
1 Managing Australia's demographic change

The demographic changes underway in Australia, including the role of immigration, have received considerable policy and public attention in recent times. The release of the Third Intergenerational Report in January 2010 and its well-publicised population projection of nearly 36 million by 2050, sparked a debate about the merits of a 'big Australia' and the potential responses to the challenges implicit in this projection. The debate culminated with the Australian Government setting in train a broad-ranging policy agenda. Recently announced initiatives include a Sustainable Population Strategy (box 1.1), a National Urban Policy and a Ministerial Statement on Investing in Regional Australia.

This chapter presents a framework for analysing the issues relevant to a population policy. It draws on a range of recent Commission studies. These include a research paper, *Population and Migration: Understanding the Numbers* (PC 2010f) and a submission to the Taskforce on a Sustainable Population Strategy for Australia. In March 2011, the Commission also held a roundtable on the topic "*A 'Sustainable' Population? — Key Policy Issues*". It brought together representatives from academia, industry and government (PC 2011f).

What are the objectives?

The objectives of 'population policy' have evolved over the years, reflecting changing public priorities. The current focus is on achieving sustainable outcomes. While the concept of sustainability has multiple potential interpretations, there is general agreement that its application needs to be consistent with the overarching objective of maximising the wellbeing of the Australian community (DSEWPC 2011).

Box 1.1 ‘Sustainable Australia — Sustainable Communities’

In May 2010, the Australian Government established a Taskforce to support the development of a Sustainable Population Strategy for Australia. The Taskforce engaged in broad public consultation and also drew on reports from three advisory panels, which considered different dimensions of population policy: demography and liveability; productivity and prosperity; and sustainable development.

The final report released in May 2011, aims to ensure that ‘future population change is compatible with the economic, environmental and social wellbeing of Australia’ (DSEWPC 2011, p. 6).

The central objective of the strategy is to lay the platform for a more sustainable Australia. The report outlined three elements as the foundation of the nation’s wellbeing, with policies to support them. They are:

- economic — pursued through policies that improve human capital and workforce participation, as well as through improved planning and infrastructure investment
- liveable communities — pursued through policies that help meet housing needs, improve social inclusion, reform service delivery, close the gap in Indigenous outcomes, and improve public health outcomes
- environmental sustainability — pursued through conservation policies, and policies that address climate change and food security.

The Strategy sees the key function of migration as acquiring the skills Australia needs to support its economy, and thereby delivering higher levels of productivity, labour force participation, and labour force growth. The report does not set a population target, arguing that doing so would compromise the flexibility to use migration as a policy lever to address emerging labour or skills shortages.

Source: DSEWPC (2011).

‘Wellbeing’ needs to be broadly defined to include not only economic aspects that can be readily measured, such as incomes, but also other key influences on quality of life, such as the impacts on environmental and urban amenity, and social and cultural factors. As noted in the *Sustainable Population Strategy*, the pursuit of this high level objective requires recognition of the need for some trade-offs among its subordinate objectives.

The main focus should be on the wellbeing of the existing and future Australian community. As Pincus (2011) argues, the responsibility of a government is primarily to its constituents, although Australia’s humanitarian commitments should also not be ignored. Broadening the objective of policy substantially beyond this would remove the rationale for controlling migration numbers (PC 2011f).

An important implication of a focus on sustainability is that it requires a dynamic perspective, in which ultimate population levels are less important for policy than the rate of population growth over time and the capacity of the Australian community to accommodate it.

Assessing policy options

Several important considerations apply in seeking the right policy mix. First, the various categories of impacts — economic, social and environmental — are interlinked, and policies targeting specific issues may have positive or negative collateral impacts. For example, negative impacts on economic growth might magnify some of the adverse social effects of immigration, while urban congestion and some environmental impacts might limit growth in incomes, in addition to affecting other aspects of wellbeing.

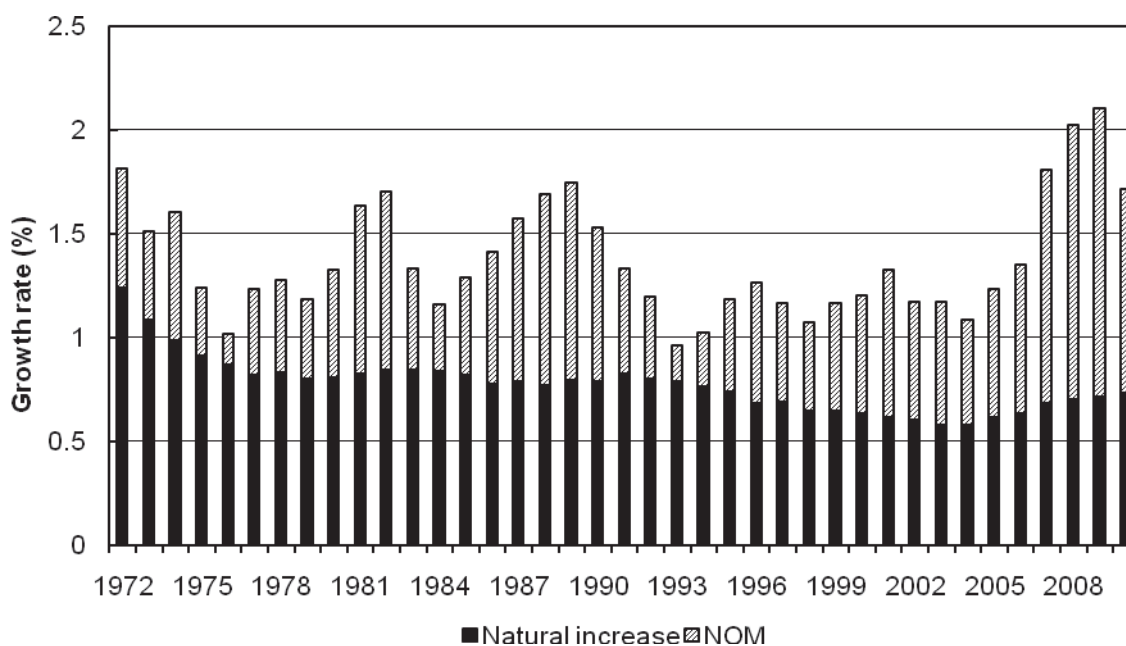
Second, some of the impacts of population growth are manifestations of existing problems that would prevail to some extent, regardless of the rate of growth. Thus, there may be ‘no regrets’ policies addressing existing problems that could have collateral positive effects for the optimal rate of population growth.

Third, there are external forces and constraints affecting some policy mechanisms, particularly those relating to migration. For example, various international forces determine the potential supply of migrants to Australia. Australia also has international humanitarian obligations that influence part of its migrant intake.

Future population growth is mainly about migration

In recent years the contribution of Net Overseas Migration (NOM) to population growth in Australia has increased considerably (figure 1.1). The share of NOM in Australia’s population growth has risen from 40 per cent, on average, over the period 1971-72 to 2005-06, to more than 60 per cent over the past four years.

Figure 1.1 Contributors to Australia's population growth^{a,b,c}



^a Years refer to end of June values. ^b The natural increase and NOM presented here do not necessarily sum to the total change in population growth in each year between 1972 and 2006. From 1977 onwards, the ABS classified this as the 'intercensal discrepancy', and is excluded from the figure. ^c The methodology used for estimating NOM changed in 2006, meaning that the data for 2007 and after are not strictly comparable to earlier periods. See PC (2010f) for details.

Data sources: ABS (*Australian Demographic Statistics*, March 2011, Cat. no. 3101.0); ABS (*Australian Historical Population Statistics*, Cat. no. 3105.0.65.001).

With Australia's population progressively ageing (PC 2010f) and the rate of natural increase eventually declining, net overseas migration will play an increasingly important role. For example, on the trends in fertility, mortality and NOM that prevailed in 2008, the share of NOM in population growth would rise to 70 per cent by the middle of this century, and would account for practically all population growth by its end (ABS 2008).

In addition to being the most significant contributor, NOM — and in particular, immigration — is also the source of population growth most amenable to direct policy influence. The Australian Government controls permanent entry into Australia and establishes the conditions under which temporary movements are permitted. For some migration streams, the Australian Government can either set a 'planning level' for the maximum number of entrants, or set various criteria for visa applicants that serve to restrict the type and number of entrants (PC 2010f).

In contrast, natural increase is much more difficult to influence through public policy. For example, programs to promote medical research or subsidise diagnostics and treatment, might increase longevity and reduce death rates, but the effects

would be indirect and uncertain. And the evidence relating to the effect of targeted policies aimed at increasing fertility, such as subsidising births, is inconclusive at best (Lattimore and Pobke 2008).

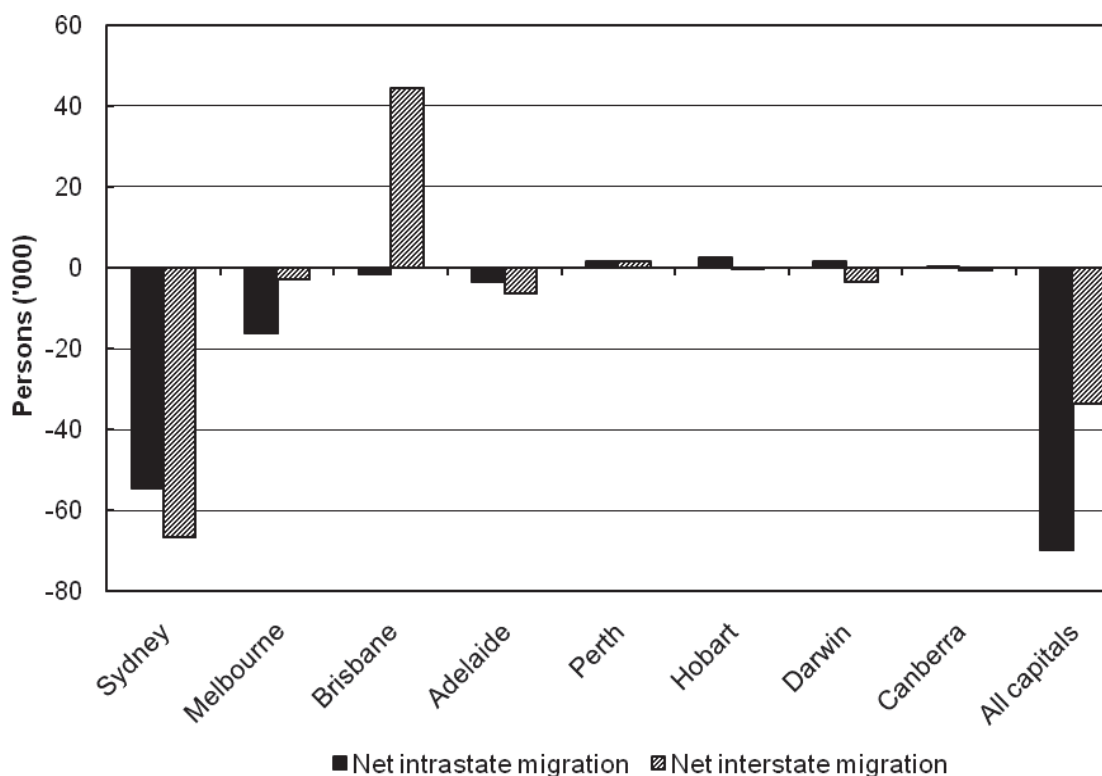
Therefore, to the extent that population growth can be influenced through policy, the issues are primarily about the size and composition of migration flows.

Internal migration is also important

Migration within Australia can also involve relatively large flows of people. In 2009-10, over 330 000 local residents moved interstate (compared to around 460 000 arrivals from overseas) (ABS 2011d).

Importantly, most of the recent internal migration has been away from Australia's capital cities (figure 1.2). It is likely that this, in part, reflects 'sea change' and 'tree change' pursuit of more space, less congestion, and a better natural environment.

Figure 1.2 Net internal migration in capital cities, 2001–06



Data source: ABS (Australian Demographic Statistics, December 2009, Cat. no. 3101.0).

While governments have little control over internal migration, these population flows raise the issue of appropriate policy responses to accommodate them.

Clarifying the economic contributions of migration

An understanding of the economic impacts of immigration is sometimes clouded by misperception. Two benefits that are sometimes attributed to immigration, despite mixed or poor evidence to support them, are that:

- immigration is an important driver of per capita economic growth
- immigration could alleviate the problem of population ageing.

Immigration and real incomes

Proponents of a high migration intake naturally focus on the positive effects on Australia's gross domestic product. By adding to the total supply of labour, migration naturally increases the aggregate size of our economy. But, this provides little insight into the question of what happens to *per capita* incomes and, in particular, the incomes of the existing population.

Labour market effects of migration

The impacts of migration on wages in the short to medium term are largely dependent on whether immigrant workers are substitutes or complements for local workers. The former would mean that immigrants add to the supply of labour, relative to other factors of production, leading to a decline in wages. The latter could arise if immigrants possessed personal or professional attributes absent in the local workforce, and could mean that immigrants increase the productivity, and hence wages, of the local population. The evidence is mixed (PC 2011f), possibly indicating that both forces are present to some degree.

In the longer run, growth in labour supply would likely encourage increased investment in capital, and capital accumulation would, in turn, raise the productivity of labour and mitigate any initial adverse effects on wages.

Ultimately, the net impact of immigration on the wages of the existing population is an empirical matter, depending on the size and composition of immigration flows, the structure of the economy, and the timeframe of analysis. Some international and Australian studies have found small positive, and some small negative effects on the *average* wages of local workers (PC 2011f).

Other potential effects on average incomes

Because immigration makes labour more abundant relative to the existing stock of capital and land, it tends to increase the returns to the latter at the expense of labour. Notwithstanding this redistribution, in a seminal paper on the topic, Berry and Soligo (1969) showed in a simple model that the increase in returns to capital and land would exceed the fall in the wages of local workers, generating the so-called ‘migration surplus’ for the existing population. International research (Borjas 1995; Acemoglu 1998) shows that the migration surplus is greater for a skilled migrant intake, because skilled immigrants can drive technological change and also generally tend to enhance the productivity of existing capital more than their unskilled counterparts.

The magnitude of the migration surplus available to residents will also be influenced by foreign ownership of capital. Around 28 per cent of Australia’s capital stock is foreign owned (ABS 2006), so some of the income redistributed from local workers to owners of capital would flow to foreigners (after tax).¹

Another important consideration for incomes of existing residents is whether immigrants are net contributors to, or recipients of, the services and benefits provided by governments (Chiswick in PC 2011f). In Australia, most immigrants are net contributors to fiscal balances over their lifetimes, with skilled immigrants making the greatest contribution (PC 2011f). This is primarily because immigrants tend to be young adults and enter the labour force soon after arrival, compared to native-born Australians who are net recipients of government services early in their lives.

As well as affecting wages and employment, immigration may change the composition of Australia’s output. For example, an increase in the number of predominantly skilled immigrants shifts production towards goods and services that are relatively intensive in this type of labour. Such changes mitigate any effects of immigration on wages and on the returns to other factors of production (Dustmann et al. 2008).

Increased immigration, and population growth generally, may also enable greater economies of scale or density. Key areas with the potential for scale effects are government services, such as defence and public administration, and the provision of infrastructure such as transport and communications (PC 2006i). Economies of density may also arise from reduced transaction costs, greater specialisation in production, and information spillovers for firms and workers located in close

¹ That said, foreign-owned capital is also part of Australian portfolios, including superannuation, and therefore still makes some contribution to Australian incomes.

proximity. However, the evidence on economies of scale is generally inconclusive, both because the scale effects are difficult to ascertain and because the role of immigration in the exploitation of such effects is unclear (PC 2006i).

By the same token, there are also likely to be some scale or density *diseconomies*. For example, Infrastructure Australia (2011) reported that the cost of providing new infrastructure is rising faster than the rate of inflation — in part, because costlier construction options such as tunnelling for new roads, now need to be adopted in the large cities.

Negative effect of ‘economic distortions’

Any community benefits that result from immigration (and population growth generally) may be reduced, or any losses exacerbated, where markets do not function well. This can arise for several reasons. ‘Externalities’ may arise when additional people generate adverse impacts on others, without facing the associated costs of their actions. For example, population growth may put pressure on the environmental or urban amenity of the existing population.

Distortions may also stem from impediments to geographic mobility, and barriers to labour market entry, such as inconsistent or unduly restrictive occupational licensing. For example, the Commission (PC 2006i) has previously found that arrangements for assessing and recognising migrants’ skills were complex and sometimes led to inconsistencies, and that potential migrants were often poorly informed about the processes. These barriers could result in their unemployment or underemployment and sub optimal use of their skills. A number of improvements were suggested, including:

- moving towards a more uniform, national approach to occupational registration and licensing
- better dissemination of information on skills assessment and recognition
- re-evaluating and possibly broadening assessment criteria so as not to artificially exclude migrants from occupations.

Industry assistance for less productive activities, that impedes the efficient allocation or re-allocation of resources, can be another constraint to fully realising the potential economic benefits from immigration. This is particularly relevant in the context of the current structural pressures from the mining boom — referred to as the ‘two-speed’ or ‘patchwork’ economy — and the attendant calls to assist industries that are under pressure from the appreciating exchange rate (Banks 2011). As has long been recognised in the economic literature on the subject, government assistance to counter structural pressures can simply increase the adjustment burden

for other industries (Gregory 1976). More fundamentally, in the context of the current conditions, such policies would prevent Australia from capitalising on the benefits of the boom.

Some have argued for growth in immigration to ease wage growth and alleviate pressures on other industries. However, general immigration is a blunt tool for ameliorating industry-specific labour shortages (targeted immigration directed at the expanding sectors would be more effective). Indeed, if immigration augmented the supply of labour to protected sectors, resulting in their expansion relative to unprotected ones, it could magnify the potential costs of the existing distortions.

Thus immigration in the presence of such distortions may result in lower real incomes. In some cases — particularly where there is a gap between market prices and non-market or ‘social’ values — measured GDP per capita may still rise, but there may be a decline in other components of community wellbeing.

Some conclusions

Many of the above factors are difficult, if not impossible, to quantify, so any economic modelling would only provide an approximation of the true impacts of immigration. Previous Commission modelling found that a 50 per cent increase in skilled migrant intake from 2004-05 would reduce the average incomes of the existing population by 0.1 per cent by 2020 (PC 2006i). However, the modelling did not capture all of the effects on net fiscal balances, and did not consider possible scale and agglomeration effects, externalities or social impacts.

In its third Intergenerational Report, the Treasury (2010c) estimated that an increase in net overseas migration of 30 000 per year (over a base-case scenario of 180 000) would lead to a 0.02 percentage point increase in per capita real GDP growth over the projection period (to 2049-50). While this modelling did not estimate the net effect on the incumbent population, the result is consistent with the Commission’s findings and those of various international studies, that the net effects are likely to be small.

This is not really surprising. The flow of migrants, even at recent more elevated levels, is relatively small when compared to the stock of the existing population. More importantly, as discussed above, the forces that determine effects on the incomes of the existing population tend to offset each other, and some wash out in the long run.

This is not to deny that net effects can mask important consequences for individuals. Some local workers in professional occupations could suffer from

declining wages as a consequence of an increasing intake of skilled immigrants. Conversely, some workers in lower-skill occupations, such as some hospitality and retail workers and labourers, could experience a relative increase in wages. Many researchers (for example, Chiswick in PC 2011f) have noted the tendency of skilled immigration to reduce income inequality in the destination country. And as noted earlier, some owners of capital, in particular land, would see their incomes rise as well.

Immigration would also affect the output mix and production technologies, driven on both the supply side (in response to the increase in labour supply) and the demand side (due to an increase in aggregate demand and any differences in the tastes and preferences of immigrants). Such changes would likely have implications for relative prices of consumption, investment and government goods and services. Individuals and groups may in turn be made better or worse off as a result of these price changes, depending on their preferences and consumption patterns.

In sum, the net impacts of immigration on the average incomes of the existing population are likely to be small, though not evenly distributed across Australia's population. There is also potentially significant downside resulting from existing policy and economic distortions.

Migration and ageing

Australia's population has been progressively ageing, and this will continue. Between 1901 and 2009, the proportion of people aged 65 and over has grown from 4 to 13 per cent, and according to the Treasury's (2010a) projections, it is set to reach nearly 25 per cent by 2050. An ageing population results in a higher 'aged dependency ratio' (the ratio of those aged 65 years and above to those aged 15–64 years) and poses significant economic and fiscal challenges (PC 2005b). Increased migration is often suggested as a solution.

Immigrants, being typically younger on arrival than the existing population, could alleviate the ageing pressures in the short run (PC 2005b). However, several studies show these reductions are small for most plausible immigration levels. For example, an increase in annual net migration from 150 000 to 300 000 would lower the proportion of those aged 65 or over by less than 3 percentage points by 2044-45 (PC 2005). More importantly, any effect would be short lived. This is because immigrants themselves age, and progressively higher levels of migration would be needed to sustain the current age structure into the future. For example, it has been estimated that, to maintain the age structure of 2003-04 in 2044-45, annual migration during that period would need to be above 3 per cent of Australia's

population, leading to a population of over 100 million by the middle of this century (PC 2005b).

Addressing the consequences of population ageing may be more effective

The Commission has addressed some of the key policy challenges of an ageing population in its 2005 publication, *Economic Implications of an Ageing Australia* (PC 2005b). Rather than pursuing policies that aim to affect population directly (migration and fertility), the Commission found that it might be more effective to pursue policies that:

- promote economic growth through increased labour supply and productivity, thereby raising incomes and government revenues
- seek to increase the cost-effectiveness of government-provided services particularly health and aged care, so that the costs of population ageing are more affordable.

International comparisons reveal that there is scope to improve the participation rates of some segments of the population, including women over 45 and older Australians of both genders (PC 2005b; Gilfillan and Andrews 2010). This suggests gains from removing policies that distort incentives to retire or remain outside the workforce.

Commission research has also reaffirmed that productivity and workforce participation increases with higher levels of human capital (Forbes et al. 2010; Laplagne et al. 2007) and, in particular, improved literacy and numeracy (Shomos 2010).

Ultimately, wide ranging productivity-enhancing reform, covering areas such as provision and use of economic and social infrastructure, industry policy, labour markets, and general regulatory burdens, would improve Australia's ability to meet the costs of an ageing population (PC 2005b).

Fiscal pressure from the costs of health and aged care can be relieved by policies that manage service costs. Governments as regulators, purchasers and providers, have substantial capacity to affect the cost effectiveness (and productivity) of these services. In addition, fiscal pressure can be alleviated by facilitating a change in the balance of public and private contributions in these areas.

The 'Blue Book' — produced each year by the Steering Committee for the Review of Government Service Provision — shows variations in the performance of health care between jurisdictions and between parts of the system, which suggest

significant scope for improvement. In the area of aged care, reforms suggested by the Commission, would promote cost effectiveness by allowing more consumer choice between providers (SCRGSP 2011a). Furthermore, private savings such as superannuation, housing equity and insurance could be utilised to broaden the funding base for these services (PC 2011a).

It would also be important to address any existing policy-related distortions in the provision of age-related services, which could be exacerbated by growing demand for these services (box 1.2).

Box 1.2 Distortions in the provision of aged care services

In its report, *Caring for Older Australians*, the Commission found evidence of a mismatch between what is offered by Australia's system of aged care and what older people want. For example, there was high unmet demand for community care packages.

The Commission proposed the progressive relaxation and eventual removal of supply-side limits on bed licences, community care packages and other services. It also proposed that the current distinctions between residential low and high care, and between ordinary and extra-service status be removed. Removing these restrictions would improve the responsiveness of the market for aged care services to consumer preferences, as well as create incentives for providers to innovate and to respond to demand more generally.

Source: PC (2011a).

Policies for sustainable outcomes

Much of the policy discussion has focused on addressing the potentially adverse effects of population growth on urban amenity, the natural environment and social cohesion.

In many cases, population growth will not be an exclusive (and in some cases, not even the main) cause of observed problems. Some may be existing or emerging problems — arising out of persisting market failures or policy distortions — which are magnified by population growth. Resolving those at their source can often produce 'no regrets' outcomes, providing gains to the existing population regardless of the rate of population growth, while also increasing Australia's 'absorptive' capacity. But this need not always be the case. Even efficient policy settings may still involve some negative impacts on incumbents. According to Pincus (2011, p. 47):

What these policies can do is ... constrain the negative externalities to their optimal sizes — they do not guarantee that the existing population will not suffer a disadvantage.

Planning sustainable cities

Roughly three-quarters of Australia's population now reside in the 18 cities with 100 000 or more residents (PC 2010f) and this is where most of the future population growth is expected to occur. Many of the key policy challenges of population growth, therefore, relate to preserving or improving urban amenity.

Importance of market signals

The formation and growth of cities and, more broadly, the geographic location of population growth, is influenced by a multitude of dynamic market forces. Some of these are 'centripetal' — reflecting the potential economic and social benefits to individuals and businesses from agglomeration, for example, due to reduced transaction costs. Some are 'centrifugal' — reflecting the potential costs, such as increased congestion. Technological changes, evolving consumer preferences, and various external forces, such as the current natural resources boom, also influence the location of Australia's population growth.

Those forces constitute signals for welfare-enhancing individual decisions on where to live and work. The consequences of those decisions are evident in the substantial internal migration noted earlier. Policies that attempt to counteract those forces would undermine this process and its potential benefits. And past experience indicates that policies aimed at directing the population growth to particular regions or seeking a more even geographic distribution face great difficulties (PC 2011f).

In this context, an appropriate role for governments is to address, where feasible, any significant market failures distorting individual choices and to facilitate flexibility and adaptability, by removing the regulatory impediments to population movement.

Managing the supply side

Population growth leads to a higher demand for infrastructure, housing and various essential services and products, such as water. Where there is an inadequate response in supply, it can lead to rising prices or (in some cases) increased pressure to ration services or reduce service quality. Accordingly, some of these demand side pressures can be alleviated through improved management of the supply side.

Urban water — low-cost supply options

One area subject to substantial institutional and regulatory constraints is the supply of urban water (PC 2011c). Of those constraints, the bans on urban–rural water trade, in place in several jurisdictions, may have been the most inefficient, particularly when viewed in the context of governments committing to high cost supply augmentation options. For example, the Port Stanvac desalination plant currently in development in South Australia is expected to cost \$1.83 billion to build and involve substantial running costs of \$0.5–\$1 per kilolitre of water, for an expected annual production of 100 gigalitres. In comparison, acquiring a similar volume of water through rural water entitlements could have cost under \$200 million and would likely involve lower operating costs. Recycling for planned indirect potable use is another water supply option currently prohibited in New South Wales, Victoria and South Australia without a transparent analysis of its costs and benefits.

Economic infrastructure — sustainable funding arrangements; reducing red tape; more flexible planning

The fiscal challenges in delivering new infrastructure programs are mounting rapidly. In part, this is due to a growing appetite for spending on new projects.² Equally important is the fact that much of the existing and proposed infrastructure is not backed by appropriate funding arrangements. Many past investments in infrastructure have been shown to be commercially unsustainable, with a majority of government-owned infrastructure service providers not achieving a rate of return necessary for efficient management of capital (PC 2008o). This could reflect poor investment decisions or investments that produce significant (unpriced) social benefits (with the latter requiring explicit or implicit subsidisation). The Commission has outlined guiding principles for investing in public infrastructure, including the need for decisions to be guided by rigorous cost–benefit analysis (PC 2008o).

Infrastructure Australia (2011) noted that there was a ‘profound disconnect’ between the governments’ (and public) desire for improved infrastructure services and their willingness to pay, whether through higher user charges or greater taxes.

² For example, since mid-2008 Infrastructure Australia has received proposals for urban transport projects that in total would cost well over \$120 billion. Until the last few years, Australian Government’s transport associated costs have typically been less than \$3 billion per year (Infrastructure Australia 2011).

The public and private provision of infrastructure is also affected by various policy constraints. Infrastructure Australia (2011) identified several areas for reform including delays in environmental assessments, inflexible planning requirements and insufficient competition. Chan et al. (2009) observed that the private sector has a major role in future infrastructure provision and more could be done to facilitate a regulatory environment conducive to private investment.

A key issue for public provision of infrastructure (particularly for projects with long lead times) is the need for governments to *anticipate* the future needs of a growing population in the face of uncertainty about future rates and location of growth, as well as other factors, such as changing tastes, technology and climate. As a result, any large-scale public investments run the risk of being based on the ‘wrong’ predictions about population growth. This suggests a need for greater utilisation of adaptive management or ‘real options’ approaches in planning and provision. Adjusting infrastructure capacity in small increments over shorter time frames, for example by implementing projects in stages, would improve flexibility to respond to new information (Arnott in PC 2011f). Getting potential projects through the early preparatory stages without committing to implementation is another approach (Cook in PC 2011f). The Commission has recently estimated that failure to implement a real options approach in water infrastructure investments for Melbourne and Perth could cost the community around \$1.1 billion over a 10 year period (PC 2011c).

Supply of urban land — improving planning systems

While Australia is not facing a physical shortage of land, the supply of land for development (whether via infill or greenfield development) is tightly regulated, at both the state and local government level. As well as constraining the aggregate supply of land, these controls often result in significant project delays. A Commission survey of greenfield residential developments across Australia’s five largest cities showed that it can take 10 years to complete a subdivision of land. Key contributors to delays are the processes for re-zoning and structure planning, which are currently not subject to statutory time limits in most jurisdictions (PC 2011d).

More generally, the impact of population growth on urban amenity will, in large part, depend on ensuring that Australia’s planning systems are responsive to community preferences, that they provide flexibility in the face of uncertainty about the future patterns of growth, and are underpinned by sound governance structures. To this end, the Commission has identified several leading practices through its benchmarking work (box 1.3).

Box 1.3 **Leading practices in planning systems**

The Commission's recent benchmarking study on *Planning, Zoning and Development Assessments* identified the following model practices for Australia's planning systems.

- Early resolution of land use and coordination issues
 - Determine as much planning policy as possible early in the planning-to-approval chain and obtain commitments to undertakings.
- Engaging the community early and in proportion to likely impacts
 - Engaging the community more fully in developing strategic land use plans and subsequent changes improves community buy-in. Greater clarity around community preferences, and explaining plans in terms of optimising the overall community welfare is likely both to gain greater acceptance and provide more certainty to residents and businesses.
- Broad and simplified development control instruments
 - If the prescriptiveness of zones and allowable uses were significantly reduced, it would increase competition by allowing a wider range of businesses and developers to bid for the same land, better harness the market in allocating land to its most valued use, and cater much more easily for innovations in business and service delivery without requiring re-zoning.
- Rational and transparent allocation rules for infrastructure costs
 - Broadly, the appropriate allocation of capital costs hinges on the extent to which infrastructure provides services to those in a particular location relative to the community more widely.
- Improving development assessment and rezoning criteria and processes
 - Specifically, through linking development assessment requirements to their objectives, using risk-based approaches for assessing development projects, facilitating the timely completions of referrals and assessments of applications, facilitating access to relevant information, and providing transparent and independent alternative assessment mechanisms.
- Disciplines on timeframes
 - More extensive use of timeframes for planning processes would provide better discipline on agencies and give developers more certainty.
- Transparency and accountability in planning decisions.

Source: PC (2011d).

Managing the demand side — the role of pricing

Population growth can exacerbate any existing distortions in consumption arising from inadequately priced natural resources or infrastructure services. In many cases, improved pricing will be the most appropriate policy response.

Consumption of urban water is one example where excess demand is typically managed through water restrictions and prescriptive conservation measures, at a significant cost to the community. Commission economic modelling estimated that stage 3a restrictions in Melbourne reduced community welfare by \$420–\$1500 million over a 10 year period, compared to a volumetric price (PC 2011c).

On the other hand, utilising pricing to reduce the potential costs of increased transport congestion from a growing population may be problematic. Congestion arises when road users do not have to take into account the cost (such as increased travel time or pollution) they impose on other users.

In theory, a congestion charge that varies with the time and location of travel, can lead travellers to ‘internalise’ the additional costs they impose on other road users, and ensure that those who travel on roads during peak times are those who place the highest value on doing so.

However, there are significant practical difficulties in implementing an efficient charging regime. One potential problem is the risk of setting the charge too high, based on the erroneous (but commonly made) presumption that free flow conditions are the optimal outcome. As observed by Ergas (PC 2011f), the objective should not be the pursuit of free flow conditions as an end in itself, but the provision and allocation of road space in a way that maximises social benefit. Thus, some congestion is likely to be efficient, because the costs of eliminating it (that is the trips forgone) would exceed the benefits. Furthermore, even in its crudest form, a congestion charging scheme is likely to involve substantial administrative costs, which must be balanced against the efficiency gains. In the generally well-regarded London scheme, which employs a simple flat charge, the operating costs were estimated to be large (50 per cent of the revenue raised) (Meyrick in PC 2011f).

Further challenges arise when the focus is on retaining or improving the wellbeing of the existing population. Even if efficient, congestion charging does not guarantee that the existing population would not suffer from population growth or the impacts of the policy itself. Indeed, some incumbents would be worse off due to paying more for using the road (taking into account travel time) or being forced to change their travel arrangements.

Addressing environmental impacts

Population growth leads to higher aggregate consumption and production, which can have implications for the natural environment. Most concerns focus on:

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- unsustainable use of natural resources, many of which are finite and are either non-renewable or slow to regenerate
 - reduced food security
 - increased air and water pollution and greenhouse gas emissions
 - loss of biodiversity.

Some of those concerns are undoubtedly important, and may justify migration controls to address them, subject to two important caveats.

First, some of the above environmental impacts, such as the effect on food security, the depletion of internationally-traded natural resources and greenhouse gas emissions, are global in nature. The implications of Australia's population growth need to be seen in the context of this country's size, as well as the net effect on global population growth (immigration into Australia does not increase the global population). Australia accounted for only 0.3 per cent of the world's population in 2010 (World Bank 2010), and our share of world carbon dioxide emissions in 2008 was roughly 1.3 per cent (IEA 2010). Furthermore, national food security may not be a real concern even if world markets could not be relied on. Australia has traditionally been a significant *net exporter* of food — over the past five years the annual surplus in our food trade has averaged nearly \$17 billion (DAFF 2010).

Second, even for localised impacts such as pollution and loss of biodiversity, the relationship between population growth and environmental quality is not direct or exclusive. As noted by Henry (PC 2011f), improvements in technology, such as improvements in energy efficiency and in waste processing technologies, can ameliorate potential ecological pressures from increasing population (while cautioning that future innovation should not be relied upon to solve environmental problems). Consumption and production behaviour are also important — a community that is more highly oriented towards the production of services and other skill-intensive activities is likely to generate less pollution than a community that relies heavily on some types of manufacturing.

Property rights also play a crucial role in determining the environmental effects of demographic changes (Clarke in PC 2011f). The assignment of property rights can help to ensure that common-pool resources, such as fish stocks, are not depleted beyond the point where regrowth is possible. This is true regardless of the size of population.

Population growth may also be beneficial for the environment in some instances. If the costs of repairing legacy environmental problems are fixed, while the number of people benefiting from such actions increases, there will be economies of scale in

environmental remediation (Clarke et al. 1990). More generally, as well as putting downward pressure on the ‘supply’ of the natural environment, population growth, through increasing the number of beneficiaries, puts upward pressure on the demand for it. The net effect may be negative or positive, depending on people’s preferences and institutional settings.

In sum, where there are concerns about environmental degradation, it is important to ascertain how direct the relationship between population growth and those problems is, and whether the relatively blunt option of more restrictive immigration controls would deliver a greater net social benefit than policies that target environmental problems at their source.

Maintaining social cohesion

The social implications of population growth, and in particular, immigration, are clearly also an important policy consideration. There are several inter-related channels through which social impacts, positive and negative, can arise. These include the previously discussed impacts on the distribution of incomes and on urban amenity. Another important channel is the changing ethnic and cultural makeup of the population and implications for how diversity is understood and accepted.

The potential benefits of ethnic diversity are well documented. In the workplace, it can lead to higher productivity and wages, due to migrants having professional and personal attributes that complement the skills of Australian-born workers (PC 2011f). Cultural and ethnic diversity may lead to other benefits, such as expanded consumer choices, improved ability to trade and interact with other countries,³ and social amenity benefits from living among people from other cultures (Metcalf in PC 2011f). Also, many Australians today are themselves recent immigrants, who could benefit from family reunion and the preservation and growth of their ethnic community within Australia.

Australia’s migration outcomes are generally considered a success story. Seven million people have settled in Australia since 1945 (Metcalf in PC 2011f), with a quarter of Australia’s current population being born overseas (PC 2010f). Surveys indicate a generally positive public perception of Australia’s migration history and outcomes, and Australia is ranked among the most receptive societies to immigration (Markus in PC 2011f).

³ However, Dolman (2008) found that while immigrants tend to increase the volume of trade with their country of origin, they also reduce trade with other countries. The overall effect is a change in the composition of trade rather than an increase in total volume.

However, maintenance of past achievements should not be taken for granted. Public acceptance of immigration can vary over time and across communities. Attitudes to migrants tend to fluctuate, particularly according to unemployment levels and the extent to which the issue receives public attention (Markus in PC 2011f). Attitudes also vary among different groups and regions (Markus in PC 2011f).

One concern raised about immigration is that it may have an adverse effect on ‘social capital’. In his seminal contribution to the literature on this topic, Robert Putnam (2000) defined social capital as ‘social networks and the associated norms of reciprocity and trustworthiness’. Social capital may generate benefits to society through many channels, including by:

... reducing transaction costs, promoting cooperative behaviour, diffusing knowledge and innovations, and through enhancements to personal well-being and associated spillovers. (PC 2003, p. viii)

The concept is multidimensional and very difficult to measure. Typically, proxies are employed, including:

- measures of interpersonal trust and support for government welfare programs
- engagement in various voluntary activities requiring cooperation, such as community associations and clubs, and participation in charity.

In a widely-cited study of the effects of ethnic diversity in the United States, Putnam (2007) found that ethnically diverse communities had lower levels of interpersonal trust, civic engagement and perceived quality of life. There is limited evidence of similar outcomes in Australia. Leigh (2006) found that greater ethnic diversity was associated with reduced public support for government welfare programs. Markus and Arnup (2010, p. 58) found that in areas with high concentrations of immigrant residents, ‘the level of social capital and sense of security for long-time Australians were markedly lower’ than the national average.

However these findings need to be placed in perspective. Social capital can also be influenced by various other factors, such as education, socioeconomic status and local area safety (Stone and Hughes (2002) cited in PC 2003). And, as previously mentioned, attitudes about immigration can fluctuate over time, are influenced by political leadership and public discussion, and do not necessarily equate with observed behaviour.

Another issue that has been raised in Australia, as well as overseas, is whether immigration contributes to increased crime levels. The evidence on linkages between ethnicity and crime is not clear, due to the complexity of the determinants of crime and inadequate data. If anything, international evidence suggests that, in aggregate, immigrants are less likely to commit a crime than the native born

inhabitants of a country. However, some ethnic groups tend to be over-represented in crime statistics overseas (Wortley 2009) and this is also the case for Australian data on incarceration rates, though the highest rates are for Aboriginal and Torres Strait Islanders (ABS 2010a, SCRGSP 2011b).

What role for policy?

Broadly, the process of a migrant's social and economic integration is determined by his or her skills, preferences and incentives on the one hand and, on the other, the host country environment, which influences both the incentives and the constraints for the immigrant *and* the attitudes and 'adaptability' of the existing population.

Of those factors, migrant characteristics appear to be most amenable to direct policy control. Research indicates that higher levels of education, greater proficiency in the host country's language and younger age on arrival, facilitate integration within the host society (PC 2011f). Skilled immigrants also generally have more scope to select a country that suits their cultural and social preferences (PC 2011f). In this context, in addition to fulfilling its humanitarian obligations, Australia's more recent focus on young, skilled immigrants with good English skills is appropriate to our current economic and social circumstances.⁴

Considerations of the most appropriate or sustainable rate of intake are also relevant. To the extent that the answer depends on the adaptive capacity of the local population, Hatton and Leigh (2007) found that immigrant absorption was facilitated by the presence of established ethnic communities.

Various policies have also been adopted in Australia to improve the opportunities and incentives for immigrants to settle well within society and for the existing population to understand and accept newcomers. These include English language courses for migrants, and information campaigns to promote intercultural harmony. It is important to evaluate the effectiveness of such policies and initiatives. For example, some research from Europe indicates that major anti-racism campaigns failed to meet their objectives (PC 2011f).

It is also important not to lose sight of the inherent incentives for migrants and the local population to adjust, and therefore of the need to address any policy barriers to natural adjustment. For example, the OECD (2008f) observed that rigid labour market structures have contributed to the poor immigrant outcomes in France. The

⁴ Another notable recent development has been the growth of temporary immigration as a path to subsequent permanent residency (PC 2010f). In the face of initial information gaps confronting both prospective immigrants and host societies, such 'try before you buy' approaches can act as a screening mechanism with a potential to improve subsequent integration.

‘openness’ to migrants of institutions conducive to human capital development, particularly schools, is also important. In most cases, immigrants become more part of the community and more accepted by local populations, the longer they stay in a country. And the second generation tends to be better integrated than their parents (PC 2011f). Australia’s experience to date has been positive in these respects and the challenge is to ensure that policy settings help sustain this into the future.

In sum

Australia’s current and prospective demographic changes clearly present many challenges. These cover a range of policy areas and involve all levels of government. Good policy development processes will be essential to ensuring that the challenges are effectively managed. This will require evidence and analysis of the various impacts and trade-offs arising from population and immigration growth. It will also call for careful examination of the likely effects and interplay of the different policy options.

A number of policy implications arise from recent Commission work in this area. While focusing on future population targets may be of limited use to policy makers, the *rate* of population growth is an important consideration. How fast Australia’s population grows has direct implications for the environmental, urban and social amenity of existing residents. And immigration policy is the most effective mechanism for influencing the rate of growth. Further, it is clear that the composition of Australia’s migrant intake is important. Australian and international experience indicate that a focus on skilled migrants (while also meeting humanitarian obligations) is the most beneficial, both economically and socially.

It is also apparent that much can and should be done to improve Australia’s capacity to accommodate a growing and changing population. Policies that improve the flexibility, adaptability and overall efficiency of the economy would be warranted regardless of the rates of population and immigration growth. However, a sustainable approach to Australia’s population makes the case for such reforms more pressing.