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# The tragedy of UK fiscal policy in the aftermath of the financial crisis

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The evolving response of the UK fiscal authorities to the financial crisis and recession are briefly outlined with a focus on the fiscal austerity programme introduced by the incoming Coalition government during 2010. The reasoning for that programme is critically examined and largely dismissed. It is argued that the drive for major cuts in public expenditure comes from seeking to achieve a balanced structural budget and reductions in estimated potential output. The significance of the latter are discussed. The paper is completed by a brief consideration of alternatives.

*Key words*: Fiscal policy, Budget deficits, Financial crisis, UK
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## 1. Introduction

The signs of the global financial crisis emerged in August 2007, gradually developing during 2008 with its full blast apparent in September/October 2008. There were some rescues of financial firms (e.g. Northern Rock in the UK, and Fannie Mae and Freddie Mac in the USA), but any significant fiscal and monetary policy responses to the crisis and developing recession only came into effect in late 2008, especially so after the collapse of Lehman Brothers in September 2008. This paper begins with a brief outline of the fiscal policy responses in the UK and the shifts in those responses with the change of government from Labour to a Conservative–Liberal Democrat coalition in May 2010, with its commitment to fiscal austerity and an emergency budget of June 2010 bringing within-year public expenditure cuts and the announcement of a programme to eliminate the structural budget deficit over five years. After a brief resume of the fiscal policy responses in Section 2, a critique is provided of the rationales given for this fiscal austerity programme and the assumptions on which it is based (Section 3). Section 4 argues that the estimated reduction in potential output has a major impact on the formulation of fiscal policy with little realisation of the significance of the idea that falls in aggregate demand impact adversely on supply potential. Section 5 argues that the aim of a balanced structural budget

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is unlikely to be achieved and that the construction of fiscal policy has to incorporate private sector behaviour. Section 6 offers some concluding comments on approaches to the budget deficit.

## 2. The evolving response

In March 2008 the Treasury argued that 'the economy is stable and resilient, and continuing to grow, and that the Government is meeting its strict fiscal rules for the public finances' (HM Treasury, 2008A, p. 1) and the economy displayed 'much improved resilience—the ability to cope with economic shocks quickly and with low economic costs—which has resulted in an unprecedented period of macroeconomic stability' (HM Treasury, 2008A, p. 2). This complacent attitude changed in the face of the events of September/October 2008, with an emergency budget in the Pre-Budget Report of 24 November 2008 including a temporary reduction in value added tax from 17.5% to 15% (reversed at the end of 2009) and bringing forward £3 billion worth of capital spending. With the onset of recession the estimate of public sector net borrowing (PSBR) for 2008/09 was raised by 2.4% of GDP from 2.9% of GDP (in March 2008 Budget; HM Treasury, 2008A) to 5.3% (in the November 2008 Pre-Budget Report; HM Treasury, 2008B) with discretionary budget changes estimated to account for an increase in the deficit of 0.6% of GDP. The eventual outturn for the PSBR for 2008/09 was 6.7% of GDP. For the year 2009/10, between the March 2008 Budget and the Pre-Budget Report of November 2008, the forecast PSBR rose by 5.5% of GDP to 8.0%, of which 1.1% of GDP was attributed to discretionary changes; the outturn was a PSBR of 11.8% of GDP. These figures indicate the relatively small scale of the discretionary budget changes, which were largely time limited. The major changes in the PSBR came from the operation of the automatic stabilisers. This is significant in that insofar as a budget deficit rises from the operation of automatic stabilisers, then the deficit can be expected to fall back as economic recovery comes and the automatic stabilisers go into reverse. But, as indicated below, the re-estimation of potential output and as a consequence the split of the budget deficit into cyclical component and a structural component has changed with much more of the budget deficit being regarded as structural.

The fiscal rules under the Code for Fiscal Stability, the centre piece of the Labour government's fiscal policy since 1997, were 'temporarily suspended' until 2015/16. In their place the government set 'a temporary operating rule: to set policies to improve the cyclically-adjusted current budget each year, once the economy emerges from the downturn, so it reaches balance and debt is falling as a proportion of GDP once the global shocks have worked their way through the economy in full' (HM Treasury, 2008B, p. 13). The terms 'cyclically adjusted' and 'structural' referring to budget position are here used interchangeably. The Fiscal Responsibility Act 2010 laid on the Treasury the responsibility to 'ensure that, for each of the financial years ending in 2011 to 2016, public sector net borrowing expressed as a percentage of gross domestic product is less than it was for the preceding financial year . . . [and] that, for the financial year ending in 2014, public sector net borrowing expressed as a percentage of gross domestic product is no more than half of what it was for the financial year ending in 2010' (Fiscal Responsibility Act, 2010, chapter 3, section 1). This can be used as a summary of the objectives of the Labour government with regard to budget deficit reduction. The Budget of March 2010, with some adjustments to previous plans, set out proposals to reduce the structural budget deficit over a five-year horizon. The 2009/10 cyclically adjusted current budget deficit of

4.8% of GDP and corresponding public sector borrowing requirement of 8.4% of GDP were scheduled to fall to 1.8% and 3.1% of GDP, respectively, in 2013/14 and then 1.3% and 2.5%, respectively, in 2014/15. Thus there were plans for fiscal tightening of 3.6% of GDP on the current budget and a reduction of public investment by the equivalent of 2.4% of GDP.

Following the general election of May 2010, a Coalition government of Conservative and Liberal Democrat parties replaced the Labour government. There has been much dispute between the incoming Coalition government and the outgoing Labour government over the causes of the budget deficit and the degree to which their budget deficit proposals and reductions in public expenditure differed. There is some brief indication below on the differences. Here it is relevant to note that the incoming Coalition government placed deficit reduction as central and played much more on doomsday scenarios of the reactions of credit rating agencies and financial markets if actual and planned deficit reduction measures were not introduced. The Coalition agreement between the Conservatives and Liberal Democrats 'recognise[d] that deficit reduction, and continuing to ensure economic recovery, is the most urgent issue facing Britain'. It committed to 'significantly accelerate the reduction of the structural deficit over the course of a Parliament, with the main burden of deficit reduction borne by reduced spending rather than increased taxes' with a plan for deficit reduction to be set out in an emergency budget that followed in June 2010 (Cabinet Office, 2010, p. 15).

## 3. The spurious justifications of the Coalition programme

The emergency budget of June 2010, following the change of government the previous month, put in place public expenditure and taxation plans, which are summarised in Table 1. By comparison with the March 2010 budget, by 2014/15 the structural current budget was to be tightened by 1.6% of GDP, and 1.9% of GDP in terms of PSBR. The discretionary reductions in public expenditure under the Coalition government are intended to be around 60% greater by 2014/15 as compared with the Labour government's intentions (an additional reduction of £32 billion as compared with £52 billion) and discretionary tax increases around 40% (an additional £8.2 billion as compared with £21 billion). A feature of the budget deficit proposals is the share of public expenditure in the deficit reduction amounting to 80% by 2014/15 in the additional measures announced in the emergency budget. The Treasury claimed that 'this approach is consistent with OECD and IMF research, which suggests that fiscal consolidation efforts that largely rely on spending restraint promote growth. Tax measures can be an effective tool for reducing the deficit quickly, allowing for phased reductions in public spending. The Government's consolidation plans therefore involve a rising contribution from public spending over the forecast period' (HM Treasury, 2011, p. 15). As I have argued (Sawyer, 2011B, pp. 18–19), this claim is based on limited evidence and the empirical work to support this proposition (e.g. *Economic Outlook* no. 81, OECD, June 2007, as cited by HM Treasury 2011) is based on the flawed methodology that identifies episodes of fiscal consolidation in terms of successful reductions in the cyclically adjusted budget position rather than by policy announcements of public expenditure reductions and tax rate rises designed to reduce the budget deficit. In contrast, the International Monetary Fund (IMF, 2010) adopted the approach of identifying fiscal consolidation by declared intent rather than by outcome, and conclude from their empirical work that 'Fiscal consolidation typically has a contractionary effect on output. A fiscal consolidation equal to 1 percent of

GDP typically reduces GDP by about 0.5 percent within two years and raises the unemployment rate by about 0.3 percentage point. Domestic demand—consumption and investment—falls by about 1 percent.' (IMF, 2010, p. 94)

The justifications for the austerity programme that were announced in June 2010 are now critically, if rather briefly, examined.

The argument against the need for fiscal policy and budget deficits essentially rests on a proposition that the private sector is self-adjusting to full employment and through appeals to Say's law that demand will come into balance with supply, and that through appeals to some form of Ricardian equivalence theorem with fully rational agents, public expenditure would only displace private expenditure leaving the overall level of demand unchanged. Appeal to the latter argument is difficult to sustain in view of its assumptions on 'rational expectations', absence of credit rationing, etc., but also in the face of recession when private expenditure has fallen so significantly, whereas the 'Ricardian equivalence' argument suggests the sum of private and public expenditure varies little. Although there has been little, if any, direct appeal to these arguments, the Coalition government's budget deficit plans rely on a substantial recovery in private demand, which not only offsets the depression of public demand but also is sufficient to carry the economy back by 2015/16 close to a position where the economy is operating near potential output (that is with a zero output gap). The concept and measurement of potential output are questioned below, but here the point is made that the Coalition government is relying on the recovery of private demand. It is not clear how far this recovery of private demand is viewed as a result of the budget deficit plans or is seen to come about fortuitously. But in the forecasts of the Office for Budget Responsibility (OBR) the reductions in the structural budget deficit are accompanied by rises in private expenditure (further discussed below; see OBR, 2011 for examples of forecasts, and Fontana and Sawyer, 2011 questioning the plausibility of the postulated growth in investment and net exports).[1]

The claim that budget deficits burden future generations has often been made: for example, 'public borrowing is, in essence, taxation deferred, and it would be irresponsible and unfair to accumulate substantial debts to fund spending that benefits today's generation at the expense of subsequent generations' (HM Treasury, 2010A, p. 11). This claim is, of course, spurious. The interest payments on government debt are transfers between taxpayers and bond holders within the same generation, representing a burden on taxpayers but an offsetting benefit for the bond holders. The burden on the present generation of a balanced budget in the face of recession would be the foregone consumption and public services that result from a budget deficit. The burden on future generations of a balanced budget in the face of recession would be foregone investment that would yield future benefits, where investment here is widely interpreted to include not only infrastructure but also education and health.

One argument deployed against a budget deficit is that it is unsustainable based on the notion that continuing borrowing leads to ever-rising debt. 'Tackling the deficit will ensure that future generations are not burdened with unsustainable debt and will underpin private sector confidence, supporting growth and job creation over the medium term' (HM Treasury, 2011, p. 34), where there is also reference to the need to shift from 'unsustainable public spending' (HM Treasury, 2011, p. 8). Some basic relationships can be invoked

[1] The OBR was established by the incoming Coalition government with the mandate of providing independent commentary on fiscal policy and its effects. However, the OBR was reliant on the Treasury for its forecasting model.

to show that this can be misleading: a total budget deficit relative to GDP of $d$ would lead to a debt to GDP ratio of $b = d/g$, where $g$ is the nominal growth rate. This would, however, involve a total budget deficit of $d' + rb$, where $d'$ is the primary budget deficit; thus, $d' = (r - g) \cdot b$ and, hence, positive or negative depending on the relationship between $r$ and $g$. The case where the rate of interest and the rate of growth are approximately equal is of particular relevance. Empirically this appears often to be the case: for example, in a report on the funding of higher education and student loans, a real interest rate on loans of 2.2% was proposed that would be 'equal to the Government's cost of borrowing (inflation plus 2.2%)' (Browne, 2010, p. 35), which would be a little below the trend growth rate of the UK economy. Under that condition the sustainable position would be a primary budget in balance and deficit equal to interest payments, and hence borrowing would cover interest payments.

The argument most often advanced by the Coalition government for a programme of budget deficit reduction set out over a four- to five-year time horizon has been that without such a programme deemed credible by the financial markets, there would be substantially higher interest rates on government borrowing (and often by implication on private borrowing) and substantial difficulties in government borrowing. The argument has often been expressed in terms of the responses of credit rating agencies and fears of downgrading of a government's credit rating and consequent higher interest rates. This has been reinforced by fingerpointing at countries whose credit rating has been reduced (e.g. Greece during 2010 and 2011).[2] The Chancellor of the Exchequer has argued that 'Last year our budget deficit was the largest it has ever been in our peacetime history. This year it is set to be among the largest the world ... This is the legacy of thirteen years of fiscal irresponsibility. And it poses a very real threat to the recovery. Those who argue that action can be safely delayed for another eleven months would put our economy at risk for the sake of short term political advantage ... Greece is a reminder of what happens when governments lack the willingness to act decisively and quickly, and when problems are swept under the carpet. The result is sharp increases in interest rates, worsening recession, growing unemployment ... if we fail to tackle the deficit we inherited from the previous government, the consequences could be disastrous' (Osborne, 2010).

The 'fear of credit rating agencies' argument is a convenient scare tactic and needs to be critically examined. It may first be noted that the credit rating of a government should be based on the ability of that government to service its debt. It is well known that a government can always service its debt provided that it is denominated in its own currency. At the limit the UK government can 'print the money' in order to service the debt: this would not take form of literally 'printing money' but rather the Central Bank

[2] During the weekend of 8/9 May 2010 there were emergency talks in Brussels to provide support for the Greek government. The UK election had been held on the preceding Thursday (6 May) and talks and negotiations were underway during that weekend between the political parties, which led to the formation of the Coalition government on Tuesday 11 May. During the election campaign, Vince Cable, subsequently Business Minister, had argued that 'The Greek position is much more serious but is a salutary warning that unless the next government gets seriously to grips with the deficit problems, as we're determined to do, we could have a serious problem.' Lord Mandelson, the then Business Secretary, rightly said, 'comparing Britain's fiscal and economic position to that of Greece was "frankly ridiculous"', http://www.telegraph.co.uk/finance/financialcrisis/7644204/Britain-risks-Greek-style-crisis-warns-Vince-Cable.html.

being a willing purchaser of government debt in exchange for money. This was a feature that clearly distinguished the situation of the UK government from that of the Greek government (and indeed other members of the eurozone), where the latter does not issue its own currency.

Second, the credibility of a programme designed to reduce a structural budget deficit cannot be judged only by the perceived commitment of the government to make public expenditure cuts and raise taxes. The elimination of the structural budget deficit would entail that for an economy operating at potential output not only did government expenditure equal tax revenue, but also that savings plus imports equal investment plus exports. Below it is questioned whether it is credible that this latter condition would hold in terms of intentions at potential output. Thus, the credibility of deficit reduction programme does not just depend on the strength of commitment of the government to public expenditure cuts and tax rises, but also on the responses of the private sector.

Third, the reputation and judgement of the credit rating agencies had been severely undermined by their roles in the build-up to the financial crisis. An oft-quoted example has been the degree to which triple A ratings were given to mortgage-backed securities and credit default swaps. This would not deny that in the event of the credit rating agencies downgrading government debt the government concerned could well be faced with higher interest charges and difficulties in borrowing, as funds are moved from that government's debt to others. But what is questioned is the basis on which the ratings are made and what actions by a government would lead to a downgrade.

The implications of the argument that a government's borrowing is limited by the actions by (e.g. credit rationing) or beliefs about (e.g. fear of reaction of credit rating agencies) financial markets can be briefly considered. Whatever the cause, any failure to have a budget deficit that is less than that necessary to secure a high level of economic activity will involve a relatively low level of economic activity and high level of unemployment: if the effective limit on government borrowing is $A < A^{\star}$, where $A^{\star}$ is the level necessary to secure a level of output $Y^{\star}$, then $A = (S - I) + (M - X)$, and the level of economic activity $Y$ would be less than $Y^{\star}$. The argument could be deployed that the announcement by government of a lower budget deficit would, through effects on confidence, expectations, etc., stimulate 'animal spirits' and thereby investment and consumer expenditure sufficiently to restore a high level of economic activity. But such an expansion of expenditure still requires financing and funding. It should also be noted that a consequence of a budget deficit of $A$ is that the volume of savings will be smaller than would occur with a budget deficit of $A^{\star}$. It is in the collective interests of savers that in these circumstances the government runs a budget deficit of $A^{\star}$ to enable them to save.

What would be suitable policy responses to any threat of downgraded credit ratings (of government borrowing) insofar as that would lead to severely high rates of interest and in effect credit rationing on government borrowing? One response would be to place requirements on financial institutions such as pension funds and life assurance companies to place some minimum proportion of their asset portfolio into government stock. Another response is to ensure that the central bank stands ready to act as lender of last resort and always willing to, directly or indirectly, provide money for government expenditure. These would be measures to be deployed in crisis situations when the alternative to the maintenance of government expenditure and the associated borrowing would be severe recession.

The thrust of the argument here is that there has been a failure to provide sound justifications for the fiscal austerity programme.

## 4. Potential output

It is notable, but little noticed in public discussion, that the estimates of UK potential output have been substantially reduced since 2007, and particularly those used by HM Treasury. This reduction in estimated potential output becomes significant given the attention paid to the 'cyclically adjusted budget deficit' (CABD) as a target for fiscal policy, since the relationship between actual output and potential output ('output gap') is used to adjust budget data to calculate the CABD. This reduction in the estimated potential output has in effect become a driving force behind the public expenditure reductions programme. A severe recession leads to a substantial increase in the budget deficit as tax revenues fall sharply and the automatic stabilisers soften the blow. This increase in the budget deficit would then be reversed when the economy recovers from recession and output is restored to its trend level. The role of fiscal policy in that scenario would be the application of discretionary measures to support the operation of the automatic stabilisers and then to reverse the discretionary measures as the economy recovered. The only sense in which a programme of public expenditure reductions would be required would be to reverse discretionary increases made in response to the recession; for example, public investment programmes implemented to support demand and employment would not be repeated. Thus much of the case for reductions in public expenditure comes from the view that a large part of the budget deficit is structural rather than cyclical in nature, which in turn crucially rests on acceptance of the estimates of reduction in potential output.

In the 2008/09 recession the reduction in estimated potential output made by HM Treasury has turned a cyclical budget deficit into a structural budget deficit. This can be clearly illustrated from the Pre-Budget Report 2008 (of November 2008), where the estimate of potential output was reduced by 4% as compared with the estimate given in the Budget 2008 (of March 2008). The reduction took the form of a drop in the level of potential output over the period 2007Q3 to 2009Q3 (i.e. the estimate was provided before the time period to which it related was complete). The estimate was provided with very little indication of how the re-estimation had been undertaken, without regard to the issues of estimating potential output and with no allowance for the uncertainties attached to such estimates.

The budget deficit forecast for 2008/09 increased between the two reports (as indicated above), and virtually all of the increase was ascribed to a deterioration in the structural deficit even though there had not been changes made to the long-term public expenditure plans and tax rates. The structural deficit deteriorated simply because estimated potential output had been reduced. Indeed, despite the onset of recession, the output gap forecast for 2008/09 barely changed between March and November, even though the forecast for output was reduced by 2%. The scale of these effects can be seen from the Pre-Budget Report 2008 and the figures given in Table 2.

Subsequently, there have been a number of estimates of declines in potential output (whether of its level and/or its rate of growth) and a range of estimates is summarised in Table 3. Martin (2011, Table 8) provides a similar summary and an extensive critique of the estimation methods used. The output gaps reported in Table 2, and particularly the final entry of an output gap of −3.7% for the financial year 2010/11, can be compared with that calculated from one that 'extrapolates trend out from the end of 2007 at a growth rate close to the post-war average of $2\frac{1}{2}$ % a year', which yields an estimated output gap for 2010 of −10.2% (Martin, 2011, p. 12 and Table 3).

The significance of the reductions in the estimates of potential output, particularly those made by HM Treasury, arises in eight ways.

First, there has been little recognition of the implications of such a decline in potential output. The effects of recession and financial crisis on potential output should be seen as a major example of path dependency and the long-lasting effects of the path of aggregate demand on the development of supply potential. The mainstream approach to macroeconomic analysis and macroeconomic policy has been firmly based on ideas of 'natural rates' (of unemployment, interest rate and growth) in which the use of the term 'natural' is 'to try to separate the real forces from monetary forces' (Friedman, 1968, following Wicksell, 1898). The supply side of the economy is almost universally modelled in the mainstream literature as unaffected by the demand side, and that whereas demand may influence the level of economic activity in the short run the long run is ruled by the supply side.[3]

Second, the estimated fall in potential output can be interpreted to suggest that the costs of financial crisis in terms of lost present and future output are substantial. The full set of calculations would have to take account of the possibility that the build-up to the financial crisis stimulated output and investment, and that there may be some future recovery of potential output. Andrew Haldane, Executive Director, Financial Stability, Bank of England provides some illustrative figures for the present value of global output losses and for the UK based on 'assuming different fractions of the 2009 loss are permanent—100%, 50% and 25%. It also assumes, somewhat arbitrarily, that future GDP is discounted at a rate of 5% per year and that trend GDP growth is 3%. Present value losses are shown as a fraction of output in 2009' (Haldane, 2010). On that basis his Table 1 'shows, these losses are multiples of the static costs, lying anywhere between one and five times annual GDP. Put in money terms, that is an output loss equivalent to between $60 trillion and $200 trillion for the world economy and between £1.8 trillion and £7.4 trillion for the UK' (Haldane, 2010, pp. 3–4).[4]

Third, the lowering of the estimates of potential output leads directly to changes in the measured output gap. This has two related effects: (i) the economy appears closer to its potential and operating with less spare capacity; and (ii) the estimates of the CABD are thereby raised. This is politically convenient for the Coalition government in providing the appearance that the previous Labour government had been operating with a much larger structural deficit and enables charges of fiscal irresponsibility to be levied (as indicated in the quote above from Osborne, 2010). But it should rather be seen that the structural deficit (as calculated) is also to be ascribed to the financial crisis through the effects of the crisis on potential output.

Fourth, there is the impact on fiscal policy through to 2015 with the target of near-balanced CABD. If estimated potential output had not diminished by the order of 6%,[5] then even with growth of demand as portrayed by OBR there would still be an output gap of *circa* 6% in 2015 and the CABD would be of the order of 4%–5% of GDP rather than near balance.

[3] For further discussion on path dependency see Sawyer (2011c), and Arestis and Sawyer (2009).

[4] Furceri and Mourougane (2009) estimate the impact of financial crises on potential output on an unbalanced panel of OECD countries over the period 1960–2007. In their results 'financial crises are estimated to lower potential output by around 1.5 to 2.4% on average. The magnitude of the effect increases with the severity of the crisis. The occurrence of a deep crisis is found to decrease potential output by nearly 4%, almost twice the amount observed for the average of crises' (abstract, p. 2).

[5] The figure of 6% is a combination of the estimates made by HM Treasury (2008B), subsequently revised and then amended by the OBR in June 2010.

**Table 1.** *Summary of 2010 emergency budget, June 2010*

| | 2008/09 | 2009/10 | 2010/11 | 2011/12 | 2012/13 | 2013/14 | 2014/15 | 2015/16 |
|---|---|---|---|---|---|---|---|---|
| Public sector net borrowing (% of GDP) | 6.7 | 11.0 | 10.1 | 7.5 | 5.5 | 3.5 | 2.1 | 1.1 |
| Surplus on current budget (% of GDP) | −3.5 | −7.5 | −7.5 | −5.7 | −4 | −2.3 | −0.9 | 0 |
| Cyclically adjusted net borrowing (% of GDP) | 6.3 | 8.7 | 7.4 | 5 | 3.4 | 1.8 | 0.8 | 0.3 |
| Cyclically adjusted surplus on current budget (% of GDP) | −3.1 | −5.3 | −4.8 | −3.2 | −1.9 | −0.7 | 0.3 | 0.8 |

| | £ billions | 2010/11 | 2011/12 | 2012/13 | 2013/14 | 2014/15 | 2015/16 |
|---|---|---|---|---|---|---|---|
| | Discretionary policy decisions in emergency budget of June 2010 | | | | | | |
| 1 | Total tax revenue increases | 2.8 | 6.3 | 7.0 | 8.5 | 8.2 | |
| 2 | Planned reduction in current public expenditure | 3.5 | 6.8 | 15.2 | 21.7 | 29.8 | |
| 3 | Planned reduction in capital expenditure | 1.8 | 2.0 | 2.1 | 2.1 | 2.2 | |
| 4 | Total planned reduction in public expenditure (equals row 2 + row 3) | 5.2 | 8.9 | 17.3 | 23.8 | 31.9 | |
| 5 | Of which changes to welfare | 0.4 | 2.0 | 4.7 | 8.2 | 11.0 | |
| 6 | Total effect of policy changes on budget deficit (equals row 4 − row 1) | 8.1 | 15.1 | 24.3 | 32.4 | 40.2 | |
| 7 | Spending share of fiscal consolidation (%) (equals row 4 as percentage of row 6) | 65 | 59 | 71 | 74 | 80 | |
| 8 | Policies inherited from previous government | | | | | | |
| 9 | Increases in tax revenues | 0.8 | 11 | 17 | 18 | 21 | |
| 10 | Reductions in public expenditure | 0.0 | 14 | 25 | 39 | 52 | |
| 11 | Total discretionary fiscal consolidation in budgets of March and June 2010 | | | | | | |
| 12 | Increases in tax revenues (equals row 1 + row 9) | 3.6 | 18 | 24 | 27 | 29 | 29 |
| 13 | Reductions in public expenditure (equals row 4 + row 10) | 5.2 | 23 | 42 | 63 | 83 | 99 |

*Source*: Derived from HM Treasury, 2010B, Tables 1, 1.1.

**Table 2.** *Cyclically adjusted net borrowing (% of GDP) for stated years (top panel) and output gap (% of GDP) for stated years (bottom panel)*

| Figures given in: | 2007/08 | 2008/09 | 2009/10 | 2010/11 |
|---|---|---|---|---|
| Budget 2008 | 2.7 | 2.7 | 2.2 | 1.8 |
| Pre-Budget Report 2008 | 2.9 | 5.3 | 7.2 | 5.6 |
| Budget 2009 | 2.7 | 5.7 | 9.8 | 8.9 |
| Budget March 2010 | | 5.8 | 8.4 | 7.3 |
| Budget June 2010 | | 6.3 | 8.7 | 7.4 |
| Figures given in: | 2007/08 | 2008/09 | 2009/10 | 2010/11 |
| Budget 2008 | 0.3 | −0.5 | −0.4 | −0.3 |
| Pre-Budget Report 2008 | 0.6 | −0.3 | −1.5 | −1.9 |
| Budget 2009 | 0.6 | −1.3 | −4.8 | −4 |
| Budget March 2010 | | −2 | −6.1 | −5.2 |
| Budget June 2010 | | −1 | −4.1 | −3.7 |

*Source*: Derived from HM Treasury, 2008A, 2008B, 2010A, 2010B.

**Table 3.** *Estimates of falls in potential output following the financial crisis*

| Source | Estimates |
|---|---|
| HM Treasury | Pre-Budget Report 2008 and Budget 2009 retained the previous estimates of trend growth rates. The former postulated a 'level effect' of potential output amounting to a decrease of 4% over the period 2007Q3–2009Q3. The latter had a corresponding figure of 5% over the period 2007Q3–2010Q3. |
| OECD | The financial crisis and the ensuing recession have reduced potential output, but uncertainty about the permanent impact remains significant. The overall effect on the UK is estimated by the OECD to be slightly larger than for the average OECD country (Figure 1.4, panel 2). (OECD, 2011, p. 25): the Figure indicates an output gap of the order of 3.5%. |
| National Institute for Economic and Social Research | 'That the long-run effect of the crisis on sustainable output was around 3 to 5 per cent, with the rise in risk premia that has resulted from the crisis inducing a 3 per cent fall in sustainable GDP' (Barrell, 2009). |
| Dicks, 2010 | 'We estimate that potential output will be 9% of GDP (£132 billion in today's money) lower than it would have been in the absence of the crisis.' |

The adjustments to potential output made by HM Treasury and now the OBR have been given a precise numerical figure and policy (in terms of the implied output gap and structural budget deficit) based on that precise numerical estimate. But the estimates of changes in potential output must be subject to considerable uncertainty, with consequent uncertainty over the size of the output gap, etc. (and the differences in the estimates indicated in Table 3). It would not seem sensible to base policy so firmly on those estimates

without any consideration of the uncertainty surrounding them. It is paradoxical that uncertainty (in terms of fan charts) is considered in the forecasts of demand but not in the forecasts of supply potential (and indeed in the estimates of current and recent past supply potential).

Fifth, the rationales behind the reduction in the estimates of potential output (sometimes its level, sometimes its growth rate) have varied between different authors and have included hysteresis effects on unemployment, higher cost of capital, lower levels of investment through lower demand or higher cost of capital, and lower immigration. Some of these are more clearly related to the financial crisis (higher cost of capital), whilst others relate more generally to recession and low demand. As Martin (2011) suggests, a number of the suggested causes of a decline in potential output relate to changes that occurred around 2007–09, which may have effects in the future but which do not provide an explanation for the sharp drop in the estimates of potential output in the 2007–09 period. A prime example of this is an increase in investment financing costs:

> It is argued that financiers will take a view of lending risks more realistic than was the case in the pre-crisis period, and charge accordingly. As businesses reduce capital employed, the National Institute suggests that output per hour in the UK might fall permanently by around 3%. This impact would not be instantaneous. Nevertheless, it has been asserted that the adjustment may be taking place 'relatively quickly' thanks to the collapse in capital spending. It is improbable, however, that this mechanism has yet had any significant effect. (Martin, 2011, p. 35)[6]

Sixth, although this is in no way spelt out, it would seem reasonable to assume that the decline in potential output relates to the private sector and not to the public sector. With public sector output of the order of 20% of GDP, this would imply that the decline in private sector potential output would be of the order of 7.5% (corresponding to a 6% decline in overall potential output). The current policy response then appears to be to reduce the demand for public services and that itself involves reducing the supply potential of the public sector—through the closure of facilities, etc. There has been some loss of productive capacity in the private sector, and the policy response is to lose productive capacity in the public sector! Hence, compounding the losses of productive capacity.

Seventh, it is highly relevant to not only work on the basis of well-founded estimates of the fall (if any) in potential output, but also on the basis of a good understanding of the causes of any such fall in potential output. The argument here is that the appropriate policy responses to a fall in potential output and associated increase in the estimated structural budget deficit are not the knee-jerk reaction of cutting public expenditure, but rather to focus on policy approaches that take fully into account the causes of the decline in potential output. Two simple examples are given here.

Label potential output of the private sector as $Y_p = aL_p$, where $a$ is the output labour ratio and $L_p$ private sector employment, corresponding for the public sector $Y_g = bL_g$. For a given tax rate the structural budget deficit (corresponding to potential output) would be $w_gL_g\ (1 - t) - t_{w}pL_p + T$, where $T$ is government transfers, and $w_g$ and $w_p$ are wage rates in the public sector and private sector, respectively. A reduction in potential output in the private sector would raise the structural budget deficit. From the supply perspective there could be a range of responses, and in order to consider those we have to make some postulates on the causes of the fall in potential output. Two are considered: (i) where labour productivity has diminished in the private sector (e.g. due to lower capital stock); and (ii) where the employment level is constrained to be lower through hysteresis effects

[6] Martin cites the paper of Barrell and Kirby (2011) for the work of the National Institute in this regard.

reducing the effective supply of labour or a rise in the non-accelerating inflation rate of unemployment.

Under scenario (i) there is a decline in $a$ and a corresponding decline in $wp$ is assumed; thus, tax revenue would decline and budget deficit increase. There would be little point in seeking to cut government (potential) output as that would merely cut further the potential output of economy. A public sector wage policy that maintained a constant ratio between public sector wages and private sector wages (despite the decline in private sector productivity) would leave the structural budget deficit unchanged relative to the level of wages. The ratio of public sector to private sector potential employment would remain unchanged; the output of the public sector would rise relative to that of the private sector, though how much of that would be evident in the statistics would depend on the way in which public sector output is measured.

Under scenario (ii), one policy response would be to accept that the employment and thereby potential output have declined, and adopt an 'equal pain' approach and scale down the size of the economy by reducing the potential (and actual) output of the public sector as well as the private sector. A rather different policy response would be to seek to address and reverse the causes for the decline in constrained employment. If there had been an increase in the non-accelerating inflation rate of unemployment (NAIRU), which reflected hysteresis effects coming from a low level of economic activity, the appropriate policy response would be to seek to reverse those hysteresis effects. Thus, if it were argued that periods of high unemployment lead to deskilling, loss of attachment to work force, then the appropriate response would be a high level of demand, targeted job creation and training programmes to reverse those effects. In a similar vein, insofar as a higher NAIRU comes from a lower capital stock and capacity, a programme of investment stimulation would be appropriate.

This simple discussion should not be taken to underestimate the difficulties of determining the causes of decline in potential output or of deriving appropriate policy responses. It is rather to point to the significance of the reduction in the estimates of potential output from the fiscal austerity programme and to argue that fiscal austerity is not the appropriate way to address any decline in potential output.

Lastly, we may ask what is meant by potential output and should it be treated as a constraint on the average level of economic activity?[7] The term 'potential output' may suggest some maximum output or at least output at some notion of desirable full capacity in terms of the cost conditions (e.g. full capacity corresponding to minimum average costs). But in the macroeconomics literature, potential output is generally taken to be the level of output consistent with a constant rate of inflation. This may be directly from a Phillips' curve of the form price inflation $p = pe + a(y - y^{\star})$, where $pe$ is expected inflation, $y$ is (log of) output and $y^{\star}$ (log of) potential output (and, hence, $y = y^{\star}$ would yield actual and expected inflation equal). Alternatively, the relationship between potential output and inflation can be more indirect in that potential output is derived from a production function based on the capital stock and employment, where the employment rate is consistent with a NAIRU (e.g. Dicks, 2010) or a non-accelerating wage rate of unemployment (e.g. OECD, 2011). The acceptance of this concept of potential output relies on acceptance of the underlying and simplistic approach to inflation. Further, it is

[7] See Sawyer (2011B) for further discussion.

relevant that the inflation rate moved within a narrow range during the decade or more from the mid 1990s to the mid 2000s and variations in the rate of inflation bore little relationship to variations in output (or employment). The acceptance of potential output as a form of inflation barrier is to accept that the barrier cannot be shifted to more socially desirable levels of output and employment. For the OECD area as a whole, the fall in potential output is ascribed to 'reductions in capital endowment as firms have adjusted to the end of cheap financing and increases in long-duration unemployment resulting in hysteresis-type effects leading to higher structural unemployment' (OECD, 2011, p. 228). In a more general setting (following along the lines of Arestis and Sawyer, 2005), the promotion of investment and increasing the capital stock is required to help shift any inflation barrier.

The first conclusion to be drawn from this brief discussion is that estimates of the decline in potential output should be treated with caution and at a minimum due allowance made for the uncertainty over the estimates. Second, a decline in private potential output should not be used as an excuse to engender a decline in public sector output. Third, the causes of any decline in potential output should be identified and appropriate remedial policies adopted, rather than in effect adjusting actual output to the lower potential output.

## 5. Fiscal policy alternatives

There have long been two essentially conflicting views on fiscal policy and budget deficits. One of these has taken the form of setting numerical rules for the budget position (e.g. balanced budget each year, balanced current budget over the cycle). At some level such an approach has to assert that market forces and/or the setting of the interest rate at the 'natural rate' will generate equality between savings and investment intentions at full employment (or equivalent phrase). The other view, that of 'functional finance' (Lerner, 1943; Kalecki, 1944), views the budget deficit as a tool in securing high levels of economic activity and full employment, where there is no presumption that savings and investment intentions will be in balance at a high level of economic activity. It is then clear from this perspective that there should, in general, be an unbalanced budget, usually but not necessarily in deficit, and this has been reflected in most governments running budget deficits most of the time (reflected in the levels of government debts).

The approach taken here is along the lines of 'functional finance' with a focus on what structural budget position would be required in order to secure a high level of economic activity and full employment. The question can be posed as to what would the budget deficit look like if savings, investment (and net exports) were at some 'normal' level (in effect the level that would be generated when/if the economy were operating at the 'desired' level of output)? Thus, with regard to investment, for example, we would seek to know what level of investment would be forthcoming if 'animal spirits' were at some 'normal' level $A$ and the level of output at some 'desired level' labelled $Y^{\star}$. The resulting budget deficit would be:

$$BD(Y^{\star}) = s(Y^{\star}) - i(Y^{\star}, A) - NX^{\star} \tag{1}$$

where s is savings function and i investment function, $A$ is 'average' animal spirits and $NX^{\star}$ some 'normal' level of net exports (and ignore variations in savings behaviour for simplicity).

The estimation of a budget deficit in accordance with equation (1) would, of course, be fraught with difficulties and include the need to specify what is to be regarded as the

'desired' average level of output. However, an alternative approach could be to consider the sustainable savings behaviour of households and corporations with the level of investment (relative to GDP), which would be compatible with the trend growth of the economy and the average capital–output ratio.

The budget deficit in a period where 'animal spirits' are $A'$ would be:

$$G^{\star} - t^{\star}(Y) = s(Y) - i\left(Y, A^{'}\right) - NX \tag{2}$$

where t is tax revenue function.

Hence the cyclical component of the budget deficit is:

$$t^{\star}(Y) - t^{\star}(Y^{\star}) = s(Y) - s(Y^{\star}) - i\left(Y, A^{'}\right) + i(Y^{\star}, A) - NX + NX^{\star} \tag{3}$$

There is a basic inconsistency in the estimates of the structural budget deficit, which can be seen by reference to equation (1). Consider two separate years T1 and T2, which differ in their estimates of the structural budget deficit, and the differences between the years are ascribed to changes in public expenditure and tax rates. But for consistency it would have to be assumed that there were some corresponding changes to savings, investment and/or net exports. Yet the concept of savings, etc. on the right-hand side is the level that would be forthcoming at $Y^{\star}$ with a 'normal' level of animal spirits. But there is no reason why behaviour should have changed in that way (unless there is some appeal to a form of Ricardian equivalence).

The policy approach as signified in equation (1) raises a major question about the fiscal policy approach of the current UK government, namely, is there any reason to think that equation (4) holds, where $a$ is a small budget deficit (basically equal to level of net public investment)?

$$a = s(Y^{\star}) - i\left(Y^{\star}, A^{'}\right) - NX^{\star} \tag{4}$$

If such an equation (or some equivalent) does not hold, then seeking to attain a small structural budget deficit will be infeasible, as private sector behaviour is not compatible with a small budget deficit.

We illustrate the idea that a substantial structural budget deficit may well be required in order to underpin actual output in line with potential output. The data in Table 4 are designed to be illustrative and certainly not definitive. Comparison between the first line (relating to the average for 2001–08) and the second line (2009/10) reveals the dramatic

**Table 4.** *Alternative scenarios for budget deficits and sectoral balances*

| | Budget deficit | Private savings | Private investment | Current account |
|---|---|---|---|---|
| Average 2001–08 | 2.00 | 15.4 | 15.6 | −2.22 |
| 2009/10 | 11.00 | 19.72 | 10.75 | −2.03 |
| 2015/16 | | | | |
| OBR | 1.55 | 17.03 | 16.15 | −0.66 |
| Alternative scenario 1 | 4.2 | 17.0 | 15.0 | −2.2 |
| Alternative scenario 2 | 7.0 | 18.0 | 14.0 | −3.0 |

*Source*: Calculated from National Income Blue Book, OBR, 2011.

*Note*: Calculations relate to ratio of variables to GDP in percentage form based on nominal figures as given in OBR.

shifts that occurred during the 'great recession' and its impact on the budget position. The third line relates to the forecasts of the OBR for 2015/16, by which time the current structural budget deficit is intended to be in balance, with the overall budget deficit equal to public net investment. It can be seen that this represents a fall in savings propensity, a sharp rise in investment and an improvement in the current account position (which is based on historically high growth of exports) as compared with 2009/10. Much of those types of changes could be expected as an economy emerges from recession, though perhaps not on this scale.

The forecasts contained in Budget 2011 were for a public sector borrowing requirement equivalent to 1.5% of GDP in 2015/16 and with an output gap of 1.3% a cyclically adjusted net borrowing equivalent to 0.5% cent of GDP. On those figures the government would have achieved its objective of a cyclically adjusted current budget surplus (at 0.8% of GDP) with the actual current budget virtually in balance. The structural position of a deficit of 0.5% would then require some combination of a lower savings ratio and higher investment and net exports, to the combined extent of 1% of GDP. The forecasts of the OBR for 2015/16 are then close to an average over the cycle position (on the basis that a zero output gap would be the average over a cycle). As compared with the average for 2001–08, the structural position would represent a tightening of the fiscal position by around 1.5% of GDP. Now consider the implications for the structural budget position of a couple of alternative scenarios with respect to savings, investment and current account position.

In alternative scenario 1 the current account position is taken to be as it averaged in the years 2001–08, private investment to be slightly lower than the average for that period and savings to be in line with the OBR forecasts. Lower investment (relative to GDP) could arise from a decline in the rate of growth of potential output (OBR forecasts)—using a capital–output of four, a decline from 2.75% to 2.25% would reduce (net) investment by two percentage points of GDP. It could be anticipated that credit and loans may remain more constrained than during the pre-crisis years and investment thereby constrained. The figures used generate a (structural) budget deficit of 4.2%. In alternative scenario 2 the current account is taken to worsen somewhat at 3% of GDP, investment at 14% of GDP and savings at 18% (which represents a near two percentage points of GDP decline relative to 2009/10), leading to a (structural) budget deficit of 7% of GDP.

These alternative scenarios illustrate the sensitivity of the structural budget deficit (and hence that required to secure actual output equal to potential output) to relative small changes in the current account, savings and investments. The implications for public expenditure are also of interest. Under alternative scenario 1, a budget deficit higher by 2.55% (as compared with the OBR 'base case') could imply public expenditure on goods and services higher by over 10% as compared with current government intentions (assuming unchanged tax rates and transfer payments). Under alternative scenario 2, the corresponding figures for budget deficit would be 5.45% of GDP and over 20% higher public expenditure on goods and services.

The crucial argument here starts from the idea that a structural balanced budget may not be compatible with private sector behaviour, for example, that for a zero output gap to be achieved private savings exceed private investment (with due allowance for the current account position). It is further argued that a substantial budget deficit may be required in order to achieve a high level of economic activity. The implication of that line of argument is that the present public expenditure reduction programme is unlikely to achieve its objective and that alternatives are required involving higher (than presently planned) levels of public expenditure.

The basic idea of 'functional finance' is that the need for budget deficits arises as a means of securing high levels of economic activity in the face of private sector imbalances. The approach to fiscal policy could in effect start by asking whether the conditions (in the private sector) can be established such that budget deficits would not be required to secure high levels of economic activity. It can be readily seen from the above that this would entail (as compared with a situation of significant budget deficits) some combination of lower savings, higher investment and higher net exports. These changes are unlikely to occur without policy interventions and specific policy measures would be required to bring changes. Sawyer (2011A, 2011B) elaborates on these arguments, which are briefly summarised here. The stimulation of net exports, whether through exchange rate changes, improvements in competitiveness may work for one country but clearly cannot be a universal solution. A revival of investment, particularly when focused on public and green investments, would be a substantial aid to reducing the budget deficit. Finally, significant shifts in inequality (in a progressive direction) arising from changes in the tax structure, provision of social benefits and in the wage structure (e.g. introduction of 'living wage') could significantly impact on consumption and savings decisions.

## 6. Concluding comments

A range of justifications for fiscal austerity have been examined and dismissed. In terms of the fiscal calculations, there appear to be three propositions underlying the fiscal stance that has been adopted. These are:

(i) That potential output has fallen relative to previous trends and that potential output is a barrier against sustainable higher levels of output.

(ii) That although recession has damaged potential output, high levels of demand would not help restore potential output.

(iii) That there will be a dramatic revival of investment and net exports, and that this raises investment and exports on a sustainable basis to higher levels than experienced in recent years.

In contrast, it has been argued that the estimates of potential output are subject to considerable uncertainty, which should be reflected in policy formulation, and that as now estimated production at the level of potential output would involve substantial unemployment. But more significantly it is doubtful that potential output (as measured) forms a barrier against higher levels of output. Further, it has been argued that a long-term budget deficit is probably required in order to secure even the present measures of potential output, and that the inability to recognise that threatens to lead to a prolonged period of inadequate output and significant levels of unemployment.

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