

THE IMPACT OF THE MIGRATION AND HUMANITARIAN PROGRAMS ON STATE AND TERRITORY ECONOMIES

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Immigration and Multicultural and Indigenous Affairs
(DIMIA) on behalf of the Joint Commonwealth, State
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by Econtech Pty Ltd

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Acronyms

ABS	Australian Bureau of Statistics
CON	Consumption
DIMIA	Department of Immigration, Multicultural and Indigenous Affairs
EMP	Employment
ENS	Employer Nominated Scheme
GSP	Gross State Product
GDP	Gross Domestic Product
LSIA2	Longitudinal Survey of Immigrants to Australia
MM2	Murphy Model 2
POP	Population
SAS	Skilled-Australian Sponsored

Executive Summary

The Department of Immigration and Multicultural and Indigenous Affairs (DIMIA), on behalf of the Joint Commonwealth, State and Territory Immigration and Multicultural Research Program, commissioned Econtech to undertake a study to assess the state and territory economic impacts of the Migration Program and the Humanitarian Program. Under the current annual programs, which commenced in 2002-03, there are about 100,000 to 110,000 places in the Migration Program and 12,000 places in the Humanitarian Program.

This report models a wide range of economic impacts of the current migration intake. These economic impacts refer to the long-term (or equilibrium or ongoing) effects of the Migration Program and the Humanitarian Program continuing for a further 20 years until 2021-22, compared to a hypothetical situation in which the programs are discontinued from 2002-03. This report does not address the non-economic impacts of the migration intake such as the intake's role in satisfying Australia's obligations for humanitarian migration, community needs for family reunion, congestion, the environment and cultural diversity. Thus, the overall assessment of migration policy would need to take into account both the economic and non-economic impacts of the migration intake.

Main Findings

- The current migration intake is estimated to add 2.0 per cent or \$794 per capita to annual living standards in the long-term than if there were no migration intake. This gain is provided by the Skill Stream
- The current migration intake is estimated to add between 1.3 and 2.4 per cent to annual living standards in each state and territory.
- The adult population, labour force participation, GSP and employment in each state and territory will be boosted by migration intake.

The Contribution of the Migration Intake to the Economy

The Migration and Humanitarian Programs, hereafter referred to as the 'migration intake', has the potential to contribute to the Australian and state and territory economies in a number of ways.

First, and most obviously, the migration intake boosts the level of the national and state and territory populations compared to a hypothetical situation in which there was no migration intake. A larger population leads to a larger economy. However, whether this is associated with a rise in living standards depends on whether the economic contribution of the representative migrant exceeds that of the representative existing resident. The typical migrant is younger, more skilled but has less financial wealth (migrant transfers) than the typical resident, as discussed in turn below.

Typical migrants are younger than typical existing residents and therefore have longer working lives ahead of them. The age structure of the population changes because the migration intake especially boosts the number of Australian residents aged between 15 and 39 years of age, which means that the migration intake provides additional labour.

Further, the typical migrant is more skilled than the typical existing resident. Thus the migration intake will boost the average skill level of the workforce. A higher skilled workforce will be more productive.

Finally, the typical migrant has less financial wealth than the typical resident. This is consistent with the fact that the average migrant is younger than the average residents and so has had less time to accumulate wealth. Being less financially wealthy, the typical migrant can only partly finance the extra investment in business capital and housing created by their migration. However, the impact of this on Australian living standards could be somewhat offset by a higher intake of wealthier migrants through the Business Skills stream.

How these three points balance out will determine the overall impact of the migration intake on annual living standards. Annual living standards are measured by the change in consumption of goods and services per head of population, compared to the hypothetical situation in which there was no migration intake.

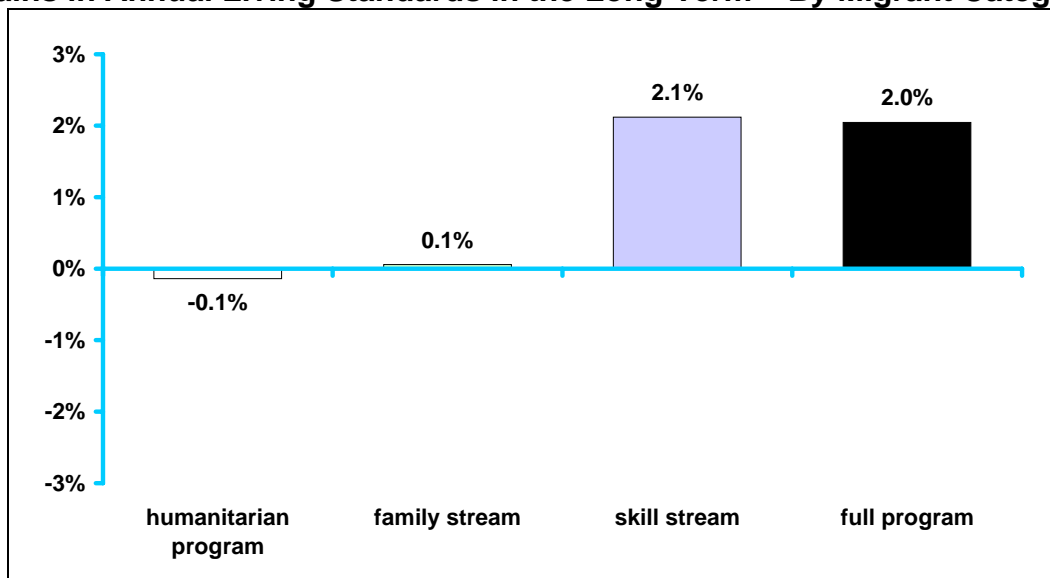
The extra labour, skills and funds brought to Australia by migrants provide a supply-side based increase in national income and living standards. These increases are matched by similar increases in demand for goods and services created by the higher income.

The income expansion will boost household spending on goods and services such as food and clothing compared to the hypothetical situation in which there was no migration intake. The population expansion will also boost government spending on health and education services.

Finally, the industry composition of the economy will change because of the larger population. For example, the Construction industry will benefit from faster population growth because of the higher demand for new homes.

Economic Effects of the Migration Intake

Chart A
Gains in Annual Living Standards in the Long-Term – By Migrant Category



Source: Econtech modelling

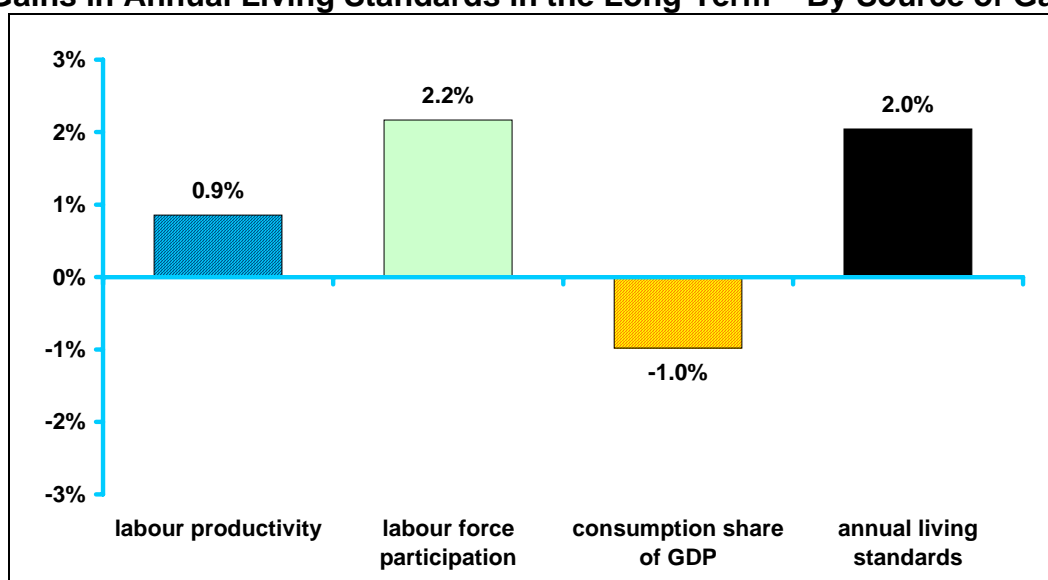
Note: "Long-term" refers to the ongoing gains from continuing the migration intake for a further 20 years to 2021-22

The economic impacts are assessed using Econtech's linked demographic and economic models of Australia. This report follows two earlier studies (Econtech, 2001 and Econtech, 2004) that used the same models to assess the economic impacts of the migration intake.

The main finding of this report is that the current migration intake will gradually lead to higher living standards for all Australians. If the migration intake continues for a further 20 years to 2021-22, in the long-term (i.e. on an ongoing or equilibrium basis) annual living standards are conservatively estimated to be 2.0 per cent or \$794 per capita per year higher than if there were no migration intake. This means that on average by 2021-22, each Australian resident each year will consume an additional \$794 of goods and services. This is a sizeable gain and by way of comparison, a large personal income tax cut of about \$20 billion (in 2000-01 prices) would be required to achieve the same gain in living standards.

The gain in living standards of 2.0 per cent can be broken down in two different ways. One approach is according to the individual categories of the migration intake. Chart A shows that the 2.0 per cent growth in annual living standards is contributed by the Skill Stream. On average, this stream of migrants has higher labour productivity and financial transfers than other migrant streams.

Chart B
Gains in Annual Living Standards in the Long-Term – By Source of Gain



Source: Econtech modelling

Note: "Long-term" refers to the ongoing gains from continuing the migration intake for a further 20 years to 2021-22

The second approach is according to the economic channel (or source) of the gain. This approach explains the good economic qualities of the migration intake, as shown in Chart B. Chart B shows that of the total gain in annual living standards of 2.0 per cent, 0.9 per cent arises from higher labour productivity, which is contributed by the Skill Stream. The remaining 1.1 per cent of the gain in annual living standards occurs for three reasons.

1. The typical migrant is younger than the typical resident, and so with longer working lives ahead of them, migrants increase the supply of labour and therefore boost labour force participation by 2.2 per cent.
2. Being younger than existing residents, migrants have less financial capital that only partly finances the extra investment in business capital and housing created by their migration. The partially offsetting loss of 1.0 per cent through a fall in the consumption share of GDP is the result of the diversion of resources away from consumption to business capital and housing investment.

3. However, migrants under the Business Skills category of the Skill Stream on average are wealthier than existing residents and thus bring a large amount of funds that can be used to finance the extra investment in business capital. This limits the fall in the consumption share of GDP created by the current migration intake.

State and Territory Effects of the Migration Intake

Table A provides a summary of the main state and territory effects of the current migration intake compared to the hypothetical situation in which there was no migration intake.

Table A
Summary of Main State and Territory Effects in the Long-Term

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	AUS
Adult Pop'n ('000 persons)	744	464	328	70	235	13	11	26	1,962
Employment ('000 persons)	512	352	247	61	169	10	10	21	1,424
GSP (\$bn, 2000/01 prices)	59.5	42.2	24.6	6.8	23.4	0.6	1.4	2.5	166.4
Cons. (\$bn, 2000/01 prices)	46.9	28.4	19.9	4.5	13.4	0.7	0.7	1.9	116.4
Labour force part. rate	2.8%	2.8%	2.8%	2.5%	2.7%	1.8%	3.4%	2.9%	2.8%
Annual Living Standards (%)	1.7%	2.0%	2.2%	1.9%	2.0%	1.3%	2.4%	2.0%	2.0%
Annual Living Standards (2000/01 prices)	\$703	\$780	\$788	\$679	\$743	\$422	\$842	\$917	\$794

Table A shows that by 2021-22, the current migration intake is conservatively estimated to add between 1.3 and 2.4 per cent to living standards in each state and territory, compared to the hypothetical situation were the migration intake is discontinued. The table also shows that the current migration intake boosts the working-age population, labour force participation, gross state product (GSP) and employment in each state and territory compared to a hypothetical situation in which there was no migration intake.

The migration intake boosts the level of the working-age populations in each state and territory. The migration intake also changes the age structure of the population because the typical migrant is younger than the typical resident. The migration intake provides additional labour, which boosts the labour force participation rate in each state and territory.

The increases in GSP are due to three main factors. The first is the higher labour productivity of the state and territory workforces. Because the average migrant is more skilled than the average existing resident, the labour productivity of the entire workforce will increase. The second factor is the population expansion. The third factor is the increase in the labour force participation rates due to the average migrant being younger than the average existing resident. This factor leads to higher employment in each state and territory.

Table A also shows that some states and territories will benefit more than others. This is due to three reasons:

- (i) the pattern of migrant settlement across the states and territories;
- (ii) the composition of the migrant group that settles in each state and territory; and
- (iii) the attributes of residents in each state and territory compared to the migrants.

1. Introduction

The Department of Immigration and Multicultural Affairs and Indigenous Affairs (DIMIA), on behalf of the Joint Commonwealth, State and Territory Immigration and Multicultural Research Program, commissioned Econtech to undertake a study to assess the long-term economic impacts on state and territory economies of the current migration intake, which includes both the Migration Program and the Humanitarian Program. These include the effects on demographic outcomes, living standards, labour force participation rates, employment and unemployment, and individual industries. The economic impacts are assessed relative to a hypothetical situation in which there is no migration intake from 2002-03 onwards.

The Joint Commonwealth, State and Territory Immigration and Multicultural Research Program was established to undertake studies in the areas of migration, migration settlement, multicultural affairs and population trends. The aim of the program is to provide information to assist Commonwealth, State and Territory Ministers and Departments in the development and assessment of migration policies. This includes information about the estimated economic impact of the 2002-03 Migration Program on each of the eight state and territory economies.

This report does not address the non-economic impacts of the migration intake. These social effects of the migration intake include its role in satisfying Australia's international obligations for humanitarian migration, community needs for family reunion, congestion, the environment and cultural diversity. These non-economic impacts of the migration intake would need to be taken into account in any overall assessment of migration policy.

Each section in this report that contains modelling results concludes with a box that summarises the main findings in general terms, so that findings in this report are more accessible to a general audience.

The economic impacts were assessed using Econtech's linked demographic and economic models of Australia. This report follows two earlier studies (Econtech, 2004 and Econtech, 2001) that used the same models to assess the economic impacts of the migration intake. This study differs from the 2004 study in the following three important respects.

- It extends the analysis and interpretation of the economic effects of migration on each state and territory economy to include effects on the underlying labour force participation rate, annual living standards and state final demand.
- It isolates the changes in living standards, Gross Domestic Product (GDP), Gross State Product (GSP), workforce skill level, labour force participation rate and migrant fund transfers attributable to all migrant categories.
- It distinguishes the allocation of the gains in consumer living standards between existing residents and migrants.

Further, this study differs from the 2001 study in the following four important respects.

- It is more up-to-date as it examines the effects of the current migration intake.
- This study uses a longer time horizon to more fully explore the cumulative economic impacts of the migration intake. Specifically, the time horizon has been extended from eight years in the earlier study to 20 years in this study, taking it to 2021-22.
- This study uses better estimates of the economic attributes of migrants. The second Longitudinal Survey of Immigrants to Australia (LSIA2) has been used to estimate the

labour market outcomes and financial transfers of migrants. LSIA2 involves two waves of interviews of migrants who arrived in Australia in the year to August 2000.

- This study uses a different point of comparison when assessing the effects of the migration intake. Specifically, this study uses a hypothetical situation in which the migration intake is discontinued as its point of comparison, whereas the earlier study used the 1995-96 Migration Program as its point of comparison.

This report is structured as follows.

- Section 2 outlines the ways in which migrants contribute to the Australian and state and territory economies.
- Section 3 contains a literature review that refers to Econtech's two previous studies, as well as studies by Lynne Williams, William Foster and Access Economics.
- Section 4 sets out the modelling approach used in this study.
- Section 5 describes the 2002-03 Migration Program.
- Section 6 explains the seven migration intake scenarios that form the basis of the analysis in this study, which cover all categories of the Migration and Humanitarian Programs.
- Section 7 shows how the 2002-03 Migration Program will affect demographic outcomes such as the total Australian population, the age structure of the population, the skill level of the workforce, the underlying labour force participation rate and migrant funds transfers.
- Section 8 analyses the effects on living standards, which are measured as consumption per head. The contributing factors to consumption per head are *GDP per employed person* (productivity), the *employed share of the population* and the *consumption share of GDP*.
- Section 9 explains the effects on employment and unemployment at the national level.
- Section 10 shows the effects of the migration intake on each of the eight state and territory economies. This includes the effects on GSP, the adult population, employment, the underlying labour force participation rate and annual living standards.
- Section 11 shows the estimates of the main state and territory effects attributable to each group of 1,000 migrants of the current migration intake.
- Section 12 shows how continuing the 2002-03 Migration Program impacts on industries.
- Section 13 contains an overview of the main results presented in this report.

While all care, skill and consideration has been used in the preparation of this report, the findings are based upon the terms of reference set by DIMIA, on behalf of the Joint Commonwealth, State and Territory Immigration and Multicultural Research Program, and are designed to be used only for the specific purpose set out below.

The specific purpose of this report is to provide the Joint Commonwealth, State and Territory Immigration and Multicultural Research Program with estimates of the economic impact of the current migration intake on the eight state and territory economies.

The findings in this report are subject to unavoidable statistical variation. While all care has been taken to ensure that the statistical variation is kept to a minimum, care should be used whenever using this information.

2. The Contribution of the Migration Intake to the Economy

The Migration and Humanitarian Programs, hereafter referred to as the 'migration intake', has the potential to contribute to the Australian and state and territory economies in a number of ways.

The first, and most obvious way, is through changes in the national and state and territory populations levels. Specifically, migrants that enter Australia boost the level of the population in each state and territory in which they reside relative to the hypothetical situation in which there was no migration intake. A larger population leads to a larger economy. However, whether this is associated in a rise in living standards depends on whether the economic contribution of the representative migrant exceeds that of the representative existing resident. The typical migrant is younger, more skilled but has less financial wealth (migrant transfers) than the typical resident.

As discussed above, the typical migrant is younger than the typical resident and therefore has a longer working life ahead of them. For example, a high proportion of the current migration intake consists of migrants aged between 15 and 39 years of age. Specifically, 67.3 per cent of the permanent and long-term arrivals fall within this prime working-age group, compared with only 35.8 per cent of the existing residents. This means that the migration intake will especially change the age structure of the Australian population. This also means that the migration intake will boost the labour force participation rate compared to the hypothetical situation in which there was no migration intake.

The typical migrant is also more skilled than the typical resident. If higher-skilled and higher-paid occupations account for a large proportion of the migration intake, then the migration intake will change the occupational mix and the boost the skill level of the workforce. In recent years, the Commonwealth Government has emphasised attracting skilled migrants. A higher skilled workforce will lead to an increase in labour productivity. As such, each state and territory will be able to produce either more goods and services or higher quality goods and services with the same amount of labour, compared to the hypothetical situation in which there was no migration intake.

Finally, the typical migrant has less financial wealth than the typical resident. This is consistent with the fact that the average migrant is younger than the average existing residents and so have had less time to accumulate wealth. However, the funds that wealthy migrants bring to Australia can be used to finance the extra investment in business capital and housing that is created by migration. If so, industries such as construction, manufacturing and property and business services in the states and territories in which migrants reside will benefit from increased demand for new housing. Alternatively, these funds may be used to start new businesses, which in turn will boost activity in the wholesale and retail trade industries.

How these three points balance out will determine the overall impact of the migration intake on annual living standards. Annual living standards are measured by the consumption of goods and services per head of population. The main finding in this report shows how the migration intake boosts the level of consumption of each Australian resident compared to the level of consumption under the hypothetical situation where the migration intake is discontinued. Living standards are discussed in more detail in Section 8.

The labour, skills and funds brought to Australia by migrants provide a supply-side based increase in national income and living standards. These effects are created by migrants

increasing the supply of these three resources. These increases are matched by similar increases in demand for good and services created by the higher income.

The income expansion will boost household spending on goods and services such as food and clothing compared to the hypothetical situation in which there was no migration intake. The population expansion will boost government spending on health and education services. These increases in expenditure will lead to an expansion in the state and territory economies in which migrants reside.

The faster growing population will also change the industry composition of the economy. For example, a faster growing population will increase demand for housing and infrastructure. New investment in houses and roads will boost production in industries such as construction, manufacturing and property and business services in the states and territories where migrants reside compared to the hypothetical situation in which there was no migration intake.

3. Literature Review

The purpose of this report is to provide the Joint Commonwealth, State and Territory Immigration and Multicultural Research Program with estimates of the economic impact of the current migration intake on each of the eight state and territory economies. This section includes a review of a number of previous studies that examined how the migration intake impacts on the Australian economy.

In 2001, DIMIA commissioned Econtech to model the economic impact of changes in the migration program from 1995-96 to 2000-01. The economic effects were estimated using Econtech's Migration Modelling Framework.

The main finding of the report was that the changes to migration policy implemented since 2000-01 would gradually lead to higher living standards compared to the situation if the old migration policy in 1995-96 had remained in place. Underlying this gain in living standards was a shift towards migrants with higher skill levels, strong English language skills, greater levels of wealth or aged between 20 and 45.

Econtech (2001) also concluded that the migration intake would not impact on unemployment. That is, the gain in labour supply created by migrants is similar to the rise in employment created by migrant expenditure on goods and services and extra housing investment.

In Econtech (2004), DIMIA commissioned Econtech to assess the long-term economic impacts of the current migration intake, including both the Migration Program and the Humanitarian Program. Compared to Econtech (2001), this study focused on the current migration intake and used a longer time horizon to more fully explore the cumulative economic impacts of the migration intake. Specifically, the time horizon was extended from eight years to 20 years, taking it to 2021-22. This report also extended the analysis to isolate the contribution of individual categories of migrants.

The main finding of Econtech (2004) is that the current migration intake will gradually lead to higher living standards than if there were no migration intake from 2002-03. The results showed that the:

“total gain of 2.2 per cent is due to the Skill Stream, with the Family Stream and the Humanitarian Program having no combined effect on annual living standards. The dominant nature of the contribution from the Skill Stream is due to the higher labour productivity and financial transfers of that stream.”

These findings are consistent with Williams (1995). Williams concluded that the migration intake has only small effects on living standards but particular groups of the population may experience a rise in living standards while other groups may not.

The modelling for both Econtech studies did not take into account the possible economies and diseconomies of a higher population. Therefore it remains to be seen whether the net impact of the migration intake on living standards is positive or negative. Instead, the modelling framework assumed 'constant returns to scale'.

Williams (1995) examined the points that need to be considered when trying to understand the economic effects of migration. This study also used Econtech's Migration Modelling Framework. The report looked at the various demand-side, supply-side effects and efficiency

effects of migration. This report provided an overview of the findings of previous work that analysed the economic effects of migration.

Williams also researched previous studies that estimated the economic effects of particular categories of the migration intake. Several studies have focussed on the economic effects of the Employer Nomination Scheme (ENS) category of the broader Skills Stream. These studies found that

“there has been a significant transfer of skills from migrants to the resident population and an addition to the base level of skills through the presence of immigrants themselves.”

This is consistent with the results presented in this report. Specifically, the results presented in this report showed that a continuation of the current migration intake will lead to a steady rise in the average skill level of the Australian workforce. This is based on the Skill Stream of the migration intake having higher average skills than existing residents. It is also consistent with the results presented in the Econtech (2001) and Econtech (2004).

Williams also concluded that at the economy-wide level, most of the available evidence suggests that migration has either a slightly positive or at worst, a neutral effect on the economy. Specifically, Williams found that:

- immigration does not lead to an increase in the unemployment rate;
- immigration has relatively little effect on both prices and wages;
- immigration has relatively little effect on the balance of payments in the long-run; and
- in the long-run, migrants are net contributors to Commonwealth and local government revenues.

Foster (1996) summarised the level of knowledge of immigration’s effects on the Australian economy. Foster also made his own assessment of immigration’s effect on the economy and his findings were based on reports prepared in the mid 1990s. He aimed to give a detailed overview of immigration’s effects and to expand on areas where minimal research has been conducted.

Like Williams (1995), Foster found that in the short-term, migrants have negative budgetary effects as they demand health, education and social security services. However, in the long-term, migrants are net contributors to Commonwealth and local government revenues. For example, Foster found that there is a:

“positive contribution overall for the overseas-born to the Commonwealth budget.”

and that:

“research also indicates that overseas-born make a higher net contribution to State budget outcomes than Australian-born”.

Further, Foster looked at how the migration intake impacts on state and territory economies. The economic impact is determined by the size and characteristics of the part of the migration intake that is going to a specific region within a state or territory. It is also determined by the nature of each region’s economy. For example, Foster found that States or Territories that have industries that demand more migrants than a region receives will most likely benefit less from migration.

Finally, Foster found that although migration has had a major impact on Australia's rate of economic growth since the Second World War, migration has had only very small effects on the key economic indicators of economic wellbeing. For example, Foster concluded that:

“immigration has had a positive, though modest, effect on average income, the most usual summary indicator of economic welfare.”

Foster based this result on a combination of positive effects caused by migration, namely a fall in the unemployment rate, technology improvements, economies of scale as well as an increase in the underlying labour force participation rate.

Williams and Foster both agreed that it is difficult to make either strongly positive or strongly negative assessments of the economic effects of migration. The main reason being that migration has many different possible affects on each of the demand, supply and efficiency sides of the economy. It should be noted that since Foster and Williams wrote, the composition of the Migration Program has been re-balanced strongly in favour of skilled migration, which delivers increased economic benefits. Access to social security payments for all except Humanitarian Program migrants has also been restricted for the first two years after entry, which has decreased the costs of migration to the Australian taxpayer and increased the labour force participation of new migrants.

In 2002, DIMIA commissioned Access Economics to estimate the impact of sponsored temporary business residents on Australia's living standards. Access Economics used the intake of sponsored temporary business residents in the year 2000-01 as the basis for the analysis. Like the results presented in this report for living standards, Access Economics used consumption per head as the proxy for living standards.

Access Economics found that to begin with, most of the increase in living standards accrues to sponsored temporary business residents. Existing residents will start to benefit more after about five years, which is the point in time when a significant proportion of the sponsored temporary business residents that entered Australia in 2000-01 have left. There are two parts to higher living standards for existing residents. First, existing residents benefit from the higher profits and employment generated by the sponsored temporary business residents. Second, existing residents benefit from the tax paid by the migrant category.

The higher rise in living standards for migrants relative to existing residents is similar to the findings presented in this report. In this report, it was estimated that by 2021-22, the gain in living standards for existing residents is \$658 while the gain in living standards for migrants is \$2,000.

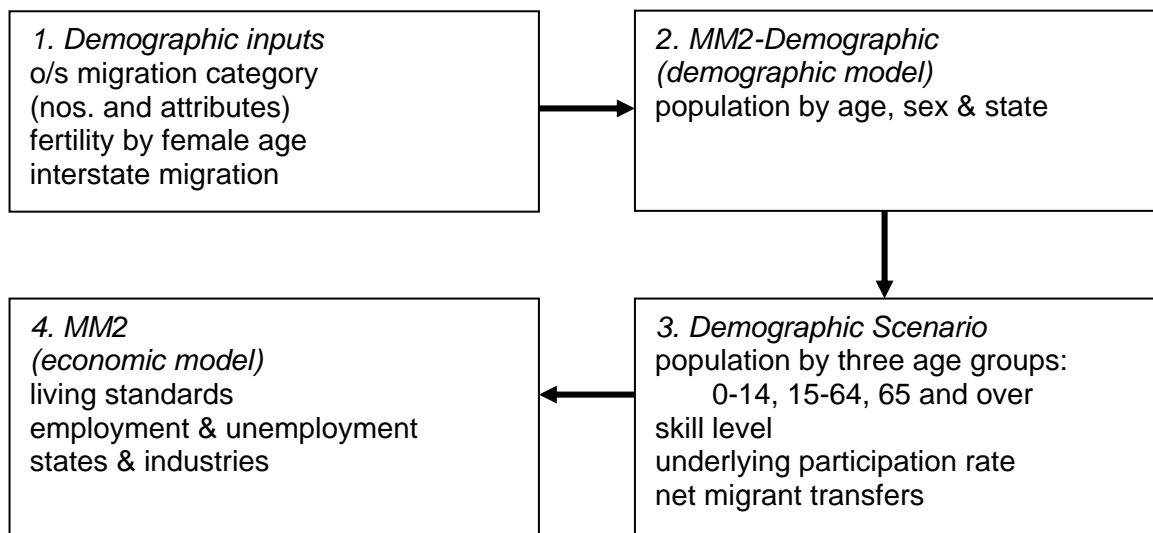
4. Modelling Approach

In this analysis, the economic impacts of the 2002-03 Migration Program are assessed using Econtech's linked demographic and economic models of Australia. This process involves four steps, as shown in Figure 1. Importantly, the same modelling approach was used in the 2004 study for DIMIA.

In contrast, a slightly different modelling approach was used for the 2001 study. However, the approach used in this study has been improved in the following four important respects: (i) it is more up-to-date; (ii) it uses a longer time horizon; (iii) it uses better estimates of the economic attributes of migrants; and (iv), it uses a different point of comparison when assessing the effects of the migration intake. More information about these improvements is included in the introduction and in this section.

The four steps in the modelling approach are now briefly explained.

Figure 1: Modelling Framework



Step One

In step one, the demographic inputs are set to reflect the features of the 2002-03 Migration Program that is being modelled. This involves specifying the following information:

- the expected annual number of permanent arrivals under the migration intake;
- the expected annual number of permanent arrivals under each of the migrant categories;
- fertility rates by female age group; and
- interstate migration.

Further, to fully capture net overseas migration to Australia, estimates also need to be made of the expected annual numbers of long-term arrivals, permanent departures and long-term departures.

Step Two

In step two, the demographic inputs estimated in step one are fed into Econtech's detailed demographic model (MM2-Demographic). The MM2-Demographic model uses these

demographic inputs to generate a detailed projection of Australia's population out to the year 2064-65. These projections are produced using the cohort-component method, which is also used by the Australian Bureau of Statistics (ABS) to generate its population projections. The model generates year-by-year population projections that are cross-classified by sex, single year of age and state and territory. The state and territory population projections are important in light of the focus of this report. These population projections form the basis of step three.

Step Three

In step three, the population projections generated in step two are used to construct a demographic scenario. This demographic scenario is to be used in the linked economic model. This scenario is important because it is the vehicle through which the attributes of the migration intake have economic impacts in Econtech's Migration Modelling Framework. The four elements of the demographic scenario are as follows.

- The first element involves aggregating the single year of age population projections into three broad age groups. This is used in the economic model to identify the population of working-age (aged 15 and over), as well as the population bases for family benefits (aged under 15) and aged pensions (aged 65 and over). The migration intake boosts numbers in all age groups. However, a high proportion of the migration intake consists of migrants aged between 15 and 39 years of age. Therefore the average migrant is younger than the average existing resident and therefore boosts the share of Australia's population in the prime working-age group. These types of differences between the attributes of migrants and the attributes of the existing population underlie the economic impacts of migration that are identified in this report.
- The second element is the skill level of the workforce. Migration changes the average skill level of the workforce by changing the mix of occupations. For example, the skill level of the workforce in Australia rises if higher-skilled and higher-paid occupations account for a large proportion of the migration intake. This is the case for the Skill Stream of the Migration Program, which focuses on higher-skilled migrants, but not for the Family Stream or the Humanitarian Program. The skill level of each migrant category is measured by a skill index, with a maximum value of 100. Further, the occupational mix of each migration category is estimated more reliably in this study than in the earlier study. For this study, LSIA2 provides information on the actual occupations of migrants about 18 months after their arrival in Australia. The earlier study relied on the occupations that migrants reported on their arrival cards when entering Australia, which did not necessarily mean they were employed in these occupations.
- The third element is the underlying labour force participation rate. This is calculated taking into account two factors. The first is the historical trends in labour force participation rates for different age groups of both males and females. The second is the changes in the age-gender composition of the population. Importantly, the migration intake boosts the underlying labour force participation rate. This is because typical migrants are younger than typical residents and as a result, the migration intake boosts the share of Australia's population in the prime working-age group, which will lead to a mounting positive impact on the labour force participation rate.
- The fourth element is the financial wealth that migrants bring to Australia as part of overseas migration. This is calculated as funds brought to Australia by permanent arrivals net of funds taken from Australia by permanent departures. The average funds per migrant are highest for the Skill Stream, especially the Business Skills component of that stream, but are lower for the Family Stream, and are close to zero for the

Humanitarian Program. The average transfers of different categories of migrants are more reliably estimated for this study than for the earlier study. For this study, LSIA2 covers fund transfers occurring at any time from 12 months before arrival until 18 months after arrival, by interviewing migrants twice – the first interview being about 6 months after arrival and the second interview being about 18 months after arrival. This information refers to migrants entering Australia in the year to August 2000. The earlier study used a one-off survey dating back to the early 1990s. Whether migrant transfers raise or lower living standards in Australia depends on whether or not the average transfer per migrant is more or less than the average financial capital of existing residents. By this yardstick, migrant transfers are high for the Business Skills component of the Skill Stream but are low for all other components of the migration intake.

Step Four

In the fourth and final step, the demographic scenario that incorporates the effects of the migration intake is fed into an economic model of the Australian economy known as MM2. MM2 then provides estimates of the economic impacts of the migration intake. The economic effects include the impact of the migration intake on GDP, living standards, employment and unemployment. Because MM2 is a fully-integrated macro-industry model, it also provides estimates of the effects at the industry level, with its results distinguishing 18 industries. Finally, an ancillary states model known as MM2-States uses results from MM2, together with the population projections for each state and territory, to estimate economic impacts at the state and territory level. This includes estimates of effects on GSP, employment, labour force participation rates and consumption in each of the eight states and territories. This is an important feature as the focus of this report is to assess the economic impacts of the current migration intake on state and territory economies.

By the end of this four-step procedure, estimates are produced of the economic effects of the migration intake. This process fully captures the way the migrant intake contributes to the Australian and state and territory economies. For example, it captures the following:

- the changes in national and state and territory populations brought about by changes in the level of the population and through changes in the structure of the population, in terms of both age and skills;
- the expansion in the national and state and territory economies resulting from additional labour, skills and funds; and
- the increase in economic activity created by migrants boosting expenditure on goods and services and increasing demand for housing.

The economic effects of the migration intake cumulate as the intake gradually changes the level and structure of the population relative to a situation in which the migration intake was discontinued. From a policy perspective, the long-term consequences of the migration intake are of the greatest importance. Consequently this study focusses on the long-term (or equilibrium or ongoing) effects of the migration intake continuing for a further 20 years, from 2002-03 to 2021-22, relative to a hypothetical situation in which the migration intake is discontinued from 2002-03. The earlier study examined the long-term effects of the intake operating for only another eight years, compared to the 1995-96 Migration Program, and hence only provided a medium-term view of the effects of the migration intake.

5. The Current Migration Intake

The first step in estimating the economic impacts of the migration intake is to specify the demographic inputs for the modelling, as foreshadowed in Figure 1. This means that the following key inputs are set to reflect the migration intake that is being modelled:

- i. the expected annual number of permanent arrivals under the migration intake;
- ii. the expected annual number of permanent arrivals under each migrant category;
- iii. the age structure of both permanent and long-term arrivals;
- iv. the average skill levels of different categories of migrants; and
- v. the average financial wealth that different categories of migrants bring to Australia as part of overseas migration.

These inputs are summarised in Charts 1 to 6 and discussed in turn below.

Permanent Arrivals

The current basis for the size and composition of the migration intake was announced on 7 May 2002 (Ruddock, 2002a, 2002b), when the number of annual places was set at about 117,000. This consisted of a range of 100,000 to 110,000 places in the Migration Program and 12,000 places in the Humanitarian Program. An additional 4,000 places for parents were added on 31 March 2003 (Ruddock, 2003a) but this did not affect the 2002-03 migration intake. Instead, this change added 6,500 parent visas to the 2003-04 intake and 4,000 parent visas each year thereafter. It was also confirmed on 31 March 2003 that for the next four years (i.e. until 2005-06) that barring exceptional circumstances, the size of the annual migration intake would remain at the current level (Ruddock, 2003b, 2003c).

In modelling the current migration intake, the modelling in this report uses the outcome of the 2002-03 Migration Program. In 2002-03, there were 108,070 visa grants under the Migration Program, falling within the intended range of 100,000 to 110,000 places. Of these visas, 31,300 were granted onshore. For modelling purposes, these onshore visa grants are added to settler arrivals of 74,800 and a Humanitarian Program of 12,000 to give a modelled migration intake for 2002-03 of 118,100.

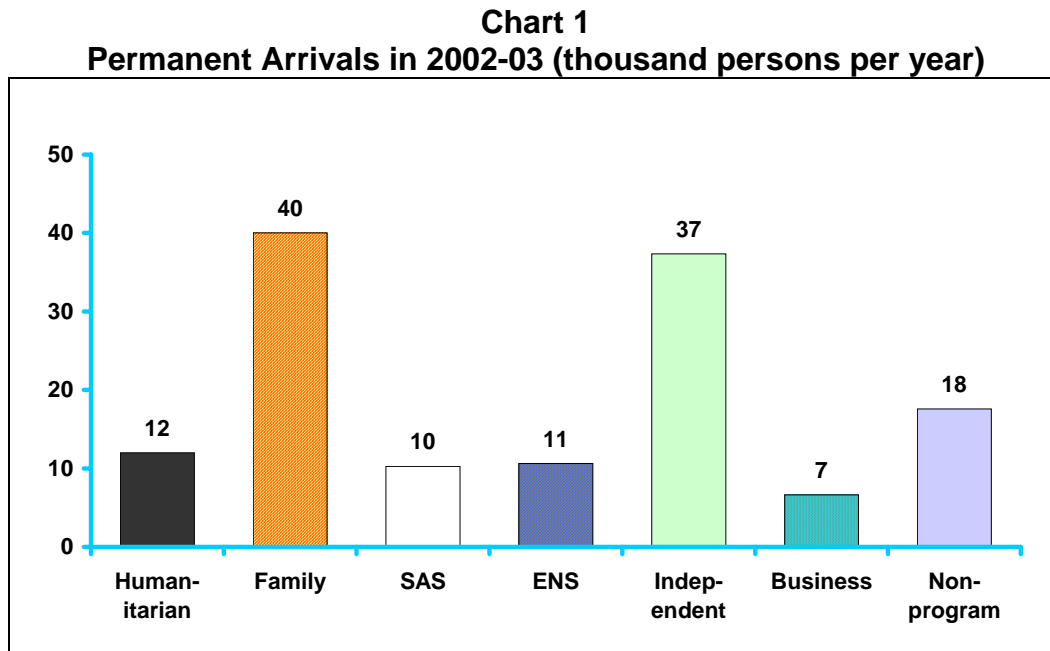
The migration intake for subsequent years is based on the intake for 2002-03 but with adjustments for the changes to parent visas mentioned above. This adds 6,500 to the intake for 2003-04, and 4,000 to the intake for 2004-05 and later years. These changes to the number of parent visas are taken into account when modelling the migration intake from 2003-04 onwards.

Non-program migration in 2002-03 was estimated at 17,600, and it is assumed to remain at that level for future years. Non-program migration consists primarily of New Zealanders who have automatic right of entry. The economic effects of non-program migration are not considered in this report.

On this basis, for key input (i), the current migration intake translates into the pattern of permanent arrivals shown in Chart 1. There are a total of 135,700 permanent arrivals per year. Of these, 118,100 places are permanent arrivals under the migration intake. The remaining 17,600 are non-program arrivals, which are represented by the bar on the right hand side in Chart 1.

The Composition of Permanent Arrivals

Turning to key input (ii), within the migration intake of 118,100 permanent arrivals, there are three broad categories of migrants. The Humanitarian Program of 12,000 annual places is shown by the first bar in Chart 1. The remaining bars in the chart refer to the various streams of the Migration Program. The Family Stream of 40,000 annual places is represented by the second bar in the chart. The Skill Stream, with a total of 66,000 annual places, is represented by the remaining bars in the chart. Four separate components of the Skill Stream are identified — ENS, Business Skills, Skilled-Australian Sponsored (SAS) and Independent.



Source: DIMIA

Migration impacts on living standards in Australia in two broad ways.

1) Migration affects living standards because the average economic attributes of migrants differ from the average economic attributes of existing residents, as discussed in more detail in Sections 2 and 3. The direction of this effect depends on the wealth, the average skill levels and the age of migrants, compared to existing residents. These differences in these average economic attributes underlie the economic impacts of migration that are identified in this report.

2) Migration affects living standards by changing the level of the population and by enlarging the economy, as discussed in earlier sections of this report. For example, migrants provide additional labour, skills and funds. Migrants also demand extra housing and increase expenditure on goods and services. Both these effects lead to an expansion in national and state and territory economies.

In this second case, the effect of migration on living standards is a combination of two offsetting factors. On the one hand, migration means more people share the same environment and limited natural resources. This is called a diseconomy of scale, which is a negative for living standards because as the level of the Australian population increases and our stock of natural resources remain unchanged, our natural resources are spread more thinly over the population. On the other hand, migration means more people share the same fixed infrastructure costs associated with networks, including telecommunications networks, media

transmission networks, electricity grids and gas pipelines. This is called an economy of scale, which is a positive for living standards because the cost per customer of electricity, gas and telecommunications falls as population density rises, which frees up more funds for consumption.

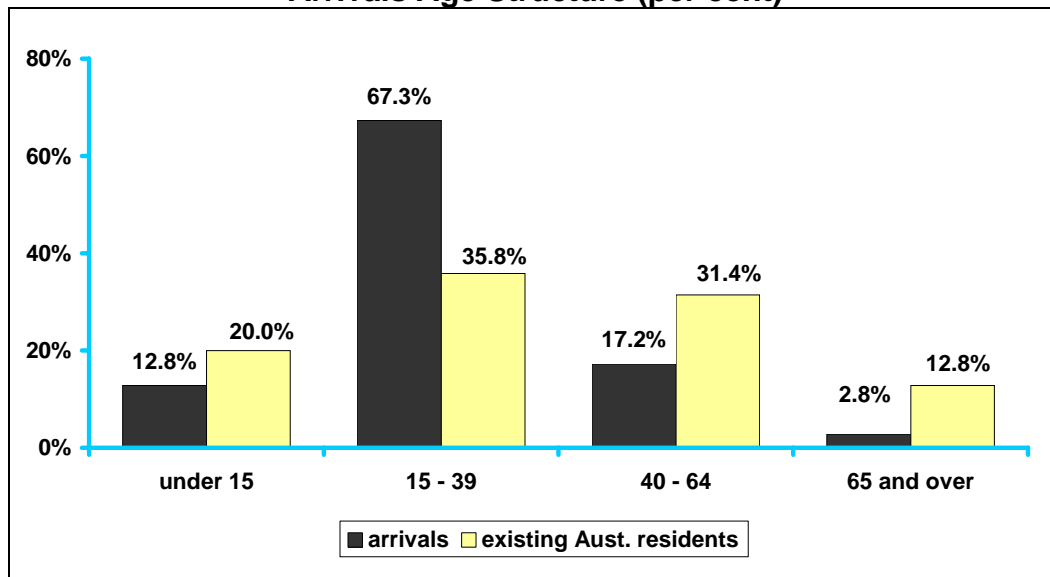
These diseconomies and economies of a larger population have not been convincingly measured, and so it remains unclear whether the net impact of the migration intake on living standards is positive or negative. Instead, the modelling framework assumes ‘constant returns to scale’, which in broad terms implies that a 1 per cent expansion in Australia’s population leads to a 1 per cent expansion in the economy, with little impact on annual living standards per head of population. This effectively isolates the contribution of migrants to the national and state and territory economies.

Before the economic impacts of migration can be modelled, it is necessary to measure the remaining key attributes of migrants relative to existing Australian residents. These key attributes of the migration intake were foreshadowed at the start of this section. The results of this measurement are reported in Charts 2, 3 and 4.

Age Structure of Permanent and Long-Term Arrivals

The information for key input (iii) is shown in Chart 2. This chart compares the age structure of migrants entering Australia with that of the existing resident population. The age structure for the migration intake uses ABS data for 2001-02, which has been adjusted to allow for the increase in parent visas from 2003-04 onwards that was outlined earlier in this section. The age structure of the existing population is as estimated by Econtech for 30 June 2003, which uses ABS data for 30 June 2002 as the starting point.

Chart 2
Arrivals Age Structure (per cent)



Source: ABS

Chart 2 shows that permanent and long-term arrivals are more concentrated in the 15-39 age group than are existing residents. For example, 67.3 per cent of permanent and long-term arrivals fall within this prime working-age group, compared with only 35.8 per cent of existing residents. The prime working-age group has higher labour force participation rates than other age groups. As a result, typical migrants have longer working lives ahead of them and, by

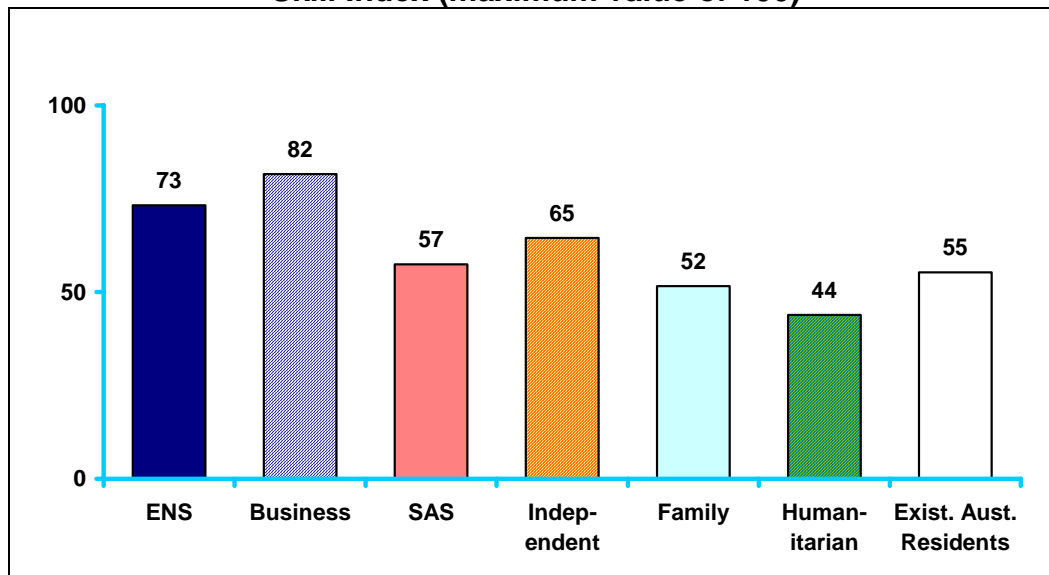
boosting the share of Australia's population in the prime working-age group, will have a mounting positive impact on the labour force participation rate. This is captured in the economic modelling.

The Average Skill Levels of Migrants

For key input (iv), Chart 3 compares the average skill levels of different categories of permanent arrivals with the average skill level of existing Australian residents. The skill levels of each migrant category as well as existing Australian residents are measured by a skill index, with a maximum value of 100. A higher rating out of 100 means a higher average skill level of a particular category. The skill level of a group is assessed from the mix of occupation of the people who are employed in that group. For example, a high reading on the skill index indicates that a high proportion of people employed in that group are in high-paying occupations, such as managers and administrators or professionals. In contrast, a low reading on the skill index indicates that a high-proportion of people in that group are in low-paying occupations, such as elementary clerical, sales and service workers or labourers and related workers. The skill index is based on the average earnings of 18 different occupation categories, distinguished by both gender and the nine occupational divisions used by the ABS.

Constructing the skill index for each group requires data on its occupational mix. Occupational data for Australian residents refers to 2001-02 and is sourced from the ABS Labour Force Survey. Occupational data for the various categories of migrants is captured from LSIA2, and refers to permanent arrivals in the year to August 2000. LSIA2 provides information on the actual occupations of these migrants about 18 months after their arrival in Australia. The use of the LSIA2 provides more reliable estimates of occupation outcomes compared to the earlier study which utilised information reported on migrants' arrival cards when entering Australia.

Chart 3
Skill Index (maximum value of 100)



Sources: LSIA2 and Econtech calculations

Chart 3 shows that some categories of migrants are more skilled than existing residents while some are less skilled than existing residents. In particular:

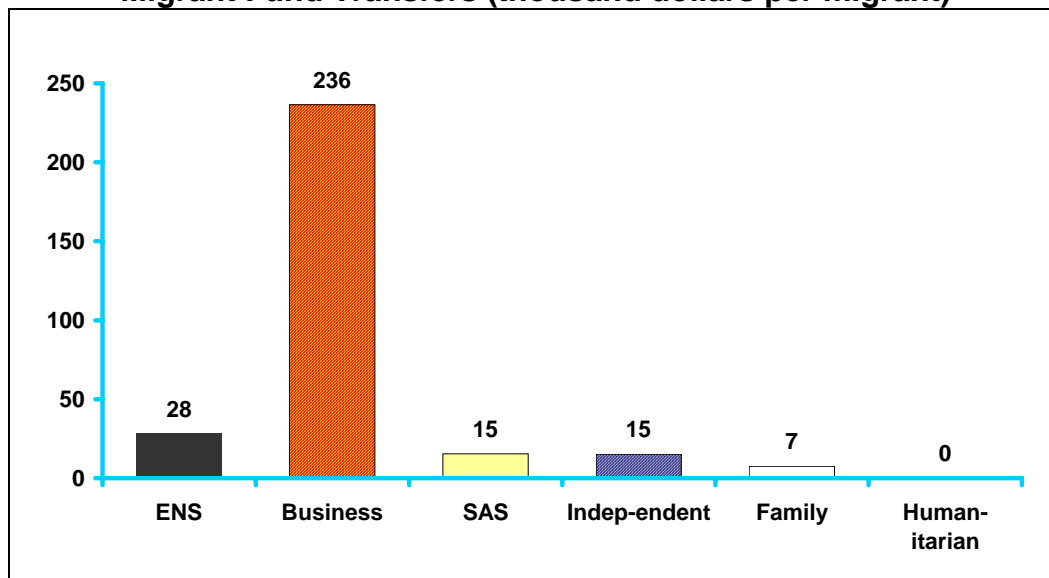
- the skill levels for all four components of the Skill Stream ('ENS', 'Business Skills', 'SAS and 'Independent') are above the skill level for existing residents, shown in the chart as 'Existing Aust. Residents'; and
- the skill level for the Family Stream ('Family'), and more especially, the Humanitarian Program ('Humanitarian'), are below the skill level for existing Australian residents.

The overall impact of the migration intake on the average skill level of the workforce will therefore depend on the composition of the migration intake, as shown in Chart 1. For example, the recent emphasis on the four components of the Skill Stream will push up the average skill level of the workforce. This is also captured in the economic modelling.

Migrant Transfers

Finally, for demographic input (v), Chart 4 shows the average funds that are transferred to Australia by different categories of migrants. This information is once again captured from LSIA2, and so refers to permanent arrivals in the year to August 2000. Migrants were interviewed twice – the first interview being about 6 months after arrival and the second interview being about 18 months after arrival. In contrast, in the earlier study, the estimation of the average funds that different categories of migrants transfer to Australia was based on a one-off survey dating back to the early 1990s.

Chart 4
Migrant Fund Transfers (thousand dollars per migrant)



Sources: LSIA2 and Econtech calculations

Chart 4 shows that migrant transfers are high for the Business Skills component of the Skill Stream, at about \$236,000 per person. However, they are low for all other components of the migration intake, at less than \$28,000 per person. The chart shows that funds transfers are particularly low for the Family Stream and Humanitarian Program. The lower financial wealth of migrants is consistent with the fact that the average migrant is younger than the average existing resident, and as a result, the average migrant has therefore had less time to accumulate wealth.

Whether migrant transfers raise or lower living standards in Australia depends on whether or not the average financial transfer per migrant is more or less than the average financial capital

of existing residents. A higher intake of wealthier migrants, such as migrants that fall within the Business Skills stream, will most likely raise living standards in Australia. The average transfer per migrant depends on the mix of migrants between the various migrant categories, as shown in Chart 1. Once more, this is captured in the economic modelling.

Main Findings

- There are 118,100 permanent arrivals each year under the current migration intake.
- The Humanitarian Program accounts for 12,000 annual places, the Family Stream accounts for 40,000 annual places with the balance of the migration intake accounted for by the Skill Stream.
- The permanent and long-term arrivals are more concentrated in the 15-39 age group than existing residents.
- The average skill level for all components of the Skill Stream – ENS, Business Skills, SAS and Independent – is above the average skill level of existing residents.
- The average skill level for the Family Stream, and more especially, the Humanitarian Program, are below the average skill level of existing residents.
- The Business Skills component of the Skill Stream has the highest migrant transfers at about \$236,000 per person.
- Migrant transfers are low for all other components of the migration intake, at less than \$28,000 per person.

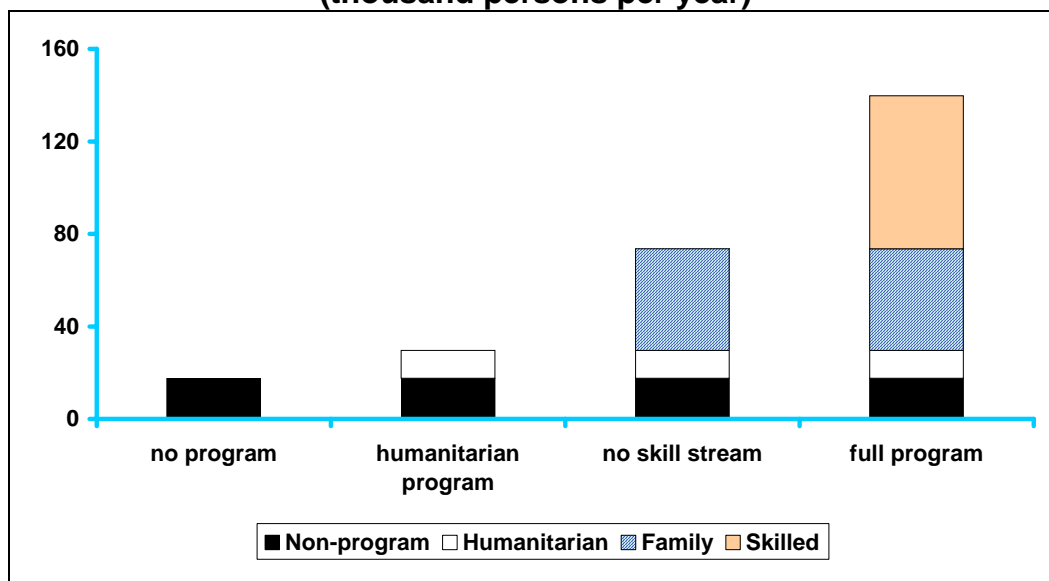
6. Migration Intake Scenarios

The purpose of this report is to assess the economic impacts of the current migration intake on state and territory economies. This also includes analysing the economic effects of individual migration streams such as the Humanitarian Program and the Family and Skills Streams of the Migration Program. All economic effects are assessed relative to a hypothetical situation in which the migration intake is discontinued from 2002-03.

To properly analyse the economic effects of different categories of migrants, a total of seven scenarios for the economy until 2021-22 were generated. Chart 5 presents the assumptions of the first four scenarios, which are now discussed in turn.

In the ‘full program scenario’ (shown as the last column in Chart 5), the current Migration and Humanitarian Programs are continued from 2002-03 to 2021-22. The chart also shows that under current migration policy there are four distinct migration flows — non-program, Humanitarian Program, and the Family Stream and the Skill Stream of the Migration Program. From 2004-05 onwards, there are a total of 139,700 permanent arrivals each year after making the appropriate allowances for changes to parents visas mentioned in Section 5.

**Chart 5: Modelled Permanent Arrivals for 2004-05 Onwards
(thousand persons per year)**



Source: DIMIA

In the hypothetical ‘no program scenario’, the Migration and Humanitarian Programs are discontinued from the year 2002-03 onwards. This means that there are no permanent arrivals under the Migration and Humanitarian Programs, as shown by the first column in Chart 5. The only permanent arrivals represent non-program migration, primarily New Zealanders who have automatic right of entry. The ‘no program scenario’ serves as a point of reference.

The economic impacts of the migration intake are then estimated as the differences in economic outcomes between the ‘full program scenario’ and the ‘no program scenario’, as presented in the last row of Table 1.

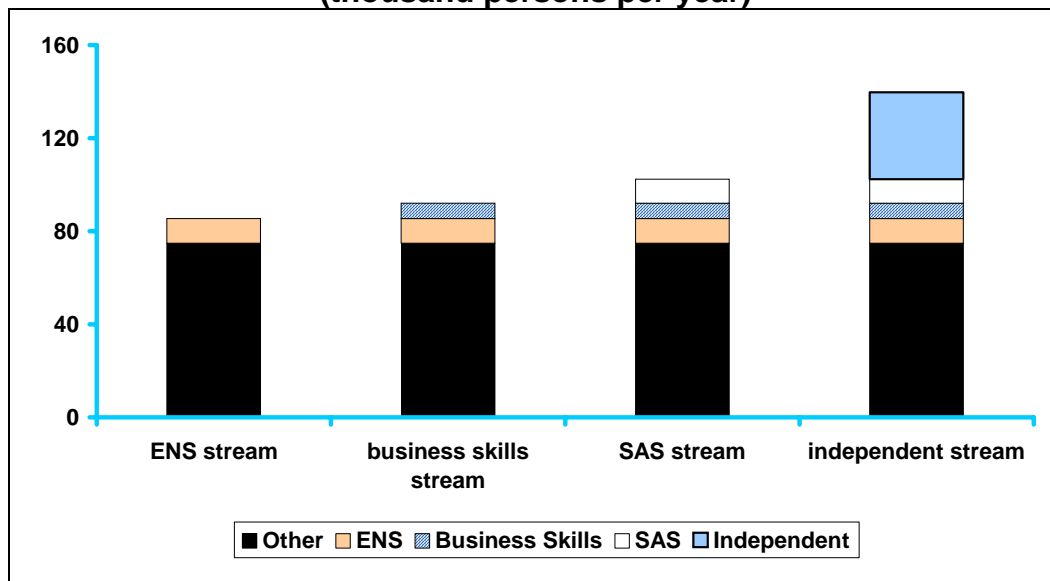
Chart 5 also contains assumptions for two further hypothetical scenarios. These two scenarios are used to estimate the contribution of individual categories of migrants to the total economic effects of the migration intake.

The first scenario is known as the ‘humanitarian program scenario’. In this scenario, the Humanitarian Program that was in place in 2002-03 is maintained to 2021-22. However, both the Family Stream and Skill Stream are discontinued. This scenario is represented in the second column of the chart. The results for the ‘humanitarian program scenario’ are then compared with the results for the ‘no program scenario’ to assess the economic impact of the Humanitarian Program, as outlined in the first row of Table 1.

The remaining scenario in Chart 5 is known as the ‘no skill stream scenario’. In this hypothetical scenario, both the Humanitarian Program and Family Stream are continued to 2021-22, but the Skill Stream is discontinued. This scenario is represented in the third column of the chart. It is used to isolate the economic effects of two different categories of migrants. First, the effects of the Family Stream are estimated as the differences in economic outcomes between the ‘no skill stream scenario’ and the ‘humanitarian program scenario’. This is shown in second row of Table 1. Second, the effects of the Skill Stream are estimated as the differences in economic outcomes between the ‘full program scenario’ and the ‘no skill stream scenario’, as shown in the third row of the table.

As discussed in Section 5, there are four separate components of the Skill Stream – ENS, Business Skills, SAS and Independent. To analyse the economic effects of each of these categories of migrants in isolation, three additional scenarios were developed, as shown in Chart 6.

**Chart 6: Modelled Permanent Arrivals for 2004-05 Onwards
(thousand persons per year)**



Source: DIMIA

The first of these scenarios is the ‘ENS stream scenario’. In this scenario, the ENS category of the broader Skills Stream, along with the Humanitarian Program, Family Stream and non-program migration¹ are continued for a further 20 years from 2002-03. At the same time, the SAS, Business Skills and Independent categories of the broader Skills Stream are discontinued. These scenario assumptions are represented by the first bar of Chart 6. Further, Table 1 shows that the economic effects of the ENS stream of migrants in isolation are estimated as the difference between the ‘ENS stream scenario’ and ‘no skill stream scenario’.

¹ For the purpose of clearly illustrating the assumptions, the Humanitarian Program, Family Stream and non-program migration are collectively referred to as ‘Other’ in Chart 6.

Table 1
Outline of Economic Outcomes of Migration Scenarios

Migration Category	Scenario Used	Comparison Scenario
Humanitarian Program	Humanitarian Program	No Program
Family Stream	No Skill Stream	Humanitarian Program
Skill Stream	Full Program	No Skill Stream
Employer Nominated Scheme	ENS Stream	No Skill Stream
Business Skills	Business Skills Stream	ENS Stream
Skilled Australian Sponsored	SAS Stream	Business Skills Stream
Independent	Full Program	SAS Stream
Migration & Humanitarian Programs	Full Program	No Program

The second scenario in the chart is the ‘business skills stream scenario’. In this scenario, the Business Skills and ENS categories of migrants, as well as the combined ‘other’ category, are continued while the SAS and Independent categories are discontinued. These scenario assumptions are represented by the second bar of Chart 6. Table 1 shows that the effects of the Business Skills stream of migrants in isolation are estimated as the difference between the ‘business skills stream scenario’ and ‘ENS stream scenario’.

The final scenario is the ‘SAS stream scenario’. The assumptions of this hypothetical scenario are that the SAS, Business Skills, ENS streams and ‘other’ categories of migrants are continued while the Independent category is discontinued. This scenario is used to isolate the effects of the SAS category as well as the Independent category of migrants, as shown in the second and third last rows of the table respectively. The SAS category in isolation is estimated as the difference between the outcomes of the ‘SAS stream scenario’ and the ‘business skills stream scenario’. Finally, the Independent category of migrants in isolation is estimated as the difference in outcomes between the ‘full program scenario’ and ‘SAS stream scenario’.

Further details of the assumptions underlying all seven scenarios can be found Tables A.1, A.2 and A.3, which are located in the attached Tables Appendix.

7. Demographic Impacts of the Migration Intake

As indicated in Figure 1, the second step in estimating the economic impacts of the migration intake is to simulate the seven demographic scenarios, which were discussed in Section 5, using the MM2-Demographic Model. The key demographic inputs to these simulations have been summarised in Charts 1 to 6.

Using these demographic inputs, the MM2-Demographic Model produces very detailed population projections for each simulation. However, our interest is in extracting a relatively aggregated demographic scenario for use in the economic model. This represents step three of the modelling process that was depicted in Figure 1. At each step, the effects of the migration intake are calculated as the differences between the ‘full program scenario’ and the ‘no program scenario’.

Each demographic scenario is important as it is the vehicle through which the migration intake has economic impacts in the modelling framework. For example, the differences in outcomes between demographic scenarios capture the effects of the migration intake on key attributes such as the population by four broad age groups, the skill level of the workforce, the labour force participation rate and migrant funds transfers. These effects, which are summarised in Charts 7 to 9, are now considered in turn. The results depicted in these charts underlie the economic impacts of migration that are identified in this report.

Population Effects

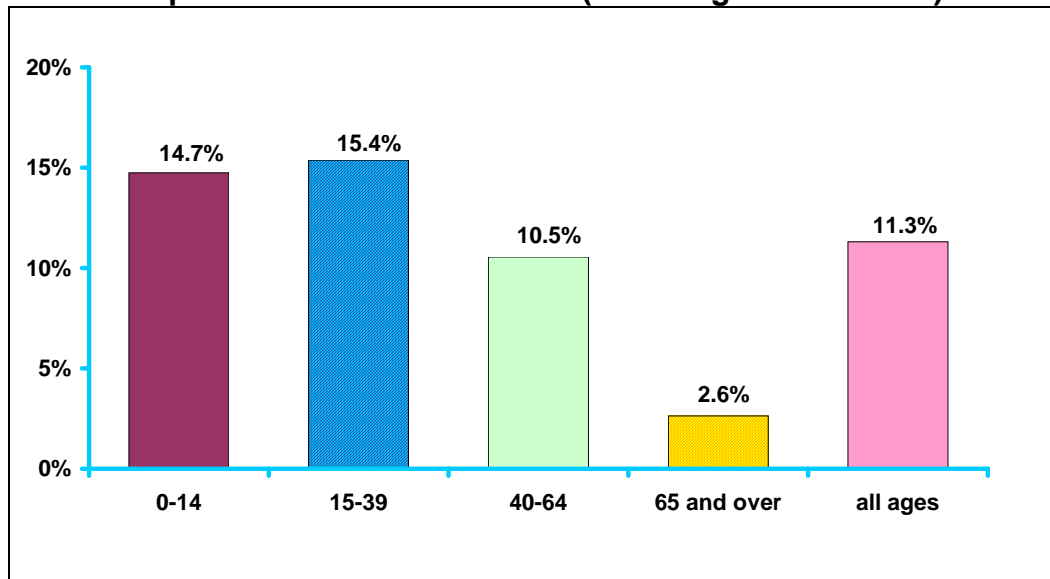
Chart 7 shows that over a 20-year period the migration intake is expected to lead to a significant expansion in Australia’s population. By 2021-22, Australia’s population is projected to reach 24.5 million compared to 22.0 million if the migration intake was discontinued from 2002-03 onwards. This represents a gain of 11.3 per cent, as shown in Chart 3. While this implies a significant enlargement in Australia’s population and the size of the national and state and territory economies, for reasons already explained in Section 5, the modelling framework does not take into account any economies and diseconomies of scale from the size of the population. Instead, the modelling framework assumes ‘constant returns to scale’, which in broad terms implies that a 1 per cent expansion in Australia’s population leads to a 1 per cent expansion in the economy. Consequently this simple expansion in the population, by itself, does not significantly affect living standards in the modelling framework.

Rather, impacts on living standards arise from migration changing both the structure and nature of the population, instead of the size. For example, migration affects living standards by changing the age structure of the population. Migration also impacts on living standards because it provides additional labour, skills and financial wealth. Charts 7 to 9 show how the migration intake changes the economic nature of the population.

While the migration intake is projected to add 11.3 per cent to Australia’s population by 2021-22, Chart 7 shows the percentage population boost varies between age groups. This is to be expected given that the discussion of Chart 2 in Section 5 highlighted that the age structure of migrants differs significantly from the age structure of existing residents. Chart 7 shows the percentage population boost is the largest at 15.4 per cent for the prime working-age group (aged 15-39). This boost exceeds the percentage rise in the total population of 11.3 per cent, which is to be expected given that Chart 2 showed a high proportion of the intake consisted of migrants aged between 15 and 39 years of age.

Chart 7 also shows a large percentage population boost of 14.7 per cent for children (aged 0-14). Once again, this boost exceeds the percentage rise in the total population of 11.3 per cent. However, this boost is not mainly due to child migrants, because Chart 2 showed that children are under-represented in the migration intake when compared to the age structure of existing residents. Instead, the large boost is due to the children of migrants. Specifically, Chart 2 showed that women of prime child bearing age (15-39) are over-represented in the migration intake, so the migration intake gradually provides a significant boost to the number of births in Australia.

Chart 7
Population Effects in 2021-22 (Full Program Scenario)



Source: Econtech modelling

Finally, Chart 7 shows that migration provides a relatively small boost of 2.6 per cent to the retirement age group (aged 65 and over). This is because, as was seen in Chart 2, only a small number of migration intake places are set aside for migrants aged 65 and over. This small boost is further compounded by the under-representation in the intake of migrants that fall within the age group 40-64 years, which is the feeder age group 65 years and over.

In summing up, over a 20-year period the current migration intake provides a significant boost to Australia's population. The largest boost is in the prime working-age group (aged 15-39) while migration only provides a relatively small boost to the retirement age group (aged 65 and over).

Population Age Structure Effects

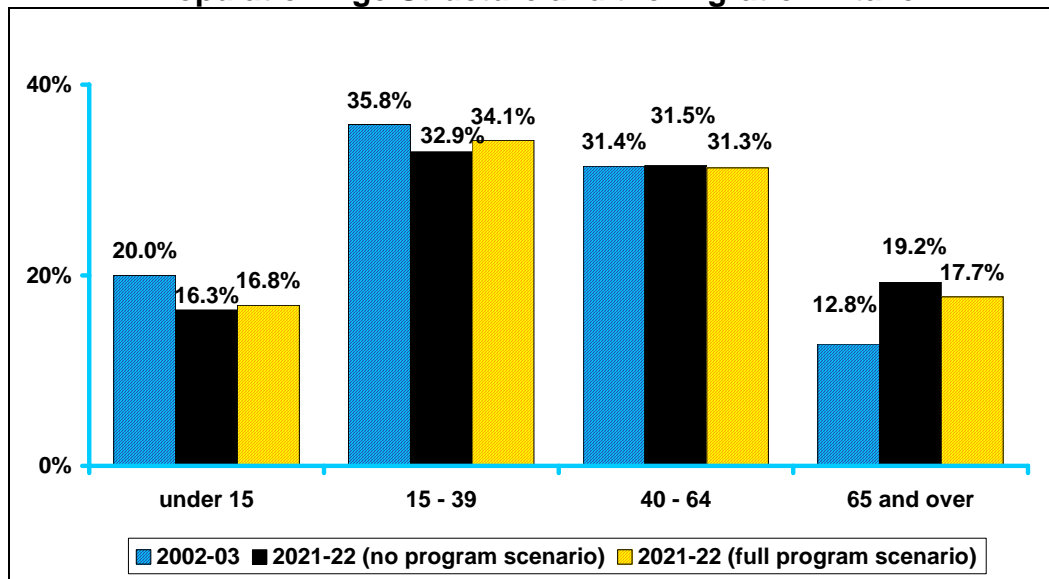
It is clear from the results in Chart 7 that the current migration intake has some capacity to affect the age structure of the population. In particular, over 20 years it achieves a boost of 11.3 per cent to total population while adding only 2.6 per cent to the retirement age group. This raises the issue of the extent to which the current migration intake can offset the much-discussed ageing of Australia's population. This can be assessed from Chart 8.

Chart 8 shows the rapid ageing of Australia's population. Without a migration intake, it shows the retirement age group is projected to rise from 12.8 to 19.2 per cent of Australia's population, a large jump of 6.4 percentage points. Under the current migration intake there is a

slightly smaller jump of 4.9 per cent, taking the retirement age group population share to 17.7 per cent.

So population ageing is expected to continue to occur even with a migration intake, but at a slower rate than without a migration intake. This is because the main causes of the rapid ageing of Australia's population are not connected to the size and composition of the migration intake. Instead, population ageing is due, firstly, to low fertility rates since the mid 1970s and, secondly, to the ongoing decline in mortality rates. The size of migration intake ranks only third as a factor in population ageing.

Chart 8
Population Age Structure and the Migration Intake



Source: Econtech modelling

Workforce Skill Effects

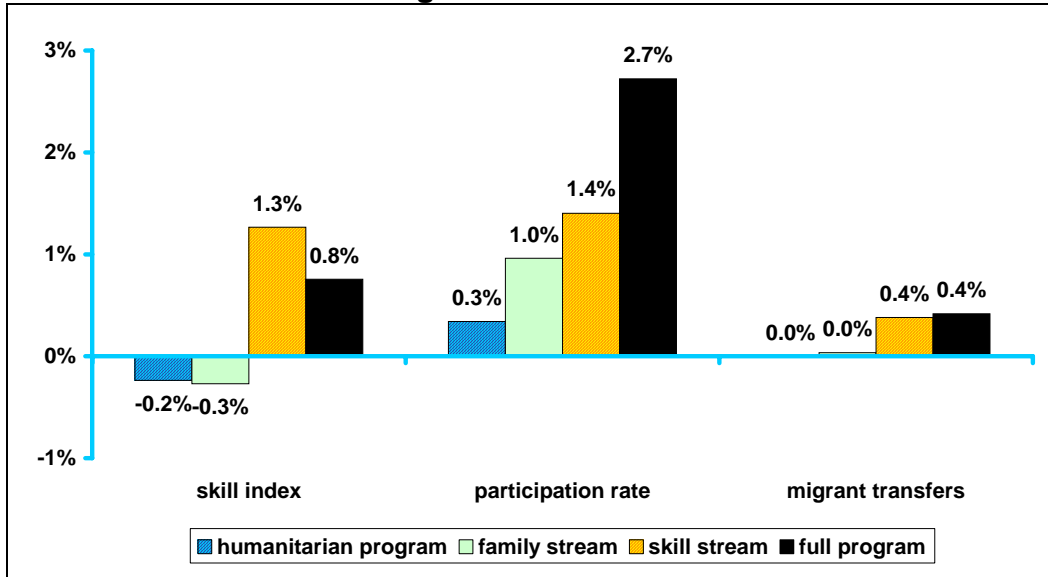
Charts 7 and 8 assessed how the migration intake changed the age structure of Australia's population. Besides changing the age structure, the migration intake also changes the economic nature of the population in other ways, as summarised in Chart 9. It affects employment skills, labour force participation and financial wealth, which are now discussed in turn.

Migration changes the average skill level of the workforce by changing its occupational mix. The skill level, as measured by the skill index with a maximum value of 100, rises if higher-skilled and higher-paid occupations account for a large proportion of the migration intake. For example, Chart 3 showed that the Skill Stream of the Migration Program has higher skills on average than existing residents while the Family Stream and the Humanitarian Program have lower skills on average, when compared with existing residents. However, the current Migration Program places a strong emphasis on the Skill Stream, as was seen in Charts 1 to 6. So this focus on the Skill Stream means that the average skill for migrants in total under the current migration intake is higher than the average skill level for existing residents.

Chart 9 shows that the continuation of the current migration intake will therefore lead to a steady rise in average skill level of the Australian workforce. The chart shows that in 20 years time, the gain in average skill level reaches 0.8 per cent. This net gain is the result of a gross gain of 1.3 per cent from the Skill Stream that is partly offset by a loss of 0.2 per cent from the

Humanitarian Program and a loss of 0.3 per cent from the Family Stream. The average skill level of both the Humanitarian Program and Family Stream is below the average skill level of existing Australian residents.

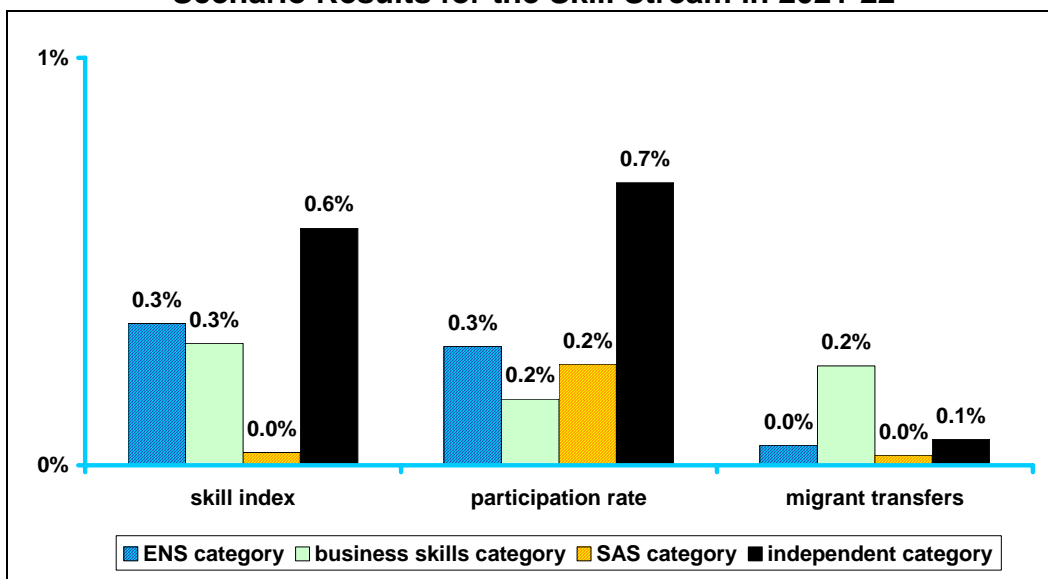
Chart 9
Continuation of Current Migration Intake Scenario Results in 2021-22



Source: Econtech modelling

As discussed in Section 5, there are four separate components of the Skill Stream – ENS, Business Skills, SAS and Independent. Chart 1 showed that there are significant differences in the expected annual number of permanent arrivals under each migrant category. Further, Charts 2 to 4 showed that each category has significantly different economic attributes in areas such as age, skill level and financial wealth. Chart 10 isolates the change in employment skills, labour force participation and financial wealth attributable to each Skill Stream category.

Chart 10
Scenario Results for the Skill Stream in 2021-22



Source: Econtech modelling

Chart 10 shows that by the year 2021-22, nearly half of the 1.3 per cent gain in the skill level of the Australian workforce contributed by the Skill Stream is the result of the Independent migrant category. There are two reasons for this. First, the Independent category accounts for just over half of the total annual intake of migrants under the Skill Stream (37,366 migrants out of a total of 66,100 migrants in 2002-03). Second, the average skill level of migrants under the Independent category is higher than the average skill level for existing Australian residents. So taken together, migrants entering Australia as part of the Independent category contribute a greater percentage to the skill level of the workforce than the ENS (0.3 per cent), Business Skills (0.3 per cent) and SAS (less than 0.1 per cent) categories.

Nevertheless, the ENS and Business Skills categories still make significant contributions to the rise in the average skill level of the Australian workforce. This is because the average skill level of migrants entering Australia as part of these categories is the highest for all migrants, as shown in Chart 3.

The results in this section show that the average skill for migrants in total under the current migration intake is higher than the average skill level for existing residents. This means that by 2021-22, the migration intake will cause a steady rise in average skill level of the Australian workforce. The Skill Stream is responsible for this rise, with the Independent category being a major contributor.

Labour Force Participation Rate Effects

Turning to the impact of migration on the labour force participation rate, migration limits the projected decline in the labour force participation rate by slowing the rate of population ageing. Specifically, Chart 8 showed that without a migration intake, the share of the population accounted for by the 15-39 age group will fall from 35.8 per cent now to 32.9 per cent in 20 years time. However, a migration intake slows this ageing so that the population share of this prime working-age group only falls to 34.1 per cent and therefore limits the fall in the labour force participation rate. Without a migration intake, the underlying participation rate is projected to decline from 62.9 per cent now to 57.8 per cent in 2021-22, due to population ageing. With a migration intake, the underlying participation rate only falls to 59.4 per cent. As shown in Chart 9, this represents a gain of 2.7 per cent (or 1.6 percentage points) in the underlying participation rate compared with the situation if the migration intake were discontinued.

Further, Chart 9 shows that about half of the overall gain of 2.7 per cent in the underlying participation rate is provided by the Skill Stream. As seen in Chart 2, permanent and long-term arrivals are more concentrated in the 15-39 age group than existing residents. The migration intake boosts the share of Australia's population in the prime working-age group, which will lead to a mounting positive impact on the labour force participation rate. This is because within the total migration intake, the Skill Stream is predominantly made up of prime working-age migrants and thus migrants entering Australia as part of this stream contribute a greater percentage to the underlying labour force participation rate than the Family Stream (1.0 per cent) and the Humanitarian Program (0.3 per cent).

Within the Skill Stream, Chart 10 shows that the Independent category accounts for about half of the rise in the underlying labour force participation rate. Again this is the result of the migrants entering Australia as part of the Independent category accounting for just over half of the annual intake of migrants under the Skill Stream.

In summary, the migration intake leads to a gain in the underlying participation rate compared with the hypothetical situation if the migration intake were discontinued. About half of this gain is provided by the Skill Stream while the Independent migrant category is the largest single contributor of all migrant categories.

Migrant Fund Transfer Effects

Finally, Chart 9 also shows migrant transfers of funds to Australia expressed as a percentage of GDP. These transfers are equivalent to about 0.4 per cent of GDP under the current migration intake. However, this ratio is not high enough to boost living standards in Australia, because the average transfer per migrant is less than the average financial wealth of existing residents. As already discussed in Section 5, this is consistent with the fact that the average migrant is younger than the average existing resident and so have had less time to accumulate wealth.

Chart 9 also shows that the Skill Stream contributes nearly all of the funds transfers of the migration intake. As seen in Chart 4, within the Skill Stream, average transfers are high for the Business Skills category, but relatively modest for other migrant categories. This is reflected in Chart 10, where migrants entering Australia as part of the Business Skills category account for nearly all of the fund transfers of the migration intake.

Further details of the demographic impacts of the current migration intake can be found in Tables A.4 and A.5, which are located in the attached Tables Appendix.

Main Findings

By the year 2021-22, the current migration intake is estimated to:

- Boost Australia's population from 22.0 million to 24.5 million, an increase of 11.3 per cent.
- Provide the largest population boost to the prime working-age group (aged 15-39).
- Slow the rate of ageing of the population.
- Lead to a steady rise in the average skill level of the Australian workforce.
- Increase labour force participation by 2.7 per cent.

8. Economic Impacts of the Migration Intake

In the fourth and final step of modelling, the economic effects of the migration intake are simulated in MM2. This involves feeding into MM2 the demographic effects presented in Charts 7 and 9 to estimate the economic effects of the migration intake. The results show the economic impacts of extending the migration intake for a further 20 years.

This report only addresses the economic impacts of the migration intake. Non-economic impacts such as congestion, the environment, cultural diversity and the role of the migration intake in satisfying Australia's international obligations for humanitarian migration and community needs for family reunion, are not covered in this report. These non-economic impacts of the migration intake would need to be taken into account alongside the economic impacts reported in the following section in any overall assessment of migration policy.

The economic effects of continuing the migration intake can be viewed under two different time frames. Under the first time frame, the effects are examined for each year from 2002-03 to 2021-22. This year-by-year perspective shows the path of development of the economic effects. Under the second time frame, the long-term effects are examined. This shows the enduring implications of continuing the migration intake to 2021-22. From a policy perspective, these enduring or long-term effects of the migration intake are the most important. As a result, this section focusses on the long-term effects of the migration intake, but also shows some year-by-year effects to highlight the cumulative nature of the development of the long-term effects.

An important indicator of the contribution of current migration intake is the impact on annual living standards. Some commentators have measured the impact of the migration intake on living standards using GDP per head. However, consumption per head is a better measure because living standards derive from consumption, not GDP. This point has long been recognised in public policy analysis. For example, the Productivity Commission, Econtech, and others routinely use consumption in preference to GDP in measuring impacts on living standards. This distinction is important because the two measures give significantly different estimates of the effects of the migration intake on living standards, as discussed below.

Migration can affect living standards through three distinct channels:

- a) migration affects labour productivity, measured by the ratio of GDP to employment ('gdp/emp.' channel), by the degree to which the average skill level of migrants differs from that of existing residents;
- b) migration affects the labour force participation rate, measured by the ratio of employment to population ('emp./pop.' channel), by the degree to which the age distribution of migrants differs from that of existing residents; and
- c) migration affects the ability to consume relative to production, leading to a change in the ratio of consumption to GDP ('con./gdp' channel), by the degree to which the average financial wealth of migrants differs from that of existing residents.

The first two channels are captured equally well using either GDP per head or consumption per head as the measure of living standards. However, the third channel is only captured using consumption per head. This is vitally important because financially wealthy migrants, such as those entering Australia as part of the Business Skills category, boost living standards, and this is only taken into account if the change in living standards is measured by consumption per head rather than GDP per head. This issue is explained at a more technical level in Box 1.

Box 1**Living Standards: GDP per Head or Consumption per Head?**

The overall influence of migration on living standards is best measured by its effect on (private plus public) consumption per head. The connection between these two measures is as follows.

$$\text{consumption per head} = \text{GDP per head} \times \text{consumption share of GDP} \quad (1)$$

Thus consumption per head can increase either from an increase in GDP per head or from an increase in the share of GDP accounted for by consumption.

If migration increases average wealth from labour income, GDP per head will increase and, based on the equation (1), consumption per head will as well. Thus, effects on living standards from changes in average wealth from labour income can be measured equally well by either GDP per head or consumption per head. However, if migration increases financial wealth, there will be little or no effect on GDP per head, but the consumption share of GDP will rise. Thus, the impact of changes in financial wealth on annual living standards can only be measured using consumption per head, not GDP per head.

To understand the effects of migration on living standards, it is useful to look closer at the two variables on the right-hand side of equation (1) as follows.

$$\text{GDP per head} = [\text{GDP/employment}] \times [\text{employment/population}] \quad (2)$$

$$\text{consumption/GDP} = 1 - \text{investment/GDP} - \text{net exports/GDP} \quad (3)$$

Equation (2) says that GDP per head may rise for either of two reasons. First, it can rise as a consequence of an increase in productivity, as measured by GDP per employed person. As seen in Section 7, the Skilled Stream of the migration intake raised productivity because the average skill level of migrants exceeded the average skill level of the existing population. Second, it can rise from an increase in the proportion of the population who are employed. As discussed in Section 7, the current migration intake raises labour force participation rates because of the focus on migrants aged between 15 and 39 years of age.

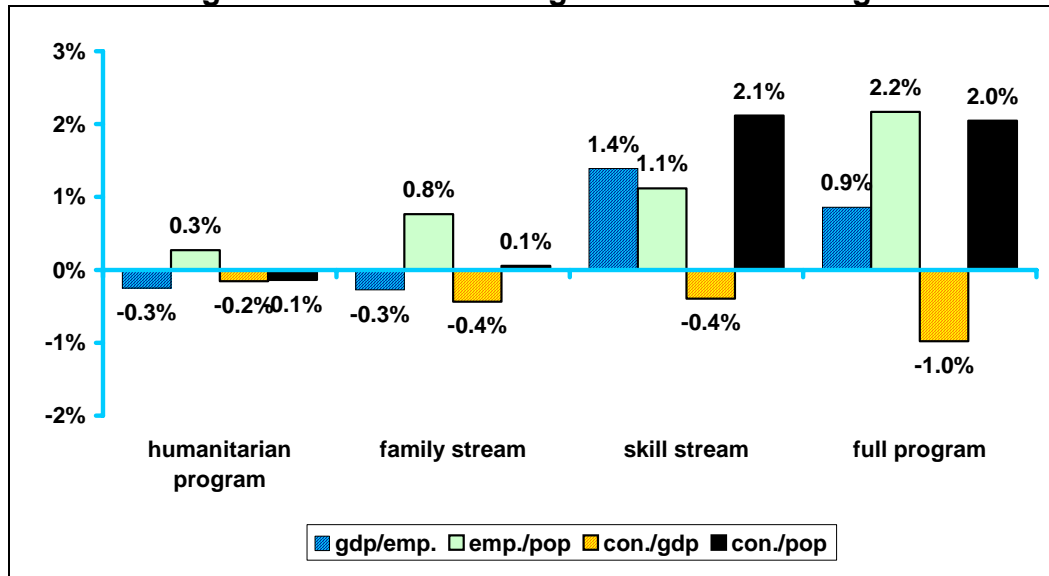
Equation (3) says that the consumption share of GDP is what is left over from GDP after the investment share and the net exports² share have been taken out. Migration affects both of these shares. Migration raises population growth and therefore economic growth, so that a larger share of GDP must be diverted to finance the resulting expansion in the stocks of business and housing capital. On the other hand, migration also brings migrant transfers of funds, which contribute to external balance. An increase in migrant transfers means that a smaller share of GDP can be diverted to net exports while still maintaining external balance. Thus migration tends to raise the investment share of GDP while reducing the net exports share. As shown in equation (3), how these changes balance out determines whether the consumption share of GDP rises or falls.

For example, migrants (other than those under Business Skills) tend to have lower levels of financial wealth than existing Australian residents. So the funds they bring with them only partly finance the extra investment in business capital and housing created by their migration. This means that the fall in the net exports share of GDP will be less than the rise in the investment share of GDP, leaving a reduced share for private consumption and hence a negative effect on living standards.

² Net exports are defined as exports less imports.

Chart 11 shows that in the long-term, the continuation of the current migration intake is estimated to add 2.0 per cent or \$794 to annual living standards, as measured by consumption per head. So by the year 2021-22, each Australian resident on average will consume an additional \$794 of goods and services than if there were no migration intake from 2002-03. This is shown by the final vertical bar in the diagram.

Chart 11
Annual Living Standards in the Long-Term – Current Migration Intake



Source: Econtech modelling

Note: "Long-term" refers to the ongoing gains from continuing the migration intake for a further 20 years to 2021-22

Analysing the Annual Living Standards Effects

Chart 11 breaks the 2.0 per cent gain in annual living standards down in two different ways.

The first way of assessing the gain in living standards is according to the different migrant categories. From the other three bars in Chart 11 that relate to annual living standards ('con./pop'), it can be seen that the Skill Stream is responsible for the total gain. Although the Humanitarian Program and Family Stream do impact on annual living standards, these effects are offsetting so the two categories have no combined effect on annual living standards. The impact of the Skill Stream is the result of the higher labour productivity and financial transfers of this stream compared to the Humanitarian Program and Family Stream.

The second way of assessing the gain in annual living standards is according to the three economic channels (or source) of the gains that were identified above and labelled (a), (b) and (c). From the results of the 'full program scenario' in Chart 11, it can be seen that of the total gain of 2.0 per cent, 0.9 per cent arises from an increase in the ratio of GDP to employment (labour productivity), referred to as the 'gdp/emp' channel above and in the chart. The Skill Stream is responsible for this gain in labour productivity.

The remaining 1.1 per cent of the gain under the 'full program scenario' in Chart 11 is a combination of two impacts. First, it reflects a gain of 2.2 per cent from the 'emp./pop' channel but this is partly offset by a loss of 1.0 per cent from the 'con./gdp' channel. However, both these effects are caused predominantly by the same factor, namely that the typical migrant

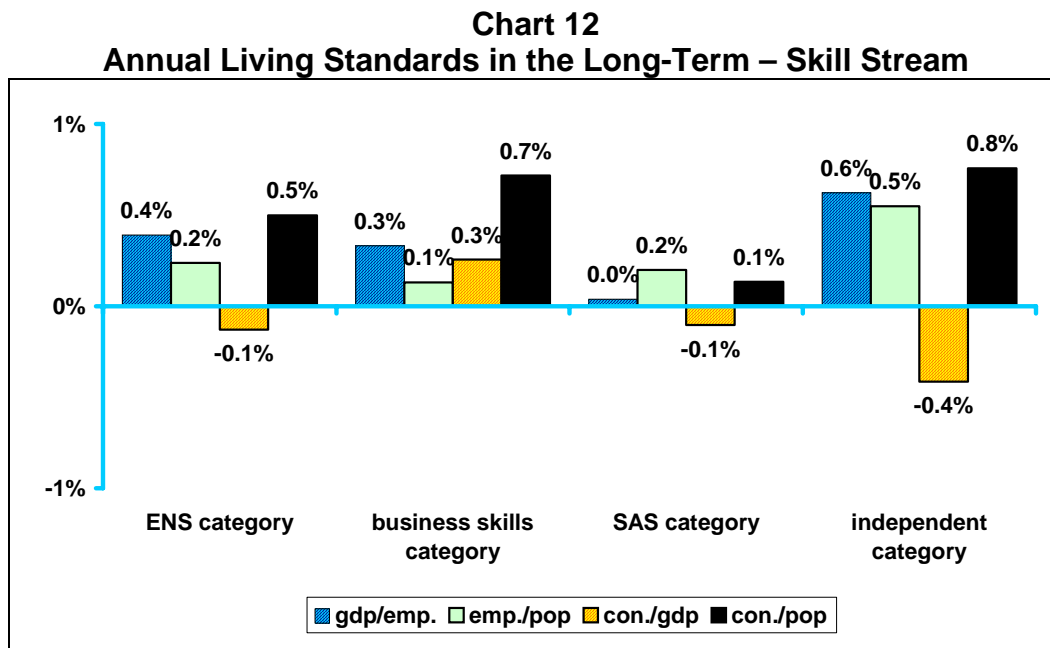
is younger than the typical resident. Chart 2 showed that about 80 per cent of migrants are aged 40 years and under, compared with only 56 per cent of existing residents.

Because typical migrants are younger than typical residents they have longer working lives ahead of them. This boosts labour force participation, which produces the 2.2 per cent gain through the ‘emp./pop’ channel seen in Chart 11. On the other hand, younger people have had less time to save, and so have less financial capital than older people. This means the funds that migrants bring with them only partly finance the extra investment in business capital and housing created by their migration. This diversion of financial resources away from consumption to business capital and investment produces the partially offsetting loss of 1.0 per cent through the ‘con./gdp’ channel.

Again, Chart 11 shows that the Family Stream and Skill Stream are equally responsible for this total offsetting loss. However, the loss attributable to the Skill Stream is limited by the high financial transfers from migrants entering Australia as part of the Business Skills category of that stream.

In summary, improved labour productivity and higher labour force participation are responsible for the overall gain in annual living standards. However, the contributions are partially offset by the extra investment in business capital and housing created by migration. The gain in living standards is provided by the Skill Stream.

The Contribution of each category of the Skill Stream



Source: Econtech modelling

Note: “Long-term” refers to the ongoing gains from continuing the migration intake for a further 20 years to 2021-22

Chart 12 dissects the gain in annual living standards attributable to the Skill Stream. So concentrating on the bars marked ‘con./pop’ in Chart 12, an important result is the contribution of migrants entering Australia as part of the Business Skills category. Although Chart 1 showed that the number of migrants in this category is the lowest of the four categories within the Skill Stream, the higher labour productivity (the ‘gdp/emp’ channel) and financial transfers (the ‘con./gdp’ channel) of this migrant category boost annual living standards.

The chart also shows that the Independent category is responsible for the largest gain in labour force participation (the 'emp./gdp' channel). This category has the highest intake of migrants of all components and therefore has the largest contribution to labour force participation.

Finally, Chart 12 shows that the Business Skills category is the only migrant category of the Skill Stream that records a gain through the 'con./gdp' channel. The high financial transfers of migrants entering Australia as part of this category fully finances the extra investment in business capital and housing created by their migration .

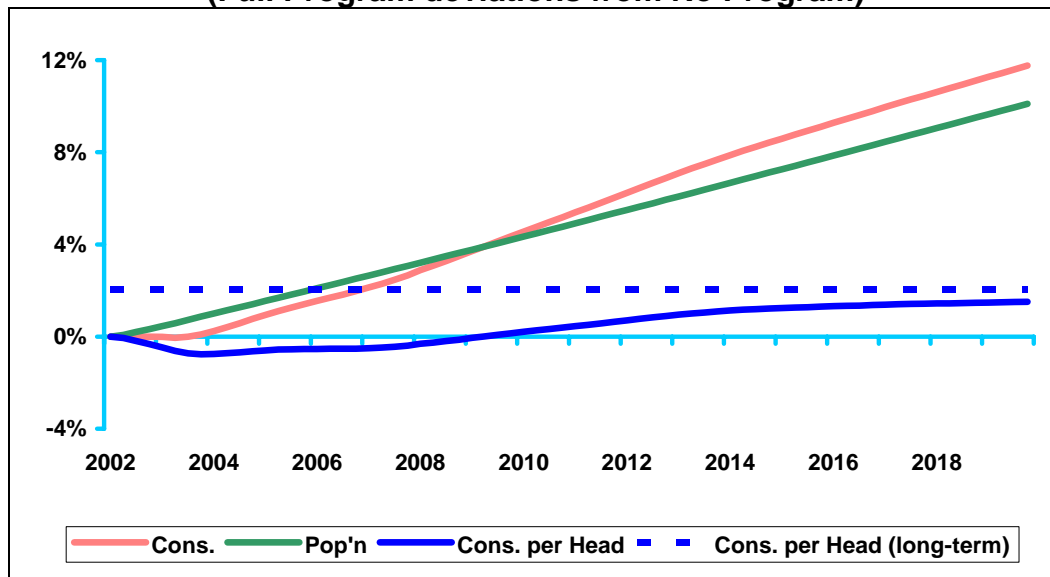
Living Standards based on GDP per Head

A slightly different picture of annual living standards would emerge if the gain from the migration intake were instead measured more partially using GDP per head instead of consumption per head. GDP per head shows a stronger gain of 3.0 per cent compared with 2.0 per cent for consumption per head. This is because GDP per head takes into account the gains from higher labour productivity (the 'gdp/emp.' channel) and labour force participation rates (the 'emp./pop' channel), but does not take into account the loss resulting from the extra investment in business capital and housing created by migration (the 'con./gdp' channel).

The Cumulative Annual Living Standard Effects

Chart 13 shows the cumulative nature of the growth in annual living standards (as measured by consumption per head) each year for the migration intake from 2002 to 2020. In the chart, the effects of the migration intake on annual living standards are calculated as the differences between the 'full program scenario' and the 'no program scenario'.

Chart 13
Year-by-Year Gains in Annual Living Standards up to 2020 (%)
(Full Program deviations from No Program)



Source: Econtech Modelling

Note: "Long-term" refers to the ongoing gains from continuing the migration intake for a further 20 years – actual consumption per head will eventually converge to this line.

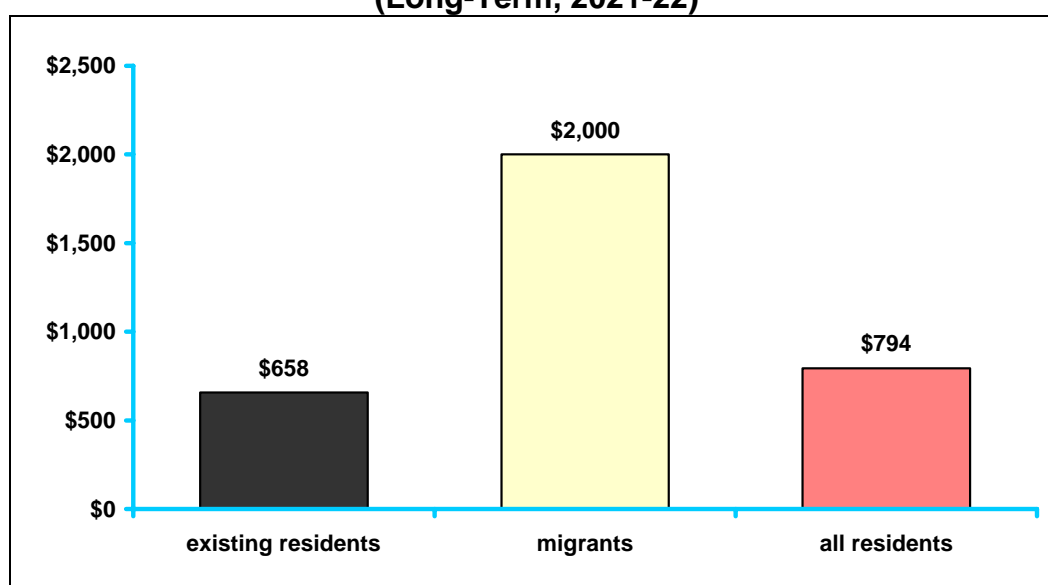
The chart shows that annual living standards (represented by the 'Cons. per Head' line) initially fall as the percentage increase in the population is bigger than the percentage increase in consumption. However, as both labour productivity and the underlying labour participation

rate gradually increase, annual living standards also increase. So in the long-term, the current migration intake is estimated to add 2.0 per cent to annual living standards, as shown by the dotted line in Chart 13.

Existing Australian Residents versus Migrants

The long-term gain in living standards can be split between the gain accruing to existing residents and the gain accruing to migrants, as shown in Chart 14. The chart shows that existing Australian residents gain by \$658 while migrants gain by \$2,000 in the long-term. These gains are both measured relative to annual living standards of residents in the long-term (2021-22) in the absence of the migration intake. That is, the gain for migrants is not relative to the living standards they would have enjoyed in their country-of-origin.

Chart 14
Annual Living Standards – Existing Residents versus Migrants
(Long-Term, 2021-22)



Source: Econtech Modelling

The gain of \$794 per head in annual living standards is a sizeable gain. By way of comparison, a large personal income tax cut of about \$20 billion (in 2000-01 prices) would be required to achieve the same gain in living standards. And it dwarfs projected gains of under \$200 per head from the important policy reform of bringing down trade barriers by eliminating existing import tariffs on motor vehicles and textiles, clothing and footwear.

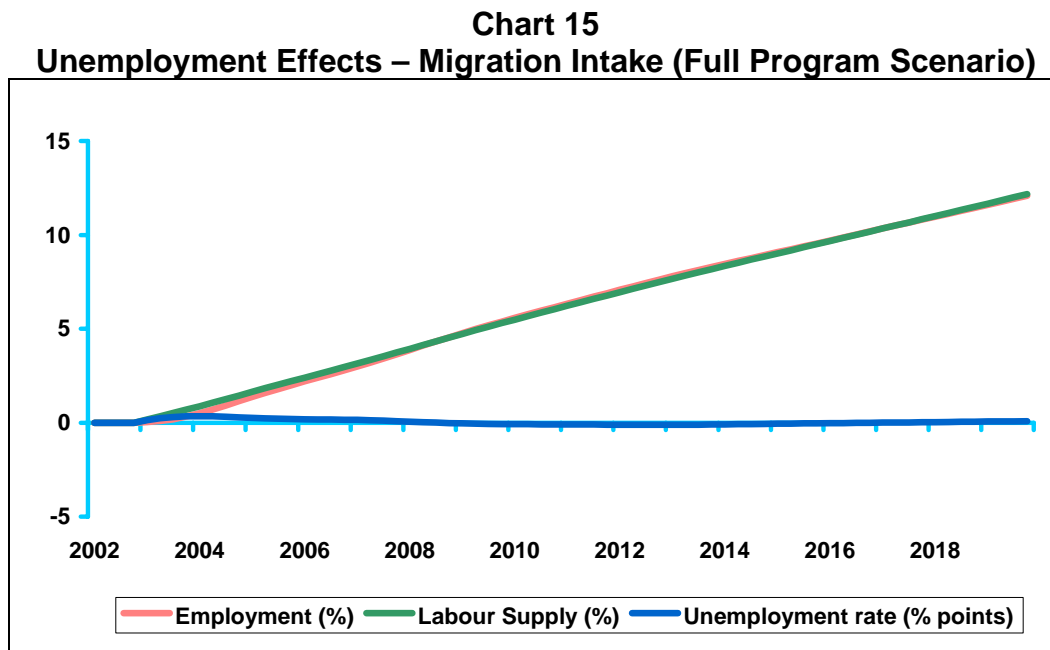
Further details of the long-term economic impacts of the current migration intake can be found in Tables A.6 and A.7, which are located in the attached Tables Appendix.

Main Findings

- The current migration intake is estimated to add 2.0 per cent or \$794 per year to annual living standards in the long-term i.e. on an ongoing or equilibrium basis.
- This is a sizeable gain, comparable to a gain that would only be achieved through a large personal income tax cut.
- The gain in annual living standards is provided by the Skill Stream.

9. Unemployment Impacts of the Migration Intake

The results from the MM2 model also show the effects of the migration intake on the labour market. Migration affects both the supply and demand for labour. The results in Chart 15 are calculated as the differences between the ‘full program scenario’ and the ‘no program scenario’ so that the effects of the current migration intake continuing until 2021-22 can be isolated.



The migration intake is expected to lead to an expansion in Australia’s population. For example, by 2021-22, Australia’s population is projected to be 11.3 per cent higher than if the migration intake was discontinued. This results in the gradual gain in the labour supply seen in Chart 15.

Equally, the migration intake gradually boosts labour demand by contributing to national and state and territory activity. For example, migrants generate employment in the same way as existing residents by spending on goods and services and investing in housing. Thus the migration intake generates the gradual gains in employment seen in Chart 15.

The gains in labour supply and employment are similar, so the migration intake is simulated to have little net effect on unemployment, as shown in the chart. This result is a coincidence in the short-term but not in the long-term.

In particular, in the long-term this result reflects the long-term *assumption* in MM2 that there is a sustainable or equilibrium unemployment rate to which the actual unemployment rate will always return in the long-term. This rate is currently estimated to be about 6 per cent and is independent of the size or nature of the migration intake.

In reality, in the long-term, unemployment largely reflects mismatch between the types of labour skills on offer and those that are needed. In fact, by some targeting of skills in short supply, the current migration intake is likely to reduce jobs mismatch, leading to some long-term reduction in unemployment. Because the modelling in this report does not take this effect into account, it shows no long-term effect on unemployment. Accordingly, the estimates in this report of the gains from the migration intake are conservative.

In the short-term, it just happens to be the case in MM2 that the direct effects on labour demand of increased migration broadly match the effects on labour supply. Increased migration leads to higher demand for housing investment in particular, which flows through to higher labour demand, broadly matching the gain in labour supply from migration.

Main Findings

- The current migration intake is simulated to have little net effect on unemployment.
- The long-term effect on unemployment is a conservative estimate because of the long-term *assumption* in MM2 regarding the equilibrium unemployment rate.
- By some targetting of skills in short supply, the current migration intake is likely to reduce jobs mismatch, leading to some long-term reduction in unemployment.

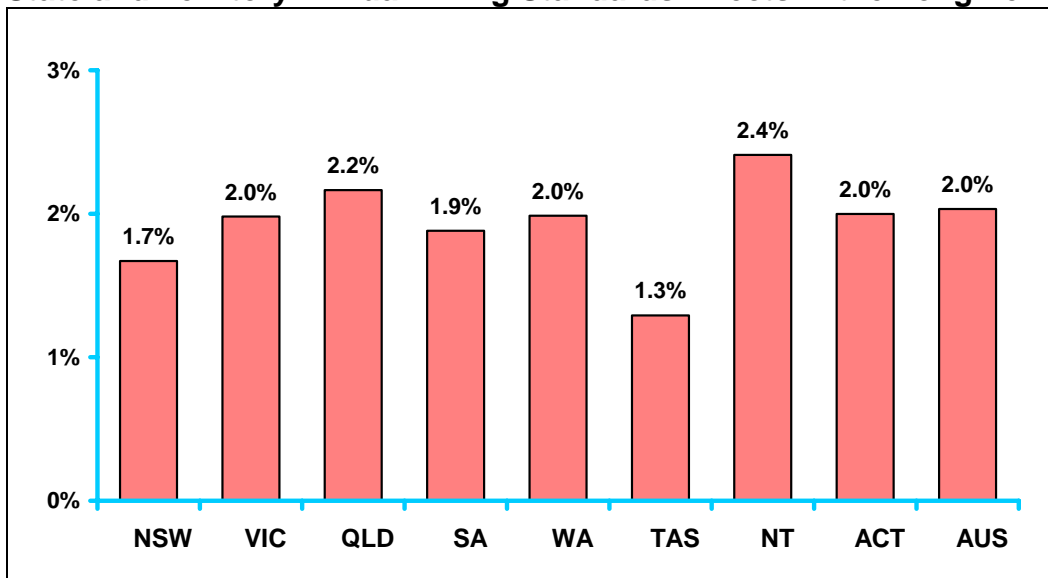
10. State and Territory Impacts of the Migration Intake

The MM2-States Model provides estimates of the effects of the migration intake on each of the eight states and territories. This model uses results from MM2, together with the population projections for each state and territory, to estimate economic impacts at the state and territory level. This includes estimates of effects on consumption, production (as measured by GSP), the adult population, employment and labour force participation.

Annual Living Standards Effects

Migrants affect living standards by enlarging the size of the population and economy in each state and territory. Migrants also affect living standards because the average economic attributes of migrants differ from the average economic attributes of existing residents. Chart 16 shows the gains in living standards in each state and territory, as measured by consumption per head of total population. The chart shows that in the long-term, the current migration intake is estimated to add between 1.3 to 2.4 per cent to annual living standards, compared with the situation if the migration intake were discontinued.

Chart 16
State and Territory Annual Living Standards Effects in the Long-Term



Source: Econtech modelling

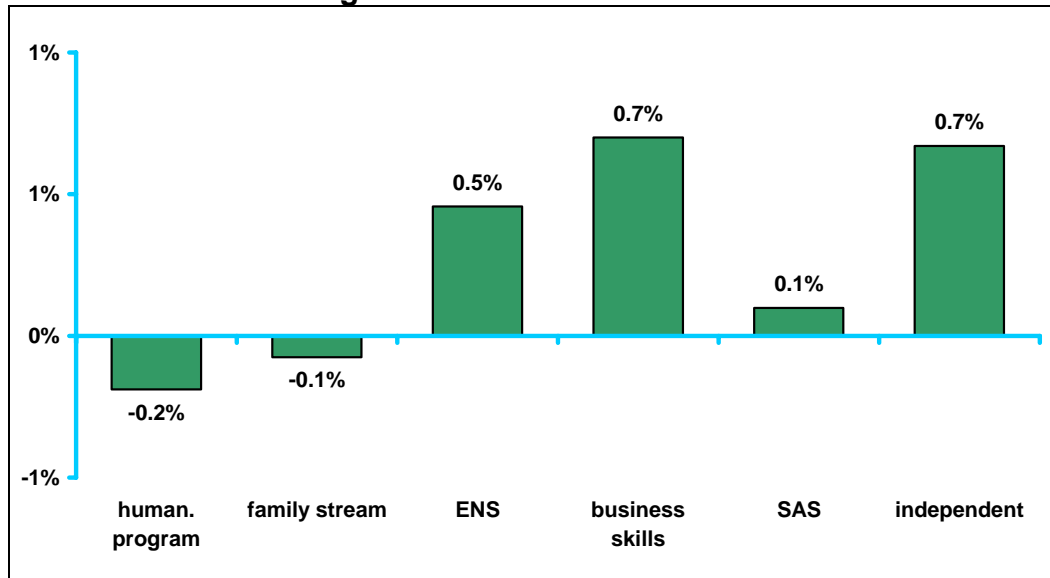
Note: "Long-term" refers to the ongoing gains from continuing the migration intake for a further 20 years to 2021-22

As discussed in Section 8, there are two ways of breaking down the gain in annual living standards. The first way is according to the different categories of migration flows. The second way is according to the three economic channels – labour productivity; labour force participation; and the consumption share of GDP – that were identified in Section 8. At the state and territory level, only the first way is used to break down the gain in living standards and Chart 17 shows this break down for NSW.

For NSW, the largest contribution to annual living standard is provided by the Business Skills category. This contribution is predominantly due to higher average skills and financial wealth of this category compared to existing residents. These differences in attributes such as skill levels, age structure and financial wealth boost labour productivity and labour force participation. A similar analysis can be applied to the results for each state and territory.

Another migrant category with a large contribution is the Independent category. There are two reasons for the contribution. First, the Independent migrant category has one of the highest intakes of migrants of all categories and so enlarges the size of the population and the economy. Second, migrants within this category have a higher average level of skills than existing residents and differences in attributes such as skill levels boost labour productivity.

Chart 17
Annual Living Standards Effects in NSW in 2021-22



Source: Econtech modelling

Note: "Long-term" refers to the ongoing gains from continuing the migration intake for a further 20 years to 2021-22

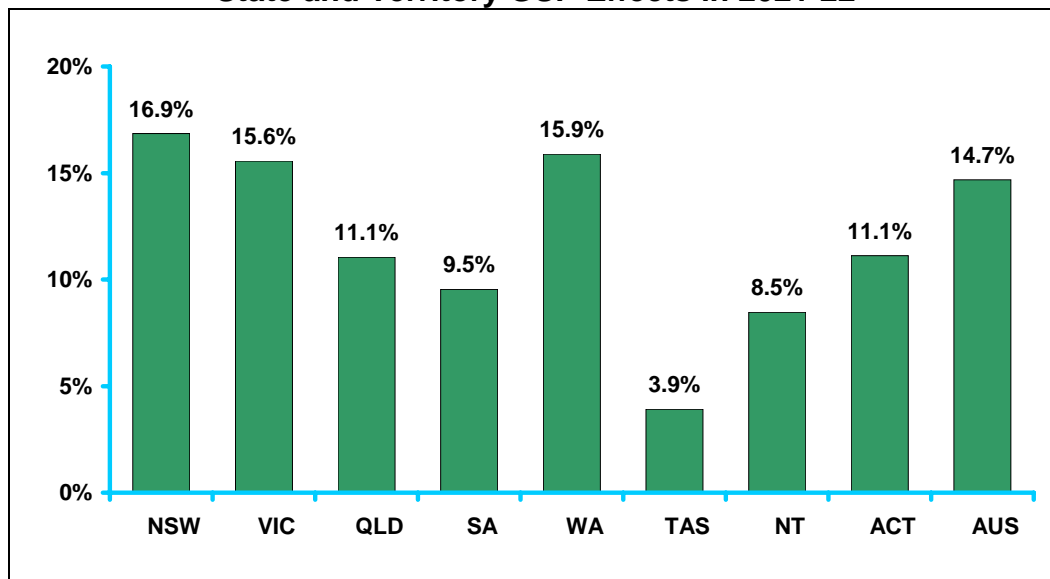
All state and territories will benefit from migration. Specifically, annual living standards, as measured by consumption per head of population, will be higher in each state and territory as a result of continuing the 2002-03 Migration Program for a further 20 years. The gains in living standards in each state and territory are provided by the Skill Stream.

Gross State Product Effects

At the national level, the current migration intake leads to higher GDP than would have been expected if the Migration and Humanitarian Programs were discontinued. Migrants boost economic activity by increasing the level of spending on goods and services and investing in housing. All states and territories share in this gain, as shown in Chart 18. The chart also shows that some states and territories will benefit more than others. For example, while there is a gain in GDP of 14.7 per cent at the national level, at the state and territory level the gain in production (as measured by GSP) ranges from a low of 3.9 per cent in Tasmania to a high of 16.9 per cent in NSW. This is because NSW receives more than its share of new migrants, while Tasmania receives less than its share.

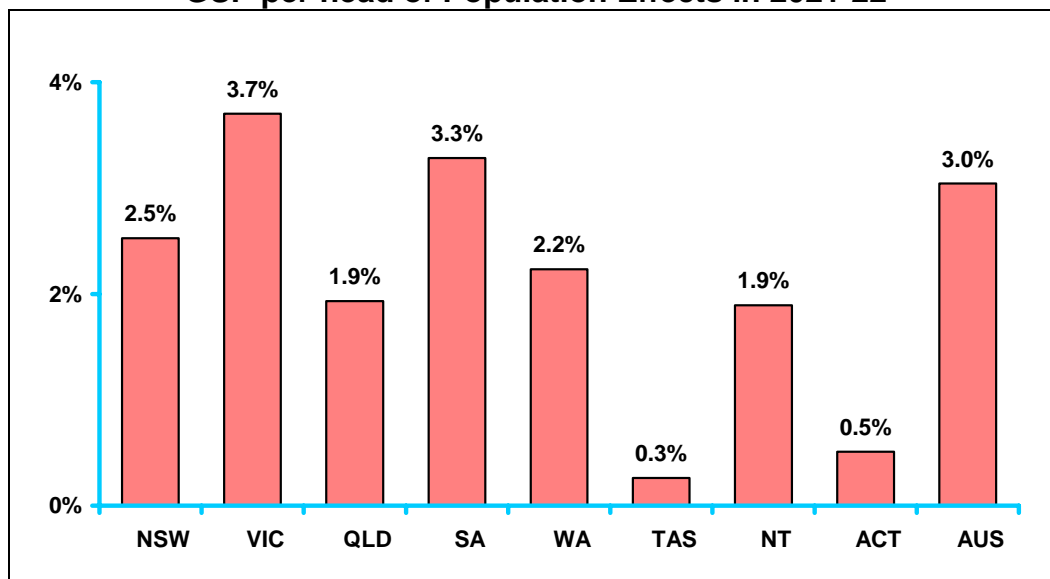
Chart 18 showed that all states and territories share in the gain in production at the national level. Chart 19 shows that GSP per head of population also rises in every state and territory. The increase ranges from a low of 0.3 per cent in Tasmania to a high of 3.7 per cent in Victoria.

Chart 18
State and Territory GSP Effects in 2021-22



Source: Econtech modelling

Chart 19
GSP per head of Population Effects in 2021-22



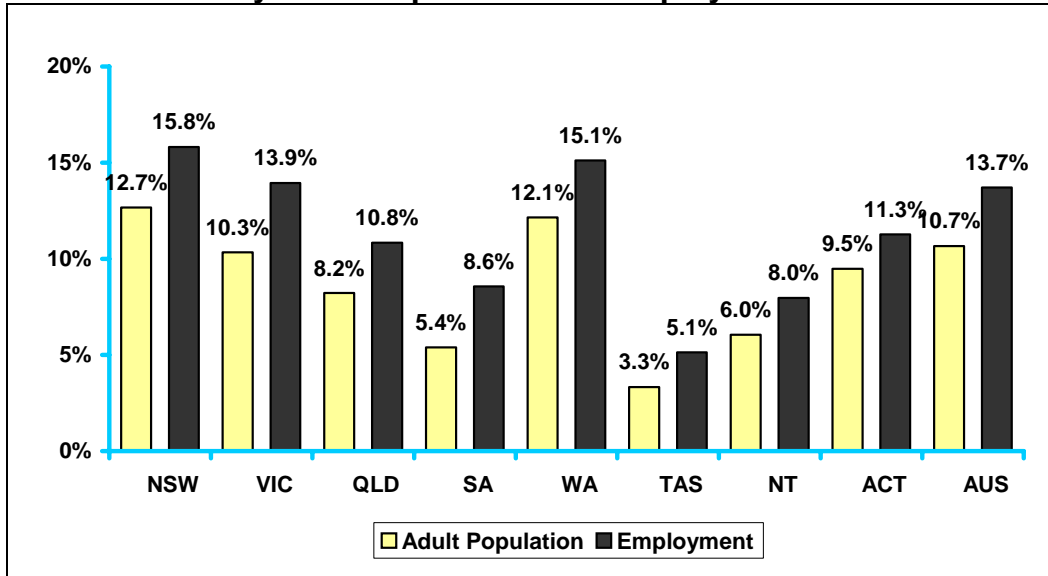
Source: Econtech modelling

Adult Population and Employment Effects

The migrant intake also affects the age structure of the population in each state and territory. As presented in Chart 2, the permanent and long-term arrivals of the migration intake are more concentrated in the prime working-age group than are existing residents. Chart 20 shows how this focus impacts on the adult population of each state and territory. The chart shows that some states and territories will benefit more than others. Like the pattern of growth in GSP across states and territories, the current migration intake has a bigger percentage effect on the adult population of New South Wales, which receives more than its share of new migrants, than on the adult population of Tasmania, which receives less than its share.

These increases in the adult population lead to a similar pattern of effects on employment in each state and territory. As discussed in Section 8, migrants boost labour demand, and hence employment, by increasing the level of spending on goods and services and investment in housing. Once more, Chart 20 shows that some states and territories will benefit more than others.

Chart 20
State and Territory Adult Population and Employment Effects in 2021-22

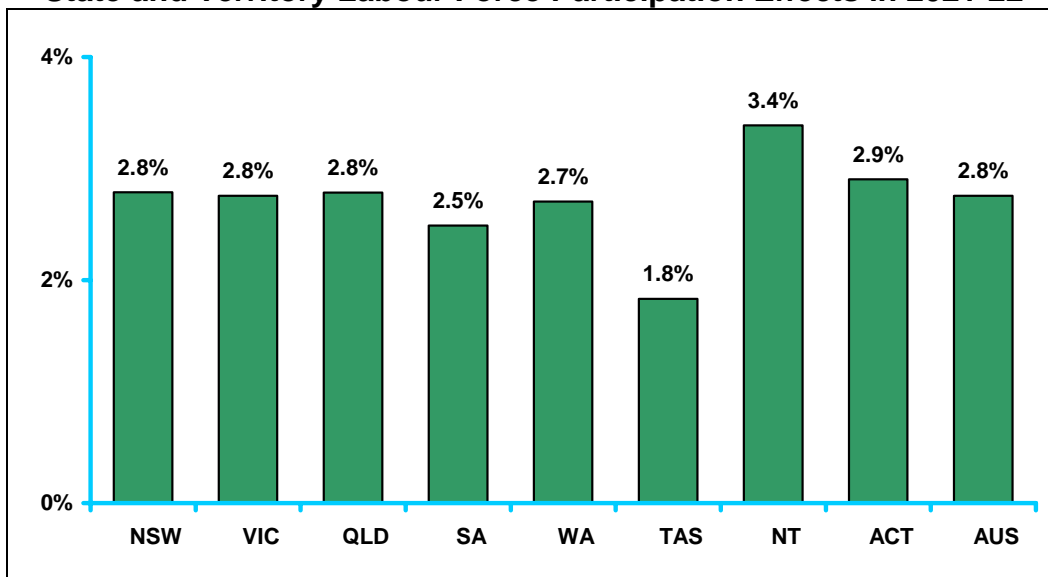


Source: Econtech modelling

Although employment increases in each state and territory, there are also similar increases in labour supply because migrants provide additional labour. This leaves little net effect on unemployment at the state and territory level, just as there is little net effect on unemployment at the national level, as shown in Chart 15.

Labour Force Participation Effects

Chart 21
State and Territory Labour Force Participation Effects in 2021-22



Source: Econtech modelling

The additional labour provided by migration, together with the increase in the share of the population in the prime working-age group, will have a mounting positive effect on state and territory labour force participation rates. Chart 21 shows that the gain in the underlying participation rate ranges from 1.8 per cent in Tasmania to 3.4 per cent in the Northern Territory, compared with the hypothetical situation if the migration intake were discontinued. Further, the gains in the five most populous states – NSW, Victoria, Queensland, Western Australia and South Australia – are similar to the gain in the underlying participation rate of 2.8 per cent at the national level.

Summary Table

Table 2 provides a summary of the main state and territory effects of the current migration intake compared to the hypothetical situation in which there was no migration intake. The results in the table show the change in persons and dollars, rather than percentages.

Using Queensland as an example, the table shows that in the long-term, the continuation of the current migration intake is estimated to add \$788 to annual living standards, as measured by consumption per head. Further, the migration intake will boost the adult population by 328,000 persons and the number of jobs by 247,000. The table also shows that GSP and consumption will be \$24.6 billion and \$19.9 billion higher respectively in Queensland in the same year as result of the current migration intake. A similar analysis can be applied to the results for each state and territory shown in Table 2.

Table 2
Summary of Main State and Territory Effects

	Adult Pop'n (‘000 persons)	Employment (‘000 persons)	GSP (\$bn, 2000/01 prices)	Consumption (\$bn, 2000/01 prices)	Annual Living Standards (2000/01 prices)
NSW	744	512	59.5	46.9	\$703
VIC	464	352	42.2	28.4	\$780
QLD	328	247	24.6	19.9	\$788
SA	70	61	6.8	4.5	\$679
WA	235	169	23.4	13.4	\$743
TAS	13	10	0.6	0.7	\$422
NT	11	10	1.4	0.7	\$842
ACT	26	21	2.5	1.9	\$917
AUS	1,962	1,424	166.4	116.4	\$794

Table 2 shows that all the eight states and territories will benefit from the continuation of the current migration intake. Further, the table shows that some states and territories benefit more than others. The extent to which states and territories will benefit from the current migration intake depends on three factors.

First, and most obviously, is where migrants settle. Historically, a large proportion of migrants have settled in NSW while only a small proportion has settled in the Northern Territory. This is reflected in the modelling results presented in Table 2 below as well as Tables A.8, A.9, A.10 and A.11 (located in the Tables Appendix). The results show the largest increases (in both levels and percentages) in employment, the adult population and GSP are in NSW.

The second factor is the composition of the group of migrants that settle in each state and territory. A large proportion of high paying jobs in industries such as banking and finance are located in either Sydney or Melbourne. Thus, both NSW and Victoria will benefit more from attracting wealthier and more skilled migrants, such as migrants that fall within the Business Skills stream, than the other six states and territories.

The third and final factor is the attributes of existing residents in each state and territory compared to migrants that enter each state and territory as part of the intake. For example, states and territory economies will benefit from migration if the economic contribution of the representative migrant exceeds that of the representative existing resident in each state and territory. Again, both NSW and Victoria will benefit more than the other state and territories by attracting a large proportion of wealthier and more skilled migrants.

Further details of the long-term state and territory impacts of the current migration intake can be found in Tables A.8, A.9, A.10 and A.11, which are located in the attached Tables Appendix.

Main Findings

- The current migration intake is estimated to add between 1.3 and 2.4 per cent to annual living standards in each of the eight states and territories.
- The gain in annual living standards is provided by the Skill Stream.
- GSP will rise in each state and territory.
- The adult population will be higher in each state and territory.
- Employment will also be higher in each state and territory.
- The current migration intake will have a mounting positive impact on state and territory labour force participation rates.
- Some states and territories will benefit more than others for three reasons: (i) the pattern of migrant settlement; (ii) the composition of the group of migrants that settle in each state and territory; and (iii) the attributes of existing residents in each state and territory compared to migrants that enter each state and territory as part of the intake.

11. State and Territory Impacts per 1,000 Migrants

This section expands the results to show the estimates of the main state and territory effects attributable to each group of 1,000 migrants of the current migration intake. The effects of the migration intake are calculated as the differences between the ‘full program scenario’ and the ‘no program scenario’.

Table 3 shows the average amount of GSP and consumption and the average number of jobs created by each group of 1,000 migrants that enter Australia between 2002-03 and 2021-22.

Using Victoria as an example, the table shows that by 2021-22, every 1,000 migrants that enter that state on average boost GSP by \$72.3 million. There are three reasons for this increase. The first reason is the improved labour productivity of the Victorian workforce as a result of the current migration intake. The second reason is the population expansion and increased demand for housing and additional expenditure on goods and services. The third reason is the increase in the labour force participation rates due to the average migrant being younger than the average existing resident. The increase in labour force participation will also boost employment in Victoria. For example, every 1,000 migrants that enter Victoria on average create an additional 603 jobs, compared to the hypothetical situation of no migration intake. A similar analysis can be applied to the results for each state and territory as shown in Table 3.

Table 3 shows that some states and territories benefit more than others from the continuation of the current migration intake. As discussed in Section 10, the extent to which states and territories will benefit from the current migration intake depends on the following three factors:

- where migrants settle;
- the composition of the group of migrants that settle in each state and territory; and
- the attributes of existing residents in each state and territory compared to migrants that enter each state and territory as part of the intake.

Table 3
Main State and Territory Impacts per 1,000 Migrants

	GSP (\$m, 2000/01 prices)	Consumption (\$m, 2000/01 prices)	Employment (jobs)
NSW	61.1	48.2	526
VIC	72.3	48.6	603
QLD	56.3	45.5	566
SA	69.2	45.7	623
WA	80.5	46.2	583
TAS	37.5	43.3	567
NT	90.2	59.4	795
ACT	85.8	66.2	733
AUS	68.2	47.7	584

Main Findings

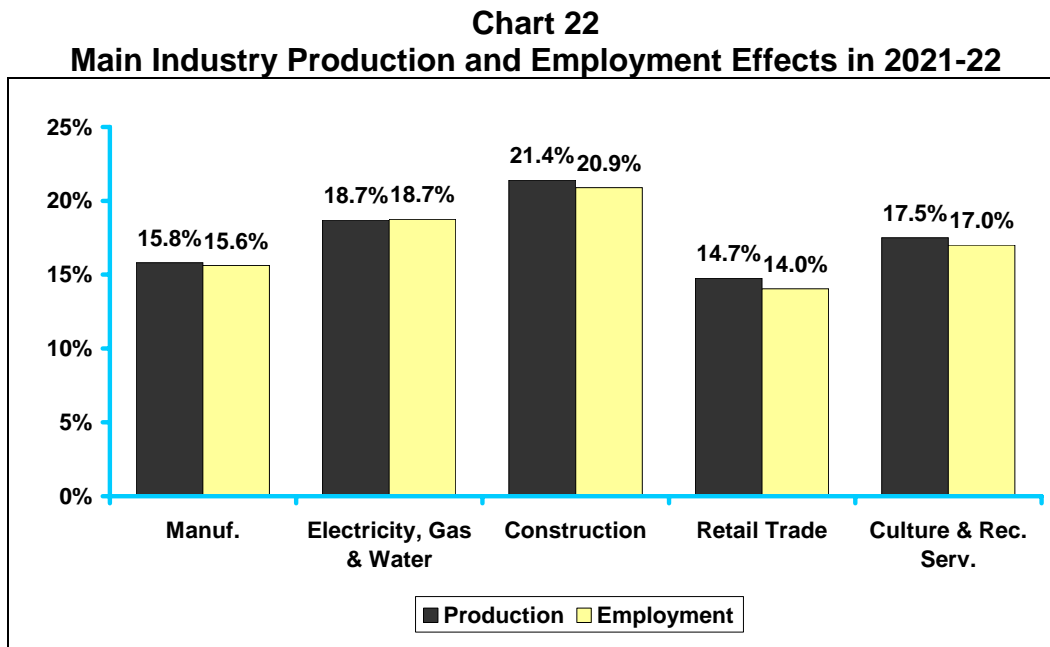
- Each group of 1,000 migrants that enter Australia between 2002-03 and 2021-22 make significant contributions to GSP, consumption and employment in each state and territory.

12. Industry Impacts of the Migration Intake

The continuation of the Migration Program leads to higher GDP than would have been expected if the migration intake was discontinued. While all industries gain from this increase in GDP via boosts to production and employment, Chart 22 shows that some industries benefit more than others. For example, the chart shows a bigger percentage increase in both production and employment of the Construction industry than other industries. This is because the higher population growth generated by migration results in a need for additional stocks of housing and business capital.

Likewise, the Electricity, Gas and Water industry also benefits from the higher population growth generated by migration. The higher growth in the stocks of housing and business capital will feed through to an increase in demand for utilities.

Finally, production and employment in the manufacturing, retail trade and cultural and recreational services industries will also benefit from the increase in population.



Source: Econtech Modelling

Further details of the long-term industry impacts of the current migration intake can be found in Tables A.12, A.13, A.14 and A.15, which are located in the attached Tables Appendix.

Main Findings

The current migration intake will:

- Provide the largest boost to production and employment in the Construction industry. This is due to the larger population demanding additional stocks of housing and business capital.
- Boost production and employment in the Electricity, Gas and Water industry as demand for utilities increases in line with the larger population.

13. Overview

Overall, the demographic and economic modelling results in this report suggest significant long-term benefits from continuing the 2002-03 Migration Program. Specifically, the continuation of the current migration intake for a further 20 years to 2021-22 is estimated to:

- add 2.0 per cent or \$794 to annual living standards in the long-term, as measured by consumption per head;
- boost Australia's population from 22.0 million to 24.5 million, which represents a gain of 11.3 per cent;
- steadily increase the average skill level of the Australian workforce;
- increase the underlying labour force participation rate;
- add between 1.3 and 2.4 per cent to annual living standards in each state and territory;
- boost GSP in each state and territory; and
- create new jobs in each state and territory.

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Tables Appendix

- A.1 Scenario Assumptions: Categories, Skills and Transfers
- A.2 Scenario Assumptions: Categories, Skills and Transfers – Continued
- A.3 Scenario Assumptions: Age Distributions of Arrivals
- A.4 Demographic Scenarios in 2021-22
- A.5 Demographic Scenarios in 2021-22 – Continued
- A.6 Economic Effects in 2021-22 (long-term)
- A.7 Economic Effects in 2021-22 (long-term) – Continued
- A.8 State Effects in 2021-22 (long-term)
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- A.12 Industry GDP Effects in 2021-22 (long-term)
- A.13 Industry GDP Effects in 2021-22 (long-term) – Continued
- A.14 Industry Employment Effects in 2021-22 (long-term)
- A.15 Industry Employment Effects in 2021-22 (long-term) – Continued

Table A.1
Scenario Assumptions: Categories, Skills and Transfers

Scenario	no program	humanitarian program	no skill stream	full program
Total Permanent Arrivals	17,600	29,600	73,600	139,700
Family (former Preferential Family)	0	0	44,000	44,000
Skilled-Australian Sponsored	0	0	0	10,256
Employer Nomination Scheme	0	0	0	10,626
Independent	0	0	0	37,366
Business Skills	0	0	0	6,612
Humanitarian	0	12,000	12,000	12,000
Special	0	0	0	1,240
Non-program	17,600	17,600	17,600	17,600
Family (former Preferential Family)	0.0%	0.0%	59.8%	31.5%
Skilled-Australian Sponsored	0.0%	0.0%	0.0%	7.3%
Employer Nomination Scheme	0.0%	0.0%	0.0%	7.6%
Independent	0.0%	0.0%	0.0%	26.7%
Business Skills	0.0%	0.0%	0.0%	4.7%
Humanitarian	0.0%	40.5%	16.3%	8.6%
Special	0.0%	0.0%	0.0%	0.9%
Non-program	100.0%	59.5%	23.9%	12.6%
Attributes: transfers (thousands of dollars per person)				
Family (former Preferential Family)	7	7	7	7
Skilled-Australian Sponsored	15	15	15	15
Employer Nomination Scheme	28	28	28	28
Independent	15	15	15	15
Business Skills	236	236	236	236
Humanitarian	0	0	0	0
Non-program	15	15	15	15
Attributes: skill index (maximum skill=100)				
Family (former Preferential Family)	52	52	52	52
Skilled-Australian Sponsored	57	57	57	57
Employer Nomination Scheme	73	73	73	73
Independent	65	65	65	65
Business Skills	82	82	82	82
Humanitarian	44	44	44	44
Non-program	55	55	55	55

Table A.2
Scenario Assumptions: Categories, Skills and Transfers – Continued

Scenario	ENS category	business skills category	SAS category	independent category
Total Permanent Arrivals	85,466	92,078	102,334	139,700
Family (former Preferential Family)	44,000	44,000	44,000	44,000
Skilled-Australian Sponsored	0	0	10,256	10,256
Employer Nomination Scheme	10,626	10,626	10,626	10,626
Independent	0	0	0	37,366
Business Skills	0	6,612	6,612	6,612
Humanitarian	12,000	12,000	12,000	12,000
Special	1,240	1,240	1,240	1,240
Non-program	17,600	17,600	17,600	17,600
Family (former Preferential Family)	51.5%	47.8%	43.0%	31.5%
Skilled-Australian Sponsored	0.0%	0.0%	10.0%	7.3%
Employer Nomination Scheme	12.4%	11.5%	10.4%	7.6%
Independent	0.0%	0.0%	0.0%	26.7%
Business Skills	0.0%	7.2%	6.5%	4.7%
Humanitarian	14.0%	13.0%	11.7%	8.6%
Special	1.5%	1.3%	1.2%	0.9%
Non-program	20.6%	19.1%	17.2%	12.6%
Attributes: Transfers (thousands of dollars per person)				
Family (former Preferential Family)	7	7	7	7
Skilled-Australian Sponsored	15	15	15	15
Employer Nomination Scheme	28	28	28	28
Independent	15	15	15	15
Business Skills	236	236	236	236
Humanitarian	0	0	0	0
Non-program	15	15	15	15
Attributes: Skill Index (maximum skill=100)				
Family (former Preferential Family)	52	52	52	52
Skilled-Australian Sponsored	57	57	57	57
Employer Nomination Scheme	73	73	73	73
Independent	65	65	65	65
Business Skills	82	82	82	82
Humanitarian	44	44	44	44
Non-program	55	55	55	55

Table A.3
Scenario Assumptions: Age Distributions of Long-term & Permanent Arrivals

	no program	humanitarian program	no skill stream	full program
<i>Males:</i>				
0-4	4.4%	4.4%	4.4%	4.4%
5-9	4.5%	4.4%	4.4%	4.5%
10-14	4.2%	4.1%	4.1%	4.1%
15-19	10.6%	10.4%	10.5%	10.5%
20-24	17.6%	17.4%	17.4%	17.4%
25-29	17.3%	17.1%	17.1%	17.1%
30-34	12.1%	12.0%	12.0%	12.0%
35-39	8.9%	8.8%	8.8%	8.9%
40-44	6.4%	6.3%	6.3%	6.3%
45-49	4.5%	4.5%	4.5%	4.5%
50-54	3.4%	3.4%	3.4%	3.4%
55-59	2.3%	2.4%	2.4%	2.4%
60-64	1.6%	1.8%	1.8%	1.8%
65-69	1.1%	1.4%	1.4%	1.3%
70-74	0.7%	0.8%	0.8%	0.8%
75 and over	0.5%	0.6%	0.6%	0.6%
All Ages	100.0%	100.0%	100.0%	100.0%
<i>Females:</i>				
0-4	4.4%	4.3%	4.3%	4.3%
5-9	4.3%	4.2%	4.2%	4.2%
10-14	4.1%	4.0%	4.0%	4.0%
15-19	11.1%	10.9%	10.9%	11.0%
20-24	19.8%	19.5%	19.5%	19.6%
25-29	18.7%	18.4%	18.4%	18.5%
30-34	12.0%	11.8%	11.8%	11.9%
35-39	7.8%	7.7%	7.7%	7.7%
40-44	5.3%	5.3%	5.3%	5.3%
45-49	3.6%	3.6%	3.6%	3.6%
50-54	2.9%	3.0%	2.9%	2.9%
55-59	2.0%	2.3%	2.2%	2.2%
60-64	1.6%	2.0%	2.0%	1.9%
65-69	1.1%	1.4%	1.4%	1.3%
70-74	0.7%	0.8%	0.8%	0.8%
75 and over	0.6%	0.8%	0.8%	0.7%
All Ages	100.0%	100.0%	100.0%	100.0%

Table A.4
Demographic Scenarios in 2021-22

	no program	humanitarian program	family stream	skill stream	full program
<i>Levels:</i>					
Population Aged 0-14 ('000 persons)	3,591	3,652	3,831	4,121	4,121
Population Aged 15-39 ('000 persons)	7,239	7,368	7,746	8,352	8,352
Population Aged 40-64 ('000 persons)	6,918	6,998	7,244	7,648	7,648
Population Aged 65 plus ('000 persons)	4,228	4,240	4,278	4,339	4,339
Total Population ('000 persons)	21,977	22,258	23,099	24,459	24,459
Skill Index (per cent)	63.5	63.3	63.2	64.0	64.0
Underlying Participation Rate (per cent)	57.79	57.99	58.55	59.37	59.37
Predicted Migrant Transfers (% of GDP)	-0.043	-0.043	-0.008	0.374	0.374
<i>Deviations:</i>					
Population Aged 0-14 ('000 persons)		1.7%	4.9%	7.6%	14.7%
Population Aged 15-39 ('000 persons)		1.8%	5.1%	7.8%	15.4%
Population Aged 40-64 ('000 persons)		1.2%	3.5%	5.6%	10.5%
Population Aged 65 plus ('000 persons)		0.3%	0.9%	1.4%	2.6%
Total Population ('000 persons)		1.3%	3.8%	5.9%	11.3%
Skill Index (per cent)		-0.2%	-0.3%	1.3%	0.8%
Underlying Participation Rate (per cent)		0.3%	1.0%	1.4%	2.7%
Predicted Migrant Transfers (% of GDP)		0.0%	0.0%	0.4%	0.4%

Table A.5
Demographic Scenarios in 2021-22 – Continued

	ENS category	business skills category	SAS category	independent category
<i>Levels:</i>				
Population Aged 0-14 ('000 persons)	3,889	3,922	3,972	4,121
Population Aged 15-39 ('000 persons)	7,863	7,932	8,038	8,352
Population Aged 40-64 ('000 persons)	7,331	7,378	7,449	7,648
Population Aged 65 plus ('000 persons)	4,291	4,298	4,309	4,339
Total Population ('000 persons)	23,375	23,529	23,769	24,459
Skill Index (per cent)	63.4	63.6	63.6	64.0
Underlying Participation Rate (per cent)	58.72	58.81	58.96	59.37
Predicted Migrant Transfers (% of GDP)	0.041	0.285	0.310	0.374
<i>Deviations:</i>				
Population Aged 0-14 ('000 persons)	1.5%	0.8%	1.3%	3.7%
Population Aged 15-39 ('000 persons)	1.5%	0.9%	1.3%	3.9%
Population Aged 40-64 ('000 persons)	1.2%	0.6%	1.0%	2.7%
Population Aged 65 plus ('000 persons)	0.3%	0.2%	0.3%	0.7%
Total Population ('000 persons)	1.2%	0.7%	1.0%	2.9%
Skill Index (per cent)	0.3%	0.3%	0.0%	0.6%
Underlying Participation Rate (per cent)	0.3%	0.2%	0.2%	0.7%
Predicted Migrant Transfers (% of GDP)	0.0%	0.2%	0.0%	0.1%

Table A.6
Economic Effects in 2021-22 (long-term)

	no program	humanitarian program	family stream	skill stream	full program
<i>Levels:</i>					
Employment ('000 persons)	10,390	10,551	11,033	11,814	11,814
Total Population ('000 persons)	21,977	22,258	23,099	24,459	24,459
GDP (\$b, 2000/01 prices)	1,133.5	1,148.2	1,197.4	1,299.9	1,299.9
Consumption (\$b, 2000/01 prices)	858.6	868.3	901.6	975.0	975.0
GDP/Employment (\$'000 per employed person)	\$109,098	\$108,823	\$108,525	\$110,032	\$110,032
Employment/Population (share)	47.28%	47.40%	47.77%	48.30%	48.30%
GDP per Head (\$/person)	\$51,578	\$51,586	\$51,839	\$53,148	\$53,147
Investment/GDP (share)	20.17%	20.30%	20.66%	21.36%	21.36%
Net Exports/GDP (share)	4.08%	4.07%	4.04%	3.64%	3.64%
Consumption/GDP (share)	75.74%	75.63%	75.30%	75.00%	75.00%
Consumption per Head (\$/person)	\$39,067	\$39,013	\$39,033	\$39,862	\$39,861
<i>Deviations:</i>					
Employment (%)		1.55%	4.57%	7.08%	13.71%
Total Population (%)		1.28%	3.78%	5.89%	11.30%
GDP (%)		1.30%	4.29%	8.56%	14.68%
Consumption (%)		1.14%	3.83%	8.14%	13.56%
GDP/Employment (%)		-0.25%	-0.27%	1.39%	0.86%
Employment/Population (%)		0.27%	0.77%	1.12%	2.17%
GDP per Head of Population (%)		0.02%	0.49%	2.52%	3.04%
GDP per Head (\$/person) (00/01 prices)		\$9	\$253	\$1,309	\$1,570
Investment/GDP (% points)		0.13%	0.36%	0.69%	1.18%
Net Exports/GDP (% points)		-0.01%	-0.03%	-0.40%	-0.44%
Consumption/GDP (% points)		-0.12%	-0.45%	-0.30%	-0.74%
Consumption/GDP (%)		-0.16%	-0.44%	-0.39%	-0.98%
Consumption per Head (%)		-0.14%	0.05%	2.12%	2.03%
Consumption per Head (\$/person) (00/01 prices)		-\$54	\$20	\$829	\$794

Table A.7
Economic Effects in 2021-22 (long-term) – Continued

	ENS category	business skills category	SAS category	independent category
<i>Levels:</i>				
Employment ('000 persons)	11,192	11,280	11,418	11,814
Total Population ('000 persons)	23,375	23,529	23,769	24,459
GDP (\$b, 2000/01 prices)	1,219.3	1,233.1	1,248.6	1,299.9
Consumption (\$b, 2000/01 prices)	916.9	929.6	940.3	975.0
GDP/Employment (\$'000 per employed person)	\$108,948	\$109,309	\$109,351	\$110,032
Employment/Population (share)	47.88%	47.94%	48.04%	48.30%
GDP per Head (\$/person)	\$52,165	\$52,406	\$52,530	\$53,147
Investment/GDP (share)	20.79%	20.87%	20.97%	21.36%
Net Exports/GDP (share)	4.02%	3.74%	3.72%	3.64%
Consumption/GDP (share)	75.20%	75.39%	75.31%	75.00%
Consumption per Head (\$/person)	\$39,228	\$39,510	\$39,562	\$39,861
<i>Deviations:</i>				
Employment (%)	1.44%	0.79%	1.22%	3.47%
Total Population (%)	1.19%	0.66%	1.02%	2.91%
GDP (%)	1.83%	1.13%	1.26%	4.11%
Consumption (%)	1.70%	1.38%	1.15%	3.68%
GDP/Employment (%)	0.39%	0.33%	0.04%	0.62%
Employment/Population (%)	0.24%	0.13%	0.20%	0.55%
GDP per Head of Population (%)	0.63%	0.46%	0.24%	1.17%
GDP per Head (\$/person) (00/01 prices)	\$326	\$241	\$124	\$617
Investment/GDP (% points)	0.12%	0.09%	0.10%	0.39%
Net Exports/GDP (% points)	-0.02%	-0.28%	-0.02%	-0.08%
Consumption/GDP (% points)	-0.10%	0.19%	-0.08%	-0.31%
Consumption/GDP (%)	-0.13%	0.26%	-0.10%	-0.41%
Consumption per Head (%)	0.50%	0.72%	0.13%	0.76%
Consumption per Head (\$/person) (00/01 prices)	\$195	\$282	\$53	\$299

Table A.8
State Effects in 2021-22 (long-term)

	humanitarian program	family stream	skill stream	full program
<i>Employment (%):</i>				
NSW	1.81%	5.25%	8.08%	15.82%
VIC	1.55%	4.64%	7.23%	13.94%
QLD	1.23%	3.62%	5.65%	10.83%
SA	0.99%	2.89%	4.47%	8.56%
WA	1.71%	5.12%	7.66%	15.12%
TAS	0.64%	1.78%	2.63%	5.13%
NT	0.95%	2.93%	3.91%	7.97%
ACT	1.31%	4.01%	5.59%	11.27%
AUS	1.55%	4.57%	7.08%	13.71%
<i>Population Aged 15 Years and Over (%):</i>				
NSW	1.44%	4.23%	6.56%	12.67%
VIC	1.16%	3.50%	5.39%	10.34%
QLD	0.95%	2.76%	4.32%	8.23%
SA	0.61%	1.81%	2.89%	5.39%
WA	1.37%	4.11%	6.26%	12.15%
TAS	0.38%	1.10%	1.83%	3.33%
NT	0.58%	2.02%	3.34%	6.04%
ACT	0.91%	3.15%	5.18%	9.49%
AUS	1.21%	3.56%	5.58%	10.66%
<i>GSP (%):</i>				
NSW	1.57%	4.98%	9.59%	16.85%
VIC	1.34%	4.51%	9.12%	15.57%
QLD	0.87%	3.08%	6.80%	11.05%
SA	0.75%	2.62%	5.94%	9.53%
WA	1.44%	4.77%	9.03%	15.88%
TAS	0.21%	0.87%	2.79%	3.91%
NT	0.73%	2.66%	4.90%	8.47%
ACT	1.08%	3.57%	6.15%	11.12%
AUS	1.30%	4.29%	8.56%	14.68%
<i>GSP per Head of Population (%):</i>				
NSW	-0.02%	0.33%	2.22%	2.53%
VIC	0.06%	0.63%	2.99%	3.70%
QLD	-0.16%	0.09%	2.01%	1.93%
SA	0.07%	0.59%	2.61%	3.28%
WA	-0.07%	0.27%	2.03%	2.23%
TAS	-0.20%	-0.32%	0.78%	0.26%
NT	0.09%	0.50%	1.29%	1.89%
ACT	0.05%	0.08%	0.38%	0.51%
AUS	0.02%	0.49%	2.52%	3.04%

Table A.9
State Effects in 2021-22 (long-term) – Continued

	ENS category	business skills category	SAS category	independent category
<i>Employment (%):</i>				
NSW	1.66%	0.95%	1.40%	3.86%
VIC	1.44%	0.83%	1.21%	3.58%
QLD	1.13%	0.63%	0.99%	2.79%
SA	0.93%	0.51%	0.78%	2.19%
WA	1.54%	0.70%	1.32%	3.92%
TAS	0.61%	0.31%	0.49%	1.20%
NT	0.93%	0.20%	0.76%	1.98%
ACT	1.23%	0.61%	1.02%	2.64%
AUS	1.44%	0.79%	1.22%	3.47%
<i>Population Aged 15 Years and over (%):</i>				
NSW	1.36%	0.74%	1.14%	3.18%
VIC	1.07%	0.60%	0.92%	2.71%
QLD	0.87%	0.49%	0.76%	2.14%
SA	0.61%	0.33%	0.51%	1.41%
WA	1.23%	0.69%	1.07%	3.15%
TAS	0.43%	0.22%	0.33%	0.84%
NT	0.82%	0.38%	0.56%	1.55%
ACT	1.26%	0.58%	0.85%	2.41%
AUS	1.14%	0.63%	0.97%	2.75%
<i>GSP (%):</i>				
NSW	2.05%	1.34%	1.43%	4.48%
VIC	1.91%	1.25%	1.30%	4.39%
QLD	1.46%	0.92%	0.98%	3.29%
SA	1.33%	0.84%	0.82%	2.83%
WA	1.92%	0.96%	1.35%	4.55%
TAS	0.78%	0.51%	0.34%	1.14%
NT	1.23%	0.33%	0.78%	2.48%
ACT	1.39%	0.82%	0.97%	2.84%
AUS	1.83%	1.13%	1.26%	4.11%
<i>GSP per Head of Population (%):</i>				
NSW	0.56%	0.52%	0.18%	0.95%
VIC	0.73%	0.59%	0.28%	1.36%
QLD	0.51%	0.38%	0.15%	0.95%
SA	0.65%	0.47%	0.25%	1.22%
WA	0.57%	0.20%	0.18%	1.06%
TAS	0.32%	0.27%	-0.02%	0.21%
NT	0.36%	-0.08%	0.19%	0.81%
ACT	0.02%	0.18%	0.03%	0.15%
AUS	0.63%	0.46%	0.24%	1.17%

Table A.10
State Effects in 2021-22 (long-term) – Continued

Scenario	humanitarian program	family stream	skill stream	full program
<i>Consumption per Head (%):</i>				
NSW	-0.19%	-0.08%	1.94%	1.67%
VIC	-0.15%	0.03%	2.10%	1.98%
QLD	-0.12%	0.10%	2.19%	2.17%
SA	-0.15%	0.00%	2.03%	1.88%
WA	-0.14%	0.04%	2.09%	1.99%
TAS	-0.22%	-0.20%	1.71%	1.29%
NT	-0.09%	0.20%	2.30%	2.41%
ACT	-0.09%	0.07%	2.02%	2.00%
AUS	-0.14%	0.05%	2.12%	2.03%
<i>Labour Force Participation Rate (%):</i>				
NSW	0.35%	0.98%	1.43%	2.79%
VIC	0.34%	0.97%	1.42%	2.76%
QLD	0.35%	0.98%	1.43%	2.78%
SA	0.31%	0.88%	1.28%	2.49%
WA	0.34%	0.95%	1.39%	2.70%
TAS	0.24%	0.66%	0.93%	1.83%
NT	0.43%	1.19%	1.73%	3.39%
ACT	0.38%	1.03%	1.47%	2.90%
AUS	0.34%	0.97%	1.42%	2.76%
<i>State Final Demand (%):</i>				
NSW	1.56%	4.95%	9.82%	17.05%
VIC	1.33%	4.49%	9.35%	15.79%
QLD	0.89%	3.16%	7.35%	11.73%
SA	0.79%	2.74%	6.50%	10.28%
WA	1.51%	5.04%	10.17%	17.47%
TAS	0.34%	1.27%	3.87%	5.55%
NT	0.74%	2.74%	5.84%	9.54%
ACT	1.14%	3.81%	7.23%	12.57%
AUS	1.31%	4.32%	9.02%	15.21%

Table A.11
State Effects in 2021-22 (long-term) – Continued

Scenario	ENS category	business skills category	SAS category	independent category
<i>Consumption per head (%):</i>				
NSW	0.46%	0.70%	0.10%	0.67%
VIC	0.50%	0.72%	0.13%	0.74%
QLD	0.51%	0.73%	0.14%	0.79%
SA	0.48%	0.71%	0.12%	0.71%
WA	0.50%	0.70%	0.13%	0.75%
TAS	0.42%	0.68%	0.06%	0.54%
NT	0.54%	0.72%	0.17%	0.85%
ACT	0.42%	0.72%	0.13%	0.73%
AUS	0.50%	0.72%	0.13%	0.76%
<i>Labour Force Participation Rate (%):</i>				
NSW	0.30%	0.17%	0.25%	0.71%
VIC	0.30%	0.16%	0.25%	0.70%
QLD	0.30%	0.17%	0.25%	0.71%
SA	0.27%	0.15%	0.23%	0.63%
WA	0.29%	0.16%	0.25%	0.69%
TAS	0.20%	0.11%	0.17%	0.44%
NT	0.34%	0.20%	0.31%	0.87%
ACT	0.28%	0.17%	0.27%	0.75%
AUS	0.30%	0.16%	0.25%	0.70%
<i>State Final Demand (%):</i>				
NSW	2.05%	1.55%	1.43%	4.49%
VIC	1.91%	1.46%	1.30%	4.41%
QLD	1.50%	1.24%	1.01%	3.42%
SA	1.38%	1.15%	0.86%	2.97%
WA	2.04%	1.52%	1.44%	4.86%
TAS	0.92%	0.88%	0.46%	1.56%
NT	1.31%	0.92%	0.83%	2.66%
ACT	1.59%	1.06%	1.08%	3.33%
AUS	1.86%	1.42%	1.28%	4.19%

Table A.12
Industry GDP Effects in 2021-22 (long-term)

	humanitarian program	family stream	skill stream	full program
<i>GDP(P) (%):</i>				
A. Agriculture, Forestry & Fishing	1.22%	4.04%	7.78%	13.50%
B. Mining	1.37%	4.51%	8.26%	14.69%
C. Manufacturing	1.46%	4.80%	8.91%	15.80%
D. Electricity, Gas & Water	1.58%	5.31%	10.95%	18.69%
E. Construction	1.94%	6.14%	12.19%	21.39%
F. Wholesale Trade	1.27%	4.18%	8.22%	14.18%
G. Retail Trade	1.15%	4.01%	9.07%	14.75%
H. Accommodation, Cafes & Restaurants	0.99%	3.41%	7.22%	11.97%
I. Transport	1.23%	4.11%	8.11%	13.93%
J. Communications	1.24%	4.18%	8.85%	14.80%
K. Finance & Insurance	1.34%	4.52%	9.58%	16.06%
L. Property & Business Services	1.11%	3.68%	7.28%	12.46%
M. Government Administration	1.24%	3.70%	5.86%	11.14%
N. Education	1.28%	3.94%	6.82%	12.45%
O. Health	1.04%	3.32%	6.31%	10.99%
P. Culture & Recreation Services	1.35%	4.72%	10.70%	17.49%
Q. Personal & Other Services	1.20%	3.97%	8.06%	13.69%
R. Ownership of Dwellings	NA	NA	NA	NA
<i>GDP/employment (%):</i>				
A. Agriculture, Forestry & Fishing	-0.31%	-0.48%	0.96%	0.17%
B. Mining	-0.31%	-0.50%	0.94%	0.12%
C. Manufacturing	-0.28%	-0.40%	0.84%	0.15%
D. Electricity, Gas & Water	-0.33%	-0.55%	0.84%	-0.05%
E. Construction	-0.28%	-0.40%	1.11%	0.42%
F. Wholesale Trade	-0.28%	-0.40%	1.12%	0.44%
G. Retail Trade	-0.26%	-0.34%	1.23%	0.63%
H. Accommodation, Cafes & Restaurants	-0.21%	-0.16%	1.45%	1.08%
I. Transport	-0.30%	-0.47%	0.92%	0.14%
J. Communications	-0.31%	-0.47%	0.98%	0.20%
K. Finance & Insurance	-0.30%	-0.46%	1.01%	0.24%
L. Property & Business Services	-0.27%	-0.36%	1.15%	0.52%
M. Government Administration	-0.24%	-0.26%	1.36%	0.86%
N. Education	-0.24%	-0.26%	1.36%	0.86%
O. Health	-0.24%	-0.26%	1.36%	0.86%
P. Culture & Recreation Services	-0.28%	-0.40%	1.11%	0.42%
Q. Personal & Other Services	-0.24%	-0.26%	1.36%	0.86%
R. Ownership of Dwellings	NA	NA	NA	NA

Table A.13
Industry GDP Effects in 2021-22 (long-term) – Continued

	ENS category	business skills category	SAS category	independent category
<i>GDP(P) (%):</i>				
A. Agriculture, Forestry & Fishing	1.75%	0.73%	1.19%	3.92%
B. Mining	1.90%	0.59%	1.30%	4.27%
C. Manufacturing	2.02%	0.69%	1.38%	4.57%
D. Electricity, Gas & Water	2.35%	1.58%	1.56%	5.08%
E. Construction	2.40%	1.63%	1.72%	5.98%
F. Wholesale Trade	1.77%	0.95%	1.22%	4.07%
G. Retail Trade	1.91%	1.57%	1.23%	4.09%
H. Accommodation, Cafes & Restaurants	1.60%	0.98%	1.05%	3.43%
I. Transport	1.79%	0.92%	1.21%	3.98%
J. Communications	1.88%	1.34%	1.26%	4.11%
K. Finance & Insurance	2.03%	1.48%	1.35%	4.42%
L. Property & Business Services	1.57%	0.87%	1.09%	3.58%
M. Government Administration	1.20%	0.66%	1.00%	2.89%
N. Education	1.40%	0.91%	1.10%	3.26%
O. Health	1.31%	0.93%	0.97%	2.98%
P. Culture & Recreation Services	2.26%	1.87%	1.44%	4.76%
Q. Personal & Other Services	1.69%	1.25%	1.17%	3.73%
R. Ownership of Dwellings	NA	NA	NA	NA
<i>GDP/employment (%):</i>				
A. Agriculture, Forestry & Fishing	0.27%	0.31%	-0.03%	0.40%
B. Mining	0.26%	0.34%	-0.03%	0.37%
C. Manufacturing	0.30%	0.11%	-0.01%	0.43%
D. Electricity, Gas & Water	0.24%	0.32%	-0.05%	0.33%
E. Construction	0.31%	0.33%	0.00%	0.47%
F. Wholesale Trade	0.31%	0.33%	0.00%	0.48%
G. Retail Trade	0.34%	0.34%	0.02%	0.53%
H. Accommodation, Cafes & Restaurants	0.41%	0.30%	0.06%	0.68%
I. Transport	0.27%	0.28%	-0.03%	0.39%
J. Communications	0.28%	0.32%	-0.02%	0.40%
K. Finance & Insurance	0.28%	0.33%	-0.02%	0.42%
L. Property & Business Services	0.32%	0.32%	0.01%	0.50%
M. Government Administration	0.37%	0.35%	0.04%	0.61%
N. Education	0.37%	0.35%	0.04%	0.61%
O. Health	0.37%	0.35%	0.04%	0.61%
P. Culture & Recreation Services	0.31%	0.33%	0.00%	0.47%
Q. Personal & Other Services	0.37%	0.35%	0.04%	0.61%
R. Ownership of Dwellings	NA	NA	NA	NA

Table A.14
Industry Employment Effects in 2021-22 (long-term)

	humanitarian program	family stream	skill stream	full program
<i>Employment (%)</i>				
A. Agriculture, Forestry & Fishing	1.53%	4.54%	6.76%	13.31%
B. Mining	1.69%	5.03%	7.25%	14.56%
C. Manufacturing	1.75%	5.22%	8.00%	15.62%
D. Electricity, Gas & Water	1.91%	5.90%	10.03%	18.75%
E. Construction	2.23%	6.57%	10.96%	20.88%
F. Wholesale Trade	1.56%	4.59%	7.02%	13.68%
G. Retail Trade	1.41%	4.36%	7.75%	14.03%
H. Accommodation, Cafes & Restaurants	1.20%	3.58%	5.68%	10.78%
I. Transport	1.54%	4.60%	7.12%	13.77%
J. Communications	1.55%	4.68%	7.79%	14.58%
K. Finance & Insurance	1.64%	5.01%	8.49%	15.79%
L. Property & Business Services	1.39%	4.05%	6.05%	11.88%
M. Government Administration	1.48%	3.97%	4.43%	10.19%
N. Education	1.53%	4.21%	5.38%	11.50%
O. Health	1.28%	3.59%	4.88%	10.04%
P. Culture & Recreation Services	1.64%	5.14%	9.49%	17.00%
Q. Personal & Other Services	1.44%	4.24%	6.61%	12.73%
R. Ownership of Dwellings	NA	NA	NA	NA

Table A.15
Industry Employment Effects in 2021-22 (long-term) – Continued

	ENS category	business skills category	SAS category	independent category
<i>Employment (%)</i>				
A. Agriculture, Forestry & Fishing	1.48%	0.42%	1.21%	3.51%
B. Mining	1.63%	0.25%	1.33%	3.88%
C. Manufacturing	1.71%	0.58%	1.39%	4.12%
D. Electricity, Gas & Water	2.10%	1.26%	1.61%	4.74%
E. Construction	2.09%	1.29%	1.72%	5.48%
F. Wholesale Trade	1.45%	0.62%	1.22%	3.57%
G. Retail Trade	1.57%	1.23%	1.22%	3.53%
H. Accommodation, Cafes & Restaurants	1.18%	0.67%	0.98%	2.74%
I. Transport	1.51%	0.64%	1.24%	3.57%
J. Communications	1.60%	1.01%	1.28%	3.70%
K. Finance & Insurance	1.75%	1.15%	1.37%	3.99%
L. Property & Business Services	1.24%	0.55%	1.08%	3.06%
M. Government Administration	0.83%	0.31%	0.96%	2.27%
N. Education	1.03%	0.56%	1.06%	2.64%
O. Health	0.94%	0.58%	0.93%	2.36%
P. Culture & Recreation Services	1.95%	1.53%	1.45%	4.27%
Q. Personal & Other Services	1.32%	0.90%	1.14%	3.10%
R. Ownership of Dwellings	NA	NA	NA	NA