

# Why our rising population will bring with it a decreasing standard of living

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The UK population has risen by about 10 million over the past 25 years – up around 400,000 a year. Just over half of this is due to net inwards migration and just under half is from the balance between births and deaths of the resident population. Population growth is set to continue.

Whether a continuing rise in the UK population at this rate is a good thing is a hard question to answer. It raises some deep issues – how do we value the happiness of the unborn? How do we value the happiness that having a lot of children might bring? What about the costs from more congestion and the extra production of pollutants that more people is likely to bring?

When faced with a very hard to answer question there is something to be said for asking a more modest question that at least gets at an important part of the issue and might be amenable to some quantification. So here is an easier and narrower question: What rate of population growth might generate a level of average consumption per person which is sustainable and as high as it can be? For the UK there are some strong reasons to believe that the answer to that question is likely to be a lower rate of growth than we have seen in recent decades – possibly one that would mean a fall in the overall level of the population.

Why might that be true? The economics is fairly simple. Suppose a country has a given saving rate out of its national income. That saving rate has to generate enough investment to replace depreciating assets (roads and buildings and computers wear out and need repair or replacement). Investment financed from domestic saving is that part of income not available for satisfying today's wants. Investment is not done for its own sake – but to satisfy needs and wants in the future. If a country has a growing population then for sustainably meeting needs of each person investment needs to replace worn out assets but also raise the stock of capital assets further in line with growing numbers of people. The higher is population growth the less is your ability to maintain assets per person unless you raise savings – but that means lower consumption.

This is a simple and powerful piece of economic reasoning. It is what underlies models of economic growth developed by US economist Robert Solow many years ago and for which he won a Nobel prize.

The UK has a relatively low savings rate. Just looking around it would also appear that we have not collectively saved and invested enough to keep many of our capital assets - schools, the rail network, roads, some types of corporate assets - at a level that can keep up with the demands on them from an ever rising population. We seem collectively unable to save enough to stop infrastructure (public and private) falling behind – a drive around our motorways, a wait in a crowded hospital or a trip on a commuter trains seems to confirm this.

Of course this is different if the new people that arrive bring capital with them; but we cannot expect the new born to do that and migrants – while they do bring substantial skills and human capital – do not bring schools, roads, hospitals and houses with them.

Calculations from demographers and economists suggest the anecdotal evidence from just looking at our crowded roads, trains and ever-shrinking houses might not be such a bad guide. Ronald Lee – one of the world’s leading demographers – led a team of researchers from across the world in a project to estimate what levels of population growth might be best for living standards. For the UK the calculations from one of Lee’s teams (Professor James Sefton) suggested that to achieve the highest sustainable standard of living per person the population should decline.

How does that square with the frequently heard argument that to help preserve the affordability of public services- in particular state pensions and public health care – we need a rising population to generate enough tax revenue? In the research published in *Science*<sup>1</sup> (one of the most prestigious academic journals in the world) Lee reports that for the UK the growth rate in population that is best for fiscal sustainability is probably substantially positive while the population growth rate for the highest sustainable standard of living of the population is negative. His research concludes “...modest population decline favour higher material standards of living”

Why do we get such different answers? The fiscal calculations focus on balancing the public budget – something that can be helped by rapid population growth if the young (on balance) pay more taxes than they consume public services while the older are net consumers. If you raise the population fast enough you keep the ratio of the relatively old to the relatively young down. But what that leaves out of the picture is the extra resources needed to maintain capital assets per person. If the public sector is unable (or unwilling) to do that maintenance then the fiscal position can improve with fast population growth while the quality of living may decline.

There are certainly many economists who take a radically different view on all this. Some argue that we need to raise the birth rate or maintain very high levels of net migration so as to counter the impacts of an ageing population.

For a densely populated country with a low saving rate like the UK this is likely to be a disastrous strategy. And this is not an anti-immigration view, just an anti-rising population view.

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<sup>1</sup> “Is low fertility really a problem? Population aging, dependency, and consumption”, Ronald Lee, *Science*, volume 346, October 2014. Science is the peer-reviewed journal of the American Association for the Advancement of Science.