

## Chapter Eight

# Ageing Populations: Projections and Trends

*A combination of increasing life expectancy and declining fertility rates over the past half century have significantly altered the age structures of developed country populations. These forces are expected to continue, with a major consequence being a substantial rise in the size of the aged cohort in both absolute and relative terms in coming decades.*

*Although it is not possible to project the future population structure with certainty – and the uncertainties become greater the further into the future one looks – it is clear that average ages, and the proportion of the community in retirement ages, will increase substantially. This has implications for society and the economy in terms of burdens on Government budgets, decisions about labour force participation and hence labour supply, and patterns of expenditure on goods and services.*

*There have been substantial policy measures over recent years to address the budgetary pressures of an ageing population and, if persisted with, Australia would appear to be better placed than many other advanced nations to cope with budget pressures.*

*A rise in dependency ratios would appear to be unavoidable. However, policy measures already in place create some incentive for people to remain in the workforce longer. In any case, a significantly greater prevalence of fully funded retirement incomes should make higher dependency ratios more supportable.*

*Population ageing will increase demands for health and aged care services substantially. An older age structure will also reward marketers who can develop their products in ways that are relevant to older people.*

### 8.1 Introduction

This Chapter explores the potential economic impacts over coming decades of population ageing in Australia and South Australia.

By population “ageing” we mean a gradual change in the demographic structure of the population such that the

median age of the population rises. The next section presents population projections that illustrate this phenomenon.

Although South Australia’s population structure is “older” than the national average, it is not as old as in some other

developed nations. Furthermore, other Australian States are ageing too, and tend to reach South Australian levels with a few years' lag.

Population ageing has potentially significant implications for the future economic environment, for instance in terms of:

- burdens on Government budgets;
- decisions about labour force participation and hence labour supply; and
- patterns of expenditure on goods and services.

There have at times been alarmist messages about the implications of population ageing. However, the informed view is that major policy initiatives over recent years have placed Australia well to deal with the pressures arising from population ageing – but those policy settings will need to be maintained.

## 8.2 The Phenomenon: Population Ageing

The Australian population, like those of most developed countries, will age rapidly over the first half of the 21<sup>st</sup> Century. Figure 8.1 shows a set of ABS projections of median ages for Australia and the States.<sup>1</sup>

<sup>1</sup> The Australian Bureau of Statistics publishes three different main series (I, II and III) of population projections where each are formed utilising differing assumptions regarding the total fertility rate (births per woman) and interstate and overseas migration. This provides three alternative forecasts of the future size and structure of the Australian population whereby, for example, Series I utilises high level assumptions regarding fertility rates and overseas and internal migration (e.g., high fertility rates and large net interstate and overseas migration) to project future population trends. For illustrative purposes we have used Series II projections - the medium variant population projections.

These projections<sup>2</sup> suggest a continued ageing of the demographic structure of the South Australian population, and indeed of the populations of all the States. While there is some uncertainty as to the appropriate assumptions for projecting demographic structure (and the ABS recognises this by producing several sets of projections based on a variety of assumptions), the conclusion of an ageing population is quite robust.

The projections shown have the median age of the Australian population rising from its present level of 34.9 years to 46.0 years by 2051. This outcome is a reflection of two processes – individual ageing through increasing life expectancy; and population ageing, whereby the average age of the population increases as the inevitable consequence of declining fertility rates.

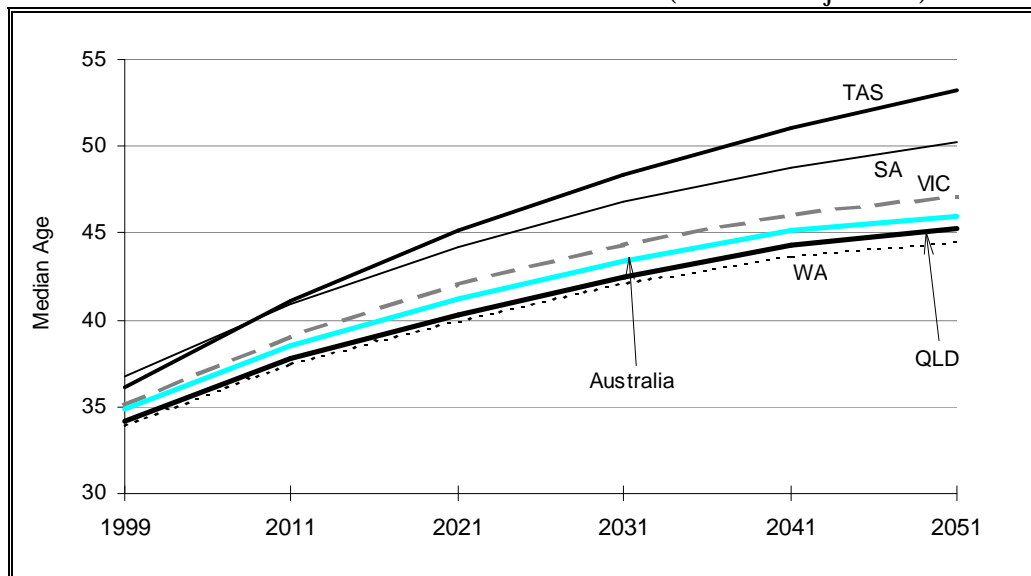
Population ageing will be particularly influenced by the ageing of the large baby boomer cohort.<sup>3</sup> After World War II and until the first half of the 1960s, fertility rates rose rapidly, resulting in a baby boom that created a 'bulge' within the population profiles of developed countries. The entry of baby boomers into the workforce resulted in a favourable demographic environment: favourable in the sense that there was a rise in the proportion of working age population to dependent aged population.

It is apparent from inspection of Figure 8.1 that South Australia's population is forecast to age more rapidly than either the Australian population or any other State population except Tasmania over the period analysed. However, while South Australia is projected to be "older" than most other States at any particular point in time, the same cannot

<sup>2</sup> Australian Bureau of Statistics, (2000), "Population Projections Australia: 1999-2101", Canberra.

<sup>3</sup> Baby boomers are persons currently aged between 36 and 54 years.

**Figure 8.1**  
**Projections of Median Age of Population**  
 Australia and Selected States - 1999 to 2051 (Series II Projections)



Source: ABS, *Population Projections Australia, 1999-2101* (3222.0)

be said of a comparison with all other developed nations. For instance, 30 years from now, 26.9 per cent of South Australia's population is forecast to be aged 65 years and over, compared to 28.1 per cent for Germany, 27.9 per cent for Italy, and 27.5 per cent for Switzerland.<sup>4</sup> The challenges presented for South Australia by an ageing population would appear not to be more severe than for a significant number of other major developed nations. Furthermore, even the relatively "young" States, such as Queensland and Western Australia, are projected to have older populations a decade hence than South Australia's population today.

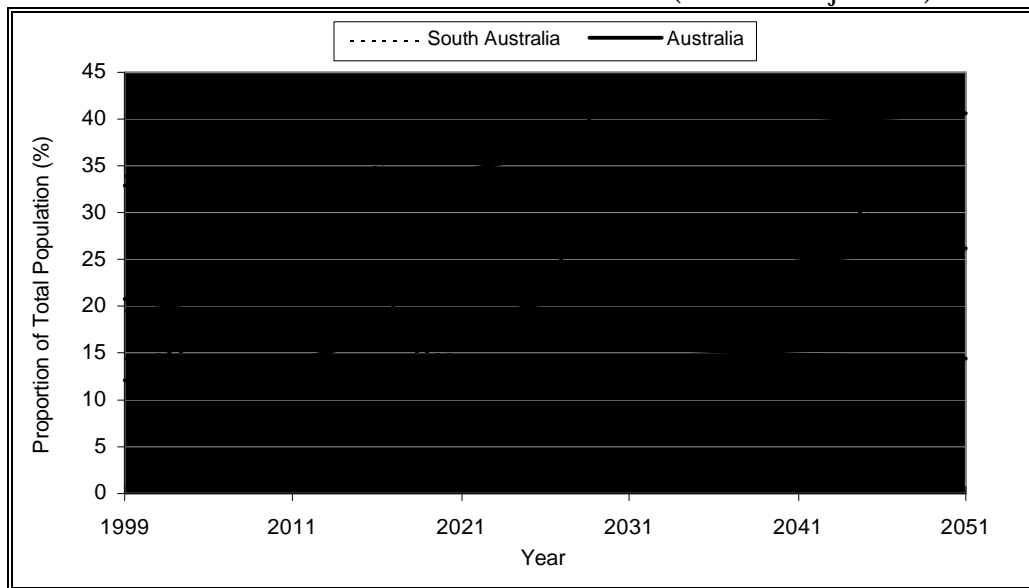
Figure 8.2 shows projected trends in the relative size of dependent populations. The dependent population is composed of two components - a "child" component and an "aged" component, and each of these is illustrated. Currently, the population aged 65 years

and over represents 12.2 per cent of the Australian population. By 2051 this cohort is projected to form 26.1 per cent of the population. This tends to increase the aggregate dependent population ratio. However, this effect is offset to some extent by trends in the child population - the relative size of the dependent child population is projected to fall from 20.7 to 14.4 per cent over this period. The aggregate impact is for the dependent population ratio to increase substantially from 32.9 per cent to 40.5 per cent over this period.

These dynamics may be further illuminated by viewing them in absolute terms. For instance, nationally, in 1999, there were 2.3 million people aged 65 years and over. By 2051 there are projected to be 6.6 million in this bracket - a 4.3 million (185 per cent) increase. By comparison, over this period, the working age population is projected to increase by 2.4 million (a much smaller 19 per cent) and the youth population to decline by 0.3 million (7 per cent).

<sup>4</sup> Bos, E., Vu, M.T., Massiah, E., and Bulatao, R., (1994), "World Population Projections, 1994-95", The International Bank for Reconstruction and Development/The World Bank. 2031 projection for South Australia, 2030 estimates for overseas nations.

**Figure 8.2**  
**Population Dependency Ratio Projections**  
 Australia and South Australia - 1999 to 2051 (Series II Projections)



Source: ABS, *Population Projections Australia, 1999-2101* (3222.0).

### 8.3 Nature of Economic Impacts

Although South Australian trends are not unusual among the developed nations, it does remain the case that substantial demographic shifts will have significant implications for the future economic environment. For instance, there may be implications in terms of:

- burdens on Government budgets;
- decisions about labour force participation and hence labour supply; and
- patterns of expenditure on goods and services.

### 8.4 Budgetary Implications

Governments make major expenditures in respect of the aged, and an increasing proportion of aged in the community indicates a potential for budgetary pressures. Table 8.1, taken from Creedy (1999), and based on work by Creedy and Taylor (1993), presents estimates of Australian governments' per capita

social expenditures for different age groups.<sup>5</sup>

The data show that per capita government expenditures are much higher for age groups over 60 years than for younger age groups (including children), and that expenditures rise sharply for successively older groups. The major expenditure areas are health and age pensions - with health expenditures actually exceeding spending on aged pensions in the older age brackets.

Taken at face value, and coupled with an ageing population structure, these figures are suggestive of considerable emerging pressure on government budgets over coming decades, at least on a "no policy change" basis.

These concerns are not unique to Australia. The OECD has raised concerns that, in some of its member countries, the required level of taxation

<sup>5</sup> Creedy is at pains to stress that the data should be regarded as approximate.

**Table 8.1**  
**Government Social Expenditures By Age Groups**  
 Per capita terms in 1998 prices (\$)

Age	Age Pension	Other Age Assistance	Unemployment Benefits	Other Social Benefits	Health	Education	Employment	Total
0-15	0	3	0	883	443	1,913	2	2,245
16-24	0	2	384	346	443	1,829	165	2,870
25-39	1	2	300	423	602	303	59	1,691
40-49	6	3	211	503	565	141	38	1,466
50-59	57	6	215	1,088	942	58	25	2,390
60-64	1,139	12	184	1,729	1,579	24	13	4,681
65-69	2,430	31	0	2,041	2,185	16	0	6,703
70-74	3,368	60	0	1,626	3,255	16	0	8,325
75+	4,168	263	0	1,135	6,111	12	0	11,689

Source: Creedy, J. (1999), "Population Ageing and the Growth of Social Expenditure", in Productivity Commission and Melbourne Institute of Applied and Economic and Social Research, *Policy Implications of the Ageing of Australia's Population*, Conference Proceedings, AusInfo, Canberra.

to finance existing publicly funded retirement income systems will become so high as to discourage work effort and degrade workers living standards<sup>6</sup>. Where this is so, a range of alternative policy measures have been identified by the OECD to alleviate future fiscal pressures. These include raising the entitlement age to retirement benefits and promoting fiscal savings by targeting pension benefits to those in most need.

Australia has some such measures in place already. In fact, Australia appears to be better placed than most developed countries to alleviate the pressures on the pension system arising from an ageing population, due to the means-tested nature of the age pension and compulsory old-age savings provision introduced through the Superannuation Guarantee. Age pensions are more tightly targeted in Australia than in

most other OECD countries. In addition, the progressive introduction of compulsory superannuation will boost private retirement incomes in future decades and decrease pressures on the public system. These factors will limit future public pension expenditure growth and grow the private pension asset base<sup>7</sup>.

Bacon (1998)<sup>8</sup> reports modelling work showing that, on existing policies, Australia's expenditures on aged pensions should plateau at a little under 5 per cent of GDP through the middle of next century. Tinnion and Rothman (1999) report a study by Johnson (1998) which found that while Australia's spending on public pensions is predicted to remain below 5 per cent of GDP in 2040, considerably higher rates are

<sup>6</sup> Organisation for Economic Cooperation and Development (OECD), (1998a), "Meeting of the Employment Labour and Social Affairs Committee at Ministerial Level on Social Policy", background documents. "The Caring World: An Analysis", Tables and Charts, Paris, 23-24 June, (downloaded from www.oecd.org).

<sup>7</sup> Johnson, P., (1999), "Ageing in the Twenty-first Century: Implications for Public Policy", in Productivity Commission and Melbourne Institute of Applied Economic and Social Research, *Policy Implications of the Ageing of Australia's Population*, Conference Proceedings, AusInfo, Canberra.

<sup>8</sup> Bacon, Bruce (1999), "Ageing in Australia: some modelling results and research issues", in Productivity Commission and Melbourne Institute of Applied Economic and Social Research (op cit).

projected for other OECD countries – e.g., 7 to 10 per cent for the US, New Zealand and Canada, and 14 to 20 per cent for Germany, France, Japan and Italy.

Given that expenditures on health are high in older age groups, an ageing population is likely to significantly increase health expenditures. Bacon also cites projections which show health spending's share of Australia's GDP rising from its current level of 8.5 per cent to 11.7 per cent in 2041 (with further increases possible as a result of demands for higher quality services).

Funding arrangements in the health system are overwhelmingly on a pay as you go basis. This is true for the components provided directly by both the public sector and private insurance funds. Ageing population will mean that, for given service standards, contribution rates in both systems will need to increase over time, even if those contribution rates are still subject to community rating. In coming decades the working age population seems likely to carry an increasing burden of health care costs for the aged, whether directly through the tax system or indirectly

through memberships of private health funds at non-actuarial rates.

Aged care burdens vary from State to State, and are greater in South Australia than elsewhere. Some parts of the burden are met directly by the Commonwealth – e.g. costs of the old aged pension. However, health costs tend to fall more directly on the States. Australia's system of fiscal equalisation plays an important role in correcting for these imbalances.

### 8.5 Labour Force Participation and Labour Supply

Ageing of the population will tend to push down the aggregate labour force participation rate. This will occur because of a compositional change in the population; older people tend to work less, as can be seen from Table 8.2 which shows labour force participation rates by age.

There has, in addition, been a long term downward trend in men's retirement ages. Figure 8.3, which decomposes the male life course for an average OECD country, demonstrates that people are remaining in school for longer periods,

**Table 8.2**  
**Labour Force Participation Rates by Age**  
Australia, August 2000

Age Group	Participation Rate (%)
15-19	56.6
20-24	81.3
25-34	80.8
35-44	81.5
45-54	79.1
55-59	60.7
60-64	34.7
65+	6.0

Source: ABS, *Labour Force Survey*.

retiring earlier, and spending more years in retirement at the expense of years in employment.<sup>9</sup> However, it needs to be recognised that this is an historical trend, and relates to a period when the progress of the baby boomers in working age groups boosted participation rates and reduced dependency ratios. This may in fact have contributed to the trend toward early retirement.

It is possible that rising dependency ratios will tend to arrest the downward trend in average retirement ages. There are already some signs of the policy environment adapting to support such a change – for instance through the introduction of age discrimination legislation and increased preservation ages for superannuation.

Furthermore, decisions about whether to work or not are to a significant degree economic decisions, and retirement income prospects would therefore appear to be an important factor bearing on broad societal trends in retirement ages. In this context, an important question is whether the combination of feasible retirement income arrangements – private and public – seem likely to create pressures for later retirement ages. If retirement incomes in future decades prove to be inadequate, there is likely to be a labour supply response, in the form of more older people deciding to work for longer.

Tinnion and Rothman (1999) argue that Australia's current retirement income policies – involving a superannuation system with a high degree of community participation, supported (on a means tested basis) by an age pension – will provide adequate levels of income support for a broad cross section of the

community as the baby boomers move into retirement from about 2010 onwards. The implementation of compulsory superannuation for wage and salary earners is a key initiative supporting this outcome. They summarise their findings in the following terms:

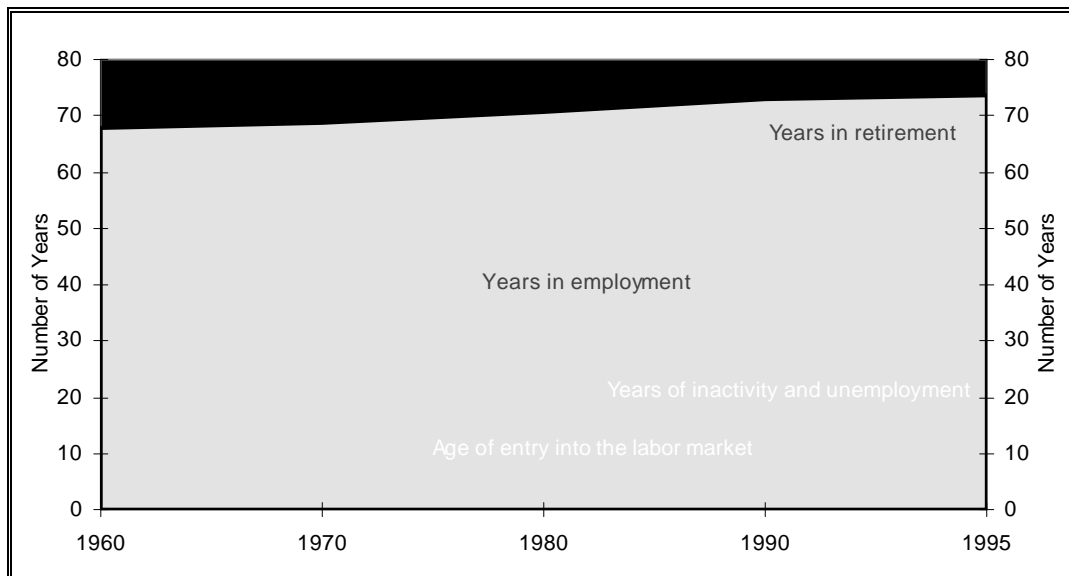
“[in conclusion] the age pension and fully implemented SG [superannuation guarantee] systems combine to provide replacement rates above frequently used benchmarks, even for low income workers with broken work patterns. While higher income earners have lower replacement rates with SG only superannuation savings, the aggregate analysis shows that taking realistic full saving rates into account, the higher income groups generally also achieve replacement rates exceeding 60%. Aggregate analysis by income level also shows that the evolution of the system has a major positive effect in relation to replacement rates over time for both lower and upper deciles. Women workers have similar replacement rates to men.”

It is important to note that these findings draw strongly on the (continuing) introduction of fully funded superannuation arrangements; “pay as you go” arrangements are much more vulnerable to demographic pressures as they need to be financed from taxes on the working population. Fully funded arrangements are, by their nature, less vulnerable to demographic changes than are pay as you go schemes.

There are of course great uncertainties as to how the future will evolve. However, if one accepts the view that current patterns of saving behaviour, in tandem with a feasible level of publicly funded

<sup>9</sup> Women exhibit a similar pattern in life-course however one importance difference is that years in employment have increased, offset by a decline in years spent outside the paid workforce.

**Figure 8.3**  
**Decomposition Of Men's Life Course For An Average OECD Country\***  
 1960 To 1995



Note: \* Average over 15 countries: Australia, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Norway, New Zealand, Spain, Sweden, United Kingdom, United States.

Source: OECD (1998), *Maintaining Prosperity in an Ageing Society*.

benefits, will support future retirement incomes at a level that is consistent with maintaining living standards after the transition from work to retirement, then there is not, apparently, a strong pressure from this direction to sharply extend working lives. Even so, it is likely that existing initiatives such as raising the preservation age and anti-discrimination legislation will have some upward effects on participation rates in older age groups.

Labour supply decisions by older people will also depend on the relevance of the skills that they have to offer. Given the current tendency for the economy to create and destroy jobs over shorter periods than in previous generations, reskilling of older people would seem to be an important factor contributing to their continued participation in the work force. This may require changes to the approaches currently taken with vocational education and training – in particular there may be a need for suitable targeting to accommodate the needs of older workers who may have a

different set of strengths and development needs to young people.

## 8.6 Spending Patterns

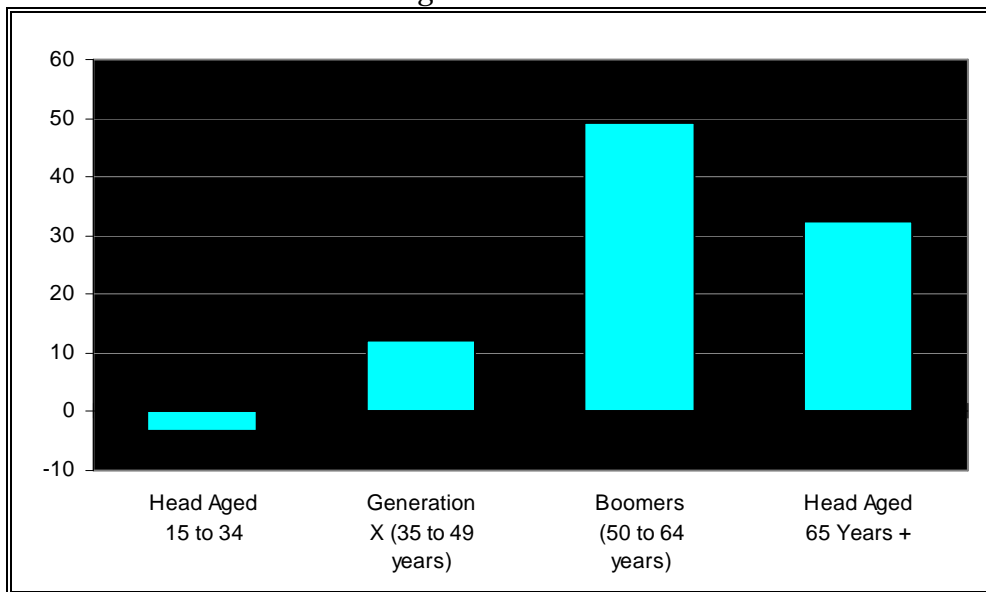
There is a widely held expectation that incomes will rise in real terms over coming decades, although the exact quantum of increase to be expected cannot be known with precision. Rising household incomes will both drive and enable rises in consumption spending. At the same time, spending patterns will also change with the demographic structure of the population.

Harding et al. (1999)<sup>10</sup> forecast that the number of households headed by 50 to 64 year olds will rise by 49 per cent between 1993-94 and 2010, and the number headed by people aged 65 or over will rise by 32 per cent. The

<sup>10</sup> Harding, A., Hellwig, O., Bremmer, K., & Robinson, M., (1999), "Geodemographics and the Aged: Where they live, what they buy", National Centre for Social and Economic Modelling, University of Canberra.



**Figure 8.4**  
**Forecast Percentage Change in Number of Households by Age of Head**  
 Australia - Change over Period 1993-94 to 2010



Source: Harding, et al (1999), *Geodemographics and the Aged: Where They Live, What They Buy*.

number headed by 35 to 49 year olds will rise just 12 per cent, and the number headed by 15 to 34 year olds will actually fall 3 per cent (see Figure 8.4)

A large increase in the size of the aged cohort represents a change in the composition of households. If income relativities across different household types are broadly maintained, then this changing composition will lead to an increased share of incomes in the hands of older households. That, in turn, has the potential to affect patterns of demand for goods and services, in the form of a shift in demand toward those areas which are relevant to the aged.

Table 8.2 shows breakdowns of household consumption patterns – both direct and indirect via government funded services – for several household structures, based on 1993-94 data.

The data give some insight into differences in spending patterns – the most striking elements being a relatively

high proportion of expenditure on hospital care for the aged and relatively low spending on education. The data on direct expenditures does not identify areas of stark difference. This is because of a lack of sufficient detail – both in terms of more detailed commodity breakdowns and also in terms of greater differentiation of household types – the “couple” and “single” household groupings are in fact quite heterogeneous (for instance households that primarily rely on “self-funded” income have substantially higher incomes than households relying on aged pensions).

The implications for businesses will be significant given that the demand for their goods and services will be determined by the preferences, needs and characteristics of aged persons rather than their traditional younger consumer base. Businesses operating in markets that serve younger consumers (especially children) face the real

**Table 8.2**  
**Breakdown of household spending, 1993-94**

Broad Expenditure Group	Couple with Dependent Children only, Eldest Child 5 to 14	Couple Only, Reference Person 65 Years and Over	Lone Persons 65 Years and Over
	As Percentage of Total Consumption Expenditure		
Fuel and power	2.5	2.7	3.5
Food and non-alcoholic beverages	17.5	16.1	15.9
Alcoholic beverages	1.7	2.6	1.7
Tobacco	1.2	0.9	1.0
Clothing and footwear	4.9	3.7	3.9
Household furnishings and equipment	5.4	5.7	3.6
Household services and operations	5.0	4.9	5.9
Medical care and health expenditures	3.7	5.3	4.6
Transport	12.2	10.5	8.3
Recreation	11.1	10.0	8.6
Personal care	1.4	1.7	1.7
Miscellaneous commodities and services	7.1	4.3	4.9
<b>Total commodity and service expenditure net of current housing costs</b>	<b>73.6</b>	<b>68.3</b>	<b>63.5</b>
<b>Selected indirect benefits</b>			
School education	14.6	-	-
Tertiary education	1.0	0.1	*
Other education benefits	1.1	*	-
<i>Total education benefits</i>	16.6	0.1	*
Hospital care	2.8	14.5	17.1
Medical clinics	3.6	4.8	5.0
Pharmaceuticals	0.8	2.0	2.2
Other health benefits	0.7	0.5	0.4
<i>Total health benefits</i>	7.8	21.8	24.7
Social security and welfare benefits	1.9	9.7	11.8
<b>Total indirect benefits</b>	<b>26.4</b>	<b>31.7</b>	<b>36.5</b>
<b>Total Consumption Expenditure</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: ABS (1996), *Household Expenditure Survey, Australia: Household Characteristics, 1993-94* (6531.0).

prospect of declining demand given the forecast decline in the absolute size of the youth cohort. Meanwhile, those producing goods and services for the aged can expect strong growth opportunities. For instance, an older population implies that a larger proportion of the population will be resident in their less physically healthy years, this should generate strong demand for health products and services.

In a separate study of consumers spending patterns<sup>11</sup>, Harding and Robinson predict a boom in health care as total household expenditure on health and medical care is forecast to increase by 39 per cent between 1993-94 and 2010. In fact, the forecast rise in consumer expenditure on medical care and health items was larger than for any other major item except mortgage repayments (also 39 per cent). Not only

<sup>11</sup> Harding, A., & Robinson, M., (1999), "Forecasting the Characteristics of Consumers in 2010", Discussion Paper No. 40, National Centre for Social and Economic Modelling.

does this imply substantial increases in private spending on such items, but government funding commitments to pharmaceutical benefits, public hospitals and Medicare would also rise substantially.

An ageing marketplace will generate demand for products that accommodate older consumers' particular physical characteristics and needs, and businesses will need to consider this when designing products and services. For example, older people naturally possess less physical strength than younger adults, so products supplied in easy to open packages therefore possess inherent advantages over similar competing products. Also, older people have lower nutritional requirements than younger adults and consequently favour smaller serving sizes - an important consideration for restaurants and food companies.

Older people also possess greater amounts of discretionary time; an expanding aged cohort should therefore boost aggregate spending on

recreational and leisure activities. In part this reflects an expressed demand for "experiences" such as holidays rather than the physical items (e.g., cars, clothes etc.), which are preferred by younger customers.

Further impacts of demographic trends on the demand for goods and services are likely to arise in the housing industry. Previously, as baby boomers left home and formed large families, the effect was to dramatically boost demand for new family housing. Now, with the children of boomers leaving home, some boomers are finding that their existing homes exceed their needs and are demanding smaller homes. However, this pattern is gradual - other older couples wish to remain in their existing homes and are spending money on renovating their homes.<sup>12</sup> An ageing population, with slower (perhaps declining) growth in younger age groups, may therefore potentially shift demand within the housing industry from construction of new large family homes to smaller luxury homes and remodelling of existing homes.

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<sup>12</sup> Weaver, P., (1997), "How to Reach Older Consumers", *Nation's Business*, June, Vol. 85, No. 6, p. 35(2).

