

***NSW GOVERNMENT
SUBMISSION
TO
PRODUCTIVITY
COMMISSION RESEARCH
STUDY
INTO
ECONOMIC IMPLICATIONS
OF AN AGEING AUSTRALIA***

NOVEMBER 2004

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EXECUTIVE SUMMARY

The New South Wales Government welcomes this opportunity to make a submission to the Productivity Commission's Research Study into the Implications of the Future Ageing of Australia's Population. Ageing of the NSW population has been occurring for some time already, though the pace of ageing is expected to accelerate ahead. As result the economic and fiscal impacts are expected to intensify over the coming decades.

This submission utilises inputs from individual NSW Government agencies and NSW Treasury analysis to address the range of issues raised by the Productivity Commission (PC) in its Issues Paper. From the State's perspective, key issues that the Productivity Commission needs to note and/or address in the study include:

- Irrespective of a range of plausible assumptions made regarding future population trends and labour force participation rates, the ageing of the population will continue over the next forty years. The impacts, both economic and fiscal, will intensify.
- Economic growth will slow as the intersection of the retirement of the baby-boomers and past slowing in fertility rates sees the working age population grow even more slowly than general population growth. Economic growth will slow to productivity growth.
- The ageing of the population, in conjunction with growing demand for, and cost of, services will result in the emergence of significant fiscal pressures at both the State and Commonwealth levels of government.
- Perhaps the most significant factor that could affect fiscal pressures on States and Territories will be the Commonwealth's approach to Specific Purpose Payments (SPPs) and other fiscal transfers over the period given the substantial proportion these transfers make up of State and Territory budgets. There is already a need for improved co-operation and dialogue between the Commonwealth and the States. Ageing of the population will increase demands in key service delivery areas such as health, disabilities, home and community care, transport and housing - areas where there is joint funding between the Commonwealth and the States. These demands only serve to highlight that the need for improved dialogue between the tiers of government is urgent. An integrated and collaborative approach to policy development would minimise fiscal risks and ensure sustainable, effective service delivery.
 - Any analysis of future fiscal pressures on the States will be extremely sensitive to assumptions regarding funding of SPPs. To the extent higher spending pressures are not reflected in higher SPPs, there will be more fiscal pressure on the States and less on the Commonwealth.
- Analysis of past and prospective State spending trends by agency and functional areas reveals that increasing demand, higher cost pressures and rising community expectations will lead to spending growth in excess of drivers such as economic growth, general inflation and demographics. This means that fiscal pressures due to an ageing population will only be part of the fiscal pressures that governments will face. The NSW Government submits that these pressures should be taken into account in the PC study.

Structure of this submission

This submission contains six sections, structured broadly around the key areas in which the Productivity Commission has sought input, as follows:

1. Population projections and assumptions;
2. Labour supply assumptions and issues;
3. Productivity assumptions and issues;
4. Economic impacts;
5. Aggregate fiscal impacts of ageing on Commonwealth, State and Territory, and Local governments; and
6. Specific responses to questions raised in the issues paper regarding the fiscal implications of ageing on State government services.

PC Terms of Reference

The following terms of reference were received by the Commission on 24 June 2004.

PRODUCTIVITY COMMISSION ACT 1998

The Productivity Commission is requested to undertake a research study examining the productivity, labour supply and fiscal implications of likely demographic trends over the next 40 years, to further improve understanding of the challenges and opportunities resulting from an ageing Australia.

The context for this research study is the projected ageing of the Australian population, the associated impacts on growth in the labour force, overall economic growth and the fiscal positions of all levels of government.

In undertaking the study, the Commission is to consult broadly with governments and other key interested groups; and take into consideration any recent work relevant to the study.

The Commission is to report on the following:

The likely impact of an ageing population on Australia's overall productivity and economic growth.

- The potential economic implications of future demographic trends for labour supply and retirement age, and the implications for unpaid work such as caring and volunteering.
- The potential fiscal impact of the above factors on Commonwealth, State and Territory and, to the extent practicable, local governments.

The Commission is required to provide a report within 9 months of receipt of this reference. The report will be provided to the Council of Australian Governments.

It is anticipated that the analysis and projections in the report would provide useful background information for future planning and policy development by Australian governments.

PETER COSTELLO

Received: 24 June 2004

PC Issues and Questions

Economic Implications of an Ageing Australia

Issues and Questions

These issues and questions are intended merely as a prompt for participants preparing submissions. They outline some of the broad issues on which the Commission is seeking information and comment. Participants are not obliged to limit comments to these matters or to address all of the issues raised. For its part, the Commission will also be seeking comments from particular participants on many of the more detailed issues associated with modelling the fiscal impacts of an ageing population. Some preliminary research has been undertaken by the Commission. Some of our early thinking and findings were presented in a recent speech by the Chairman, [An ageing Australia: small beer or big bucks?](#)

The likely impact of an ageing population on Australia's productivity and economic growth

The ageing of the 'boomer' generation may have several effects on productivity trends, and consequently the economic growth prospects for Australia. Workers of different ages may have different levels of productivity and different prospects for improved productivity in the future. Ageing may also have macroeconomic implications, since it may affect savings and investment. If aggregate labour supply growth slows then this may prompt innovative ways of producing goods and services with less labour inputs. On the other hand, an ageing workforce may have less capacity for innovation and entrepreneurship.

- Overall, how is the shift in the age distribution of the workforce to older ages likely to affect the productivity of the workforce as a whole?
- What evidence is there on productivity by the age of workers?
- How important are the different (opposing) mechanisms that might explain different productivity levels of workers of different ages - such as experience, access to training, motivation, and physical or cognitive impairment?
- Are age-productivity effects uniform across different occupational and industry categories (for example, between unskilled manual and skilled non-manual jobs)?
- What links are there, if any, between individual productivity and decisions to retire or not to participate in the labour market?
- The current cross-sectional evidence suggests that the age-productivity profile has an 'inverted u' shape. Will this profile be maintained over time and why?
- Will an ageing workforce affect the generation or absorption of new technological know-how and more generally affect national levels of innovation and entrepreneurship?
- What impact, if any, will an ageing population exert on capital accumulation, with what implications for labour productivity trends? Are there other macroeconomic effects of ageing on productivity?

The potential economic implications of future demographic trends for labour supply

Another major determinant of economic growth per capita is the effective labour supply - the numbers of hours worked per capita. Labour participation rates of people aged 55 or more years are currently lower than those of younger people. As the population ages, more people will shift into these older age groups, and, all other things being equal, aggregate labour participation will decline. However, the Australian Government is seeking to encourage older workers to remain longer in the workforce, so future participation rates of older people may be higher than now.

Other aspects of labour supply may be affected by ageing - such as average hours worked and unemployment rates. These collectively will determine the number of hours worked in the future.

People also contribute to Australia through unpaid work, such as volunteering, and this may be affected as the population ages.

- What is likely to happen to the participation rates for older people in the workforce (both in terms of involvement in paid work and choice of hours)?
- Will trends to early retirement of males continue?
- Will lower numbers of younger job seekers increase opportunities for older people?
- What will be the wage effects of a contracting supply of labour and how will such wages affect labour participation decisions by older workers?
- To what extent are the employment prospects of older workers affected by employer prejudices, and how may these prejudices change as the workforce ages?
- What other factors are likely to affect the decisions by baby boomers to participate in the labour market when older (for example, superannuation, pensions, attitudes to work, income needs, and housing equity withdrawal)?
- To what extent will the extra years of predicted healthy life result in more work or more leisure?
- What are the implications of ageing for unpaid work, such as caring and volunteering?
- Are there differences across States and Territories in the factors that drive labour market participation for older workers?

Fiscal implications for government services

Ageing will affect the demand for many Government services. Average spending per person for health and long-term care is significantly greater for older people, while it is lower for education. So, as the population ages, changes in spending can be expected in these key services. It is also expected that demand for some social welfare payments will decline as the population ages (such as family payments and unemployment benefits), while others will rise (old age pensions and disability pensions). At the local government and **State and Territory** levels, there are many government-funded services in a host of portfolio areas - from housing to transport - that may be affected by ageing. At the same time that governments' expenditure levels are likely to be generally raised by ageing, governments' taxing capacity may be

squeezed if economic growth slows. Different jurisdictions within Australia may face different pressures on spending or revenue raising capacities.

- For any **given** age group, how are health care usage and prices likely to change over time? What are their key determinants?
- How is increasing longevity likely to affect health and aged care costs?
- To what extent are technological changes likely to moderate or accentuate the health care costs of ageing?
- How are morbidity (illness) and disability rates likely to change in Australia over the next 40 years?
- To what extent would lower future morbidity and disability rates affect age-specific health costs per person?
- To what extent would lower disability rates reduce the demand for high level institutional aged care?
- Are health costs for the aged primarily associated with maintaining health or with the final stage of life?
- What are the fiscal implications for aged care expenditure of greater levels of 'at home' care.
- To what extent are there interdependencies between different expenditure types that need to be taken into account when projecting future health care costs? For example, would increased expenditure on the PBS reduce the rate of growth of hospital care costs?
- How will ageing affect future housing needs? Are there fiscal implications associated with such needs?
- Will ageing have any effect on future transport costs?
- What effects will lower population shares of young people have on the costs of education as a proportion of Gross Domestic Product?
- What are the likely effects on government revenue of ageing: on GST, payroll and income tax, stamp duties, gambling taxes and other revenue sources - and what are the key determinants of these fiscal effects?
- What are the differences in the fiscal implications of ageing for different levels of government - Australian, State and Territory and Local?

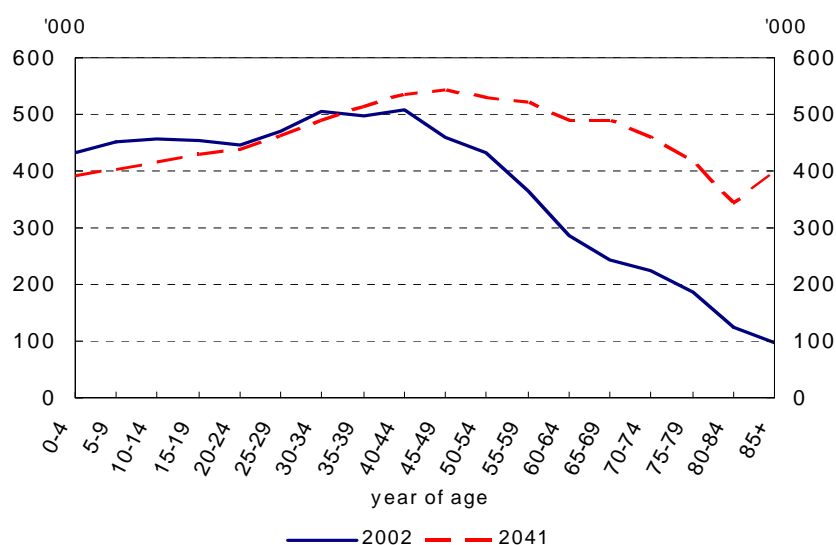
1. POPULATION PROJECTIONS AND ASSUMPTIONS

The starting point in analysing the impact of ageing of the population on the economy and finances is projections of the population. The NSW Government would prefer that the Productivity Commission (PC) study use an independent set of assumptions that are applicable to each State and Territory and consistent at the national level. Use of such projections in the PC's research study would also enhance consistency with studies made by the Federal Government¹, the Victorian Treasury² and the Queensland Government³. The Australian Bureau of Statistics⁴ makes such projections, with the Series II representing a reasonable mid-point scenario.

Population projections require assumptions about fertility and life expectancy rates, as well as net overseas migration and (for States/Territories) net interstate migration. The assumptions for these key drivers used in the ABS Series II include:

- Fertility rates are assumed to decline from 1.8 births per woman in 1999-2001 to 1.63 babies in 2011 and remain at that level to 2041.
- Life expectancy at birth is assumed to continue to rise, but at a slower rate. In 1999-2001 life expectancy at birth in New South Wales was 76.9 for males and 82.4 for females. Under Series II projections these are expected to increase to 83.2 and 87.1, respectively, by 2041.
- Constant levels of migration, including for New South Wales a net 38,900 persons annual gain from overseas migration and an annual loss of 17,000 persons from interstate migration.

Chart 1.1: Population structure, actual and projected – New South Wales



Source: NSW Treasury and ABS data

¹ Commonwealth Treasury, *Intergenerational Report*; Commonwealth of Australia, 2002.

² Victorian Department of Treasury and Finance, *Shaping a Prosperous Future*, April 2003.

³ Queensland Government, 'Queensland Government Submission on Australia's Demographic Challenges', May 2004.

⁴ ABS, *Population Projections Australia 2002 to 2101*, ABS Catalogue No. 3222.0, Canberra, September 2003.

Chart 1.1 above compares the NSW population age profile as at 2002 and as at 2041 under the ABS Series II assumptions. The clear implication is that there will be fewer people in New South Wales aged less than 35 than there are currently and considerably more in older age groups. The proportion of the population aged below 15 years will decline from 20 percent in 2002 to 15 percent in 2041. The proportion of the population aged over 64 years will rise from 13 percent in 2002 to 25 percent in 2041. The total dependency ratio (that is the proportion of the population aged either under 15 or over 64) is expected to rise from 33 percent in 2002 to 40 percent in 2041.

Sensitivity analysis of the assumptions underlying the ABS Series II population projections (Table 1.1) shows that while fertility and migration can have a large impact on the size (and growth rate) of the population, they have a more limited impact on the aged dependency ratio. The sensitivity analysis suggests that the ageing of the population will be impossible to avoid given past declines in fertility rates and increases in life expectancy.

Table 1.1: Sensitivity Analysis of NSW Population Projection Assumptions

	ABS Series II	Higher life expectancy	Lower fertility	Higher overseas migration	Higher interstate migration
Population in 2041	8,266.1	8,556.1	7,883.3	8,739.8	7,904.1
Proportion:					
Under 15	14.7	14.2	13.1	14.8	14.6
Over 64	25.4	27.4	26.6	24.7	25.8
Over 74	14.0	16.1	14.6	13.4	14.2
Total dependency ratio	40.1	41.7	39.7	39.5	40.4

Source: NSW Treasury and ABS

The endorsement of the use of ABS Series II population projections in the current PC study, however, should not be taken to infer that the ABS projections are the official population projections of the NSW Government. To the contrary, the NSW Department of Infrastructure, Planning and Natural Resources (DIPNR) has recently released NSW State and Regional Population Projections, 2001-2051. These population projections are the official population projections used for NSW planning and infrastructure provision. The DIPNR projections use more recent population counts, migration and fertility data and also assume higher fertility, life expectancy and share of overseas migration to NSW, compared with the ABS projections. The DIPNR projections⁵ also allow for a variable, rather than fixed level of migration.

The DIPNR projections suggest that NSW population growth will progressively slow from around its current pace of 0.9 percent per annum towards growth of 0.5 per cent per annum in the decade to 2041. The ABS Series II projections also suggest a progressive slowing in population growth in New South Wales, though to around 0.3 percent per annum in the decade to 2041. Notwithstanding these differences in population levels and growth rates, there is unlikely to be a significantly different age structure under either set of projections. For the purposes of the PC study, it is the age structure which will be most important in driving economic and fiscal impacts.

⁵ NSW Department of Infrastructure, Planning and Natural Resources, *New South Wales State and Regional Population Projections, 2001-2051*, 2004, pp66-67

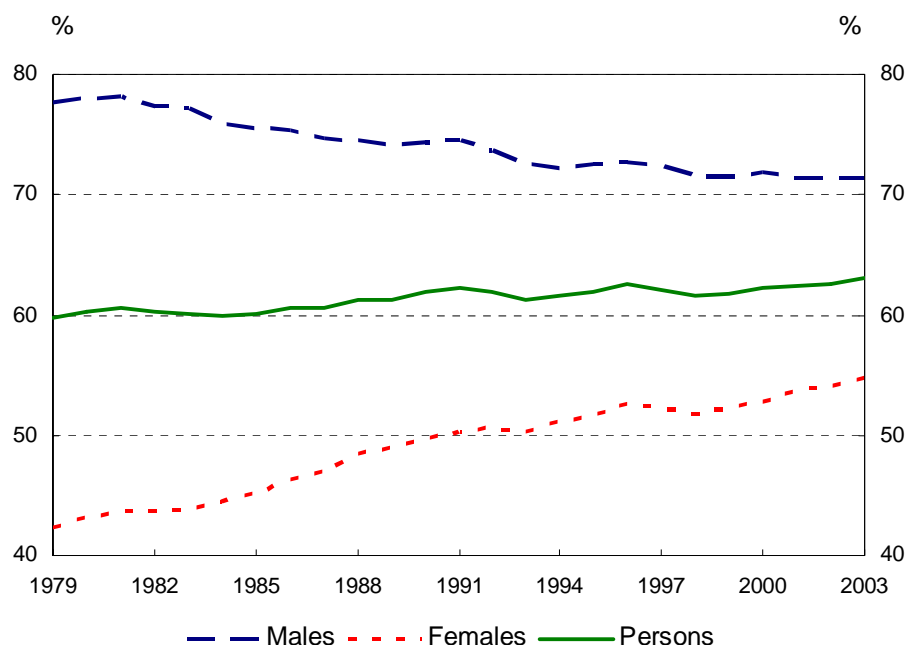
2. LABOUR SUPPLY ASSUMPTIONS AND ISSUES

2.1 Labour Supply Assumptions

The economic impacts of an ageing population will be affected by future labour supply assumptions. Population projections will provide information on the size and growth rate of the working age population⁶, but assumptions about participation rates will drive both the size and growth rates of the labour force and hence employment and economic growth.

Projections of participation rates are perhaps more contentious than population projections. This is because the assumptions underlying population projections are more transparent than those required for participation rates. As an example, the Chart below shows that over the last few decades there have been large trend movements in the aggregate participation rates of males and females in New South Wales (these movements in the aggregate are composed of significant moves in participation rates by age and sex). A 12 percentage point increase in the female participation rate has more than offset a 5 percentage point decrease in the male participation rate, so that there has been a slight increase in total participation. In projecting into the future, should those trends be extrapolated, attenuated or perhaps reversed? That is not an easy question to answer as the reasons for the trends are more qualitative than quantitative in nature.

Chart 2.1: Participation rate trends – New South Wales



Source: ABS

⁶ Slower growth in the working-age population, reflecting past declines in fertility rates as well as the retiring of the baby-boomers, will see working-age population growth slow more quickly than overall population.

Both social and economic factors will influence participation rates over time. The ABS⁷ postulates that.... “Some of the forces that have influenced labour force participation have been:

- The severity, length and frequency of the business cycle;
- Labour market law and regulation;
- Interaction between the Australian economy and international markets;
- Age at retirement;
- School retention rates and participation in education;
- Perceptions about the likelihood of finding work;
- Family role and responsibilities;
- Structural and technological changes to the economy;
- Wage levels;
- Attitudes towards leisure and family life relative to work; and
- Housing affordability.”

Some of these issues have been directly raised by the Productivity Commission and are addressed in Section 2.2. Attempting to incorporate such variables into participation rate projections are clearly fraught with difficulty, which is why in most studies, participation rates are projected using some attenuation of trends observed in historical data (or as the ABS says, “extrapolating past trends within certain parameters”). This is the approach adopted by the ABS in determining its labour force projections.

In general, the size of the labour force will be more sensitive to population assumptions than participation rate assumptions. The ABS, for example, notes that over the next eighteen years “the current size and age structure of the population is the largest factor in determining the size and age structure of the Australian population.....Ageing of the population and slowing of population growth rates are likely to have a much greater impact on the size and nature of the labour force than changing participation rates.”

It would appear that, within reasonable bounds, assumptions about future participation rates are unlikely to have as large an impact on the PC study results as the population projections.

⁷ Australian Bureau of Statistics (ABS), *Labour Force Projections 1999-2016*, ABS Catalogue No. 6260.0, Canberra, September 2000.

2.2 Specific Labour Supply Issues

In the Issues Paper, some specific questions on labour supply were asked. These are addressed below.

- ***What is likely to happen to the participation rates for older people in the workforce (both in terms of involvement in paid work and choice of hours)? Will trends to early retirement of males continue? To what extent are the employment prospects of older workers affected by employer prejudices, and how may these prejudices change as the workforce ages? Will lower numbers of younger job seekers increase opportunities for older people? What other factors are likely to affect the decisions by baby boomers to participate in the labour market when older (for example, superannuation, pensions, attitudes to work, income needs, and housing equity withdrawal)? To what extent will the extra years of predicted healthy life result in more work or more leisure? What will be the wage effects of a contracting supply of labour and how will such wages affect labour participation decisions by older workers?***

Analysis of national trends from 1976 to 1999⁸ suggests that: the downward trend in the participation rate for males aged 55-59 is slowing; there is no up or downward trend in the participation rate for males aged 60-64; and, that there is a slight upward trend for males aged 65+. For corresponding female age groups, there are upward trends in participation evident across the board.

On this quantitative basis alone there may be grounds to expect higher participation rates from older people in the workforce as we move forward. In addition, there are a number of important potential reasons that are likely to interact with each other and add to the supply of aged workers remaining in the workforce beyond recent norms, including:

- heightened living standards of the baby boomers;
- some disappointment with retirement incomes as compulsory superannuation has only been in place since the early 1990s;
- improvements in life expectancy, which may also lead to some disappointment with retirement incomes – especially for those opting for an annuity income;
- the possibility that potential retirees who have faced a sharp run-up in house prices and debt may find themselves asset rich, but income poor, in retirement. The advent of borrowing against home equity in recent years may well add to this;
- higher educational qualifications, which should permit more flexibility in both type and hours of employment;
- in an increasingly services dominated economy, hours of work should be more flexible, which should suit older workers;
- better health outcomes which should permit a higher supply of older workers; and

⁸ Australian Bureau of Statistics (ABS), *Labour Force Projections 1999-2016*, ABS Catalogue No. 6260.0, Canberra, September, 2000.

- possible skill shortages in certain areas may drive up wage outcomes and attract attention from older workers.

In summary, there are many reasons to expect that there should be an increase in the supply of older workers over coming decades. What may need to change on this front is the attitude toward older workers by some employers. While governments can attempt to influence such attitudes (as the NSW Government has done by not imposing a retirement age on its employees), market forces, such as skill shortages and higher wage growth, will probably exert the greatest influence.

• *What are the implications of ageing for unpaid work, such as caring and volunteering?*

In broad terms recent studies suggest that ageing of the population should significantly increase the demand for carers, but that the supply of both carers and volunteers, while likely to expand may not match the increase in demand. This would increase fiscal pressures in an area that is jointly funded by the Commonwealth and States.

The Australian Institute for Health and Welfare (AIHW)⁹ has estimated that in 1999-2000 the financial worth of the contribution by carers in NSW was more than \$5.4 billion. People aged 55 and over make up 22.5% of the population yet contribute 37% of all volunteer work.¹⁰ It has been estimated that men and women over 65 contribute approximately \$39 billion per year in unpaid and voluntary work, rising to \$72 billion if the contributions of 55-64 year olds are included i.e. \$20,000-\$27,000 for each woman and \$17,000 to \$18,000 for each man.¹¹

- The social contribution of this unpaid work is considerable. Evidence also shows that volunteering clearly benefits the volunteers themselves, and the community at large. Volunteers are healthier than non-volunteers: they have a better quality of life and live longer. The improved health of volunteers is thought to be due to the effects of social supports that have (sic) *important causal effects on health, exposure to stress and the relationship between stress and health*¹², and are particularly beneficial for those over 60 who use it to compensate for multiple losses.¹³

The ageing population will result in an increase in people needing care, with a continued preference to remain at home. A recent study by NATSEM¹⁴ projects the number of older persons likely to need informal care over the next 30 or so years and the number of persons likely to provide care. It found that the number of older persons likely to need assistance is projected to rise approximately 160% from 2001 to 2031, with a lower rate of increase of 57% for the number of informal carers. If these projections are accurate, there will be

⁹ Australian Institute of Health and Welfare (AIHW) 2001: *Australia's Welfare 2001* Canberra.

¹⁰ Australian bureau of Statistics (ABS) 2001, *Voluntary Work Survey, 2000*, Catalogue No. 4441.0, ABS Canberra

¹¹ Gray M, Vaus D, Stanton D, 2003, *Measuring the value of unpaid household, caring and voluntary work of older Australians*, presented at the 4th International Research Conference on Social Security, Antwerp, May 2003.

¹² Onyx, J. 2001, *Volunteering and Health among Older People, A Literature Review*, commissioned by the Office for Ageing in the International Year of Volunteers. Here, Onyx quotes House J, (1987, *Social support and Social Structure*, Social Forum 2, 1, 135-146).

¹³ Onyx, J. 2001: *Volunteering and Health among Older People, A Literature Review*, commissioned by the Office for Ageing in the International Year of Volunteers.

¹⁴ NATSEM, 2004, *Who's going to care? Informal care and an Ageing population*. A report prepared for Carers Australia by NATSEM. NATSEM, University of Canberra 2004

significant fiscal pressure on government spending on home and community care, an area where there is currently joint Commonwealth and State funding.

- Greater labour force participation of women (who provide 70% of care) is likely to continue. Balancing caring responsibilities with paid employment will be a challenge facing an increasing proportion of the workforce. Already, the majority of carers combine work and caring responsibilities and there are obvious advantages for maintaining both roles in terms of financial security and social benefits. Support and flexibility in the workplace can reduce the conflict between their dual roles, enhance their participation and improve workforce productivity.
- NSW agencies, Office of Industrial Relations, Department of Commerce, Office for Women, Premier's Department, Office of Employment, Equity and Diversity, Premier's Department and NSW Health are industry partners with the Department of Ageing, Disability and Home Care (DADHC) and Carers NSW in an Australian Research Council Linkages Grant Project with the Social Policy Research Centre, titled *Negotiating Caring and Employment: the impact on carers well-being*. The two-year project will commence by the end of 2004. The project consists of four stages - (1) a qualitative study of employed carers' circumstances, (2) a survey of employment practices, (3) quantitative analysis of longitudinal data sets¹⁵ to study changes in the health, social participation, employment and economic security of carers over the life course, and (4) the development and evaluation of evidence-based interventions.

Key points regarding caring and volunteering from a recent study by Merkes and Wells¹⁶ are that:

- *Substantial proportions of women in the baby boom generation intend to provide unpaid caring and community work after their retirement;*
- *There is no evidence of a decline in the future volunteer labour force;*
- *Women are more likely to anticipate volunteer work if they are currently involved in it and are in good health; and*
- *Women in the baby boom generation are concerned about the lack of support and recognition for providing this work.*

DADHC commissioned research studies into volunteering in 2001, the International Year of Volunteering. A qualitative research project explored the motivations and barriers to volunteering. The study by *Heartbeat Trends*¹⁷ found that a prime motivator for volunteering for the current generation of older people is its congruence with their identity and strong sense of community responsibility and is related to their experiences of the Great Depression and World War II. By contrast, volunteering for 'baby-boomers is associated with a sense of meaning that comes from being 'productive'; a priority to keep growing and experience new things; and a desire to pursue passions and interest with zest i.e., volunteering in their retirement is likely to be about personal growth.

¹⁵ Data sets include the Household, Income and Labour Dynamics in Australia (HILDA) and the Women's Health Australia (WHA) study. These longitudinal surveys will be supplemented by an analysis of the ABS Time Use Survey (TUS).

¹⁶ Merkes M & Wells Y, 2003, *Women of the baby boom generation and unpaid work –What are the indications for the future?* Australian Journal on Ageing, Vol 22 No 4 December 2003

¹⁷ Heart Beat Trends 2001, *Older People & Volunteering, Research Report*, prepared by the 2001 Premier's Forum on Ageing, funded by the NSW Department of Ageing, Disability and Home Care, September 2001.

The study identified four levels of overall barriers to volunteering:

- *personal* – poor health and caring responsibilities exclude potential volunteers;
 - *contextual* - including time constraints, apathy and morality based messages;
 - *systemic* - lack of awareness of volunteering opportunities; and
 - *organisational* - structures that do not provide the rewards that the volunteer needs e.g. sense of being ‘taken for granted’, not ‘making a difference’ and unclear roles and expectations.
-
- ***Are there differences across States and Territories in the factors that drive labour market participation for older workers?***

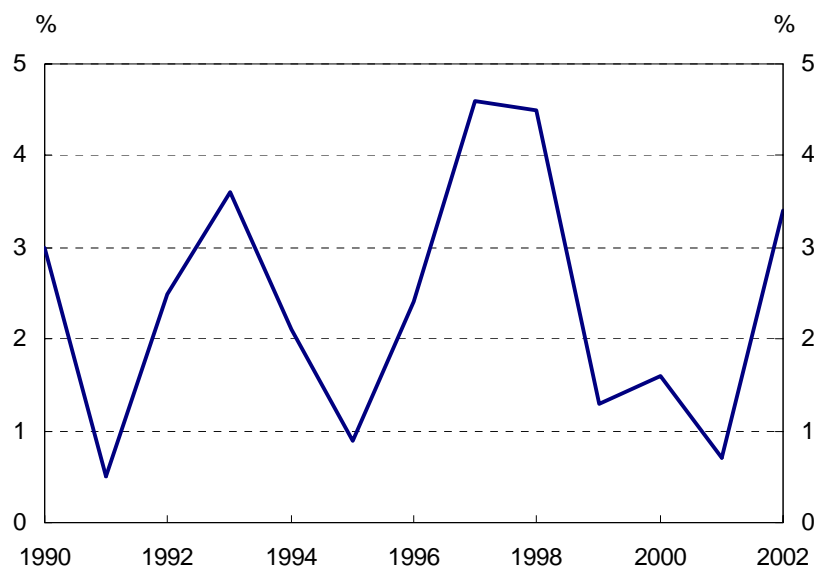
The structure and industry composition of States and Territories may well have some influence on the demand for older workers. In this context, since the structure of the NSW economy is similar to the national average, there is unlikely to be a significant divergence of older worker labour participation relative to the national average.

3. PRODUCTIVITY

3.1 Productivity Assumptions

After making population and participation assumptions, the other major requirement to project long-term GDP/GSP growth is an assumption about productivity growth. Several recent studies, including the Commonwealth Treasury (2002), Victorian Treasury (2003), and the Queensland Government (2004) have assumed long-term productivity growth of 1.75 percent per annum. As shown in the Chart below, relative to the experience in New South Wales (productivity growth on a full-time equivalent basis averaged 2.4 percent per annum from 1989-90 to 2001-02), such an assumption is conservative. However, if the 1.75 percent assumption were to be made in the PC study (along with population and participation assumptions suggested), the PC study would be broadly comparable with these other recent studies, at least in terms of GDP determination.

Chart 3.1: Productivity growth trends – New South Wales



Source: NSW Treasury and ABS

While this is a good reason to use a 1.75 percent per annum productivity growth assumption, it is evident that there is a wide band of uncertainty around this assumption. That said, the main impact of this assumption is likely to be on GDP growth and hence living standards, rather than on fiscal pressures (as discussed in section 5.4).

3.2 Specific Productivity Issues

This sub-section contains responses to specific questions raised by the Productivity Commission in the issues paper.

- **Overall, how is the shift in the age distribution of the workforce to older ages likely to affect the productivity of the workforce as a whole? What evidence is there on productivity by the age of workers? How important are the different (opposing) mechanisms that might explain different productivity levels of workers of different ages - such as experience, access to training, motivation, and physical or cognitive impairment? Are age-productivity effects uniform across different occupational and industry categories (for example, between unskilled manual and skilled non-manual jobs)? What links are there, if any, between individual productivity and decisions to retire or not to participate in the labour market? The current cross-sectional evidence suggests that the age-productivity profile has an 'inverted u' shape. Will this profile be maintained over time and why?**

There has not been any specific work that has been undertaken of the above issues at a NSW State or regional level. That said, since New South Wales is the largest of the States and with a broad industry structure, trends at the national level should be similar for the State. The key to providing answers to these questions will probably be the changing composition of industry structure over the long-term¹⁸.

- **What impact, if any, will an ageing population exert on capital accumulation, with what implications for labour productivity trends? Are there other macroeconomic effects of ageing on productivity?**

Recent research has questioned growing contentions (based on the lifetime savings hypothesis) that global ageing will lead to a capital shortage. A study by Poterba (MIT & NBER)¹⁹ concludes that ageing will have little effect on asset demand or asset prices:

Data on age-wealth profiles from repeated cross-sections of the Survey of Consumer Finances suggest that asset holdings rise sharply when households are in their 30s and 40s. Aside from the automatic decline in the value of defined benefit pension assets as households age, however, other financial assets decline only gradually when households are in their retirement years. When these data are used to project asset demands in light of the future age structure of the U.S. population, they do not show a sharp decline in asset demand between 2020 and 2050. This finding calls into question the "asset market meltdown" view. Similar arguments are likely to apply in other nations where elderly households exhibit substantial saving rates. Second, the paper considers the historical association between population age structure and real returns on Treasury bills, long-term government bonds, and corporate stock. ... These empirical findings provide modest support, at best, for the view that asset prices could decline as the share of households over the age of 65 increases.

¹⁸ The likely evolution of industry composition has not been a feature of Australian studies so far undertaken on the ageing of the population issue.

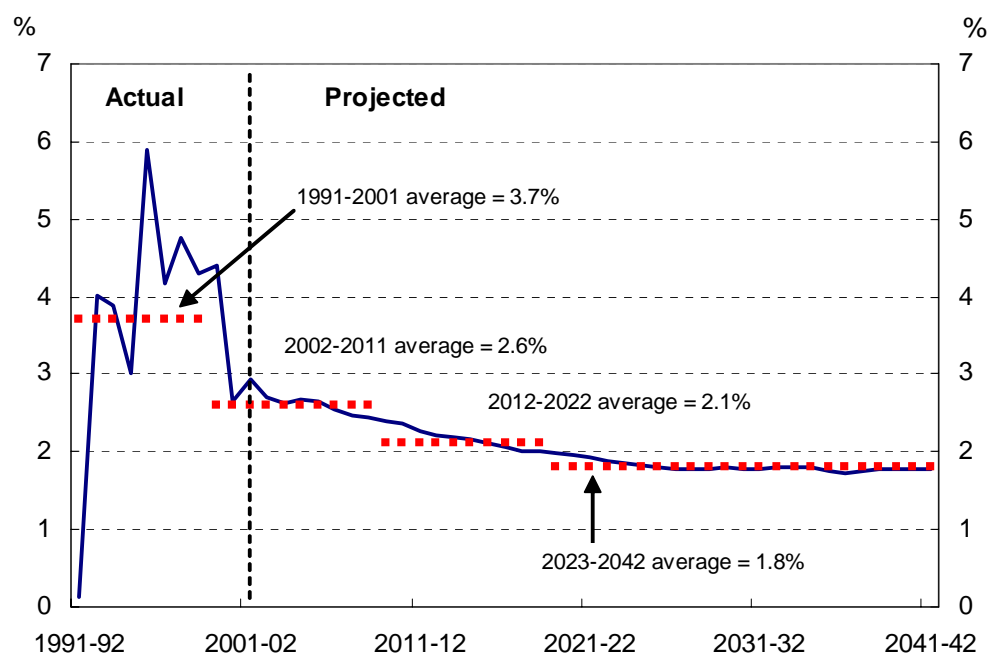
¹⁹ James Poterba, *Population Aging and Financial Markets*, Kansas City Fed, 27 August 2004

4. ECONOMIC IMPACTS

Given population, participation and productivity assumptions, longer-term GDP and GSP projections can be made. If the PC assumptions for these are similar to other recent studies (as advocated in this submission), it should be no surprise that GDP and GSP growth rates will be found to be in decline over coming decades.

Using such assumptions for New South Wales, the slowing in population growth to 2041-42 would result in employment growth and real GSP growth slowing. However, there is an extra dynamic that results in employment and GSP growth slowing even further. Slower growth in working age population associated with the retirement of the baby-boomers means that employment growth will be slower than population growth. This impact would be greatest in the period 2015-2030. But even in the decade to 2041-42, GSP growth would slow to an average of 1.8% per year compared with an average of 3.7% per year in the 1990s (Chart 4.1). With minimal employment growth, GSP growth will be largely driven by productivity growth. The ageing of the population would also weaken GSP growth because a smaller proportion of the population will be in the household formation stage, leading to slower growth in housing investment. Business investment growth would also slow due to the impact of weaker spending growth in other components of GSP.

Chart 4.1: Long-term GSP growth – New South Wales



Source: NSW Treasury and ABS

Per capita GSP growth (a crude measure of growth in living standards), would also slow for the above reasons, from 2.6% annual growth in the 1990s to a low of 1.3% in the decade to 2031-32 before recovering to 1.5% in the decade to 2041-42. Despite the slower rate of

growth, GSP per capita would increase by almost 80% from 2002-03 to 2041-42 - a substantial increase in living standards.

Projections of key macroeconomic variables are shown in the table below.

Table 4.1: Average growth rates of key macro variables for NSW – by decade (%)

	1991-92 to 2000-01	2001-02 to 2010-11	2011-12 to 2020-21	2021-22 to 2030-31	2031-32 to 2040-41
Gross state product (real)	3.7	2.6	2.1	1.8	1.8
Population	1.1	0.9	0.7	0.5	0.3
Labour participation (labour supply)	1.1	0.5	0.1	0.0	-0.1
Employment	1.5	0.8	0.3	0.1	0.0
Labour productivity	2.2	1.8	1.8	1.8	1.8

Source: NSW Treasury and ABS

5. AGGREGATE FISCAL IMPACT ON JURISDICTIONS

5.1 NSW Treasury Analysis

This section utilises NSW Treasury analysis into longer-term fiscal pressures.

As a first step, ABS data on historical government spending by function was analysed. This analysis reveals that some functional areas of government spending have grown at faster rates than might be expected given growth in real incomes, the general price level and demographic considerations. These functional areas for New South Wales include Health, Education, Social Security & Welfare, Public Order & Safety, and Transport and Communications. Such spending trends may be due to some or all of the following factors:

- Higher costs of non-wage inputs associated with certain service deliveries (eg high drug/equipment prices in the health area);
- Higher quality of services (eg availability of new technologies adds to demand such as knee/hip replacement);
- Higher than economy-wide public sector wage increases; and
- Improvements in policy (such as lowering school class sizes).

A fuller picture of the potential fiscal pressures that governments may face would include not only demographic and economic assumptions, but also some extrapolation of these trends.

The impact of ageing on government spending can be derived by applying age-specific per capita cost parameters to each age group. The rationale behind this is that within government service delivery areas, use of the services can vary significantly by age. Age-specific parameters are often only available as activity statistics (eg, the average number of doctor visits per person by age) rather than actual per-capita cost data. Thus they provide a measure of the impact of ageing on the volume of services, rather than the value of services. To the extent that costs in certain service delivery areas are rising faster than general inflation, these measures will tend to underestimate any fiscal impact. Eleven sets of relative usage indices corresponding to five functional areas have been identified. These sets include: **Health** (Hospital, Aged Care, PBS, Doctor Visits), **Education** (Tertiary, School), **Public Order and Safety** (Court, Incarceration, Crime), **Welfare** (Disability) and **Transport** (Bus Concessions).

- There will be other age related spending requirements that are not included in this analysis. For example, as detailed in Chapter 6 on specific service deliveries, there are many age-related spending pressures that can be identified, but are either not amenable to precise quantitative modelling or have not been fully researched to date.

Utilising similar population, labour force participation and productivity assumptions as other recent Australian studies, allowing for demographic impacts on government spending, including historical trends in spending above demographic and economic influences, and allowing revenue bases to run off key projected economic variables, projections of future

fiscal trends and pressures can be made. Such projections are clearly on a “no policy change” basis and do not represent the likely evolution of the State’s fiscal position over time.

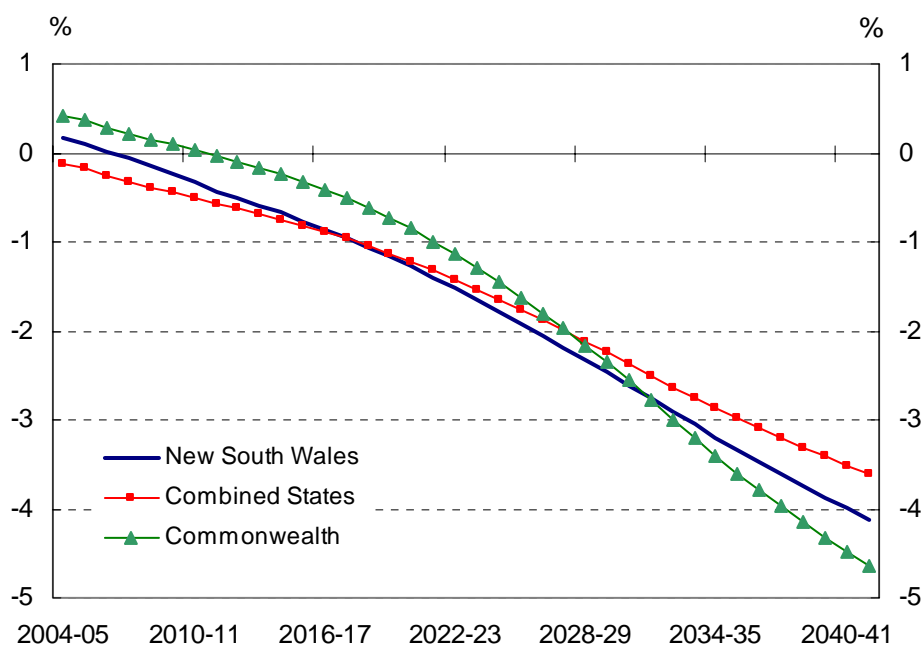
Analysis was conducted to 2041-42 to ensure comparability with other recent Australian studies. The analysis includes trends for the Commonwealth, all States and Territories and New South Wales.

5.1.1 Aggregate fiscal pressures for jurisdictions

The ageing of NSW population, together with non-demographic factors, is projected to exert considerable fiscal pressure on the NSW general government sector over the next 40 years. Measured by the change in the primary fiscal balance (the gap between revenue and spending excluding interest transactions), fiscal pressure is projected to increase by 4.3% of GSP from 2004-05 to 2041-42. Chart 5.1 shows projected fiscal pressures (the ratio of the primary fiscal balance to GDP or GSP) over time. Ageing of the population accounts for about one quarter of the total fiscal pressure.

The NSW primary fiscal impact of -4.3% is higher than the combined State primary fiscal impact of -3.4%, but lower than the Commonwealth primary fiscal impact of -5.0%.

Chart 5.1: Fiscal pressure projections - New South Wales, combined States and the Commonwealth (% of GDP or GSP)



Source: NSW Treasury

5.1.2 Expenditure projections

For New South Wales, all of the pressure is due to higher expenditure growth with total revenues largely unchanged as a share of GSP over the 40 years. Within expenditures:

- Growth in Health expenditure is projected to be the most significant. Health expenditure as a share of GSP is projected to increase by 2.3 percentage points for New South Wales (and 5.2 percentage points for the Commonwealth);
- Social Security & Welfare and Public Order & Safety expenditures are also projected to increase their share of GSP – by a combined 1.2 percentage points;
- New South Wales expenditure on Transport & Communication is projected to increase by 1.1 percentage points as a share of GSP – this result is driven by historical trends and is not observed in the Commonwealth or combined States results. Higher transport and communication spending is the major reason why the New South Wales fiscal gap is larger than estimated for the combined States result.

Table 5.1: Changes in fiscal pressure by component, 2004-05 to 2041-42 (percentage points of GDP or GSP)

	NSW	Combined States	Commonwealth
Revenue Gap			
Own Sourced Tax	-0.2	-0.1	0.6
Other Own Sourced	0.5	0.3	0.1
General Purpose Payments	-0.2	-0.2	N/A
Specific Purpose Payments	0.2	0.0	N/A
Total Revenue Gap	0.3	0.0	0.7
Expenditure Gap			
Own Expenditure			
Public Order & Safety	0.6	0.9	0.4
Education	0.1	0.1	-0.3
Health	2.3	2.4	5.2
Social Security & Welfare	0.6	0.2	0.6
Housing & Community Amenities	0.0	-0.2	0.0
Transport & Communication	1.1	-0.1	-0.1
Others	0.0	0.1	0.1
Total Own Expenditure	4.6	3.4	5.9
General Purpose Payments	na	na	-0.2
Specific Purpose Payments	na	na	0.0
Total Expenditure Gap	4.6	3.4	5.7
Fiscal Gap	-4.3	-3.4	-5.0

Source: NSW Treasury

5.1.3 Revenue projections

Total revenues for New South Wales are projected to grow at slower rates, but broadly in line with slower GSP growth. Within this:

- Own-sourced tax revenue should decline slightly as a percent of GSP, reflecting growth in the State's tax base slightly below growth in GSP over time;
- Other own-sourced revenues are projected to increase as a share of GSP, mainly driven by an increase in government sales of goods and services which is assumed to move in proportion to total government expenditure;
- GST revenues are projected to decline by 0.2% as a share of GDP. This is due to the non-GST taxable components of private consumption spending (health services in particular) growing faster than the taxable components. The same reduction is projected to the allocation of GST to New South Wales; and
- Total Specific Purpose Payments (SPPs) distributed to all State and Territory Governments are assumed to maintain their share of GDP. However, New South Wales' portion of SPPs would increase slightly increase due to faster growth in government expenditure by New South Wales.

These projections assume no change in the Commonwealth's approach to fiscal transfers to the States and Territories. As a result, the projections of the differential impact on jurisdictions are vulnerable to changes in the volume and nature (for example, the proportion made up by SPPs) of these transfers.

5.2 Comparison with Other Australian Studies

Table 5.1 shows that the fiscal projections of the NSW Treasury analysis are broadly comparable to other recent Australian studies. The clear conclusion from all of these studies is that the combination of ageing and other fiscal pressures will lead to a significant negative fiscal impact for New South Wales, the combined States and the Commonwealth.

Table 5.2: Summary of key results of Australian long-term fiscal studies
(Percentage point change in primary balance as a share of GDP or GSP by 2041-42)

Report	Jurisdiction	Original Report	NSW Base Model under original report assumptions
NSW Treasury	Federal	-5.0	-5.0
	Combined States	-3.4	-3.4
	NSW	-4.3	-4.3
Commonwealth Treasury, 2002	Federal	-5.0	-3.7
	Combined States	Negligible	-0.6
Victorian Treasury, 2003	Victoria	-4.8	na
Queensland Government, 2004	Federal	-2.5	-3.0
	Combined States	-3.2	-2.8

Source: NSW Treasury

5.3 Impact on Local Government

The analysis undertaken by NSW Treasury does not include any impact on local government finances, nor does it include any feedback loops from local government that might impact on State or Commonwealth finances²⁰.

5.3.1 Background on local government finances

Currently there are 152 councils in NSW. Local government raises:

- about 48 percent of total revenue from rates and annual charges (i.e. charges upon property);
- 16 percent from user charges and fees (i.e. charges upon the individual);
- 7 percent from interest and other operating revenues;
- Grants, contributions and donations for capital and recurrent purposes are about 29% of total revenue. This would include funding from the State. This area may include funding for Pensioners' Rates Subsidies, water/sewerage, rural/urban fire issues, community transport, libraries, community facilities, economic/tourism development and some infrastructure projects to name a few. The amount varies from local government area to local government area and from year to year.

Commonwealth and State payments to NSW local government in 2004-05 are shown in the Table below.

Table 5.3: Commonwealth and State Payments to NSW local government – 2004-05

Annual Charges	\$m
Rates paid by Public Trading Enterprises	104.0
Rates paid by General Government agencies	8.0
Grants	
Identifiable from the Commonwealth	
Financial Assistance Grants	493.3
Paid by State (includes C/W SPP funds)	
Pensioner rate rebates	76.0
Fire fighting equipment – capital	40.3
Traffic and Transport	71.6
Local government capital	62.1
Other Revenues Paid by NSW	127.7
Total Operating Revenue from State and Commonwealth Government	983.0
Total Operating Revenue (2002-03, latest available)	6,417.0

Source: NSW Treasury

²⁰ The Australian Local Government Association report, *State of the Regions Report 2003-04*, contains some discussion on the impacts of ageing, unemployment rates and productivity on local governments.

The NSW government is expected to pay nearly \$490 million in 2004-05 to local government. This revenue includes rates (some general government agencies and about 75% of public trading enterprises), and recurrent/capital expenditures. Most of this is from State own source, however, it also includes some funding from the Commonwealth paid via the State. Specific Purpose Payments (SPPs) from the Commonwealth such as the Home and Community Care provides nearly \$247 million funding to NSW. The program in turn is administered to people through Non Government Organisations (including councils) which provides Food Services ('Meals on Wheels'), Respite Care, Home Help, and a number of other programs.

Local government is also a revenue collector for the State, through various methods, i.e. parking fines and development/planning assessment costs. Local government in NSW contributes fees towards the purchase of land and property data, and makes statutory contributions for fire services. Fees and revenue collections combined to the State government totalled \$130.8 million in 2002-03.

5.3.2 *Impact of ageing*

The major fiscal impact of an ageing population will be an increase in the 'pensioner rate subsidy' (see table 5.3). This will impact both local and State government finances as the pensioner subsidy is shared between the State and each council on a 50-50 basis.

- It should be noted that not all councils with a growing aged population will be affected as the pensioner must also be the rate payer (owns the property).
- The Local Government Act also provides for the postponement of rates in certain circumstances i.e. for pensioners. An increased uptake in this option may create a cash flow issue for some councils in the short term. In the longer term i.e. once the property is sold, these councils would receive the full amount of rates in arrears and interest is payable (9.0 percent in 2004-05).
- The Local Government Grants Commission has observed a population shift from the western parts of NSW towards either Sydney or the coast. This would adversely affect the revenue base for some local governments, while boosting that of others. In addition, some councils may need to seek assistance for infrastructure needs to cater for shifts in the population. While this trend is not solely related to the ageing of the population, it is nevertheless likely to add to fiscal pressures on some local governments.

The other major area of potential impact relates to whether SPPs paid to local government will continue to grow in line with growing demand as the population ages. To the extent SPPs reflect this additional demand, the fiscal pressure will be borne by the Commonwealth, rather than local government. This same issue, of course, occurs for services that the State provides via SPPs from the Commonwealth.

5.4 Key Conclusions

- NSW Treasury analysis suggests that there will be significant fiscal pressures emerging for the Commonwealth and the States as the population ages. Spending on Health services is the major driver of those pressures. However, as recent Australian studies have shown, the impact of other underlying trends in government service delivery is even more pervasive in raising fiscal pressures in the long-term. These include expectations that the quality and quantity of government services will continue to improve; service delivery costs rising faster than general inflation; and increasing community expectations generally.
- Cooperation between the Commonwealth and other levels of government will become even more important. There are a number of functional spending areas where the States share funding responsibilities with the Commonwealth and these are where the impacts of an ageing population will have the largest impact (health, disabilities, home and community care, housing and transport). An integrated and collaborative approach to policy development would minimise fiscal risks and ensure sustainable, effective service delivery.
 - An important issue will be the funding of services that are currently provided by Specific Purpose Payments (SPPs) from the Commonwealth to State and local governments. Any analysis of fiscal pressures on the States will be very sensitive to assumptions regarding funding of SPPs. To the extent higher spending pressures are not reflected in higher SPPs, there will be more fiscal pressure on the States and less on the Commonwealth.
- GST revenue will decline as a share of GDP over time because the non-GST taxable components of private consumption (health services in particular) will be growing faster than the taxable components (in addition, the construction of new housing and turnover of existing housing may be impacted by the ageing of the population).

6. SPECIFIC GOVERNMENT SERVICE DELIVERY ISSUES

As indicated in Chapter 5, the fiscal impact of ageing in the NSW Treasury analysis is derived by applying age-specific per capita cost parameters to age groups. However, as in any such analysis, there will be difficulties in identifying and/or quantifying all such pressures²¹. This section responds to specific questions raised by the PC in the issues paper at an agency level. It identifies pressures that are included in the Treasury analysis as well as ageing and other pressures that are not captured. The conclusion is that there are valid reasons to expect not only ageing, but other factors (only partially captured in NSW Treasury analysis) to add to fiscal pressures on the State. These include:

- **Health:** several areas apart from including the need for higher hospital and PBS spending are identified. These include: staff training to respond to the ageing, chronicity and complexity of health conditions of the ageing population; public hospitals tending to bear the burden of treatment of more complex and costly conditions such as diabetes, dementia, dialysis and rehabilitation; growth in non-inpatient care and especially community support for the aged; increased spending on equipment for a growing number of people with disabilities to prevent avoidable admissions to (expensive) acute care services; and a shift of expenses from treatment to prevention and maintenance care.
- **Aged care and disabilities:** there is a trend of more younger people with disabilities; a trend of people with disabilities living longer; there is likely to be a growing need for home and community care, which is jointly Commonwealth/State funded – Commonwealth support for this higher demand is a key risk for the State;
- **Housing:** considerable planning and infrastructure needs are expected to exert fiscal pressures as the nature of the private housing stock adjusts to an ageing population; public housing demand is expected to grow – in the context of reduced capital being provided by the Commonwealth under the CSHA (Commonwealth funding for NSW under the CSHA has declined in every year but one (2000-01) since the mid-1990s).
- **Transport:** Increased spending could be expected on: pedestrian facilities; safer roads, bypasses and interchanges; clearer road signage; transport assistance relating to the use of motor vehicles by the elderly, as well as public transport concessions; accessibility of public transport for less mobile passengers; changing demands for service routes to access more leisure activities, services and health needs; and changing demands on the times transport services operate and their frequency.
- **Education:** while lower student numbers will tend to decrease education expenses, it is clear that the trend to higher quality education (e.g. smaller class sizes) will continue to add to spending pressures.

²¹ That said, the identification of particular functional areas of government spending that have grown at faster rates than might be expected given growth in real incomes, the general price level and demographic considerations and the use of those past trends in projections will tend to capture the impact of some of these omissions.

6.1 Health

- *For any given age group, how are health care usage and prices likely to change over time? What are their key determinants?*

Population growth, technological advances and consumer expectations are important drivers of health costs. Other drivers of demand include:

- age;
- expanded age range for surgery because of improvements in surgical techniques and anaesthetics;
- growing capacity to treat complex conditions eg. cancer and HIV;
- pharmaceutical costs, reliance on pharmaceutical-based treatment modalities, and increased range and specialisation of pharmaceuticals;
- better technology and diagnosis; and
- legal liability.

Input price changes will be more reflective of industrial award agreements and general cost escalation for goods and services. The need for staff training to respond to the ageing, chronicity and complexity of health conditions of the population will be costly.

Whilst there will be global growth in health expenditure over time, it is likely that there will be a reduction for inpatient services relative to the growth in non-inpatient care and especially community support for the aged. This will reflect a need, and demand for, an increased investment in community care services.

- *How is increasing longevity likely to affect health and aged care costs?*

The relationship between age and utilisation of health services is an empirical relationship observable in all health systems. On average, an older person in NSW uses hospitals at 4 times the rate of a younger person. Like most other OECD nations, NSW faces a significant ageing effect for its population in the next 25 years. However, there are debates over the implications of ageing for the health system, and the relationship between ageing and other trends affecting utilisation.

In terms of hard data, there seems no doubt that an ageing population will severely impact on total public sector health spending.

- Average health expenditure Australia wide, per person, rises sharply in the older age groups. Average per person health expenditure in 2000-01 was \$5509 for 65-74 year olds, \$8895 for 75-84 year olds and \$15690 for people aged 85 and over, compared with \$1807 for persons aged less than 65 years²².
- There are expected increases in the number of separations and bed-days for the aged, as a result of treatment of multiple health conditions. In NSW, 34% of acute separations in

²² (Australia's Health 2004, AIHW).

public hospitals in 2003/04 were for persons aged 65 and over. The average length of stay was 4.8 days compared to the overall average of 3.4 days for those less than 65 years.

- It is estimated that, on any one day, some 51% of public hospital inpatients are over the age of 65 years. This usage, in addition to that of community-based services such as the Home and Community Care (HACC) program, community nursing, outpatients and day centres, reflects that NSW Health is, in effect, an aged care health service system.
- Public hospitals, rather than private hospitals, tend to wear the burden of treatment of more complex and costly conditions such as diabetes, dementia, dialysis and rehabilitation.

The shape of the health and community services systems will need to change to better manage demand. In particular, growth in community nursing and community care services will require greater emphasis. Personal costs borne by informal (unpaid or family) carers, costs of rehabilitation and extended care services would also be expected to increase.

There would also be an expected increase in the costs of disability services. In 1998, 54% of the total population of Australians aged 65 and over had a disability²³.

- ***To what extent are technological changes likely to moderate or accentuate the health care costs of ageing?***

Growth in utilisation rates are sometimes higher for older people than for the rest of the community. Advances in anaesthetics, less invasive surgical techniques and surgery generally, allow people to undergo surgery later in life. This suggests a “multiplier effect of ageing”.

Services for the aged will benefit with better equipment to bring about less lifestyle restrictions, greater comfort and higher mobility to clients.

Greater rates of disability as a result of an ageing population, coupled with greater community-based living arrangements will require an increased investment in the Program of Appliances for Disabled People (PADP), which although attracting a significant budget investment and increases over recent years, still struggles to meet current demand. Thus, the demand for equipment such as wheelchairs, communication devices, toileting, and showering aids will require a further increased level, and rate of, investment if NSW Health is to prevent avoidable admissions to (expensive) acute care services.

- ***How are morbidity (illness) and disability rates likely to change in Australia over the next 40 years?***

There is likely to be an increase in types of disability rates as the population gets older, especially for the aged 85 and over for conditions such as arthritis, hearing loss and dementia. There is also a likely increase in chronic conditions with all its associated costs of treatment.

²³ (Australia's Health 2004, AIHW).

- ***To what extent would lower future morbidity and disability rates affect age-specific health costs per person?***

Lower rates would be as a result of better prevention strategies being implemented currently to address risk factors. There would be a corresponding shift of expense from treatment to prevention and maintenance care, which would be evidenced in areas such as public health, education, primary and community care.

- ***Are health costs for the aged primarily associated with maintaining health or with the final stage of life?***

It would be a combination of both.

It is sometimes argued that longitudinal analyses demonstrate that costs are more closely associated with time from death, rather than age. On average, people who are in the last year of life consume health services by a factor of about 6 times those of the general population of the same age. Not surprisingly, the ratio is higher at younger ages when more aggressive attempts are made to preserve life.

It is important to recognise that as mortality rates decline and life expectancy advances, the current age-specific cost-weighted rates are likely to fall, especially for acute inpatient care. Although the last year of life consumes more health resources than at any other time in the lifespan, for the cohort of survivors with similar illness to those who died, the quantum of health expenditure is similar over time as the survivors grow older, consume more health resources over time and die later.

There is some evidence that with increased life expectancy, a concomitant increase occurs in years lived prior to the onset of chronic disease. In 1980, Fries²⁴ coined the term 'compression of morbidity' to explain how increasing years of life may not lead to a corresponding rise in years of poor health and may even reduce the period of time between failing morbidity and final death.

Regardless of length of life, some health problems occur almost inevitably if an individual reaches a particular age. Cataract, hormonal changes and orthopaedic degeneration are examples. However, it seems also true that other consequences of ageing may be less associated with a specific age and more with an individual's overall health status.

- ***To what extent are there interdependencies between different expenditure types that need to be taken into account when projecting future health care costs? For example, would increased expenditure on the PBS reduce the rate of growth of hospital care costs?***

Ageing effects may not be as significant as is sometimes predicted by analyses of age utilisation rates. One typical flaw is that the analyses do not include all health expenditure types, and that by focusing exclusively on acute services, the effects of ageing are overstated. Instead, ageing effects should be identified for various components of health care expenditure such as outpatients, rehabilitation, primary and community based services and emergency departments.

²⁴ Fries J (1980) Aging, Natural Death and the Compression of Morbidity New England Journal of Medicine 303: 130-135

6.2 Aged Care and Disabilities

- ***How are morbidity (illness) and disability rates likely to change in Australia over the next 40 years?***

There has been a discernible general trend increase in people with disabilities at younger ages. Improvements in procedures and technology have seen lives saved at early ages, but have also increased the numbers with disabilities. In addition, those with disabilities tend to be living longer as treatments improve. Both of these trends are likely to continue, increasing non-age related fiscal pressure.

- ***To what extent would lower future morbidity and disability rates affect age-specific health costs per person? To what extent would lower disability rates reduce the demand for high level institutional aged care?***

It is uncertain if rates of core activity restriction among older people will decrease over time. Current planning in Australia and other OECD countries (nearly all of which already have population profiles similar to that predicted for Australia in 30 years time) is based on the expectation that at any time for the population over 70, about 5-7% will be disabled and require institutional care; 5-7% will have major restrictions on mobility or another marker of core activity restriction; and 85% will be able to do most of what they want to do most of the time.

Ageing-in-place arrangements are supported by the jointly funded Commonwealth-State Home and Community Care (HACC) Program and through Commonwealth funded so called *packages* of care in the form of Community Aged Care Packages (CACPs) or through Extended Aged Care in the Home (EACH) packages. There is an ever-increasing call for ageing-in-place, with mentally active older people resisting moves to residential aged care and seeking community-based care.

- ***What are the fiscal implications for aged care expenditure of greater levels of 'at home' care.***

Chart 6.1 outlines the projected numbers of people with a moderate, severe or profound core activity restriction aged 65 and over for the next 40 years. These projections are based on ABS population projections for NSW (2001) and the ABS Survey of Disability, Ageing and Carers (1998).

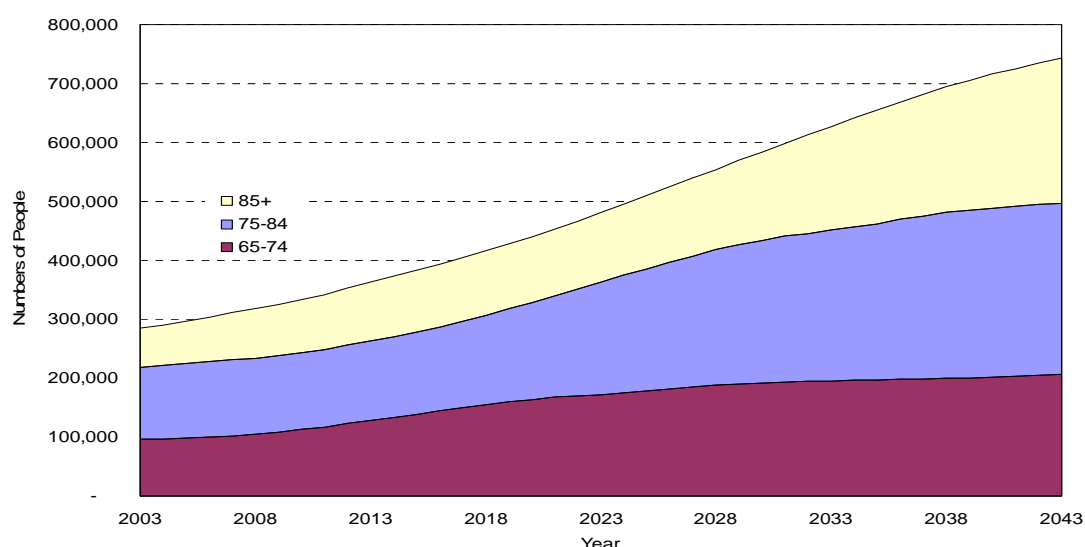
Chart 6.2 outlines projected HACC expenditure on people aged 65 and over for the next 40 years. The chart illustrates:

- The impact on projected expenditure of demographic change only (i.e. assuming the level and cost of HACC services per older person remains constant).
- The additional impact on projected expenditure of increases in the cost of providing HACC services. Increases in costs have been assumed to be 2% per annum.
- The impact on projected expenditure of an increase in demand for HACC services per older person of 1% per annum (for example, due to an increase in core activity restriction

among older people or a preference for in-home services over residential aged care). The 1% increase is an arbitrary amount and not based on evidence or research on future demand for HACC services.

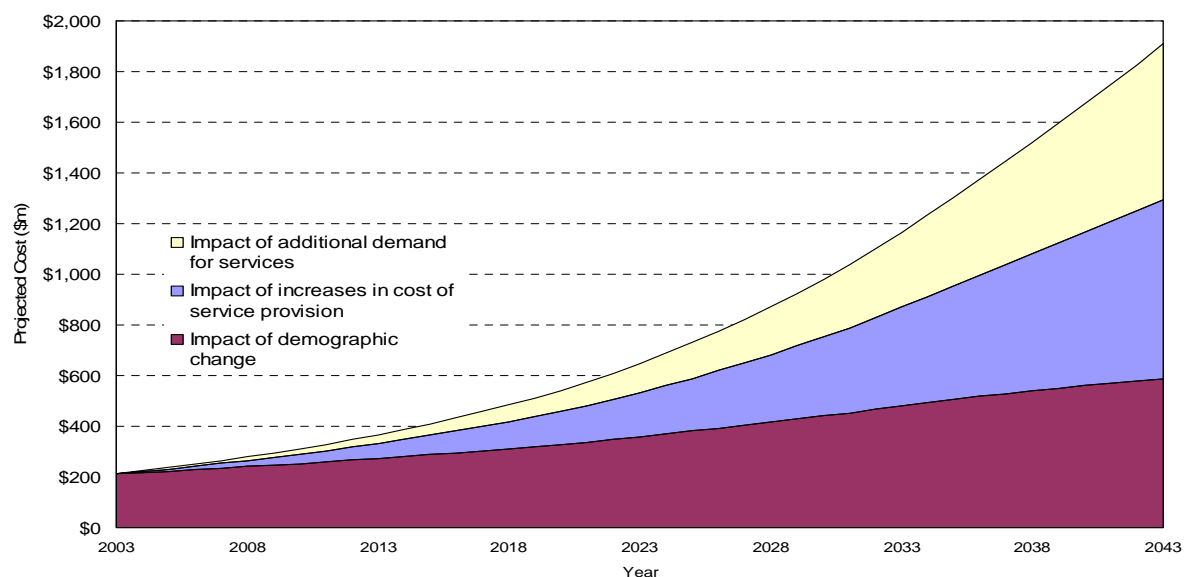
In these charts the population projections assume that mortality rates will decline over time, resulting in life expectancy at birth increasing by 5-7 years over the next 40 years. It is also assumed that the prevalence of core activity restrictions among older age groups is *constant*.

Chart 6.1: Projected numbers of older people with a moderate, severe or profound core activity restriction, 2003-2043



Source: DADHC

Chart 6.2: Impact of demographics, demand and costs of service provision on projected cost of HACC services for people aged 65 and over, 2003-2043



Source: DADHC

6.3 Housing

- *How will ageing affect future housing needs? Are there fiscal implications associated with such needs?*

Ageing of the population will impact demand for various types of housing and accommodation. The impact on the government will be largely in anticipating and planning for those changing needs as well as the provision of public housing.

6.3.1 Impact on private demand

In general terms, housing can either facilitate healthy ageing or be an impediment. In terms of the quality of life, key issues relating to housing include:

- its affordability;
- its suitability in terms of possible diminished mobility (including fall prevention and the ability to remain reasonably independent); and
- its location in terms of access to external factors such as transport, friends, family support networks, services and amenity.

The baby boomers and the generation Xers will move into the 50 years and over age group over the next 40 years and they are the most numerous generations ever to reach this age. Much of the Boomers and older GenX's current housing is detached dwellings located in the middle and outer areas of Sydney. There will be a demand for more housing choice in the middle and established outer parts of the metropolitan area.

- Their housing, and the land that goes with it, is likely to be too large to provide many of them with a good quality of life in retirement, including how much debt in the form of a continuing mortgage is attached to it. Boomers and Generation X are more likely to retire still owing money on a mortgage than previous generations. In 2001 59 percent of the Boomer age groups still had mortgages. Other factors that come into play are costs and difficulties with maintenance of house and yard, potential for falls with stairs and changes of levels.
- The opportunity to trade down, but stay in the same location will appeal to many boomers and generation Xers. Most people seek to remain in familiar neighbourhoods, close to family friends and facilities. There is evidence that the boomer generation is likely to be more attracted to 'trading down' to a smaller house (but still with 3 bedrooms) and smaller land (in order to keep a pet) than an apartment in middle age and young old age²⁵. Other options would include townhouses with a bedroom on the ground floor or single level semis. Flats are a demonstrated housing option for single older people, though this choice seems more likely to be avoided

²⁵ BIS Shrapnel Empty Nesters Study, 2001

until a person reaches 75 years of age or more and find they can no longer manage a detached dwelling on their own.

- A smaller proportion will make a major move or ‘sea-change’ away from their current local area to a non metropolitan location in NSW or relocate to another State.

In Australia about 3% of the age group 55 years and over currently live in retirement villages, the proportion rising with the age of the resident. Retirement villages have proven to provide a high level of satisfaction for residents, although this sector requires stringent consumer protection legislation to protect buyers from unscrupulous or incompetent operators.

- Even if this market share was only maintained, many more villages will be needed over the next 40 years to meet the demand that will come from the increase in the numbers in this age group.
- Access to suitable sites, especially to non-urban land, to achieve economies of scale where services are provided on site, is a concern for the retirement village industry that is appreciated by the planning system.
- Sites that offer opportunities for large scale lifestyle villages in the metropolitan area are relatively scarce.
- Transport for residents is a commonly cited council concern with villages/clusters in non – urban locations.

How will ageing trends affect the distribution of special purpose accommodation, housing and facilities for aged care, disability care and health care services?

Ideally new care facilities need to be provided where the ageing population will live over the next 40 years i.e. in the Sydney Region it will primarily be in the middle and outer suburbs. At present demand for new facilities in established areas is already increasing, a trend that is expected to accelerate over coming decades.

In recent years, there have been changes to Aged Care legislation that have resulted in different funding arrangements and increased building and service quality requirements for aged care facilities (nursing homes and hostels). This has led to a consequent need for redevelopment of existing residential care facilities and the development of new ones near where most people live.

- Under the Commonwealth’s Aged Care Reforms all residential care facilities must be accredited by 2008 in order to continue to receive subsidies. This has led to some smaller operators leaving the industry, and most continuing facilities have needed to add to their building as new standards require more space per person and limit the number of people to a room.
- While less emphasis is being placed on formal residential care as the solution for care needs, as people age, there will still need to be an increase in the number of places/facilities provided over the next 30-40 years.

6.3.2 *Impact on public demand*

There will be continuing demand for public and community housing and other types of housing assistance given the increasing numbers of older people in the NSW population and difficulties faced by low-income households in the private rental market.

- Projections undertaken by the Department of Housing for housing need and priority households show that numbers of low income older people (aged 65-79 years) on an aged pension, and low income frail aged people (80 years plus) in the rental market and in housing stress, will increase by 36% over the next 10 years from 47,000 people now to 64,000 in 2014.
- There will also be demand for assistance from older people who are homeless or in other insecure housing such as boarding houses or caravan parks. Currently there are around 16,000 older residents of caravan parks in NSW (2,000 of these frail aged) and less than 1,000 older residents of boarding houses. These forms of housing are often insecure, can make take up of support services difficult and may not adapt to changing needs as people age.
- In addition, of the estimated 26,700 homeless people in NSW around 6% are older (1,660 people). A further 8% are aged 55-64 years.

Continuing demand from older people has a number of implications for the Department of Housing as the main provider of direct housing assistance in NSW. The major form of assistance provided by the Department of Housing is subsidised long-term housing and community housing. At June 2003, the NSW Department of Housing directly managed 129,200 public housing dwellings, provided 12,700 dwellings through community housing providers and managed 4,500 dwellings on behalf of the Aboriginal Housing Office.

- There is a large population of older people already living in public housing. They represent 44,000 persons or 17% of the public housing population. Almost 30% of tenancies are headed by an older person. This represents a greater proportion of older people than in the population generally.
- Current dwelling stock is diverse in terms of type and condition of housing and much of it was built to respond to the needs of families rather than smaller aged households. The Department has a range of strategies in place to improve the suitability of its housing stock for older
- Older indigenous people and older people from culturally and linguistically diverse backgrounds have specific housing and support needs.
- Increasing numbers of older people with dementia will have impacts on the Department as a service provider. For example public contact staff will require additional training to assist them identify clients with dementia, make appropriate referrals and work with support service providers to develop appropriate housing options.

Meeting these expected growing demands must be put in the context of declining levels of capital funding available through the Commonwealth State Housing Agreement (CSHA). Nationally, expenditure on CSHA assistance declined by approximately 20.8% between 1992-93 and 2001-2002. Commonwealth funding for NSW under the CSHA has declined in every year but one (2000-01) since the mid-1990s.

6.4 Transport

- *Will ageing have any effect on future transport costs?*

The following combines information supplied by the various NSW Government agencies and authorities with responsibility for transport. It is clear from the information presented that the ageing of the population will not only change transport needs, but create considerable fiscal pressures for the NSW government.

6.4.1 Ageing and transport needs

Seniors need access to transportation that allows them to move freely around their communities. There is a need for transportation options that preserve dignity, maximise independence, and provide access to the full range of activities that contribute to quality of life.

- Limited transport choices can lead to isolation of older persons and a consequent deterioration in both physical and mental health. Research for the NSW Greater Metropolitan Region shows that 49 percent of those aged over 65 without a drivers licence did not make a trip on an average day in 2002²⁶.
- The age of seniors does not necessarily impact on transport needs - the real issue is the level of mobility and disability.

Over time older persons have remained the most likely to make walking trips, however, their rate of private vehicle use has grown at the expense of both public transport and walking. Between 1991-2001 the proportion of public transport trips taken by those over 60 years has fallen. This reflects the increasing proportion of older women who hold a driver's license, the growth in car ownership and the increased wealth and mobility of older age groups²⁷.

- The most significant growth in the number of trips taken between 1999 and 2002 has been in the 50 – 60 year age group, primarily related to an increase in private vehicle transport.
- Across the board license holding has grown along with car ownership, especially for young women. As this group approaches old age, they are likely to have higher mobility rates than previous generations of older Australians.
- Given the projected changes in the demographic structure of the population these travel trends are likely to be reinforced into the future as the proportion of the population in retirement years grow.²⁸
- The greater presence of older drivers on the roads may lead to demands for more older-person friendly driving conditions such as lower speed zones.

²⁶ Household Travel Survey Summary Report, Transport Data Centre DIPNR, July 2003

²⁷ Household Travel Survey Summary Report, Transport Data Centre DIPNR, July 2003

²⁸ 2002 Household Survey: Executive Summary, 2004, Transport Data Centre DIPNR

For public transport the implication of an ageing population is that the pattern of the demand is likely to change. There will be less journey-to-work trips and more trips related to community activities, shopping and health-related journeys. There will be a shift from peak hour travel to more off- or inter-peak period trips as less people will travel to and from work.

There will also be greater demands placed on one on one personal and assisted transport options for older seniors, particularly those with reduced mobility to ensure they can access shops, health care services and social activities. At present these are generally organised at local government level and rely to a large extent on volunteer support.

A growing area that may provide a solution for larger numbers living in low density areas is Group transport – (Community Transport). This provides assisted trips for: shopping community lunches, library visits, and day outings for the housebound and active aged. In NSW there are two community transport programs in operation:

- HACC – Community Transport Sub-program; and
- NSW Community Transport Program.

6.4.2 *Fiscal implications*

Across the range of transport options, it would appear that fiscal pressures will emerge due to the ageing of the population. In the NSW Treasury analysis, only the impact of an ageing population on public bus transport concessions was explicitly included. As is clear from responses from agencies and authorities below, there are considerable other fiscal pressures which are likely to emerge²⁹. Thus NSW Treasury analysis would understate the transport spending pressures the State will face.

Growing pressures on spending for pedestrian facilities is likely. Such expenditures would include: pedestrian-actuated and adaptive traffic signal systems; overbridges; secure path of travel; appropriate lighting; and appropriate gradients/ramps.

For road systems there will be a need for: improved or higher level of service for road corridors and networks; safer roads, bypasses and interchanges; clearer road signage; and lower speed limits in highly urbanized and residential zones.

In addition to these pressures, there will be an increase in transport assistance relating to the use of motor vehicles by the elderly. This is currently delivered through subsidisation of licenses, registration, weight tax and to a limited extent the charges for heavy vehicles. The RTA provides community service obligations (concessions) in the form of rebates and refunds for these license fees and charges. Under the NSW subsidy scheme, the elderly do not pay these license fees and charges.

- Concession cardholders are currently a considerable portion of road/vehicle users. In 2003/04, about 20% of license holders were receiving license concessions and about 21% of vehicle registrations received concessions. About 50% of those receiving

²⁹ There are also likely to be health and environmental impacts of changing transport demands. For example, an ageing population will likely lead to a higher proportion of the population vulnerable to transport-related health impacts such as air pollution and also vulnerable to transport-related accidents.

license and registration concessions were aged 65 years and over and the amount of their concessions constituted 52% of total rebates and refunds.

- Total motor vehicle concessions reached \$153.2 million in 2003/04, 52% or \$79.3 million of which were granted to age pensioners. Based on reasonable assumptions the RTA projects that these age pensioner concessions will rise to \$107 million in 2011/12, \$168 million in 2021/22, \$272 million in 2031/32 and \$447 million in 2041/42.

For public transport, spending pressures will include accessibility³⁰ of buses, trains and ferries for less mobile passengers; safety and security of public transport for older persons; changing demands for service routes to access more leisure activities, services and health needs; and changing demands on the times transport services operate and their frequency.

There may be a call for more services for seniors with a disability and frail older people who are unable to use public transport. This will require both greater funding for these services and the development of new user pays service sectors. At present there is considerable reliance on volunteer services. The impact of ageing on volunteering is addressed earlier in this submission.

The Government has a three-year, \$6.6 million plan to improve country and regional transport for disadvantaged sectors such as the aged, the young, the disabled and people living in remote areas. The program will help bring about more tailored transport services that are responsive and flexible to the needs of the transport disadvantaged.

The Ministry of Transport administers three grant schemes that cater for the needs of the transport disadvantaged, including the aged, being (1) Community Transport Program, (2) Area Assistance Scheme, (3) Home and Community Care (part-funded by the Commonwealth).

- Increasing number of aged persons will create greater demand for services provided under these schemes, correspondingly increasing their costs. The Community Transport Program, for instance, has risen from \$2.15 million in 2000-01 to \$2.53 million in 2001-02, an average increase of over 8% per annum. It is reasonable to assume that there will be continual upward pressure on the cost of providing these schemes in their current form, as the population ages.
- An ageing population will increase the demand for subsidies under the Taxi Transport Subsidy Scheme (TTSS). In 2002-03, TTSS expenditure amounted to \$14.4 million. The scheme is experiencing, on average, a real growth rate (less the impact of taxi fare rises) of almost 5% per annum. This trend is forecast to continue as the number of participants and their frequency of use increases.
- In 2003-04, the NSW Government spent \$234 million in public transport concessions funding for pensioners (including non-aged pensioners). Funding for these concessions has increased by 0.5 percent per annum in real terms over the last 2 years. The doubling of the over-65 age group as a proportion of the total NSW population over the next 40 years indicates that the funding growth rate will accelerate as the average age of the population continues to rise.

³⁰ Some accessibility costs will be incurred irrespective of an ageing population, in particular the State's legal obligations under the Disability Discrimination Act.

6.5 Education

- *What effects will lower population shares of young people have on the costs of education as a proportion of Gross Domestic Product?*

Population projections suggest that the total number of school students will decline. On its own this could be expected to see a decline in private and public expenditure on education and training. It should be noted, however, that public education and training has continued to be a major priority area for government, reflective of community expectations. Major enhancements to education have more than offset any reductions in costs. The average recurrent funding per public school student in New South Wales in 2003/04 is \$7,965. This compares with \$5,035 in 1994/95, an increase of over 58 percent or an annual average increase of 5.2 percent. The following relates to public education only.

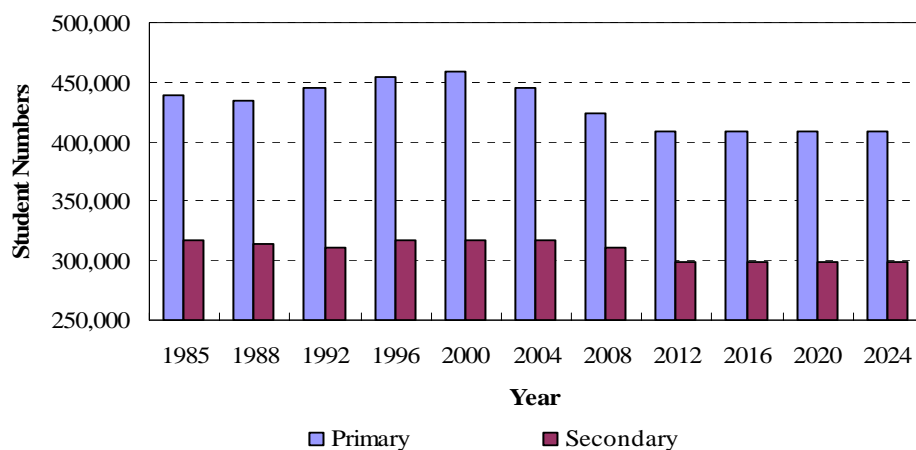
6.5.1 Student numbers

For the period 1999 to 2004, student enrolments in Government schools have declined by 17,710. This followed a period of growth where combined primary and secondary student numbers had increased by almost 8,000 students between 1987 and 1999.

It is projected that there will be a continuing decline in student numbers of some 54,074 for the period 2004 through to 2012. It should be noted that the projections are based on the following assumptions and any changes to these assumptions would affect the outcomes:

- 2004-2012 enrolments are based on Kindergarten enrolment projections based on ABS birth rates and ABS projections;
- Grade progression ratios assumes continuation of numbers at current retention rates;
- The Department's projections are based on unchanged assumptions post 2011.

Chart 6.6: Student enrolments and projections - New South Wales



Source: NSW Department of Education and Training

A number of significant factors influence Government school student enrolments projections. These factors include:

- Changes in interstate migration patterns which have resulted in increased mobility of families;
- Changes to birth rate patterns;
- Changes to Commonwealth immigration policies; and
- The abolition by the Commonwealth of its New Schools Policy in 1999, which has resulted in a proliferation of non-government schools.

6.5.2 *Teacher numbers*

Student numbers are a major cost driver for the Department as they directly impact teacher and School Administrative and Support Staff (SASS) numbers in the schools. With a decline in student numbers, all things being equal, there should be a corresponding decrease in teacher numbers and funding requirements. However, declines in student numbers do not necessarily result in comparable declines in teacher numbers (a reduction of one student in a class will not necessarily lead to one less teacher). Caution should thus be exercised in extrapolating teacher reductions based on classroom staffing ratios.

6.5.3 *Other cost drivers*

Given past and prospective trends to improve the quality of public education, it is clearly not sufficient to model public education spending on the basis of student/teacher numbers. A not exhaustive list of recent government enhancements that have raised costs per student includes: class size reduction for Kindergarten to Year 2; significantly increasing technology/computers in schools; literacy and numeracy programs; additional teachers in key learning areas; a students at risk program; higher special education funding including the integration of students with disabilities; and programs for students with learning difficulties.

6.6 **Law and Order**

In the NSW Treasury analysis, the impact of ageing on law and order expenditure is solely related to crime. The lower numbers of youth and young adult population (who have higher offender, court appearance and gaol rates) acts to reduce spending in these areas. While supportive of such analysis, NSW Police suggest that considerable police resources are dedicated to Community Support, including response to calls for assistance (both crime & non-crime), crime prevention and events/emergencies management. The aged are considered to be high users of such services. Thus the Treasury analysis may understate the impact on law and order spending from ageing of the population.