

## METHODS FOR PROJECTING FUTURE MIGRATION LEVELS: AN ASSESSMENT

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*The need to supplement traditional fixed level projection methods for migration by rates-based approaches, and by other more sophisticated options also, is argued in this paper. It is concluded that more pluralistic methodology will make for better policy in this contentious area.*

### BACKGROUND

Peter McDonald and Rebecca Kippen have sought to evaluate the use of migration levels versus migration rates in Australian migration projection, and to draw attention to some possible problems with a rates approach to projections.<sup>1</sup> It is good to see this being discussed, since issues such as the potential role of immigration in muting demographic ageing are quite sensitive to the methodology adopted. For example the traditional levels procedures necessarily impose a conclusion of diminishing capacity for migration to retard ageing as long as net natural increase is positive, because they impose a constant absolute net inflow on a growing population base. This means a steadily diminishing rate of impact, both over time and for alternative higher immigration levels. A rate-based methodology allows different conclusions, including a more substantial contribution of immigration to ameliorating the impact of population ageing on public budgets over long time periods.<sup>2</sup>

In a previous examination commissioned by the Immigration Department of some earlier work of mine on demographic ageing, McDonald and Kippen<sup>3</sup> chose not to address this point of rates versus levels. What they do say now is helpful but, in my view, it is insufficient.

### ISSUES OF METHODOLOGY

In particular a number of general methodological points need still to be made:

1. There are merits and problems in each approach (rate vs level) and the choice is not necessarily 'all or nothing'. Projections showing the implications of both possibilities can be presented together, thus sensibly offering a sensitivity analysis. Sensitivity analysis is exceedingly helpful for demographic interpretation, *including* in terms of alternative methodologies. Increasingly as modelling power grows with modern computing, it might be hoped that variable migration timepaths could also be examined further, with neither levels nor rates rigidly fixed for long periods. For example, econometric time series methods could be used, which allows trend, cycle and seasonality to all be characterised for forecasting (see below). Regrettably, even official bodies such as the Australian Bureau of Statistics and the Immigration Department currently persist with publishing only simple fixed level migration projections. By contrast the Canadian Statistician is to move to per cent migration projections.

2. Historical trend analysis may not be the best basis for choosing between either levels and/or rates for future projection purposes. Certainly the historical record is an important source of information as

to what has been determined in the past, and that should be considered. But, both for levels and for rates for Australia, the fit of any simple trend is not good as there is a lot of variation, and trend itself is heavily influenced by outlier observations. In this latter respect, while a migration rate trend for the full post-war period does indeed decline, relative to a level trend line on absolute numbers, the result is highly sensitive to inclusion/exclusion of the immediate post-war years. Once those years of post-war dislocation are excluded, a better fit is in fact obtained by characterising the post-war period not by a single trend rate or level but as two different but constant rates, with a shift occurring in the mid 1970s. In this latter respect the displacement brought about by the anti-immigration (but pro multicultural) policy actions of the Whitlam Government has been insufficiently recognised.

3. Similarly, much more than fertility and mortality, immigration is a variable subject to direct policy discretion. Where projections are not just simple extrapolations or crude forecasts, but information for policy choice, then rates can be as valid as levels. In the case of the work by the Australian Chamber of Commerce and Industry (ACCI), cited by McDonald and Kippen, the whole ACCI point was precisely to argue for a rate as a policy choice and to illustrate the potential implications of that choice. They were not engaging in any forecasting, but rather in policy advocacy and outlining some characteristics of their preferred stance on migration.

4. For the same reason, age-specific rates of projection need not be advisable for migration in the same way as they might be for fertility and mortality, since the age structure of immigration is itself also a policy choice on the demand side

or a product of population levels and age structures in other countries on the supply side. For Australia, it has long been the case that the demand side is binding since there is an excess of actual and potential applicants for entry. This demand does not link in any actuarial manner to the age structure of the Australian population, unlike fertility and mortality. Linkages may exist but they are indirect and political, not decreed by biology, as where demographic ageing is inducing a reversal of attitudes to migration of many European political leaders. Be this as it may, the warning by McDonald and Kippen not to assume that full symmetry between fertility and migration methods should apply is indeed perfectly valid. My own earlier appeal was only for 'greater symmetry' in approach to immigration and fertility, not complete symmetry.

5. If forecasts are what are actually wanted then actuarial demography (whether by levels or rates for migration) may not be the best method anyway. Certainly purely statistical econometric time series forecasts and even causal economic models have out-performed conventional demographic projection methods in the past for Australia.<sup>4</sup> Of these, time series methods are superior in forecasting and causal or structural models are superior in explanation. It is a pity that little progress seems to have been made since this earlier flurry of interest in additional methodologies following the Borrie Report — and the soon thereafter evident deficiencies of the conventional projection methods employed in that report.

#### **SPECIFIC ISSUES**

Finally, a couple of specific comments should also be made:

6. A rate approach is not only the province of population expansionists, as

it is stated to be by McDonald and Kippen. Other analysts such as Ross Guest and Ian McDonald<sup>5</sup> have also adopted this approach, as indeed have McDonald and Kippen themselves elsewhere.<sup>6</sup> To suggest that a rate-based approach is only chosen by expansionists so as to serve their pre-conceived case is as inappropriate as saying that a levels approach is only adopted by restrictionists to serve their pre-conceived conclusions. This may happen. But the core issue is a methodological one that can still be considered in isolation from policy (see points 1 to 5 above), though it does have significant policy repercussions.

7. ACCI argued for a 0.67 per cent crude net migration rate, as is correctly stated by McDonald and Kippen. Since net migration is presently 0.49 per cent the higher rate does lend itself to the observation that 'an immediate jump in annual migration' is needed. ACCI does

not shy away from this and indeed sees merit in a 'kick start' for further economic expansion. But my own preference is actually for pursuit of a population target rate of 1.25 per cent with the migration rate gradually increasing as and when natural increase falls away over time.<sup>7</sup> Since population is currently growing at 1.2 per cent a moderate increase in current migration program levels only is implied — not any dramatic jump. In my schema a higher migration rate such as 0.67 per cent is only a later target not an immediate one.<sup>8</sup> The average over the whole period up to 2050 might be more like the Whitlam-Keating average rate of 0.54 per cent. It should be added that any population target rate is also best seen as a conditional target, and hence be subject to ongoing review as related economic, social and environmental factors also evolve.

## References

- <sup>1</sup> P. McDonald and R. Kippen, 'Projecting future migration levels: should rates or numbers be used?', *People and Place*, vol. 10, no. 1, 2002, pp. 82-83
- <sup>2</sup> G. Withers, 'Population ageing and the role of immigration', *Australian Economic Review*, vol. 35 no. 1, March 2002, forthcoming
- <sup>3</sup> P. McDonald and R. Kippen, *The Impact of Immigration on the Aging of Australia's Population*, Department of Immigration and Multicultural Affairs (DIMA), Canberra, May, 1999
- <sup>4</sup> R. Filmer and R. Silberberg, *Fertility, Family Formation and Female Labour Force Participation in Australia, 1924-1977*, Working Paper, IMPACT Project, IAC, Melbourne, 1977; J. McDonald and P. Morgan, 'Forecasting Australian Marriage rates', *Economic Record*, vol. 57, no. 156, March, 1981
- <sup>5</sup> R. Guest and I. McDonald, 'Population ageing and projections of government social outlays in Australia', *Australian Economic Review*, vol. 33, no. 1, March, 2000; R. Guest and I. McDonald, 'Is low fertility a threat to living standards in Australia?', *Australian Economic Review*, vol. 35, no. 1, March, 2002, forthcoming
- <sup>6</sup> P. McDonald and R. Kippen, 'Population projections for Australia', *BCA Papers*, vol. 2, no. 2, September, 2000
- <sup>7</sup> G. Withers 'Creating a dynamic Australia' in J. Jupp (Ed.) *Immigration and Multiculturalism: Global Perspectives*, CEDA, Melbourne, 1999; B. Chapman, and G. Withers, 'Human capital accumulation: education and immigration' in P. Lloyd, J. Nieuwenhysen, and M. Mead (Eds), *Australia's Economic Growth*, Cambridge University Press, Sydney, 2001
- <sup>8</sup> G. Withers, 'Population issues and options: investing in people', *Australian Economic Review*, vol. 33, no. 3, September, 2000