

**A Comparison of Immigration Growth and  
Fertility Growth as Alternative Solutions to Australia's Ageing Population  
Problem.**

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## **Abstract**

The combined effects of the post World War Two 'baby boomers' approaching retirement age and a decreasing fertility rate is predicted to cause Australia's worker ratio to increase from 2011. This raises the policy issue of how future tax revenue can be generated to finance the increase in social expenditure necessary to support the increasing number of dependents. This paper explores fertility growth and immigration growth as alternative policy options to increase the size of the future labour force. In addition to exploring the impacts on employment of these alternative policies, the impact on various other economic variables is investigated.

The increase in skilled immigration under recent immigration policy changes is found to improve employment outcomes for recently arrived new-immigrants relative to those who arrived prior to the policy changes. A logit analysis of the second Longitudinal Survey of Immigration to Australia data reveals that the probability of employment for less-skilled immigrants is significantly related to post-secondary education, Australian qualifications and English language skills. The future employment rate of new immigrants is predicted to increase as less-skilled immigrants who invest in education post-arrival enter the labour force.

Forecasts generated using the Murphy Model (MM2) for various demographic scenarios reveal that gradually increasing immigration levels from 2010 produces a more favourable worker ratio than alternative scenarios. Economic forecasts at 2011 indicate that, in addition to increasing the worker ratio, gradually increasing immigration impacts positively on other economic indicators. Gradually increasing immigration increases labour productivity, is non-inflationary, increases per capita consumption, reduces the income gap, and increases income for the pre-immigration population. Unemployment is marginally increased in the medium-term, as is the ratio of the current account deficit to GDP. However, as productivity and GDP increase over time, unemployment and the ratio of the current account deficit to GDP are expected to decrease.

## **Introduction**

The post world war two baby boom, followed by a decreasing fertility rate has led to an increase in the proportion of over 65 year olds in the Australian population. It is predicted, under current mortality, fertility and immigration assumptions, that in the 40 years from 2011 to 2051 the dependency ratio per 100 will increase by over 20. That is for every 100 individuals between ages 15 and 65 (the usual working ages) there will be an increase in the number of individuals outside the usual working ages of 21.7. This anticipated change in population structure raises the issue of how the increasing number of dependents is to be financially supported. As the number of dependents increases, the tax revenue required to finance increasing social expenditure will also need to increase.

The purpose of this paper is to explore two policy alternatives for dealing with this ageing population issue; immigration growth and fertility growth. It is hypothesised that immigration growth will be more efficient than fertility in stabilising the worker ratio (the proportion of the population in the labour force relative to the proportion not in the labour force). A policy to encourage fertility growth would be costly in terms of the financial incentives that would need to be offered and the initial increase in the dependency ratio. Immigration growth is hypothesised to produce more immediate results and be less costly to implement. However, it is necessary to investigate the impacts of immigration and fertility growth (both in the short-run and the long-run) on the labour force and other economic indicators, in order to determine which of these policy options is preferable.

In chapter 2 the likely impact of Australian immigration on various economic indicators is discussed. In particular output and income, income distribution, inflation, unemployment and balance of payments are identified as economic indicators against which policy alternatives should be judged, in addition to labour force outcomes. Disaggregating the results into the pre- and post-immigration population is also recommended.

Chapter 3 focuses on recent empirical work and models employed to test the impact of immigration on the economy. Immigrants entering under previous immigration policy were found to have no significant impact on the unemployment rate, inflation or the current account (when measured in terms of direct effects). Increasing the skill level of immigrants has been shown to improve living standards and labour productivity. Immigrants entering under current policy, which focuses on skilled migration, produce greater economic benefits than those who entered previously. Previous research does not compare the economic impact of increasing immigration with fertility growth. Consequently, as a relevant input into the current policy debate, this paper improves on previous research.

The Longitudinal Survey of Immigration to Australia (LSIA) was conducted by the Department of Immigration, Multicultural and Indigenous Affairs to collect data on the early settlement experiences of new immigrants to Australia. Two cohorts of immigrants were surveyed, the first (LSIA1) being immigrants who arrived in the two

year period from September 1993 to August 1995. The second cohort (LSIA2) included immigrants who arrived in the one-year period from September 1999 to August 2000. LSIA2 data is analysed in chapter 4, to assess the labour force experience of new-migrants 18 months after arrival.

Examination of LSIA2 data reveals that new-immigrants aged over 15 achieve an employment rate only 0.3 per cent lower than the national average 18 months after arrival. Amongst primary applicants the employment rate 18 months after arrival is 3.2 percentage points higher than the national average, an improvement of 8.8 percentage points over LSIA1 primary applicants. This evidence supports the expectation that the current composition of new-immigrants will produce greater economic benefits than past immigration.

A logit analysis of the LSIA2 data reveals that Australian qualifications and English language ability greatly improve the probability of employment for less skilled immigrants. As less-skilled migrants invest in these forms of human capital post-arrival, their labour force outcomes are predicted to improve as a consequence. Therefore, in the long run employment rates are expected to be greater for new-immigrants than the national average, even before the worker ratio is predicted to decline. The greater than national average skill level of new-immigrants will also yield greater labour force productivity for increasing the labour force by immigration rather than fertility.

In chapter 5 the demographic module of the Murphy Model (MM2) is used to generate demographic forecasts based on various migration and fertility assumptions. These forecasts support the hypothesis that increasing immigration will stabilise the worker ratio earlier and at a higher level than increasing fertility, so long as the increase in immigration levels occur gradually over time. The demographic scenarios are imported into main module of MM2 to predict their initial impact on the economic indicators identified in chapter 2. The main module only produces annual economic forecasts up to 2011, but this is sufficient to assess whether there are any costs associated with increasing immigration relative to fertility.

Overall the results strongly support increasing immigration rather than increasing fertility to address the economic impact of Australia's ageing population.