

Demographics, the Real Economy and Pensions

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Overview

- Where does economic growth come from?
- Global population growth: good or bad?
- Do size and age matter?
- Global savings rates & pensions
- Summary

Where does growth come from?

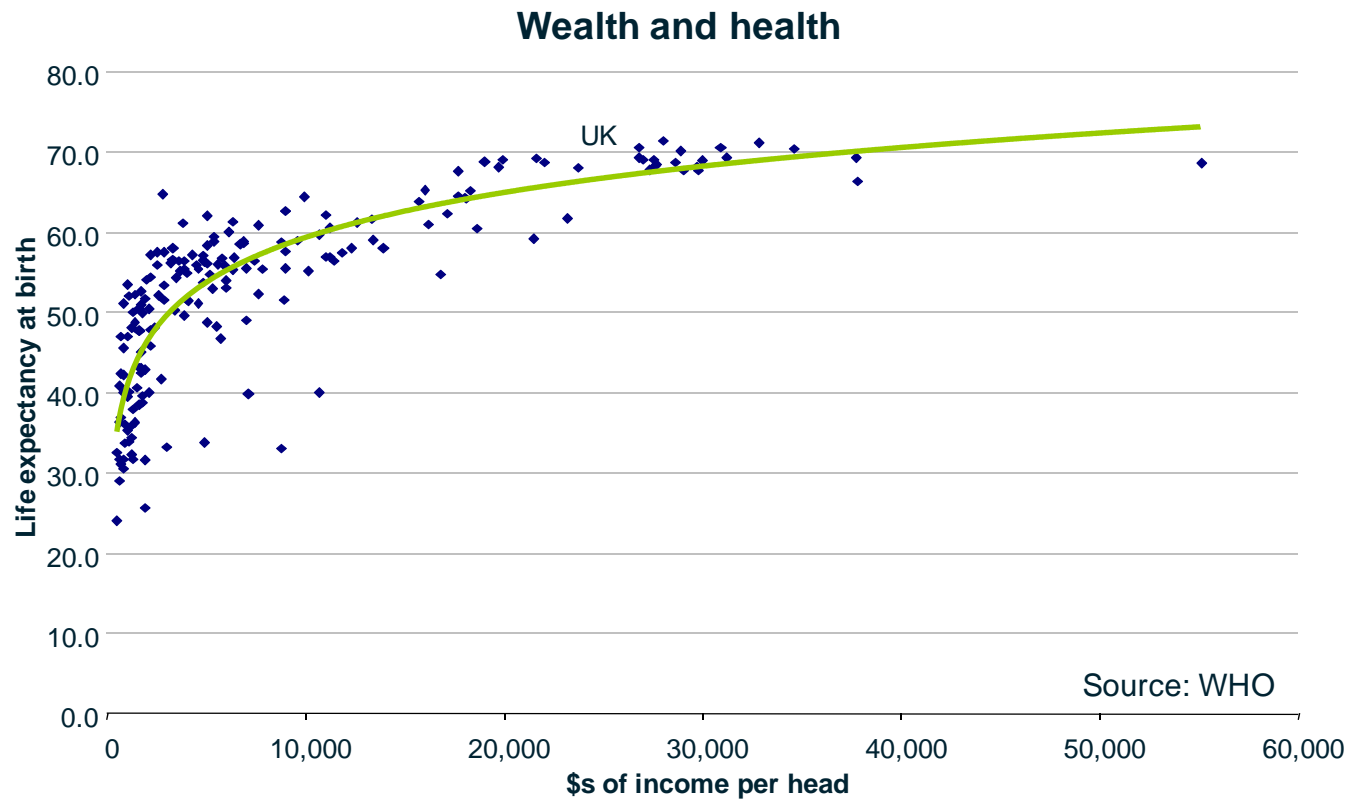
- There are really only two sources of economic growth
- Output is:

$$\begin{aligned}\text{output} &= \text{output per worker} \times \text{employment} \\ &= \text{output per worker} \times \text{employment rate} \times \text{pop of working-age}\end{aligned}$$

- Output per worker can increase with productivity gains
- Employment can rise with the employment rate, but also with an increase in the population of working age
- Output growth without productivity improvements may not improve welfare

Economic growth and health

- Economic growth is a key goal of most developed, but in particular most developing countries.
- Here is why:

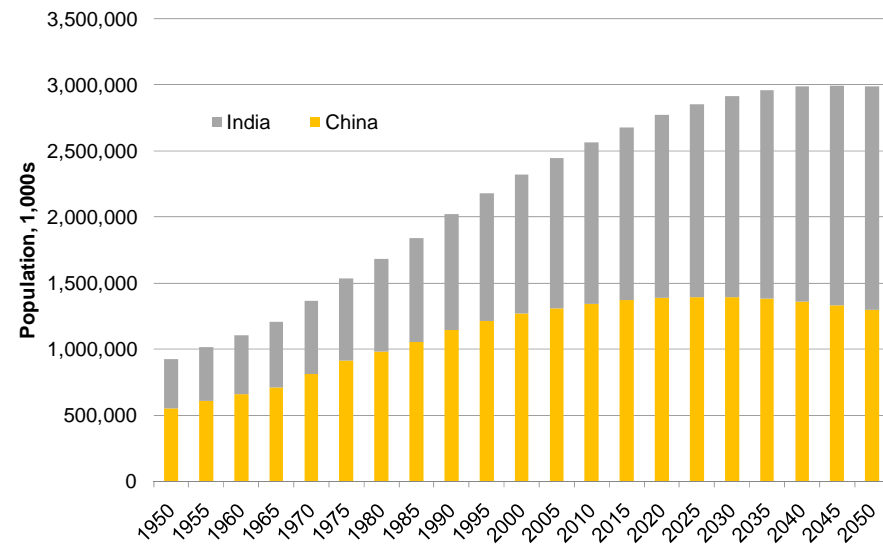
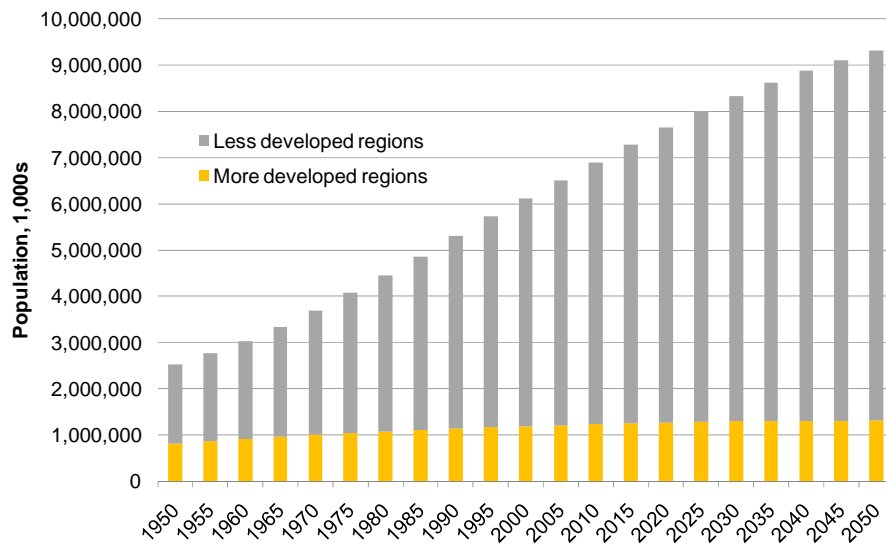


Global population growth: good or bad?

- Many economists are agnostic about the impact of population growth, arguing that it does not affect per capita outcomes only aggregate outcomes
- Others argue that it is bad (Malthusians) – there are finite resources, so population growth dilutes capital per head, reducing productivity and therefore living standards
- The optimists argue that ultimately it is human ingenuity that drives welfare improvements, in which case the more people (particularly the more older people) the better – within reason
- So how fast has population growth been?

Global population growth

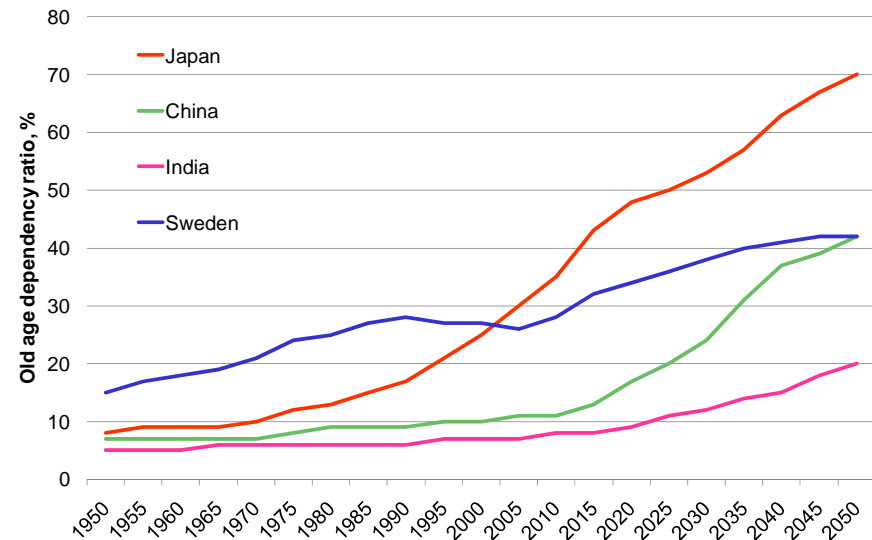
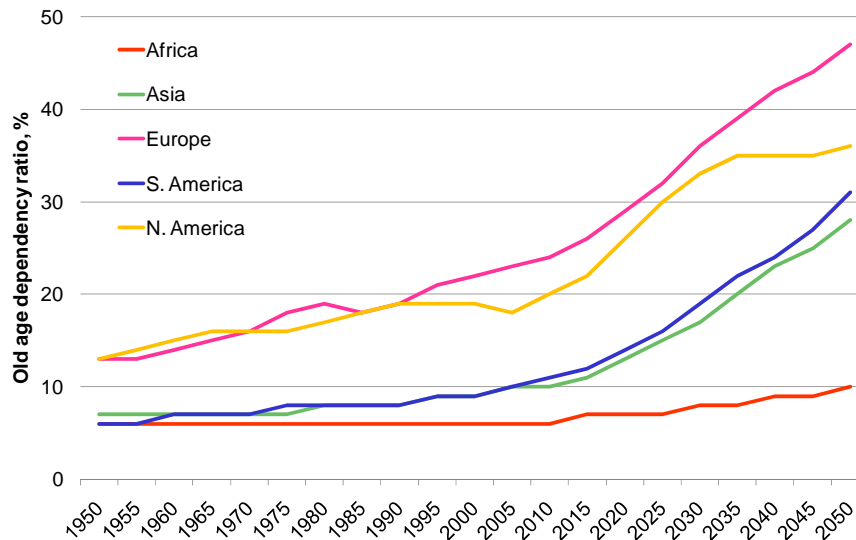
Population growth (Source UN)



- Global population to peak by 2050 at about 9bn
- By 2050, 1 in 3 people will be either Chinese or Indian
- By 2025 Indian and Chinese populations expected to be equal, by 2050, India is expected to become the most populace nation on earth

Does age matter?

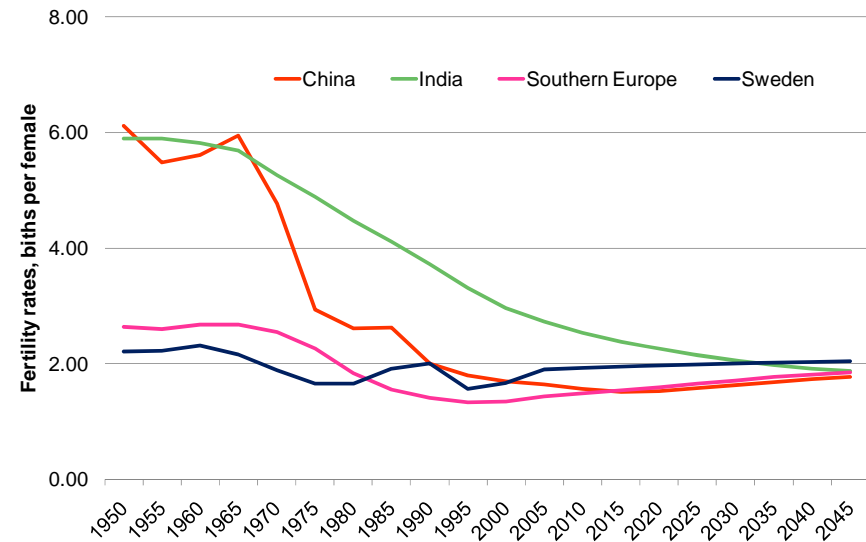
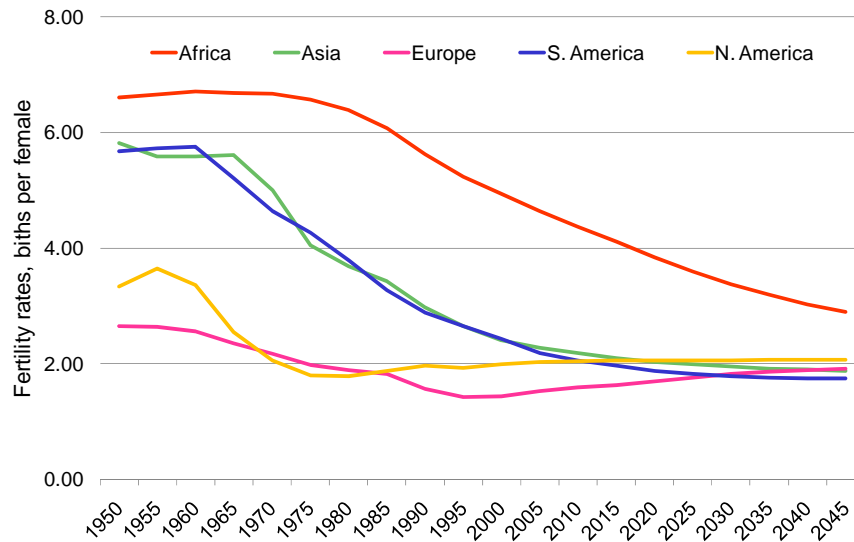
Old age dependency ratios (Source UN)



- Rapidly aging nations – e.g. Japan, Spain, Italy, Germany, China and Russia – will see GDP shrink
- Young countries – e.g. Middle East, India – should see it increase
- UK, US, Canada and Sweden somewhere in between the extremes

So the more babies the better?

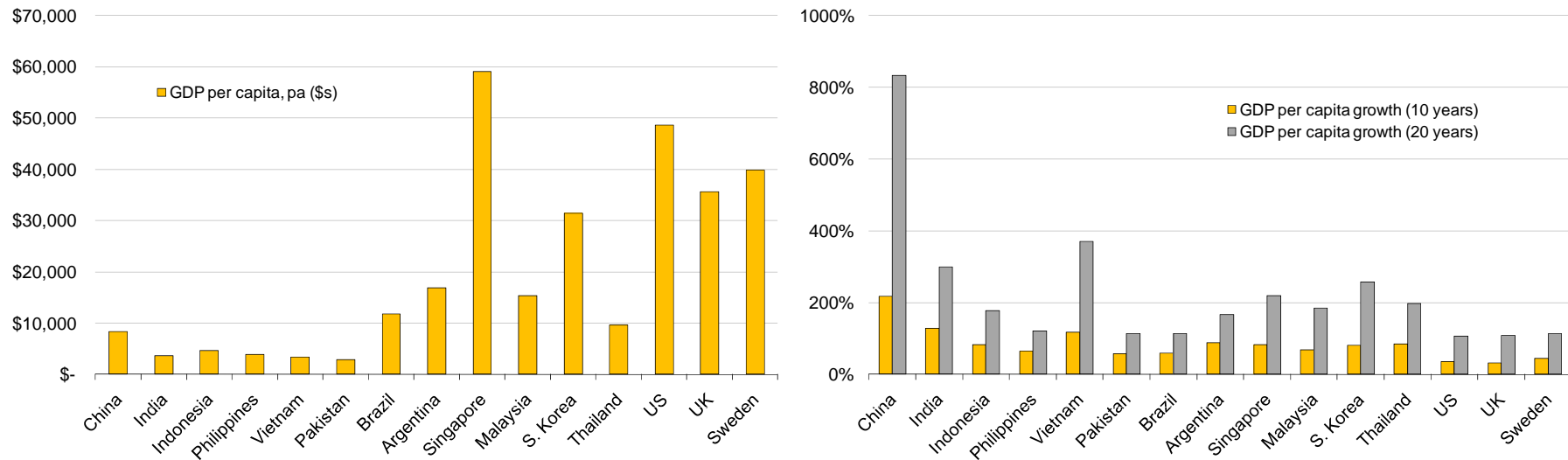
Fertility rates (Source UN)



- Arguably there is a sweet spot, where the average population is young, but where fertility rates are just above the replacement ratio
- Lots of babies are a sign of poverty, not affluence, and is usually accompanied by high infant mortality rates

Does size matter?

GDP per capita, \$s (Source UN)



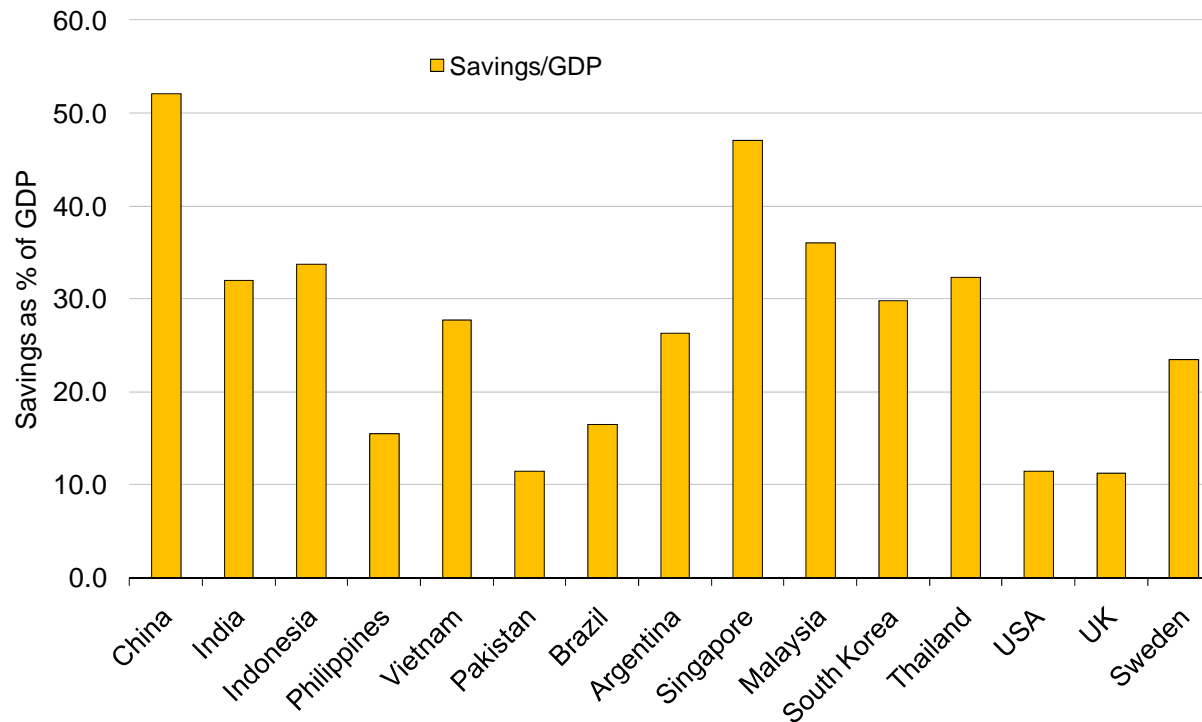
- GDP per capita is still very low in many developing economies, however it is growing much more rapidly in younger nations
- China has approximately four times the population of the United States, the average Chinese only has to become a quarter as productive as the average American in order to equalise the size of the two economies.

Savings

- ‘Young’ countries with relatively large, growing populations will tend to have a high marginal return on capital – think of these countries as being ‘labour-rich’ and ‘capital–scarce’ – while ‘older’ countries are in the opposite position
- Other things equal, we would therefore expect to see higher rates of investment in the ‘young’ countries than in the ‘old’ and higher rates of growth in the ‘young’ countries until such time as marginal returns on capital converge
- We might also expect the propensity to save to be lower in ‘young’ countries with growing populations, reflecting the relatively smaller number of people at prime saving ages

Savings

Savings rates (Source UN)



- However, savings rates in some developing countries are astonishingly high – particularly in China, India and Indonesia
- Their demographics says that their savings rates should be lower

Pensions

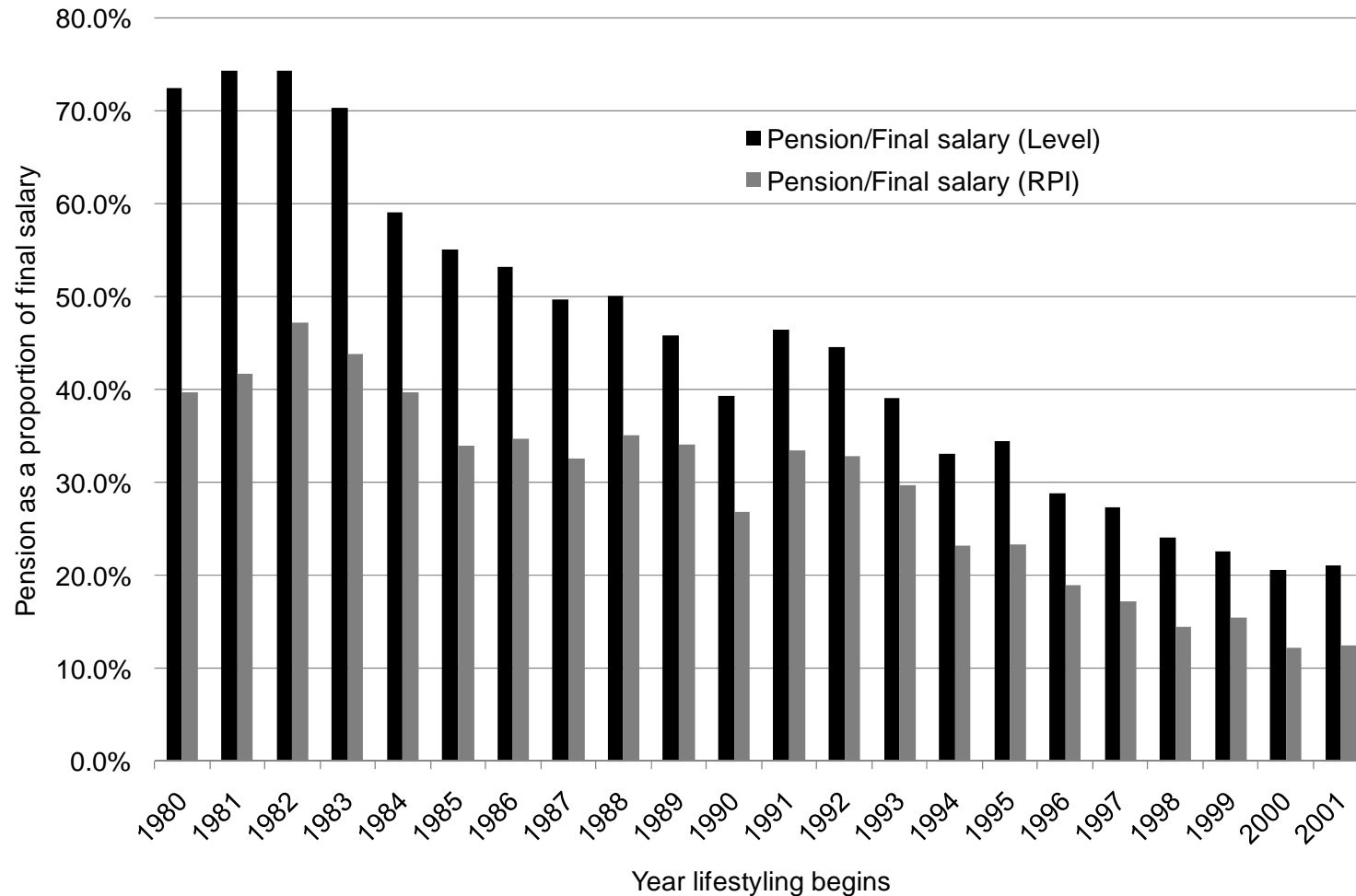
- Arguably the defining challenge of our time – particularly in the developed world
- Generally, households in developed economies are not saving enough for retirement
- As the demographic make up worsens there will be a smaller and smaller working age population left to support us all
- Either developed economy productivity has to rise massively, or we will all have to work, much, much longer
- **BUT WE CAN'T ALL SAVE**

The pension challenge ...

- We have just completed work* on a research project that looks at the challenges for the average UK (developed economy) individual as they try to provide for their retirement
- In particular we looked at the challenges faced by pension members in the last few years of their working lives
- Typically over the last few years DC members switch from risky assets (equities) to risk free assets (government bonds) and then annuitize at 65
- This challenge will become almost insurmountable for many ...

*Outcome orientated investing for DC pensions, 2011, Andrew Clare and Douglas Wright, Centre for Asset Management Research, Cass Business School, London.

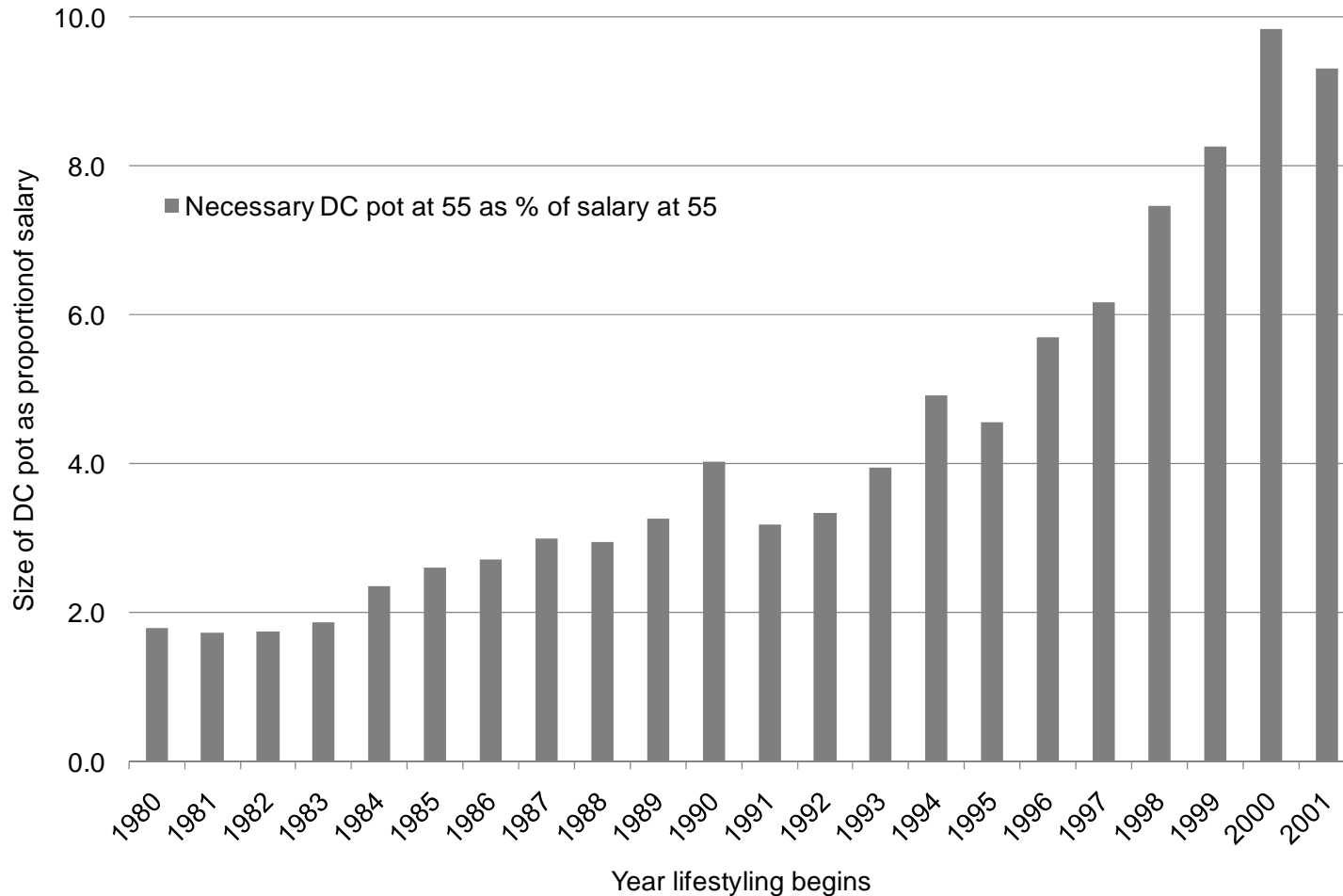
The pension challenge ...



Source: Outcome orientated investing for DC pensions, CAMR, London.

- The same strategy has produced worse and worse results for retirees

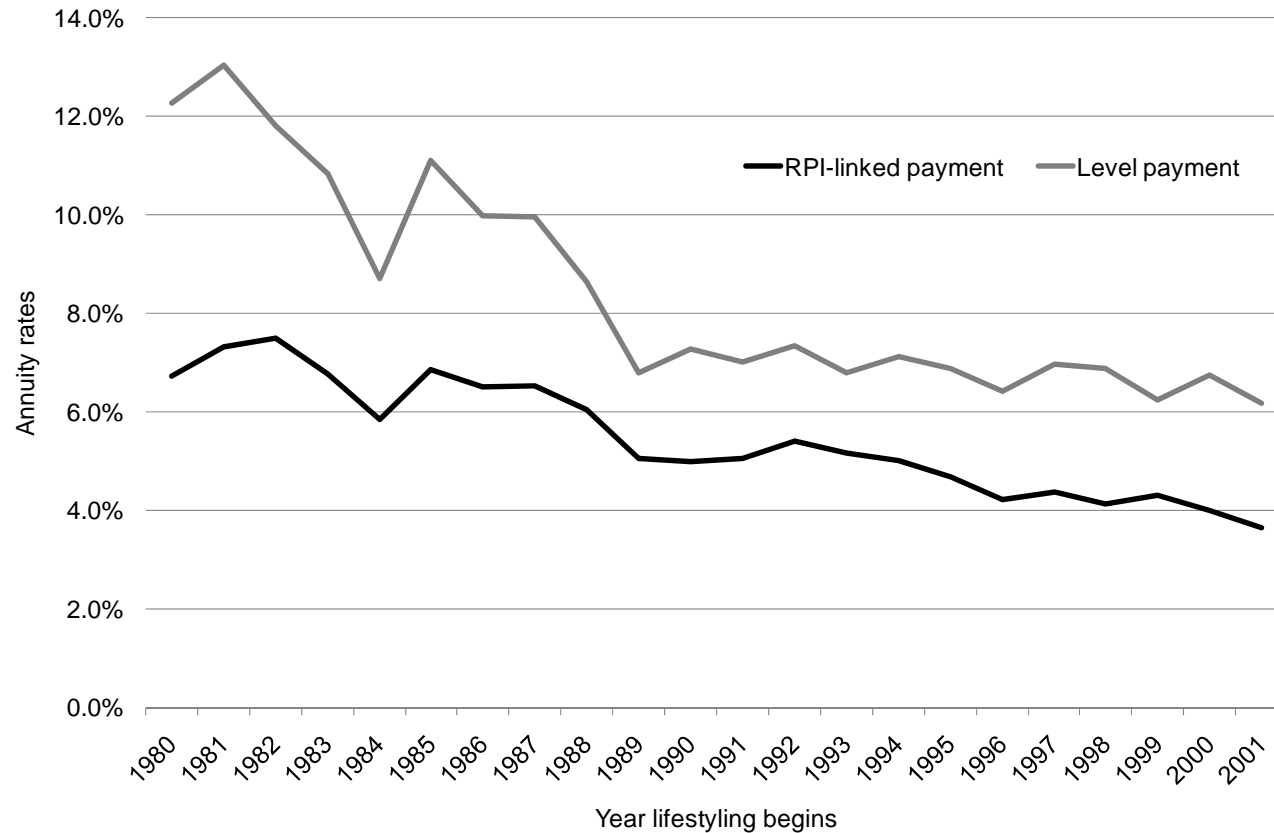
The pension challenge ...



Source: Outcome orientated investing for DC pensions, CAMR, London.

- Other things equal the 'price' of achieving a pension equivalent to 2/3 of salary, in salary terms, has increased by a factor of 5

Collapsing annuity rates ...



Source: Outcome orientated investing for DC pensions, CAMR, London.

- Globally real (annuity) rates have collapsed because too many parts of the global economy are trying to save
- We need 'young' nations to spend, allowing 'old' nations to save

And then there's longevity ...

- In the late 1940s the average UK male would have been lucky to make it to 72, and many never made it to 65, but:
 - according to the ONS, in 2009 the average 65 year old male in the UK was expected to live for 17.8 years and female 20.4 years
 - (the difference between the life expectancy of a 65 year old male living in Kensington and Chelsea compared to a 65 year male living in Glasgow is 9.8 years)
 - in January 2011, the DWP estimated that nearly 11 million people alive today in the UK, around 17 per cent of the population, would live to 100
 - by 2066 the UK could be home to half a million centenarians!!!

Summary

- Demographic trends suggest higher growth in developing, young economies and, in the absence of a major increase in productivity, lower growth in the 'old world'
- Developed economy citizens face a major challenge in providing for their pensions, unless annuity rates rise – which would require young nations to start spending and stop saving – the only other options are:
 - mass poverty in old age
 - massive increase in state provision (remember we are all living much longer too)
 - major expansion of working age population as we either:
 - increase the retirement age from 65 to 75 or
 - allow immigration rates to increase