

COMMENTARY: THE BURDEN OF THE NATIONAL DEBT

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Introduction

Most discussion of the Government's fiscal position seems to focus on the immediate risks associated with a rising national debt. There is concern that the UK's credit rating will be reduced and fear that this might lead to a further fall of the exchange rate. It is sometimes suggested that if the budget deficit is not reduced sharply in the reasonably near term there will be a significant risk that the UK might default on its debt.

We view these concerns as somewhat exaggerated. Long-term interest rates, which would be expected to reflect possible funding difficulties, are unusually low. Earlier work showed (Barrell and Holland, 2009) that the interest rate faced by governments in the Euro Area does indeed depend on the size of their outstanding national debt but that the effect is weak. As we and others have noted, if the national debt (public sector net debt) follows our projections, it will rise to 93 per cent of GDP by 2015; this is well below the levels that some other countries manage at present and also below the levels experienced by this country for much of the past two centuries. This does not, however, imply that there are no implications of rising debt levels or that these can be ignored; here we focus on the effects of rising and eventually high debt levels making the reasonable assumptions i) that debt levels have few implications for the cost of finance and ii) that for practical purposes there is no risk of a government default.

The cost of the national debt

It is impossible to have a clear view of the burden imposed by the national debt without having some means of assessing its cost. We can see two possible ways of doing this.

The first method looks at the increase in taxation needed to pay the interest on the national debt, on the basis of the interest rates actually paid. On this basis, and while interest rates are expected to remain at current levels, it is difficult to argue that there is any cost at all. If the

growth rate of the economy is g and the real interest rate on the national debt is $rgov$, then, to stabilise the ratio of debt, D , to GDP, Y , at any desired level, the rate of growth of the national debt must match the rate of growth of GDP. This means that the sustainable budget deficit, as a proportion of GDP, is given by the growth rate multiplied by the ratio of debt to GDP, gD/Y . The debt incurs interest payments, which, as a proportion of GDP, are given as $rgovD/Y$. Thus if $rgov > g$ the sustainable deficit is lower than the interest burden and, in that case, for any given level of government revenue, the higher is the ratio of debt to GDP, the lower is the amount available for spending on things other than debt service. But if $rgov < g$ then the higher the ratio of debt to GDP, the higher is the sustainable budget deficit even after the requirements of debt service have been met.

In the current circumstances, the real rate of interest on long-term government debt is below 1 per cent per annum, while the long-run growth rate of GDP can reasonably be assumed to be around 2 per cent per annum. Thus, seen from this perspective, in the current circumstances there is no cost to the national debt and therefore no reason to be concerned about the current budget deficit.

There are, of course, two weaknesses to this argument. First of all, if the deficit were allowed to continue or to rise further, it is perfectly possible that interest rates on government debt would also rise. As argued above, the effect is likely to be weak; in any case, if rising debt levels do lead to appreciably higher interest rates, the appropriate policy would certainly be to let debt rise so as to push the interest rate up to the point at which $rgov = g$. Secondly, the low level of interest rates may not last for other reasons, so that the Government may need eventually to refinance its debt in a situation in which $rgov > g$.

However, the key point is that neither of these arguments provides any basis for suggesting that the budget deficit

needs urgent attention, They are both concerns about what *could* happen rather than near certainties and need to be balanced against the costs of restricting the budget while the economy is still depressed. As noted above, the structure of the yield curve on indexed government debt does not suggest that markets regard the prospect of sharp rises in real interest rates on government debt as likely. In any case, this second point could be addressed, at least in part by the Government locking in future funding at today's rates through innovative use of financial instruments.

A variant of these arguments is that, unless the Government restricts the budget deficit, there is a risk that rating agencies will down-grade the country's debt rating. It is not clear why markets should pay much attention to such a move. Historically, since the country has managed levels of debt much higher than those in prospect, it is hard to see why the market for UK debt should be affected by rating agencies' views on default.

Quite a different view of the cost of the national debt emerges, however, if one looks at the equilibrium of the economy as a whole. In an economy in which people save for retirement – probably the main motor of saving in advanced countries – savings can be invested in one of three ways. First they can be invested in produced capital either at home or abroad. Secondly, they can be invested in national debt and thirdly, they can be invested in land. An increase in the amount of produced capital held by the country increases its future income while an increase in the amount invested in national debt or an investment which simply drives up the value of land does not. To the extent that a large supply of national debt displaces, or crowds out, investment in produced capital, the future income of the country is reduced as the national debt rises. If high government borrowing reduces national saving, then the social cost of the debt can be measured not by the interest rate on that national debt but with reference to the rate of return on produced capital. National Institute calculations put the return on productive capital at 4–4½ per cent per annum, well above the real rate of growth of the economy. With this 'shadow cost' of government debt it is clear that, while a budget deficit may support current consumption and current output, there is a long-term cost associated with it. Only those currently alive enjoy the benefits of the deficit while future generations are left to handle the long-term costs.

If, then, a case can be made that the national debt crowds out the nation's holding of produced capital, then

the social cost of the national debt is identified by its impact on the nation's stock of productive capital. Obviously one should not expect clear-cut conclusions on crowding out; it can be investigated in one of two ways. The most obvious, and direct route might be to examine the relationship between produced national wealth and the national debt. However, no one would claim that the national debt is the only source of variation in national wealth and a better impression would be gained by examining the relationship between the change in national wealth (i.e. national saving) and the change in the national debt which is a consequence of the financing of current expenditure rather than capital accumulation.

Barrell and Weale (2009) compare the share of national saving as a proportion of GDP with the budget current deficit (which equals government current dis-saving). They pool the data and, after removing country fixed effects, find that a £1 increase in the government current deficit reduces national saving by just over 50p.

The alternative way of examining this issue is to look at household consumption as a function of holdings of different types of wealth, such as housing, government debt and other financial wealth. Such studies tend to suggest a picture broadly consistent with the idea that a 1 per cent of GDP current account deficit displaces ½ per cent of GDP of national saving and that therefore the rise in the national debt associated with the current crisis, which we put at about 60 per cent of GDP, will depress the nation's stock of income-producing assets by about 30 per cent of GDP.

In essence, by running up the national debt, the country has transferred consumption from the future to the present, in much the same way as an individual who lives off capital reduces their future scope for spending. One might puzzle how paper transactions can have an influence of this type on the 'real' economy. The answer is that, although the presence of national debt does not depress output in the short term, it reduces the need for people to accrue productive capital and this has long-term implications.

Other means of burdening the future

It is worth mentioning two other phenomena which have a similar effect of benefiting predominantly people who are currently old at the expense of people who are predominantly young and those who are not yet born. The first is a pay-as-you-go benefit system. This also

reduces the need for people to accrue income-producing assets to fund their retirements and thus has to be expected to depress the economy's holding of productive capital. It results, in effect, in a transfer from future generations to the first generation to enjoy them. These people receive the benefits of pay-as-you-go pensions when old without the cost of financing anyone else's pensions when young.

This aspect of pay-as-you-go pensions has of course been enhanced by rising life expectancy at age 65. As figure 1 shows, women who are 65 in 2009 can expect to receive such benefits for five years longer while men can expect to receive them for seven years longer than was the case in 1981. Thus today's 65-year olds impose a much higher bill on younger generations than they had to meet while of working age.

The second mechanism for generating a transfer is the effect of a rise in land prices, at least on the assumption that people rely in part on their holdings of housing wealth as a means of financing retirement. An increase in land prices, which most people notice as an increase in house prices (with eventually a parallel rise in rental rates), reduces the amount that those who do not own land have to spend on goods and services other than housing use. But since the total productive potential of the economy is not reduced, all that happens is that

consumption is redistributed towards those who currently own land. Since housing/land ownership is much more common among old and older people than among young people, a land price rise also has the effect of generating a powerful intergenerational transfer. Barrell and Weale (2009) show that the effect is very similar to national debt and pay-as-you-go pensions. The discounted value of the consumption that people who do not own land and future generations have to give up matches the increase in the consumption of the (old) people who happen to own land at the time that its price rises.

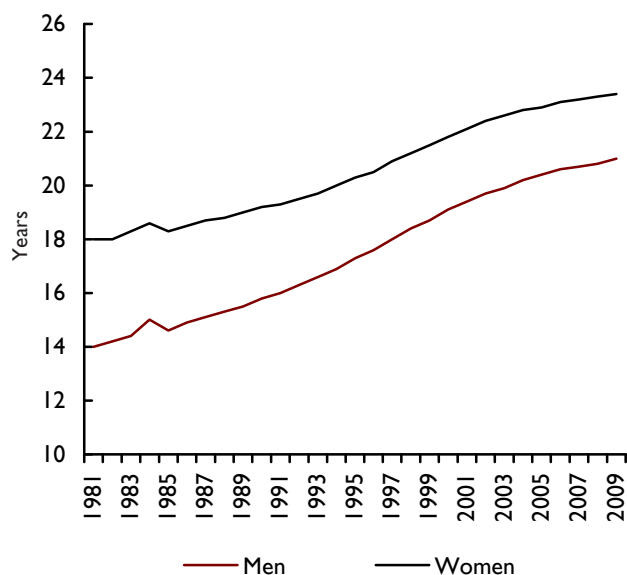
The importance of these points is that, to the extent that policymakers are concerned about the burden of government borrowing and, as we have argued, this is of much greater concern than the idea that the Government might find the debt unmanageable, they should be concerned about any economic circumstances, whether the direct result of government policy or not, which transfer resources from future generations to the present. In particular, those who hope to see the economy supported by a buoyant consumption on the back of a recovery to house prices and believe that this is somehow preferable to the economy being supported by budget deficits are living a dangerous and remarkable delusion.

Should we burden the future?

An argument might be made on crude redistributive grounds that we should burden the future. We might treat future generations in much the same way as we treat rich people of our current generation as suitable targets for taxation. Of course transfers between rich and poor contemporaries are limited in part by the objections that the rich make to such transfers. People not yet born are not in the same position to draw attention to the politics of envy.

An alternative way of examining this is to try to imagine an intergenerational consensus about how resources ought to be transferred between generations. The difference between this and crude redistribution is that, if there is an intergenerational consensus, each generation will regard the way it is treated as fair while, without any basis for such a consensus, it is quite likely that the future generations who are compelled to support current consumption will regard their treatment as unfair and may well decide to impose additional burdens on their own descendants. A consensus can be visualised by imagining a social planner who makes

Figure 1. Life expectancy at age 65



Source: Government Actuary Tables of Cohort Life Expectancy.

decisions about transfers between generations. Such a planner would almost certainly discount the welfare of future generations relative to the present one. But some sort of view would also be needed on how far it is reasonable to expect a reduction in the welfare of one generation to balance against the increase in welfare of another. Unless the degree of inter-generational substitutability is quite high, and greater than the extent to which we believe individuals are prepared to let high consumption in one year compensate for low consumption in another year, no case can be made for transferring resources from the future to the present.

One can decide how far it is reasonable to burden the future by trying to put ourselves in the position of others. Do today's old and older people expect that today's young people resent the burden of high house prices even though they know that their parents enjoyed a comfortable retirement as a result? Or that they mind financing the costs of the welfare state, knowing that the need for it arises because their parents did not choose to save adequately for their own retirement? Only in the event that these questions can be answered negatively can a case can be made for burdening the future.

A twenty-year binge: the profligate generation

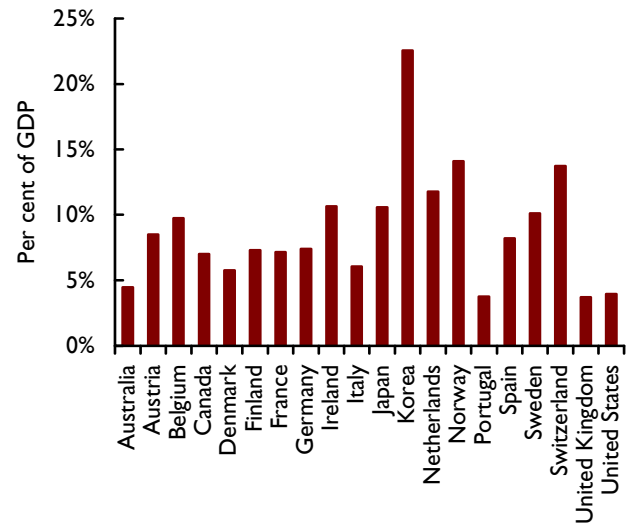
The fact that a high national debt is a burden on future generations would not be a major concern if the country had a strong history of past saving. One might then take the view that, rather than imposing an unreasonable burden on the future, a response to the crisis involving extra public borrowing was simply drawing down past savings.

In fact, as figures 2 and 3 illustrate, the United Kingdom has a very poor saving history. Figure 2 shows that, measuring saving as a proportion of GDP, the United Kingdom has been the lowest saving of all the advanced countries over the past twenty years.

Figure 3 shows the long-run history of the ratio of produced capital to GDP. The recent data are taken from the national balance sheet. Historical data are more limited and are computed from cumulated saving data, provided by Sefton and Weale (1995), and the estimates of national wealth for 1920 provided by Feinstein (1972).

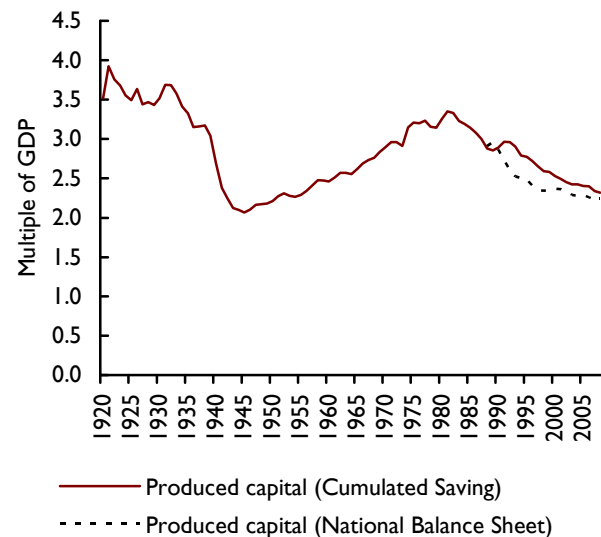
We can see that produced capital declined sharply during the Second World War; many of the war's costs

Figure 2. Net national saving as a proportion of GDP: average 1987–2007



Source: OECD Database.

Figure 3. Long-run history of the ratio of produced capital to GDP



Source: Feinstein (1972) and Sefton and Weale (1995).

were paid for by running down wealth. The nation's wealth was rebuilt in the thirty years after the end of the war. But since then we have seen produced capital relative to GDP decline by about one year's GDP, as the credit boom drove up house prices and made

consumption 'easier'. A natural consequence of low saving is that people are now poorer than they would have been had they saved more and, as the widespread concern about pensions demonstrates, this unexpected poverty is concentrated among people close to retirement who, in the past, chose not to save up properly for their retirement.

Implications

Looking ahead, national saving is likely to fall well below the average of the past twenty years for the next two or three years. This is a consequence of the Government's fiscal measures to support the economy and has to be seen as a necessary evil. In a recession very low saving has the effect of raising output and is therefore desirable despite its costs. But beyond that there is the question whether policy should be structured so that the costs of the crisis are spread across future generations or whether they are in large part borne by the current generation. The fact that the economy had a low level of wealth at the time of the crisis, and that this was a consequence of past low saving, suggests that the economy should aim to move rapidly to deliver much higher saving once the crisis is over. It is hard to imagine future generations, or indeed those starting on adult life today, believing that they should carry a substantial part of the cost of a crisis which struck us at a time when wealth was very low as a consequence of not having saved in the past.

On pp. 58–60 of this *Review* we discuss policies which reduce government borrowing by 2 per cent of GDP and so tend to increase national saving by about 1 per cent of GDP. A 5 per cent fiscal tightening will have the effect of raising the share of saving by about 2½ per cent of GDP and is associated with an exchange rate fall of about 10 per cent of GDP.

Since the Summer of 2008 the exchange rate has in fact fallen by 20 per cent. A part of this may be because people have anticipated the fiscal tightening which is necessary. But the figures above suggest that that can account for only about half of the fall. Our model suggests that the remaining fall of 10 per cent is likely to result in a further increase in national saving of around 1½ per cent of GDP. Thus the overall response to the crisis may well be to raise the UK's net saving rate by around 4 per cent of GDP. This will bring it to a level similar to the recent historical experience of neighbours such as France and Germany and may suggest that, in contrast to the past twenty years, the British economy post crisis stands a chance of positioning itself on a sustainable path. Of course a sharp recovery of the exchange rate would put this sustainability at risk.

Finally we note that the need for savings can of course be reduced by extending working lives and curtailing retirement. The effects of this, discussed on pp. 58–60 of this *Review*, suggest it is likely to have an important role in addressing Britain's past profligacy.

REFERENCES

- Barrell, R. and Holland, D. (2009), 'Debt, deficits and borrowing costs', *National Institute Economic Review*, 208, pp. 39–43.
- Barrell, R. and Weale, M.R. (2009), 'Fiscal policy, fairness between generations and national saving', *Oxford Review of Economic Policy* (forthcoming).
- Feinstein, C.H. (1972), *National Income, Expenditure and Output of the United Kingdom 1855–1965*, Volume 6, Studies in the National Income and Expenditure of the United Kingdom, Cambridge, Cambridge University Press.
- Sefton J. and Weale, M.R. (1995), *Reconciliation of National Income and Expenditure: Balanced Estimate of National Income for the United Kingdom: 1920–1990*, Volume 7, Studies in the National Income and Expenditure of the United Kingdom, Cambridge, Cambridge University Press.