

theirview

The economics of demographic shifts

Ageing strikes at the very roots of the welfare state and the social contracts on which democracy rests

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There is a growing sense, in the wake of the recent global financial crisis, that mainstream macroeconomic frameworks are inadequate in explaining the real world. Arguably, the forces of globalization, the neglect of financial markets and demographic change have undermined these frameworks.

Of these, demographic transition is perhaps the most profoundly underestimated force. Ageing strikes at the very roots of the welfare state and the social contracts on which social democracy rests. This has recently begun in advanced economies. It is just a matter of a few decades before its impact is felt across the globe.

Human history can be broadly divided into five demographic stages. In the beginning, human populations were sparsely distributed during the hunting and gathering phase that lasted right up to the end of the last ice age around 10,000 BC. Population densities never exceeded 1-2 persons per square mile. Survival was a full-time profession for everybody. There was no such thing as division of labour or economic growth. This began during the second stage with the Neolithic Revolution and the discovery of agriculture that facilitated the generation of a 'surplus' over and above what was required for daily survival.

The origins of social stratification, urbanization, civilization, the State and empires can all be traced to the Neolithic Revolution. Technological change, its dissemination, and consequently productivity shifts, were however slow where progress was measured in centuries.

Aggregate gross domestic product (GDP) therefore grew at very low rates over an extended period, with the standard of living improving very slowly over time. Economic growth was more a function of population increase than productivity growth. Birth rates were high, as were death rates. This resulted in a large, young,

dependent population that consumed but did not contribute to economic activity. The constraints on economic growth were therefore on the supply rather than demand side. War, famine and pestilence led to periodic sharp declines in both population and output, followed by long periods of slow recovery. This pattern persisted right up to the 17th century.

The third stage began in the 18th century with the Industrial Revolution. A continuing technological revolution facilitated rapid population growth through rapid upward shifts in human productivity. This was made possible by a sharp fall in death rates on account of improvements in public health, with the birth rate adjusting only slowly. A virtuous cycle of rapid supply and demand growth ensured that both aggregate and per capita GDP, and with it standards of living, grew at unprecedented rates.

Extant macroeconomic theories are the product of this third stage. They now need to adjust to the next two stages where birth rates first approach replacement rate, leading to a levelling off of population growth, and then fall below the replacement rate.

Humans are the only species where prosperity beyond a certain point leads to demographic decline rather than to rapid, unsustainable expansion of the species. Several European countries and Japan have entered the fourth stage, characterized by declines in aggregate GDP growth. The slow recovery from the global financial crisis must be seen not simply as a balance-sheet recession, but also through the prism of ageing.

Beyond the fourth stage lies a possible fifth stage, where productivity growth may be inadequate to prevent negative aggregate GDP growth, although per capita GDP may well continue to grow at robust rates. A shrinking working population leads to a large dependent population, this



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time aged instead of young, that consumes but has traditionally contributed little to economic activity. In a closed economy, this would lead to lower growth because of problems on both the supply and demand sides. While these constraints can be substantially mitigated in an open, globalized economy, attempts to overcome demand constraints through leveraged consumption are not sustainable in the long run. Indeed, this was one of the underlying causes of the recent global financial crisis.

The peculiarity of the fourth and fifth stages is that hourly productivity per worker does not decline because of the continuing technological revolution. However aggregate production, the production possibility frontier, may decline.

The ageing process works itself through the economic system in surprising ways. The likely impact on fiscal policy is widely acknowledged. Social contracts underlying the welfare state may need to change, retirement ages pushed back, and the healthcare system shift from curative to preventive with greater onus placed on individuals for their own health outcomes.

The impact on financial markets,

monetary policy and on inequality however needs fuller consideration going forward.

It is possible that we have only seen the tip of the iceberg called 'savings glut' that tends to keep the cost of capital and interest rates low. Workers need to save more and more for retirement, as a shrinking tax base weakens the State's fiscal capacity. With trend growth declining, and savings rising, central banks may be constrained to keep interest rates low.

There has been much talk about rising inequality, such as that centred around the influential work of Thomas Piketty, on account of the increasing returns to capital relative to labour in a globalizing world. But as the world ages, and the number of workers falls, the returns to labour would rise as the proportion of those buying assets (workers) shrinks and that of sellers (retirees) increase. Would this then reverse the current trend of relative returns to capital and labour? What would this imply for income inequality and tax policies going forward?

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