Commentary



What sort of population policy should Australia adopt? Suggestions for migration, fertility and population research policy

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1. Introduction: Why have a population policy?

The implications of population change are wide-ranging and long-lasting. Population growth, geographical distribution and compositional change affect the need for all sorts of goods and services, including housing, transport, childcare, education, health, water and energy; labour supply, income, wealth, tax revenue, and government expenditure; land use, living space, the natural environment and the effects of climate; time use; family life; national culture and identity; inequity and inequality; crime and security; and religion (e.g. Argyrous et al. 2017; Daley and Coates 2018; Hugo 2012; Infrastructure Australia 2018; McDonald 2011; McDonald and Temple 2010; Ong et al. 2017; Pew Research Center 2017; Piketty 2014; Productivity Commission 2015, 2016; Treasury and Home Affairs 2018). The long run effect of immigration on the size and composition of Australia's population is more than just a matter of the initial 'plus one' per immigrant; it continues over the lifetimes of the immigrants who remain here, is added to by births to migrant parents in Australia, and, over the longer run, will also reflect the survivorship, reproduction and emigration of second and higher order generation descendants (Schmertmann 1992). Similarly, changes to numbers of children born in any one year will affect subsequent numbers of (potential) parents, and, hence, the sizes of subsequent generations across future time. In view of breadth and duration of its various effects, the potential value of Australia implementing (and progressively refining over time) an integrated national policy to direct, anticipate, monitor and respond to population change (i.e. a 'population policy') would appear to be considerable.

2. The scope of population policy

Population policy should be simultaneously broad in its range of considerations and focused in terms of its priorities. The considerations include:

• the future prospects and scope for change through policy of international migration, internal movement within Australia, fertility, and mortality, and the differing implications of alternative combinations of these variables for the future size and composition of national and subnational

populations. Trajectories of population change over long periods of time should be considered, and not just projected sizes for one future point in time (as occurred during the 'Big Australia' debate). This is because population change and its consequences vary over time, and because population change over any one time period will have ramifications for subsequent population change (Treasury 2015; Treasury and Home Affairs 2018; Parr and Guest 2014).

- the implications, both more immediate and sustained over longer periods of time, of such population outcomes for key non-population outcomes, such as labour force size, participation rates and composition, income levels, housing (numbers, types and affordability), road traffic and congestion, public transport use, educational enrolments, university funding, health care need, water use and environmental degradation.
- differences in the implications of population change between different geographical locations and for different population subgroups, especially disadvantaged subgroups.
- compassionate and emotional grounds for particular types of immigration (i.e. Humanitarian and Family).
- the implications of Australian population change and policy for populations overseas, especially for those that are poor, endangered or persecuted.
- the implications of population change for biodiversity and environmental sustainability.
- population-related budgetary, planning, social, education, family, regional development, foreign aid, health, environmental and other policies.
- time lags, degrees of uncertainty, potential for error, and contingency plans.
- gaps in knowledge and understanding in all of the above, and how best to address them through coordinated and funded research and through development of the research community.
- ministerial and departmental responsibility for the administration of population policy, and the
 coordination of policy formulation and implementation between Australia's major jurisdictions.
 For example, whether there should be a Federal Minister for Population, and, if so, whether the
 portfolio will include responsibility for immigration policy, and how consultation with State and
 Territory Governments will be conducted.
- the population-related implications and coherence of policy which is made primarily with considerations other than population to the fore but which also has population-related implications.
- how accountability will be ensured. For example, whether political parties will provide clear indications of intended population-related direction before elections, and will adhere to such promises if elected.

The rest of this brief article focuses on selected aspects of three key elements of population policy: immigration policy, fertility policy, and research policy.

3. Migration policy

By international standards Australia's immigration is highly planned and managed (Hugo 2014). Current migration policy covers movement on a range of temporary visas (including student, temporary work-related, working holiday maker, and visitor), as well as eligibility for permanent visas (which is almost entirely on the basis of skill, family and humanitarian grounds), and moves in and out of Australia by Australian and New Zealand citizens and some others (Hugo 2014a, 2014b; DoHA 2018). Not least because it is the component of population change which is the most readily changed through policy, migration policy, especially policy on the annual numbers of permanent residence visas issued, should be the cornerstone of any Australian population policy. The long-run impact on Australia's population of visa grants will reflect the length of stay and longevity of the immigrants, the children they have after moving here, and the reproduction, emigration and life expectancies of their descendants in Australia. Thus whilst changes to temporary visa entries can have large shorter-term impacts on population, over the long run the numbers of Permanent Residence visas (including those issued to previous temporary visa holders) will have a much greater bearing on population growth than the number of temporary visas (ABS 2018a).

Migration policy should align with (relatively) acceptable and feasible trajectories for future population change. It should recognise that in the more immediate future some degree of population growth and population ageing is virtually inevitable, both nationally and for Australia's largest cities, avoid zero (or negative) growth or zero ageing 'population pipedreams', and consider longer-run sustainability issues, as well as the more immediate implications of population change (ABS 2013; Martin et al. 2017; Parr et al. 2016).

There are both advantages and disadvantages to higher levels of immigration. Higher levels of immigration, especially suitably-targeted skilled immigration, can help to increase living standards (McDonald and Temple 2010; Parr and Guest 2014; Productivity Commission 2016). Whilst their perperson economic benefits tend to be smaller than those of Skilled migration, there are compelling compassionate and emotional justifications for a Humanitarian component and for most of the current components of Australia's Family immigration stream (Treasury and Home Affairs 2018). Higher immigration and, hence, population growth, particularly in Sydney and Melbourne, has also been linked to 'population problems', including traffic congestion, housing affordability issues, localised school capacity shortage, and concerns related to the spread of higher density housing (Daley and Coates 2018, Infrastructure Australia 2018, Ong et al. 2017).

The economic consequences of a change to immigration numbers will depend on how that change is targeted. Substantial proportions of particular occupational workforces (including Accountants, and various ICT Professional and Health Professional occupations) are the product of Australia's Skilled Migration Program. However, there are also smaller numbers of former Skilled migrants working in less-skilled occupations (for example Carers and Aides, Cleaners and Laundry Workers, Numerical Clerks, Factory Process Workers and Sales Assistants and Salespersons) which have never been on the lists of eligible occupations for Skilled stream visas (albeit somewhat smaller percentages for Primary Applicants than for Secondary Applicants) (ABS 2018b; Birrell 2018; De Alwis and Parr 2018). It would be preferable for any reduction to the size of the Skilled stream to disproportionately reduce the proportion of migrants who do not work in the stream's eligible occupations post visa award.

Recent improvements in data availability, including linked visa application and census datasets, have strengthened the evidence base for assessment of the labour market outcomes of Skilled stream entrants and their variation between demographic groups and geographical areas (ABS 2018b). The provision of data at a finer level of detail (especially for the occupations for which the skills assessments were undertaken), facilitation of further data linkage initiatives (for example by recording tax file numbers with other visa data), and empirical analysis of the resulting data may help to inform increases in the efficiency with which Skilled stream entrants fill shortages in areas of need and contribute to taxation revenue, and reduction in numbers of skilled migrants not working in Skilled migration eligible occupations. The inclusion of a question measuring time-related underemployment on the census could facilitate identification of labour underutilisation at the detailed level of classification of occupations used in Skilled migrant selection, and hence inform the targeting of reduction to migrant numbers.

As well as its targeting, the timing of changes to total Skilled stream visa numbers and the integration of migration policy with education and training policy are also important considerations. Education and training is a critically important determinant of labour supply, especially for professional and other high skill occupations, such as those targeted by the Skilled migration stream. In order to reduce the risk of oversupply and related graduate and immigrant skills wastage, it is important the setting of quota sizes for the occupations which are targeted by Skilled migration is responsive to changes in domestic graduate supply, as well as to demand, productivity and workforce attrition trends in these occupations. However, in view of the inevitable time lags between policy initiation and change to graduate numbers, a phased approach to migrant number reduction, which is harmonised increases in graduate numbers, would be advisable. Population policy should incorporate contingency plans for responses to rapid, unanticipated increases in need for critically important occupations with long education and training supply pipelines. Flexible plans for increases or decreases in suitably-skilled immigrant numbers in response to sudden changes in demand for mining and other industries which operate in relatively sparsely-populated regions which lack locally-available labour and face volatile demand should also be formulated.

The recent growth in numbers of 'domestic' Australian higher education graduates, particularly into occupational workforces which currently rely heavily on skilled immigration, such as Health, Engineering and Related Technologies, and Information Technology, provides reason for reassessment of the related Skilled migration occupation quotas (Birrell 2018; Crettenden et al. 2014; DET 2018). Proactive, suitably-calibrated, expansion of domestic graduate numbers, such as that recently implemented as a part of workforce planning for doctors and nurses, could potentially reduce risks of future labour shortage and thereby facilitate larger reductions to the size of the Skilled migration intake (Crettenden et al. 2014). However, in view of the inevitable time lags between policy initiation and change to graduate numbers, a phased approach to migrant number reduction, which is harmonised with expected future increases in graduate numbers, would be advisable.

The 26% increase in Australia's annual number of births between 2001 and 2012 contributed to past increases in demand-related pressures on child care and to more recent school enrolment growth and localised school capacity shortage (ABS 2014; Goss 2016; Guest and Parr 2013; McDonald 2011; Productivity Commission 2015). The prospective entry into the Australian labour force of these

significantly larger cohorts may contribute to supply surpluses for particular occupations in the absence of responsive changes to skilled migration numbers. The larger sizes of these cohorts could also provide a significant opportunity for strategically-targeted education and training to reduce Australia's future reliance on skilled immigration. Of note is that the entry of the larger post-2006 birth cohorts into the Australian labour force will roughly coincide with the Baby Boomer generations reaching older ages with high per capita health and aged care needs, and therefore with increased need for health care sector and aged care sector workers.

Slowing population growth in Australia's largest cities through a wider dispersal of new immigrant settlement should be a priority policy goal. Despite Australia's large land mass and low population density, the concentration of population growth in major cities in general, and Sydney, Melbourne and Brisbane in particular, increased between 2007 and 2017 (ABS 2018c; Hugo et al. 2015). In 2016-17 Melbourne had a growth rate of 2.7% and Sydney and Brisbane both of 2.0%, and in combination these three cities accounted for over 70% of Australia's population growth (ABS 2018c). Projections of the populations of Sydney and Melbourne reaching 8 million by 2061 appear conservative in the light of subsequent trends (ABS 2013).

It is the projected population sizes of the largest cities, rather than Australia's projected national population size, which I see as the more challenging prospect. A wider geographical dispersal of immigrant settlement and of population more broadly could in theory reduce the extent of transport, housing, infrastructure provision and space-related population problems in the major cities. That said, despite evidence of the improvement in immigrant labour market outcomes in regional and rural Australia, with a few notable exceptions (for example Byron Bay, Cairns, Darwin, Griffith, Kalgoorlie, Pilbara, Shepparton, Whitsunday), the immigrant share of population in areas which are distant from the larger cities has generally remained low (ABS 2017a; Hugo 2015; Krivokapic-Skoko and Collins 2014; Massey and Parr 2012).

The prospective geographical pattern of population ageing may assist dispersal of immigrant settlement beyond the largest cities to a degree. The working age populations of Australia's larger cities are generally younger than those in regional Australia. The occupations in which larger numbers of recent Skilled stream primary applicants work include accountants, nurses, certain ICT-related occupations and medical practitioners (ABS 2018b). In these occupations too the percentages in the later working ages (i.e. 55 and over) are higher for regional Australia than for the major cities, and higher for Tasmania and generally (but usually less so) for South Australia than for the other States and Territories (ABS 2017a). Thus age-related retirement linked to the ageing of numerically-larger 'Baby Boom' cohorts, and the related need to recruit replacements, may increase the proportions of job vacancies in Skilled stream eligible occupations outside Sydney, Melbourne, Brisbane and Perth.

Australia's geography of population ageing will have workforce demand-side implications, as well as workforce supply-side implications, and has the potential to exacerbate health inequity. The ageing of larger 'Baby Boom' cohorts to progressively older and higher health care-using ages will necessitate a substantial expansion of the health workforce (Treasury 2015; Crettenden et al. 2014). Older populations in regional Australia, Tasmania and South Australia face the prospect of 'double-whammy' demand-side and supply-side effects increasing the need for recruitment of immigrant (and local) Health Professionals beyond the larger cities. The failure of attempts to encourage

Australian medical practitioners to relocate from the cities makes the need for a successful migration-based solution to the prospective doctor shortage all the more pressing (Carson et al. 2017).

As Searle (2018) argues, the most feasible approach to reducing the concentration of population growth in the largest cities involves trying to increase the share of growth of the next tier of cities by population size, such as Adelaide, Canberra, Darwin, Hobart, Toowoomba, Townsville, and (if reclassified to become part of 'regional Australia' for visa purposes) Newcastle. The success of 'bullet trains' in dispersing population growth from larger to smaller cities along rail corridors in China points to a potential population-related advantage of an Australian high speed rail initiative (Zheng and Kahn 2014). Promoting overseas student study at universities outside the largest cities and providing financial incentives for migrants (especially Health Professionals) to settle in regional areas of Australia may help to disperse migrant settlement a little (Tang et al. 2014). In terms of numbers of skilled migrant primary applicants it is the various ICT-related occupations which are the most heavily skewed towards Sydney and Melbourne. Thus reductions in quota sizes for these occupations might be expected have the greatest immediate impact in terms of reducing the concentration of numbers in the two largest cities (ABS 2018b). In view of limited proven options, a coordinated and funded program of research on the experiences of immigrant settlement and retention in regional and rural Australia and comparable countries overseas with a view to identifying a model for achieving a larger-scale dispersion of population is essential (Collins et al. 2018; Krivokapic-Skoko and Collins 2014; Santoro and Wilkinson 2015; Taylor 2018).

4. Fertility policy

Family policy and the monitoring and understanding of fertility trends should be important population policy considerations, but not for the 'pronatalist' reasons presented by the former Howard Government (Parr and Guest 2011). Australia's Total Fertility Rate (TFR) has decreased since 2008 (ABS 2014; 2017b). However, contrary to some the belief of some, sustained fertility at replacement level is not necessary to prevent long-run population decline. Indeed, under continuation of its average TFR, immigration and life expectancy for 2011-15 over a very long time Australia's population would increase to over 130 million (Parr 2018). Whilst higher fertility would slow the extent of future population ageing, it would adversely affect the dependency ratio both immediately and over the longer run. Higher birth rates may also adversely affect educational provision and attainment and will add to population growth (Parr 2006). Moreover, the feasibility of substantially increasing birth rates is questionable: the available evidence suggests the effects on birth rates of the former Howard Government's introduction of the 'Baby Bonus' (and other simultaneous budgetary changes) most probably was slight (Parr and Guest 2011).

Nonetheless, whether, how many, and when to have children are life-changing decisions. The lifetime work, other financial, other time-related, and happiness-related effects of children on parents (and other family members), the lifetime effects of parents (and other family members) on child development, and the ways in which family policies, such as family benefits, child care policy, and leave-related policies, economic policies, social policies, and education policies affect them are fundamentally important issues (Craig et al. 2014; Guest and Parr 2013; Luppi and Mencarini 2018; Markey et al. 2015; Myrskyla and Margolis 2014; Parr 2006; Productivity Commission 2015). It is also

important that housing supply facilitates, rather than constrains, attainment of preferred family sizes. For all these reasons, it is supporting research to understand the drivers and family-level implications of fertility patterns, and developing evidence-based policy to enhance family wellbeing, and not birth rate change, which should be the primary fertility policy concern of an Australian population strategy (McDonald 2006).

5. Conclusion: the need for population research policy

In theory the policy suggestions in this article could:

- help to put Australia (and especially its larger cities) on a less unpalatable trajectory of population change
- aid reduction (which I presume would be the more popular preference) of immigration intake
 and hence population growth with a view to minimising its economic cost and maximising its
 mitigation of population-related problems in our major cities
- accentuate the value of strategically educating and training younger generations of Australians,
 and enhance their future integration into the labour force
- aid the geographical alignment of Australia's national workforce with its ageing population, and
- promote the enhancement of family life in Australia.

However, the realisation of such outcomes will depend, at least in part, on a broad range of related research being undertaken. Three key priority areas for research are:

- forecasting fertility, mortality, Trans-Tasman migration, Australian citizen return, international student movement, emigration, and (most importantly of all) subnational population change
- analyses of the relationships between immigration selection criteria and immigrant labour market outcomes, workforce ageing, retirement trends, trends in education and training, and work, housing and family combination, and
- 3) developing experimental ideas for and analysis of immigrant settlement experience and retention outside Australia's largest cities.

Ensuring that the requisite research is undertaken will require establishment of a coordinated, funded program of population research and a systematic expansion of Australia's pool of suitably-trained researchers. Currently, what little Australian population-related research is conducted is a matter of the whim of a relatively small and ageing pool of researchers who compete against researchers from other disciplines for scarce research funding, and whose jobs are a by-product of staffing decisions which are not necessarily taken with a view to the broader national interest. The coordination and funding of the development of a next generation of demographers and other population researchers through dedicated scholarships for postgraduate and postdoctoral research is also critically important if a research-informed population policy for Australia is to be sustained over time.

6. Key messages

- In view of the wide-ranging and long-lasting implications of population change, Australia should adopt a population policy.
- Changing the total number of permanent migration visas issued is the key policy lever though which the Federal Government may influence population trends.
- The implementation of changes to Skilled migration numbers should be phased over time and integrated with changes to education and training policy.
- The growth of the population sizes of the largest cities presents a more challenging prospect than national population growth. A wider dispersal of immigrant settlement should be a priority population policy goal.
- Population ageing could create opportunities for achieving a wider dispersal of migrant settlement.
- Enhancing family wellbeing, and not birth rate change, should be the primary concern of fertility policy.

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