

# THE CHALLENGE OF AGEING POPULATIONS

*Opening Address by Dr M Edey, Assistant Governor (Economic) to Fifth APEC Future Economic Leaders Think-tank, Sydney, 22 June 2005.*

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It is a privilege to be invited to address this Future Economic Leaders think-tank, which is focusing this year on the important subject of population ageing.

## **Nature and Dimensions of Population Ageing**

The process of population ageing has been likened to the course of a glacier – something that is extremely slow moving but has apparently irresistible momentum. In most of our countries, the challenges that population ageing poses will unfold over a period of perhaps the next 50 years. This is far beyond the events we would normally try to forecast, and yet in some ways the effects of population ageing seem more predictable because of their slow momentum.

The population transition that we are currently experiencing in fact began in the industrialising world about 200 years ago. But it is really in the post-War period that these changes have accelerated around the world.

In a mechanical sense the main features of this transition have involved three things:

- declines in infant mortality;
- increases in adult life expectancy; and
- coming rather later than the other two, declining birth rates.

The reasons for the first two of these developments are not hard to understand. Falls in infant mortality, and rises in adult life expectancy, were driven by improved hygiene, better medical care and better nutrition – all things that accompany human progress. The third phenomenon, falling birth rates, is more difficult to explain. But what we can say is that it does not seem to be culture-specific. As countries get richer, birth rates fall – this is a repeated pattern around the world. The only question is how far. This is something that I will return to later.

The effect of these changes in the basic demographic parameters has been to set up a period of transition that works in several stages. The first stage, after mortality rates start to fall, is a population boom. Later, as birth rates decline, the effect is a population bulge that moves gradually through the population structure into the older age groups. Later still, presumably, there will be a transition to a new stable equilibrium with a stable age structure. What we are concerned about now is the economic consequences of going through the second of those stages – which, for the world as a whole, is what will be happening over the next half century.

Virtually all countries around the world are going through this transition, although they are at different stages and it is happening at different speeds.

The process is most advanced in countries like Japan, Italy and other parts of continental Europe. In Japan, the crude birth rate will fall below the crude death rate in the current decade, so that the ‘natural increase’ in the population turns negative. This point has already been reached in Italy, and the excess of deaths over births is even larger in parts of eastern Europe, especially Russia. At the other end of the spectrum are the countries of sub-Saharan Africa and south Asia, which still have very high birth rates. But even in those countries, UN projections show an eventual ageing of the population structure, though it comes much later than in the developed world.

In between those extremes, there are a large number of countries like the US, the other English-speaking countries, China, other parts of east Asia, and Latin America, where significant population ageing is now under way, even though it is not as far advanced as in Japan and continental Europe.

But, even though there are some big differences across countries, we should be clear that this is a global phenomenon, and not something that is confined to the developed world. One common way of summarising these trends is to look at old-age dependency ratios – that is, the ratio of people aged 65 and over to those of working age. According to the Harvard demographers Bloom and Canning, in a paper to a Federal Reserve conference last year, this ratio is projected to roughly double, from about 12 per cent now to about 25 per cent by 2050. And it will be significantly higher than that in places like Japan, Europe, the US and China.<sup>1</sup> The corollary of that trend is that there will be fewer workers available to support each person in retirement than is the case today.

## **Economic Implications**

What are the implications of all this for our economies? Before I try to answer that, a preliminary point to consider is the question of what constitutes old age.

The conventional way of thinking is to use a fixed cut-off – say, age 65, and to define everyone above that age as being old. But it is conceivable that societies can define old age more flexibly. If population ageing is being driven partly by improved longevity, which entails better health and higher life expectancy at any given age, then it is reasonable to think that what constitutes old age is itself shifting upwards. The average 70-year old in Australia today is much fitter and healthier, and can expect to live longer, than was the case a generation ago. And I am sure the same is true in other countries.

The reason I make this point is that many of the economic effects that stem from population ageing are a result of structures that assume a fixed cut-off point for old age – particularly things like fixed retirement ages and fixed ages for qualifying for pension benefits. But these things do not necessarily have to be fixed.

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<sup>1</sup> David E. Bloom and David Canning (2004), ‘Global demographic change: dimensions and economic significance’, presented at a symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, 26–28 August.

Having made that point, let me outline what seem to me the main economic consequences of population ageing, given the economic structures we currently have.

The first one is likely to be slower economic growth.

When a large part of the population starts to move from the pre-retirement to the post-retirement age group, the effect of that is to slow down the growth of the working-age population. Other things equal (that is, assuming given participation rates and productivity growth), this is going to mean lower growth in per capita incomes and lower growth in the total economy. In Japan, for example, the working-age population is already falling, and this is one reason, though not the only one, why potential growth there is lower than it was two or three decades ago. Other countries are experiencing the same transition, though it is not as far advanced. In Australia, growth of the working-age population is still a healthy 1½ per cent per annum, but it has already started to slow down and this in turn will mean lower potential growth of the economy. The same will happen in China, Korea and many other countries.

This is the reverse of the process that countries would have experienced in the previous phase of the population transition. In that phase, working-age populations were generally growing more quickly than the population as a whole. The resultant growth in labour supply is thought by many economists to have been an important contributor to above-average growth in per capita GDP, especially in east Asia. But what the demographic projections are telling us is that this positive force will eventually turn around and become a drag on growth, as it already is in large parts of the developed world.

The second consequence will be to put strain on government budgets.

One way this will arise is through government pension commitments, especially where governments run defined-benefit systems that are effectively funded on a pay-as-you-go basis. This is the norm in large parts of the developed world, including the US, continental Europe and Japan. Work done at the OECD has shown that these pension systems have very large negative net present values to their respective governments.<sup>2</sup> In other words, they represent a significant (but not formally recognised) net liability. This is borne out by official projections for the US social security pension system, for example, which show that it will soon turn cash-flow negative and eventually will run out of funds.

Another important source of fiscal strain is the impact of ageing on health costs. A disproportionate amount of the lifetime health-care cost for an average person is incurred in old age. This means that, as the population gets older, health costs for the population as a whole will go up. Australian Treasury projections suggest this will in fact be the main way that population ageing affects the fiscal position in this country: in 40 years' time, under unchanged policies, rising health costs are projected to add an extra 4 per cent of GDP to government spending.<sup>3</sup>

A third set of possible consequences will be the effects on financial markets.

Population ageing means we are entering a world where, in relative terms, labour will become more scarce and capital more abundant. As a result of that, economic modellers generally predict

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<sup>2</sup> See for example Deborah Roseveare, Willi Liebfrütz, Douglas Fore and Eckhard Wurzel (1996), 'Ageing populations, pension systems and government budgets: simulations for 20 OECD countries', OECD Economics Department Working Papers No 168.

<sup>3</sup> *The Treasury* (2002), Intergenerational report 2002–03, 2002–03 Budget Paper No 5, Canberra.

that real wages will rise and returns to capital will fall. It is interesting to note that this change in relative prices will actually make it harder to prepare for population ageing purely by saving more, because the returns on saving will be lower. This means that what will be needed is some combination of increased saving and greater workforce participation, which is what higher real wages should help to bring about.

Another way that financial markets may be affected is through the fiscal strains I already mentioned. If governments around the world fail to prepare adequately for these events it might undermine confidence in the sustainability of public finances, with effects on financial markets in general. Most models would predict that these and other financial market effects would be slow moving, because the demographic changes that drive them are themselves slow moving. But we know in practice that financial market adjustments are not always achieved smoothly. Some commentators speculate that markets might be disrupted if there were a pattern of delayed recognition followed by overreaction to the implications of demographic change.

Yet another way that financial markets might be affected is through the impact of differential rates of population ageing on international capital flows. This is a major separate subject in itself, so I mention it only in passing. Economic theory suggests that the high-income countries that are ageing soonest should be preparing for that by exporting capital to the countries that are further behind. In this way they would build up assets that will yield a return flow of income when the costs of ageing are eventually incurred. Whether or not this mechanism can make a big difference in spreading the costs of ageing is an interesting question for debate. Also interesting is the puzzle of why (in some instances) capital seems to be flowing in the opposite direction at the moment to what the theory predicts.

A final point worth making here concerns what might be called the political economy of financial market regulation. The emphasis on saving for old age could help lift the overall importance of financial institutions and markets in our national economies. This might well bring with it greater demands for regulatory scrutiny of saving vehicles, particularly when people are encouraged into those vehicles by government policies.

## **Policy Responses to Prepare for Population Ageing**

What should governments do to prepare for population ageing? Answering this question is the task set for delegates to this think-tank over the next couple of days, so I am not going to attempt any definitive answers myself. What I will do is to suggest a few of the areas that you might want to look at in your discussions. You may well be able to come up with more.

The first area is fiscal policy. It is always important to run a sound fiscal policy, but particularly so when you know you are entering a period where there will be additional pressures on government budgets. So the question here is, are our governments entering the population ageing period with sufficiently strong fiscal positions?

A second area is pension schemes. Governments obviously need to avoid entering into unsustainable pension commitments, if they can. Where they have already done so, which is broadly the case in Japan, Europe and North America, they have the more difficult problem of trying to put these schemes on a sustainable footing. How might this be done? On the face of it, the main options are either to raise social security contribution rates, cut benefits in some way

(possibly by delaying entitlement) or else to face an ever-increasing subsidy requirement from the general budget.

More creative options are to try to move to pre-funded pension systems, as has been done, to a degree, in the UK and is being considered in the US. The available models for pre-funded schemes around the world include Singapore's publicly sponsored central provident fund, and the mandated private saving schemes operating in Australia and Chile. Where pre-funded schemes are put in place, they should have the effect of lifting saving rates, and therefore helping individuals (and society as a whole) to prepare for the financial needs of old age. But, for reasons I have already alluded to, this seems unlikely to solve the problem on its own. Higher saving can be expected to force down rates of return, while at the same time people are facing a longer period of retirement that needs to be funded.

This suggests a further area that will need to be looked at, namely policies to lengthen the average working life. With people staying healthier for longer, it may be natural to expect people to continue working longer than was the case in the past. We need to consider whether there are obstacles that might prevent this from happening. Is there anything governments need to do to encourage this, like raising official retirement ages, or changing the incentive structures that operate in the years around retirement?

It is possible, too, that people's expectations need to be changed. In Australia, a common aspiration is to retire at age 55 which, for many people, would mean working for 30 years to fund a 30-year retirement. For the bulk of the population, that is clearly not going to be feasible. Do governments need to take a more active role in reshaping those expectations, or will market forces achieve the needed result?

Two other policy areas we should think about are those that can directly affect the age structure of the population and possibly reduce the pace of population ageing itself.

The first is immigration. Some countries might be able to slow down population ageing by attracting more immigrants. Presumably, migration would flow from poorer to richer countries, so this is not an option that is going to be available to everyone. But it is one option that countries will need to consider as they see their working-age populations either slowing down or going into outright decline. The extreme case here is Europe. It is commonly said that on current trends, Europe faces a choice between large-scale immigration and depopulation. For some other countries the prognosis might not be as extreme, but it will differ only in degree.

The second area is policies to influence birth rates. I am not an expert on this, and there are many people who would argue that it is not feasible for governments to influence birth rates, or that it is not a proper role for governments to actively encourage larger families. But we should at least consider whether there are aspects of our societies that unnecessarily discourage people from having children. Are families too heavily taxed? Are women excessively penalised for having children? Are our societies 'child-unfriendly' in other ways? Again, these are questions that participants in the think-tank might want to consider during the course of the meeting.

## Broader Social Implications

Economists don't tend to talk a great deal about the wider social implications of the phenomena that they study, but I want to finish up by making a brief comment of that nature.

We know it is a recurring pattern around the world that, as countries get richer, their families have fewer children. But many countries are still in the early stages of this process. What we do not yet know is how low birth rates will go before they finally level out. Will most countries be like the United States currently is, with a birth rate around the replacement level of 2.1 children per woman? Or will they be more like Italy, with a birth rate not much more than half that? The answer will make a big difference, not just to population trends, but to the nature of our societies.

The American social commentator Nicholas Eberstadt speculated on what societies would be like if something like the current Italian birth rate were to prevail for more than a generation. Writing in 1998, he said:

At the moment, Italy's total fertility rate is estimated to be less than 1.2; the UN's 'low variant projection' anticipates the continuation of this pattern to the year 2050. If Italy's current fertility regimen is extended for two generations, the modal 'family' will be completely redefined. For in that future world, under reasonable assumptions about the incidence of childlessness and larger families, almost three fifths of the nation's children will have no siblings, cousins, aunts or uncles – only parents, grandparents, and perhaps great-grandparents. Under those same assumptions, conversely, less than 5 percent of Italy's children would have both siblings and cousins. [...]

While it is possible to describe this new typology of the family, it is almost impossible today to imagine what it would portend. Throughout the remembered human experience, the family has been the primary and indispensable instrument for socializing a people; families presented the individual with extended bonds of obligation, and reciprocal resources – including emotional resources – upon which he or she could draw. Under the demographic projections considered here, all that would change momentously. For many people – in some places, for most people – 'family' would be understood as a unit that does not include any biological contemporaries or peers.<sup>4</sup>

He went on to talk about what he calls the 'social atomisation' that might result from that.

Obviously, this thought experiment is based on one extreme of the demographic spectrum, but it makes the point that demographic changes are likely to have social consequences as well as economic ones. I leave you with that thought, and wish you well in your discussions over the next couple of days. ✎

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<sup>4</sup> Nicholas Eberstadt (1998), 'What if it's a world population implosion? Speculations about global de-population', Harvard Center for Population and Development Studies.