FUNDAMENTALS

Demographics and inflation – an age-old problem

Slower population growth has probably depressed OECD inflation by around ½% over the past decade. Going forward, the outlook could change as politicians progress on the five stages of demographic despondency: growth disillusion, breaking promises, squeezing, populism and currency debasement.

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DEMAND OR SUPPLY?

The relationship between demographics and inflation is a contested issue because there are two schools of thoughts: one focusing on demand, the other on supply.

The first 'Malthusian' view sees a positive link between populations and prices via higher demand. More people means more demand for scarce resources and therefore higher prices.

The second 'dependency ratio' theory looks at the distribution of the population. Workers are seen as deflationary as they 'supply' labour while dependents (children and elderly) are inflationary as they consume goods and services but do not produce anything.

DEMAND – MALTHUS

Back in 1798, Thomas Malthus wrote about the link between demographics and inflation ("An Essay on the Principle of Population"). He believed that rising populations boosted food prices through higher demand. He believed this would constrain future population growth as rising living costs would increase poverty and ill health.

Data show the existence of a strong positive relationship between UK population and prices in the 200 years prior to Malthus' essay (Figure 1 overleaf). Ironically, the relationship broke down immediately thereafter. Prices stabilised in the 1800s while population surged as the industrial revolution boosted productivity.

So the population/demand channel is clearly an important factor driving inflation, but not the only one.

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SUPPLY – DEPENDENCY RATIO

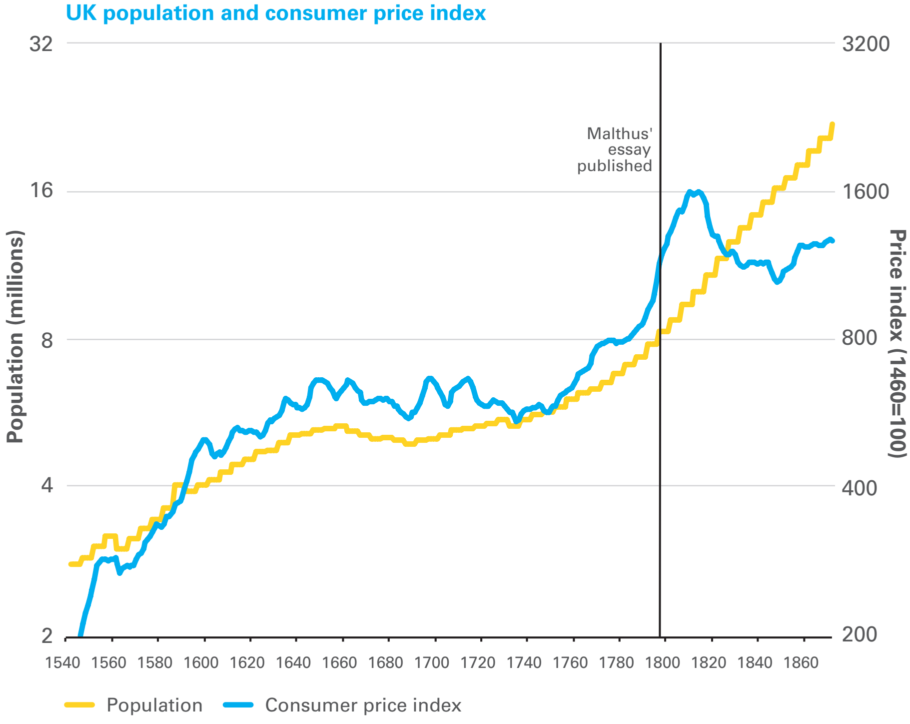
An alternative view is to look at the composition of the population. Workers are seen as deflationary because they 'supply labour'. Prime-aged workers are particularly important because they save, consuming fewer goods and services than they produce. By contrast, 'dependents' (young children or elderly retirees) are seen as inflationary because they consume but do not produce.

So the more workers a country has, the more it can produce and therefore the greater the 'excess' of goods and services available for dependents. But as the 'dependency ratio' increases as the population retires (more dependents relative to workers), there could be a shortage of goods and services produced relative to demand, bidding up prices.

A key issue here is government support. Figure 2 right, plots consumption and labour income by age in the US. You can see that most people's labour earnings peak in their late 50s as they approach retirement. Private consumption peaks a decade later but public spending ramps up, particularly on healthcare. So overall consumption does not fall back when people retire but actually increases in people's 80s reflecting spiralling healthcare costs (see previous Fundamentals "Ageing and wrinkles in public finances").

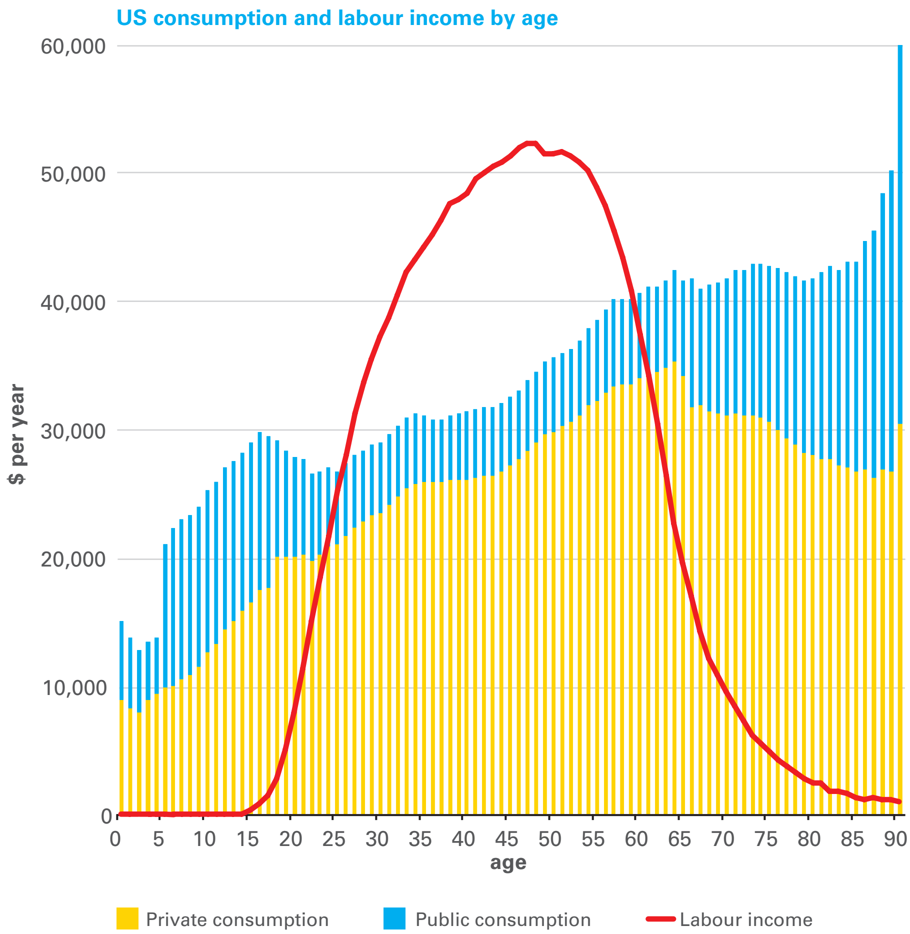
The inflationary impact of elderly people is therefore partly dependent on the ability of governments to meet their pension and healthcare promises.

Figure 1: A positive relationship between UK population and prices existed for 200 years… until Malthus published his essay!



Source: The Population History of England 1541-1871

Figure 2: Elderly retirees consume a lot of health services but do not produce anything



Source: National Transfer Accounts

If governments were to renege on their promises, that would be a deflationary shock. Consumption by retirees would fall and existing workers might pre-emptively save more. By contrast, a large increase in government borrowing to fund health and pension costs could be inflationary as demand exceeds supply.

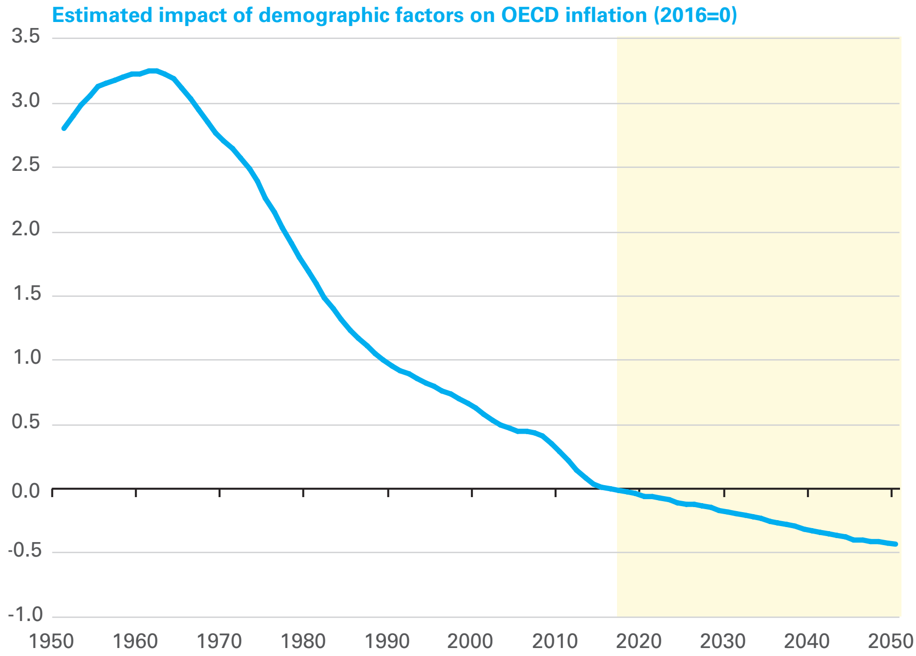
WHICH EFFECT DOMINATES?

The current combination of rising life expectancy and a generous welfare state is largely unprecedented. So the empirical research on the impact of demographics on inflation "is scant and inconclusive" (IMF 2015). Researchers who focus on the composition/supply-side effect see an inflationary effect of ageing populations while those who focus on the population growth/demand angle see deflationary trends ahead.

Our analysis finds a role for both factors – there is strong evidence for Malthusian population growth effects. But there is also evidence that prime-aged workers are deflationary compared to dependents.

We estimate that OECD inflation has probably been reduced by ½% over the past decade because of demographic effects. In other words, for a given set of unemployment rates and commodity prices, inflation should be ½% lower today than you might have expected a decade ago (see Figure 3 – this shows the impact from demographic variables on OECD inflation. We also took into account unemployment, commodity prices, exchange rates and globalisation for a panel of 22 OECD countries).

Figure 3: Demographic factors probably dragged OECD inflation down by ½% over the past decade



Source: LGIM estimates

FUTURE OUTLOOK – POPULISM?

Going forward, the outlook for inflation is a bit more ambiguous. Inflation should stay muted in the near term, but further out we see increased risk of populism.

There are currently two demographic trends pushing in opposite directions. Previous reductions in fertility rates have reduced population growth, dragging down inflation. But a wave of retiring babyboomers combined with rising life expectancy is increasing the share of dependents, providing an offsetting boost to inflation.

What could be crucial for the inflation outlook is the political response to the difficulties faced by ageing populations. To simplify, we believe policymakers will progress along the five stages of demographic despondency.

Timeline / triggers:

Disillusion – The pay-as-you-go 'ponzi' pension/health scheme could last a long time if there was an offsetting acceleration in productivity. But it's doubtful this 'magical productivity tree' exists. While a shortage of labour could encourage technological innovation in robotic/software substitutes, rising health and pension costs are squeezing government research and investment budgets. Moreover, health and social care is a relatively labour intensive, low productivity sector.

Renege – Policymakers could admit the numbers don't add up and renege on previous promises to elderly voters. However, Theresa May's ultra-fast U-turn on the 'Dementia tax' for social care shows this is hard to do. The Tory-DUP alliance also agreed to maintain the 'triple lock' of linking pensions to wages, prices and 2½% and failed to 'means test' benefits such as the 'winter fuel' allowance.

Squeeze – This has been the UK's strategy over the past decade. It has kept its promises to the elderly but has squeezed everybody else. It has imposed pay restraint in the public sector, increased tuition fees, curtailed non-pension benefits and rationed the health service in a vain attempt to hit government borrowing targets. But with demographic pressures getting worse every year, this is akin to pushing a boulder up a hill. As soon as you stop tightening fiscal policy, the deficit will deteriorate again, taking you back to square one.

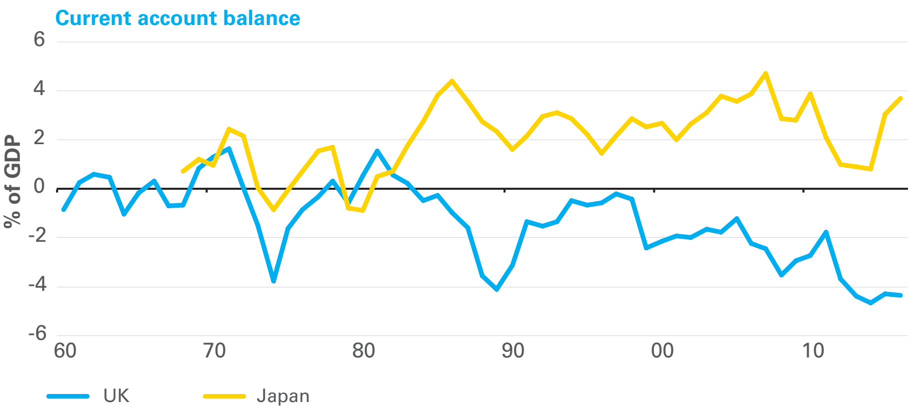
Populism – Eventually, the electorate is likely to grow tired of non-pensioner austerity and vote for change. This can be seen by the surge in support for Jeremy Corbyn at the last election. A populist politician will vote to maintain benefits for pensioners (e.g. Labour not wanting to increase the retirement age further) while also reversing austerity for the rest (cancelling tuition fees). This implies stronger growth and inflation pressures. The danger is that increased government borrowing and lower unemployment pushes up interest rates, but the central bank could be 'leant on' to keep borrowing costs down ('people's QE').

Debasement – As well as higher domestically generated inflation from populism, there is a risk of imported inflation. Foreigners might refuse to buy domestic assets if government borrowing was on a steeply rising path and risk premiums were suppressed by an accommodative central bank. Commodity producers might also demand higher prices (commodities are akin to a currency as they are a store of value and tradable). This would boost inflation.

COUNTRY OUTLOOKS

Despite a shrinking population, Japan has managed to stall its progress along the five stages, remaining in benign low inflation rather than shifting to populism or debasement. Japan still manages to export more than it imports, and when combined with net income flows from its overseas assets, it is running an external (current account) surplus of over 3½% of GDP. So its large government deficit is funded by private-sector savings. While there is a risk that Japanese savers move their money elsewhere, Japanese culture is particularly insular. Until this changes, populism and debasement can be postponed.

Figure 4: The UK is running a large external deficit, the complete opposite of Japan



Source: Macrobond, OECD economic outlook

The UK appears more vulnerable. As shown in figure 4, the UK is importing more than it exports, with a current account deficit of around 4% of GDP. The UK is therefore funded by foreign investors who could prove fickle. The pound might need to fall until the UK's private sector can run a sufficient trade surplus to pay for the welfare state, pushing up imported inflation. A political shift towards populism could exacerbate this trend.

The US also runs a current account deficit and has a deteriorating demographic profile. While there has been a political shift to populism, the US still benefits from the dollar being the world's reserve currency. For now, this reduces the chances of a significant currency debasement and associated imported inflation.

Like Japan, the euro area and China have large current account surpluses. However, the euro area suffers from significant imbalances within the currency union without the unconditional fiscal transfers of nation states. This explains why populism remains a significant trend and why the region might be most at risk of political revolt if politicians are unable to implement the populist policies its electorate demands.

CONCLUSION

OECD inflation has probably fallen by ½% over the past decade due to slowing population. While this effect should continue to depress inflation, it could be offset by a move towards populism as an increasing share of 'dependent' retirees boost budget deficits. The UK is particularly at risk from imported inflation given its weak external financial position.

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