Planning for the future:
Structural change in New Zealand’s population, labour force, and productivity

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Purpose
The paper gives an overview of the demographic projections at the heart of fiscal sustainability. This includes projections of the population and labour force. The paper also discusses some perspectives on growth and productivity in the context of ageing and fiscal sustainability.

Projections
Statistics NZ produces demographic projections, which give an indication of the future size and structure of the population. For an in-depth discussion of the role, methods, assumptions, and results from the projections, see Bascand (2012, August).

The future is inherently uncertain. To help convey that uncertainty, Statistics NZ now derives stochastic projections of the New Zealand population and labour force change (Statistics NZ, nd, a, b). These are produced by creating 2,000 simulations (different population projections), where each simulation can effectively be considered as likely or unlikely as each other.

The simulations give a probability distribution (summarised by percentiles) for the population size (and other characteristics), although these probability intervals are themselves uncertain. The 50th percentile (or median) indicates a 50 percent chance that the actual result will be lower, and a 50 percent chance that the actual result will be higher, than this percentile. The 25th percentile indicates a 25 percent chance that the actual result will be lower, and a 75 percent chance that the actual result will be higher, than this percentile.

Traditionally, most demographic projections have been deterministic. They have essentially been scenarios based on specific stated assumptions about the components of change (fertility, mortality, migration). Multiple scenarios are produced to indicate uncertainty, but the uncertainty was never quantified.

Regardless of methodology, users of the projections should always make their own judgement as to which projections are most suitable for their purposes. At the time of releasing each set of projections, Statistics NZ considers the mid-range projection (ie median stochastic projection) to be a suitable indication of future population changes. However, the future will inevitably be lower or higher than the mid-range projection, which is why Statistics NZ encourages users to consider the uncertainty.

Moreover, birth, death, and migration patterns do change, often unpredictably, as does the resulting population. Statistics NZ updates its projections every two to three years to incorporate these changes, as well as changes in policy that can affect population. Updated projections also incorporate refinements to methods. Users of projections should therefore use the latest projections as the best indication of future change.

Projection methods
The ‘cohort component’ method is used to derive the population projections, regardless of whether the projections are stochastic or deterministic. In this method:

- new birth cohorts are added to the population by applying the specified fertility assumptions to the female population of childbearing age
- the population at the start of each year is projected forward by calculating the effect of deaths and migration within each age-sex group (or cohort) according to the specified mortality and migration assumptions.

The method is international best practice, with its main features being:

- suitability for both short-term and long-term projections
- internal consistency of age-sex groups with totals
- changes in age structure inherently affect projected births and deaths.

The method also recognises that fundamentally only three factors can change the population: births (fertility), deaths (mortality), and migration. Although other social, economic, political, and
environmental factors can influence those demographic factors, it is sufficient to model the demographic factors when projecting the population. The wider factors are implicitly accounted for, in as much as they have influenced past trends in births, deaths, and migration.

**Population**

New Zealand’s population has grown steadily over the last 150 years, with the rare exception (such as the late 1970s). In 2012, there were 4.4 million people usually living in New Zealand. It is projected to grow further, eclipsing 5 million in the mid-2020s and reaching about 6 million in 2061.

New Zealand had average annual population growth of 1.1 percent between 1991 and 2012, high by Organisation of Economic Co-operation and Development (OECD) standards. However, population growth is likely to slow as the age structure of our population changes. Proportionately more people at older ages means more deaths and lower rates of natural increase (births minus deaths).

For New Zealand to reach a population of 7 million or more by 2061, we would need sustained fertility and/or migration levels significantly higher than those that we have experienced in recent decades.

**Figure 1**

**New Zealand population 1861–2061**

Source: Statistics New Zealand

**Changing age structure**

The number of children (aged under 15) might increase slightly over the coming decades, but as a proportion of the total population they are expected to drift lower, to about 1 in 6 in 2061. This compares with 1 in 5 of the population in 2012, and 1 in 3 in the early 1960s.

The broad ‘working-ages’, 15–64 years, are also likely to be a lower proportion of the population in future, as the baby boomers move out of this age group. The projected proportion aged 15–64 in 2061 is similar to that in 1961 (58 percent), but lower than the current proportion (66 percent). The younger (15–39) and older (40–64) segments of the population will be roughly equal in 2061. In 1961, the younger segment outnumbered the older segment by a ratio of 4 to 3.

The 65+ group is projected to gradually increase its share of the population. By 2061, between 22 and 30 percent of the population will be aged 65+.

Demographic transition theory underlies these significant changes in age structure. The demographic transition refers to the shift from relatively high fertility rates and high mortality rates to, first, relatively low mortality rates, and then to relatively low fertility rates.
Population ageing refers to the gradual transformation of the age structure and is intrinsically linked with the demographic transition. Both the transition and ageing has occurred, or is occurring, in other countries as well – often at a much faster pace than in New Zealand (Dunstan and Thomson, 2006).

New Zealand’s age structure is becoming increasingly top-heavy. The median age was 29 years in 1951, 37 years in 2011–12, and is projected to increase to 41 years in 2036 and 44 years in 2061.

Another feature is the movement of the large birth cohorts of the 1950s and 1960s (including the baby boomers) through the age structure. Although there is no universally agreed definition, the baby boomers were aged roughly 46–65 years in 2011.

**Figure 2**

![New Zealand age structure, mid-range projection 1951–2061](image)
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Source: Statistics New Zealand
Growth in the older population

The number of people aged 65+ has doubled since 1980, and passed 600,000 in 2012. The number is likely to double again by 2036. Projections indicate it is highly likely\(^1\) that the 65+ population will be between 1.18 million and 1.25 million in 2036, and 1.44 million and 1.66 million in 2061.

Uncertainty about the 65+ population comes largely from uncertainty in future mortality, even though there has been a persistent long-term downward trend in death rates. Uncertainty in future fertility does not affect the numbers of 65+ until the 2070s, while uncertainty in future migration plays a minor role as the largest migration flows occur at ages under 40 years. This suggests that the population aged 65+ and 85+ can be projected with some confidence, although the uncertainty does increase the further out we project.

The older population is also getting older. By 2061, about 1 in 4 people aged 65+ will be 85+, compared with 1 in 8 in 2012. Projections indicate an 85+ population of 180,000–210,000 in 2036, and 290,000–430,000 in 2061, compared with 76,000 in 2012.

\(^1\) The range indicated by the 5th and 95th percentiles. There is an estimated 90 percent chance that the actual population will be in this range.
The largest growth in the 65+ population will occur between 2011 and 2036 as the baby boomers move into the 65+ age group. The largest growth in the 85+ population will occur after 2031 as the baby boomers move into the 85+ age group.

Smaller family sizes

Population ageing reflects the transition to lower birth rates and lower death rates. In New Zealand, this has involved a gradual transformation of the age structure, beginning in the 19th century and continuing into the 21st century. The main effects of population ageing have, until now, been experienced among those under 65 years of age.

The cohort total fertility rate (TFR) indicates a progressive decline in completed family size. Women born in the early 1970s averaged 2.2 births each, compared with 2.5 for those born in the early 1950s, and 3.5 for those born in the early 1930s.
Census data also indicate progressive declines in completed family size and progressive increases in childlessness (across all major ethnic groups):

- Women aged 45–49 years had averaged 3.3, 2.5, and 2.3 births during their lifetime as at the 1981, 1996, and 2006 censuses, respectively.
- The proportion of women aged 45–49 years who were childless was 9, 10, and 13 percent at the 1981, 1996, and 2006 censuses, respectively.

Internationally, TFRs are generally declining. New Zealand’s period TFR has generally fluctuated within the range 1.9–2.1 births per woman since the late 1970s. Among OECD countries, New Zealand’s TFR has been in the top quartile throughout the 1990s and 2000s.

Barring a major change in childbearing norms, future fertility levels are unlikely to be significantly higher than they are today, even though the timing of births – the age at which women have birth and the spacing of births – may change.

**Increasing longevity**

Sustained increases in longevity are also causing population ageing in countries like New Zealand. The sustained increases have been driven by a range of factors including advances in public health and hygiene, and more recently by reduced rates of smoking. Internationally, death rates continue to generally decline and life expectancy is generally increasing (at all ages). New Zealand’s life expectancy is one of the highest among the OECD countries, ranking in the top half in the 1990s and 2000s.
In terms of future life expectancy, the New Zealand assumptions are broadly consistent with those in other countries. However, there is no consensus among demographers, epidemiologists, or other researchers as to the levels of future life expectancy at birth and other ages, which highlights future uncertainty.

In recent Statistics NZ projections, future life expectancy is driven by the trends in underlying death rates at each age. Further reductions in death rates, and increases in life expectancy, are therefore assumed. Because the death rates are now low at ages under 60 years, the resulting increase in future life expectancy is likely to be less than experienced historically. This could change, up or down, if future reductions in death rates occur at different paces at different ages than assumed.
Volatile arrivals and departures

New Zealand’s migration balance is volatile, with periods of net gains interspersed with periods of net losses.

Net migration (arrivals minus departures) has contributed about one-fifth of New Zealand’s population growth since 1970. Net migration has, however, contributed more at different times. For example, net migration contributed roughly half of New Zealand’s population growth between 2001 and 2006.

Net migration also has a significant impact on population composition, with departures exceeding arrivals for some age groups, and arrivals exceeding departures for other age groups.

Net migration is likely to make an even more important contribution in future relative to natural increase, because the ageing population will lead to a lower rate of natural increase (gap between births and deaths).
Ethnic populations growing at different rates

All the major broad (and overlapping) ethnic group populations are likely to grow in future. However, the Asian, Pacific, and Māori ethnic populations are likely to grow faster than average and, as a result, increase their share of New Zealand’s total population.

Figure 13

Major ethnic group populations, mid-range projection
2006 and 2026

The different growth rates reflect different age structures, different fertility levels, and different migration patterns.

- Māori and Pacific population growth is driven by relatively high fertility rates combined with a young age structure, which gives built-in momentum for future growth.
- Asian population growth is driven by migration, which accounts for three-fifths of projected growth between 2006 and 2026.
- European (including ‘New Zealander’) population growth is projected to be much lower because of its older age structure.

About 1 percent of New Zealand’s population identifies with ethnicities outside of these broad ethnic groups, namely Middle Eastern/Latin American/African ethnicities.
Changing ethnic mix at different ages
The Māori, Pacific, and Asian ethnic groups will all increase their share of the New Zealand population in all age groups.

The Māori, Pacific, and (to a lesser extent) Asian populations have younger age structures than the ‘European or Other (including New Zealander)’ population. As a result, an increasing share of young entrants into the labour force will have Māori, Pacific, and Asian ethnicities.

The different ethnic make-up of the labour force potentially raises issues around different cultural needs (such as language), training, and recruitment.

About 40 percent of births in 2010–12 had a Māori or Pacific ethnicity. Hence, there is built-in momentum for these ethnic groups to increase their share of New Zealand’s population. About 52 percent of births in 2010–12 had a Māori or Pacific or Asian ethnicity.

Figure 14

Subnational differentials in ageing
All areas of New Zealand will experience population ageing, which will be evident by increasing proportions of the population at older ages. However, there will be considerable variation between areas, reflecting differences in current age structure, fertility patterns, and migration patterns.

Currently, the districts of Kapiti Coast, Thames-Coromandel, Horowhenua, Waitaki, and Waimate have the highest proportions of populations aged 65+ (22–25 percent). By 2031, these districts are likely to have over 30 percent of their populations aged 65+, as will several other districts across the country.
Labour force

Slower growth in the labour force is likely in future, as the number of 'new entrants' (people entering the labour force at all ages) exceeds exits (people leaving the labour force) by a narrowing margin. The relatively small increase in the decade ending 1991, which included a decline in the size of the labour force between 1986 and 1991, largely reflects the recession and labour market distress of the late 1980s.

The labour force is projected to grow by less than 0.7 percent per year between 2012 and 2061, compared with average growth of 1.6 percent per year between 1991 and 2012.
Downward pressure on overall labour force participation

Overall, 68 percent of adults (aged 15+) were in the labour force in 2012. The projections indicate that this proportion may fall in the longer term, despite the assumptions of static or increasing labour force participation rates (LFPRs) at most ages. This apparent contradiction is caused by the changing age structure of the population, with more people at the oldest ages where LFPRs are at their lowest.

As a corollary, the proportion of the population in the labour force (that is, those who are 'economically active') will decline, unless moderated by further increases in labour force participation.

New Zealand labour force participation rates high and rising

New Zealand's LFPRs are high by OECD standards, especially among young adults (under 25) and older working ages (50+), for both men and women. Our female participation rates in the main childbearing ages (25–44) are a little lower than the OECD average, reflecting in part the
higher fertility rates in New Zealand. However, the female rates at other ages are higher than average.

LFPRs are expected to continue to rise, notably for males aged 55+ years and females aged 50+ years, although there is considerable uncertainty around the magnitude of any change (Statistics NZ, nd, a). Smaller increases in LFPRs for females in the main childbearing ages are also possible, consistent with further declines in completed family size and increases in childlessness.

**Figure 18**

**Labour force participation rates among 34 OECD countries 2000–2011**

Among the broad 65+ age group, LFPRs continue to rise strongly in New Zealand. This reflects:

- the raising of the age of eligibility for national superannuation during the 1990s, which created a financial incentive for people to stay in the workforce longer
- greater flexibility in the age of retirement (with no compulsory age of retirement) compared with other countries
- changing attitudes to retirement (eg increasing acceptance among employers and employees of older workers)
- increasing life expectancy and well-being at the older ages (eg a longer life-span to support and remain active; better health, meaning workers are less likely to leave the workforce for medical reasons).

Among those aged 65+, 1 in 16 were in the labour force in 1991. It is 1 in 5 in 2012, and is projected to increase to 1 in 3 by the mid-2020s.

As a result, by 2036, it is expected that between 9 and 15 percent of the labour force will be aged 65+, compared with 3 percent in 2006. By 2061, it is expected that between 10 and 18 percent of the labour force will be aged 65+.
Productivity

Maintaining living standards while providing for an ageing population, with fewer new workers entering the labour market, could be achieved by increasing labour force participation, population, or productivity. All three factors are important for understanding growth in GDP per capita.

Figure 19

Components of GDP per capita

Productivity growth is critical to long-term growth in material living standards and meeting the fiscal challenges of ageing. It means that more value is added in production, and therefore more income is available to be distributed. For this reason, there has been growing interest in gaining a better understanding of New Zealand’s productivity performance, both within industries and relative to other countries.

Historical context

The strength of the relationship between living standards and productivity over the long-term was exemplified by Nobel Laureate Paul Krugman: “productivity isn't everything, but in the long run it is almost everything” (Krugman, 1998). This is also embedded in the long-term fiscal model, which assumes total economy labour productivity growth of 1.5 percent per year drives real wage growth.

This growth rate is less than that shown in New Zealand’s official productivity statistics – since 1978, measured sector labour productivity has averaged 1.9 percent per year\(^2\). Total economy

\(^2\) The measured sector covers approximately 80 percent of the economy and excludes the government administration and defence, health, education, and ownership of occupied dwellings industries. These figures are based on the last ANZSIC96 release, which provides a longer time series.
labour productivity, as measured by the OECD, grew by 1.4 percent per year from 1990 to 2010, reflecting slower growth in non-measured industries as well as differences in methodology. Both the Statistics NZ and OECD labour productivity series show a slowdown in labour productivity growth over time. Similar slowdowns in labour productivity have been observed internationally, especially in Australia and the United States.

Labour productivity (real GDP per hour worked) and real GDP per person has grown at similar rates over the long-term in New Zealand. This is despite major structural change that occurred throughout the 1980s, the recessions of the early 1990s, the Asian financial crisis, and of course the recent global financial crisis, which materially affected factor inputs and cyclical output growth.

**Figure 20**

![GDP per person and labour productivity](chart)

**Drivers of productivity**

Output growth can come from three main sources: capital input growth, labour input growth, or multifactor productivity. During the early 1980s, infrastructure investment (through Think Big projects) led to strong growth in capital inputs and drove output growth. Declines in labour utilisation towards the end of the 1980s offset much of the capital inputs contribution to output. From 1990 to 2000, multifactor productivity was the main contributor to output growth, but became less influential during the early 2000s boom.

Labour productivity growth is a result of multifactor productivity and capital per worker. Since 1978, multifactor productivity growth has averaged 0.9 percent for the measured sector, about half of labour productivity growth. Total economy multifactor productivity, as measured by the OECD, grew by 0.6 percent per year from 1985 to 2010.
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Figure 21

Contribution to measured sector output growth
Average annual percentage change across cycles, 1978–2011

The changing economy

As with other developed economies, New Zealand’s economy has become more service orientated. This is reflected in the changing share of measured sector GDP due to each industry type. The contribution of primary industries to measured sector GDP was 12.3 percent in 1972, but declined to 9.0 percent by 2010. This is still a much greater share than the primary sector has in the USA and the UK (Sasaki, 2007). Goods-producing industries’ contribution to GDP also declined over this series, from 40.8 percent to 26.8 percent. Service industries were the dominant broad industry type throughout the period, accounting for 46.9 percent of GDP in 1972 and 64.3 percent in 2010.

Figure 22

Contributions to GDP by sector
1972–2010

Economists suggest that productivity will differ between broad industry types. Service industries in particular are likely to have lower labour productivity growth rates as they are likely to be
subject to ‘Baumol’s cost disease’ (Baumol, 1967). Even when the amount of inputs for a given set of outputs cannot be reduced (for example, a brass band requires the same number of musicians and instruments to produce the same piece of music today as it did at the start of the 1900s) wages need to increase in line with general wages to attract new labour to the industry. In this case, additional costs unrelated to productivity increases are incurred. Over the long-term, differences in productivity growth between sectors shift the structure of the economy towards service industries (Baumol, 1967).

However, official productivity statistics do not necessarily reflect this traditional economic view. Measured service industries have driven New Zealand’s labour productivity, especially since 2000. Slower growth in goods-producing industries productivity has offset this, while primary industry productivity has been high but volatile.

Figure 23

![Multifactor productivity](image)

Even with this strong growth, the contributions of service industries on the wider economy, however, may be understated. This is because the output of service industries can be difficult to measure, leading to underestimates of actual output growth (Stiglitz et al, 2009). Many services, especially arts and culture, provide social benefits that may not be captured in the output measure. Benefits may include social connectedness, cultural, identity, health, and well-being (Ministry of Social Development, 2009). In addition, services may play a key role in intermediate demand rather than final demand, leading to positive spillovers for productivity throughout the wider economy (Pugno, 2005).

If services do produce intermediate demand, this may reverse the implication from Baumol’s model that unbalanced growth between sectors leads to declining macroeconomic growth (Oulton, 2001). Outsourcing to firms in the business services industry, for example, has been observed internationally and has also likely had an impact in New Zealand. According to Ng (2007), the growth in outsourcing by the finance and insurance industry has benefited New Zealand’s business services industry through:

- the demand for the development of banking application software
- processing and settlement of payments services
- finance and accounting services.

Non-market sector productivity

Measuring productivity as the economy continues to change is a challenge that needs to be tackled if we are to address the impacts of ageing on the economy. Determining the contribution of non-market services in particular will be important, not only for measuring total economy productivity growth and tracking the economy as it changes, but also to inform the future.
The long-term fiscal model assumes multifactor productivity growth of 0.3 percent per year for non-market services. While this reflects some experience of non-market services internationally, information on the productivity growth in New Zealand is still being developed. New benchmarks for the measurement of health care and social assistance, and education and training GDP are soon to be incorporated into New Zealand’s national accounts, with productivity estimates for these industries to follow in 2013.

Previous analysis suggests that labour productivity in non-measured sector industries, which are largely non-market based, has grown slower than the average measured sector industry. As shown in the table below, non-measured sector industries grew at an annual average rate of 0.3 percent per year from 1996 to 2011 compared with 1.4 percent for the measured sector (Warmke and Janssen, 2012).

Multifactor productivity will, however, likely grow at a lower rate, as all measured industries have shown capital deepening over time. New chain volume benchmarks, and alternative labour volume data, may well alter the productivity story for these industries. This estimate also includes central and local government administration and defence. The output for this industry is not measured independently from its inputs, which means the growth rate is biased towards zero growth.

Table 1

Average annual labour productivity growth: 1996–2011

<table>
<thead>
<tr>
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<th></th>
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<td>Australia</td>
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<tr>
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<td>2.0</td>
<td>1.4</td>
<td>0.3</td>
<td>0.3</td>
</tr>
</tbody>
</table>

1. Non-measured sector includes central and local government administration and defence, health, and education.

International estimates of public sector productivity are sparse. The Office for National Statistics provides the main source of information in this area to date.

Focusing solely on publicly provided services, but not accounting for intermediate consumption, shows steady growth in the United Kingdom public sector labour productivity from 2000 to 2008 (Jurd, 2011).
However, the labour productivity story is markedly different when measuring productivity in the equivalent non-measured sector industries of government administration, health, and education (thereby including some market based activity) and accounting for intermediate resource use in production. In this, labour productivity has shown minimal change since 2000, aside from some minor fluctuations.

This industry level value-added based approach to measuring labour productivity is consistent with that adopted by Statistics NZ.

**Productivity and ageing: An intertwined relationship?**

While productivity growth is required for improving living standards, it is often assumed that the productivity change needed to sustain well-being is unaffected by demographic change. But what if ageing itself impacts productivity growth?

An increase in the proportion of older workers may benefit productivity simply because an older workforce is more experienced.
Productivity might increase with age, or a decline in cognitive ability may be offset by other characteristics of the worker. Davey (2007) summarises the attitudes towards older workers in New Zealand. Older workers are likely to be more experienced, have more institutional knowledge, and be seen to be as more reliable, loyal, and committed. However, older workers are also perceived to have problems with technology and adaptability, be less flexible and more resistant to change, be more expensive to employ, and be lacking ambition, innovation, and creativity.

The possibility for diminishing returns, however, needs to be considered as cognitive abilities decline with age (Skirbekk, 2003), and older workers may not adapt to change as quickly (Davey, 2007). Skirbekk’s (2003) summary of the productivity–age relationship at the individual level concludes that “the evidence suggests that productivity tends to follow an inverted U-shaped profile, where significant decreases take place from around 50 years of age”. Although older workers have more experience, they learn at a slower pace, have reductions in their memory and reasoning abilities, and are likely to have difficulty adjusting to new ways of working.

Declines in productivity with age are often observed even after accounting for a range of other factors that may affect the age–productivity relationship (Skirbekk, 2003). While a number of empirical studies suggest that productivity is declining with age, the point at which the age effect occurs is contentious.

Evidence on the age–productivity profile in New Zealand is minimal. Tipper (2012) shows a slight but insignificant increase in labour productivity for older workers relative to middle-aged workers. Higher proportions of younger workers in the workforce are related to lower levels of labour productivity, while higher proportions of middle-aged and older workers are associated with higher labour productivity. Bell, Gardiner, and Rodway (2012) demonstrated that an ageing labour force resulted in a decline in economy-wide labour productivity.

Figure 26

Labour productivity and age group structure

The changing age composition of the labour market, and ageing in general, poses a number of challenges for labour market policy. Age-related labour market policy tends to focus on participation rather than productivity (OECD 2006, Ministry of Social Development 2011), with productivity seen more as a general policy instrument to meet the fiscal challenges of ageing and to compensate for the increasing dependency ratio.

If there are differences in productivity and wages across age groups, then there may be trade-offs between productivity and participation policies: increasing labour market participation for a given age group may not lead to productivity gains if the average labour productivity for that group is lower than that of others. However, the (pecuniary and non-pecuniary) flow on effects of unemployment and productivity losses by age need to be factored into any analysis of such trade-offs.
Implications for long-term growth

In a recent paper on long-term global growth prospects, the OECD has projected New Zealand’s average GDP growth at 2.6 percent per year from 2011 to 2060, compared with 2.7 percent from 1995 to 2011 (OECD 2012). This is one of the faster average rates of growth projected. In many countries, GDP growth rates are projected to slow markedly as populations age and labour force growth slows.

For New Zealand, the OECD projects a small increase in labour force participation and (upwards) convergence in multifactor productivity growth towards the OECD average of 1.5 percent per year. This is a relatively favourable set of assumptions reflecting assumed return on human capital investments and convergence from New Zealand’s relatively lower productivity level starting point.

With issues including scale, distance to markets, and relatively low saving to overcome, the OECD projections need to be considered in more detail. In the context of this paper the latter is of particular importance, since an ageing population is likely to be associated with dissavings. This will reduce the level of capital intensity, which in turn means that labour productivity will be driven more by multifactor productivity than capital per worker.

Our own analysis implies that higher total labour force participation rates in the face of an ageing population would be a strong assumption, whilst sustained multifactor productivity growth of 1.5 percent per year is plausible but demanding in the light of history, the context of service sector growth, rising demands on public services, and ageing of the population.
Conclusion

This paper has described significant changes going on and projected in coming years in New Zealand’s population, labour force, and productivity. The substantial growth of the 65+ population is a striking and inexorable phenomenon over the next 20 years, extending through the 50-year window of this paper to 2061. The effects of New Zealand’s ageing population will be most evident in slower labour force growth and declining aggregate labour force participation, which will result in lower real income growth. These have significant implications for the demand for, and cost of, publicly funded services and transfers, and for private income and public revenue projections. The direct costs of this on health service and pension expenditures – absent any policy changes – will be substantial.

The labour force will grow much more slowly in the next 50 years than in the last 50, by itself reducing the projected rate of real national income growth, though not necessarily income per capita. The rate of income growth – an important element in funding increased public and private expenditure – will ultimately be determined by the rate of productivity growth. Unlike labour force participation, New Zealand’s projected productivity growth and the impact of an ageing population remain uncertain. On one hand, the changing composition of New Zealand’s workforce may reduce productivity growth, while recent OECD analysis, incorporating a range of other factors, suggests New Zealand’s productivity growth may converge upwards. With this uncertainty, the historical rate of labour productivity growth of about or just under 1.5 percent might be a reasonable starting point assumption.
References


