THE MACROECONOMIC RECORD OF THE COALITION GOVERNMENT

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This paper examines the outcomes for changes introduced by the UK Coalition government in 2010. The Office for Budget Responsibility (OBR) is generally regarded as a success, and should become a permanent part of fiscal policymaking. The form of the primary fiscal mandate, involving a five-year rolling target, appears to be a sensible way to shape fiscal decisions when monetary policy is able to stabilise the economy. Unfortunately it was introduced, along with a five-year programme of severe fiscal consolidation (austerity), while the economy was in a liquidity trap. The OBR estimates austerity reduced GDP growth by 1 per cent in both 2010–11 and 2011–12, and monetary policy was unable to offset this. For the Liberal Democrats a misreading of the Eurozone crisis may have been responsible for this mistake, but for the Conservatives this mistake appears to derive from an unconventional view that the liquidity trap is unimportant.

Keywords: UK Coalition government; fiscal; monetary; liquidity trap; zero lower bound; fiscal council; fiscal rules

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1. Introduction

The simple, but potentially misleading, way to evaluate the macroeconomic record of any government is to look at outcomes. On this basis, as I discuss in section 3.3, the record of this government looks pretty bad. It gained power at the turning point of a deep depression. The experience of the previous few decades would suggest that this turning point would be followed by a robust recovery, with above trend GDP growth. The actual outcome has been much more disappointing. GDP per head appears to have moved further away from the pre-crisis trend, rather than moving back towards it.

The problem with that evaluation approach is that it overstates the role of the government in influencing macroeconomic outcomes. The poor performance of the UK economy since 2010 could reflect the influence of the global economy, the lingering effects of a financial crisis, or other factors beyond the government's control.

This paper takes a different approach. We begin, in section 2, by outlining the key innovations and changes that the Coalition brought to the conduct of macroeconomic policy. Then, in section 3, we discuss the extent to which those innovations evolved, and only then do we discuss how these interventions influenced macroeconomic outcomes. In other words, we try and focus on the impact of changes in government policy on macroeconomic outcomes.

The Coalition brought in three main changes to the conduct of macroeconomic policy in 2010, all of which involved fiscal policy. The first, outlined in section 2.1, established an independent body to undertake fiscal forecasts (the Office for Budget Responsibility, OBR). This can be judged a success for a variety of reasons (section 3.1) including the fact that discussion now involves extending its remit. The second (section 2.2) involved the *form* of the primary fiscal mandate introduced to replace the previous government's fiscal rules. I argue that the structure of this rule represented an improvement over the previous administration's rules, as long as monetary policy was capable of successfully controlling demand and inflation. Unfortunately it was introduced while monetary policy was constrained because nominal interest rates were at their lower bound.

The third major change introduced by the Coalition government, and by far the most controversial, was greater fiscal austerity (section 2.3). Fiscal contraction is estimated by the OBR to have reduced GDP growth by 1 per cent in both 2010–11 and 2011–12, and section 3.3 suggests that there are good reasons for thinking this is a conservative estimate. The main issue is whether the impact of this tighter fiscal policy might have been offset by a looser monetary policy, which is discussed in section 3.4. Section 3.5 briefly considers two

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innovations brought in midway through the Coalition's period of office, which involved encouraging lending and subsidising borrowing. Section 4 draws some overall conclusions about the impact of the Coalition's macroeconomic policy, and the rationale behind it.

2. The macroeconomic policy framework

When the 2010 Coalition government took power it introduced macroeconomic changes mainly in the area of fiscal policy. They can be split into three: the establishment of the OBR, the *form* of the fiscal rules which the OBR was tasked with monitoring, and the particular targets that were fed into those fiscal rules.

2.1 The Office for Budget Responsibility

George Osborne first proposed establishing a 'fiscal council' or 'independent fiscal institution' for the UK in 2008. At the time a few countries had similar bodies, but both the IMF and OECD were strongly encouraging their formation elsewhere. What these fiscal councils did varied significantly (Calmfors and Wren-Lewis, 2011): for example in Sweden it had a wide ranging role to act as a kind of macroeconomic watchdog, with no forecasting responsibility. In contrast the OBR had a very specific remit, to provide the fiscal forecasts on which budget decisions would be based. It was not allowed to examine the implications of alternative fiscal policies.

It is tempting to draw parallels between the establishment of the OBR and granting independence to the Bank of England that took place at the start of Labour's period of office. (The limits to such comparisons are discussed in Wren-Lewis, 2013a.) In both cases responsibility for a key aspect of macroeconomic analysis was devolved away from government. Academic economists saw independent central banks as a way of reducing what they call 'inflation bias'. While there was far less academic analysis of fiscal councils (for an early proposal for the UK, see Wren-Lewis, 1996), what there was saw these councils as a means of countering 'deficit bias': the tendency for government debt to rise over time (Calmfors and Wren-Lewis, 2011). However, while deficit bias had been clear among OECD countries as a whole in the 30 years before the 2008 recession (where debt to GDP almost doubled), this problem appears less acute for the UK. By the late 1970s UK government debt to GDP had fallen from very high levels following WWII to less than 50 per cent, and since then the pattern has been largely cyclical, with if anything a downward trend until the financial crisis. A counter argument might be that this reduction was partly achieved through relatively high inflation, which might have been lower in the absence of deficit bias.

One reason why the UK might have been less subject to deficit bias than other countries is the strong role of the UK Treasury within government. Nevertheless, the Conservative opposition argued, with some justification (Wren-Lewis, 2013b), that the fiscal forecasts of the then Labour government had been overoptimistic since the early 2000s, and that an independent institution would be less prone to fiscal over-optimism. (Frankel and Schreger, 2013, have recently discussed the problem of overoptimistic fiscal forecasts by governments.) This helps explain why the OBR's task was quite specific and limited to the production of fiscal forecasts. In effect, what the new Coalition government did was contract out the macroeconomic forecast on which budget decisions would be based. This raised two interesting questions. First, was it possible to contract out this task while much of the specific forecasting expertise remained within government, and yet for the OBR to remain independent. Second, was it right to prevent the OBR examining the impact of alternative fiscal policies to those of the current government? Both questions are discussed in section 3.1.

2.2 The form of the fiscal rules

The primary fiscal mandate adopted by the Coalition government was to achieve a cyclically adjusted current deficit (the overall deficit less government investment) of zero within the next five years. We discuss the zero number below, focusing here on the form of this fiscal rule. It replaced the formulation adopted by the previous government, where one of the rules (before the recession) was to achieve current balance over the course of an economic cycle.

Both the new and old rules attempted to correct for the influence of the economic cycle on the deficit. One of the drawbacks of the Labour government's method of correcting for the cycle is that it made the rule backward looking, so that favourable shocks during the early part of the cycle could be used to justify a lax policy later on in the cycle. As George Osborne put it in his June 2010 Budget speech: "Past prudence was an excuse for future irresponsibility." (The extent of this problem in practice, and the danger that the dating of the cycle might become political, is discussed in Wren-Lewis, 2013b.) Cyclical correction avoids this, but is arguably less transparent.

Ironically, in the case of the Coalition's main mandate it is not obvious why any cyclical correction is required. This is because a forecast normally assumes that in five years time the monetary authorities will have closed any existing output gap, in which case the expected cyclically adjusted and actual deficits will be the same. The only exception might be if monetary policy is unable to close

the output gap because interest rates are at their lower bound but, for reasons that will become clear, it seems unlikely that the Coalition was trying to anticipate this problem.

A feature shared with one of Labour's rules was to focus on the current balance, rather than the overall deficit, the difference being public investment. This leaves public investment potentially uncontrolled. In the case of Labour's policy this meant adding a second rule, which in their case placed a limit on the overall debt to GDP ratio. For perhaps the same reasons, the Coalition supplemented their main mandate with a second rule, which was that debt should be falling as a share of national income in 2015–16. Having a target that debt to GDP should be falling in just one particular year seems odd because it is open to manipulation through the timing of discretionary expenditure.

An important contrast between the primary and supplementary targets related to the time period over which the target had to be achieved. The primary mandate involved a 'rolling' target: in 2010 the target was to achieve a particular balance by 2015, but in 2012 the target would be shifted to 2017. In contrast, the supplementary target was for a specific date. This distinction proved important in practice. As the rationale for a rolling target seems counterintuitive, it is worth elaborating on it here.

Having a deficit target to be achieved within the next five years, where that five-year period remains as time moves on (a rolling target) might seem too easy. There is never a date by which we can unambiguously say that the target has been achieved or not. It would seem much better to have a target for a fixed date, as with the Coalition's supplementary target. The problem with this logic comes when we approach the target date, and some unexpected shock occurs. Rather than adjusting to that shock gradually over the next five years, as a rolling target will allow, a fixed date target can either require adjustment to be very rapid, or for the rule to be ignored. The former breaks an important principle of good fiscal policy, which is that the deficit should be a shock absorber, not a rigid target. (This principle is explained in Portes and Wren-Lewis, 2014.)

Rolling targets are familiar from monetary policy. This attempts to achieve the inflation target within the next two years or so. The reason often given for this is that it takes some time for changes in interest rates to have their *full* influence on prices, but this is only part of the story. Interest rates have some fairly immediate impact on prices, so it would in principle be possible to try and meet an inflation target within a shorter time horizon. This is not attempted because it would lead to damaging variability in interest rates and output. The rolling target for inflation adopted by many central banks does not stop central banks being accountable for their actions, but it does prevent damaging volatility.

The same logic applies to fiscal policy. It is true that rolling targets do give the fiscal authority the possibility to cheat. If the government has in the past always cheated and there is no institutional arrangement to stop this happening, then fixed date targets may be an unfortunate necessity. However, in the past, UK governments have proved to be quite capable of taking the actions required to meet fiscal rules: what has typically derailed them has been unexpected shocks like recessions. In addition, with the OBR we have an effective fiscal council which in this respect acts as a watchdog. As a result, Portes and Wren-Lewis (2014) suggest that the Coalition's main mandate involving a 5-year rolling target is a good way of managing fiscal policy in normal times.[1] Unfortunately 2010 was not a normal time in one key respect.

2.3 Austerity

The Conservative party had criticised the Labour government for using fiscal policy to support the economy in 2008 and 2009. At the time their argument appeared to be running against the international consensus, which was that fiscal stimulus was required to assist monetary policy in mitigating the impact of the financial crisis and recession. As George Osborne said in a speech given at the RSA in April 2009:

> *"The crisis has also exposed two fundamental arguments. The first is whether, when you are already borrowing too much, you should deliberately try and borrow your way out of debt. David Cameron and I have consistently argued against this irresponsible course of action. To begin with we were almost alone in making this argument, but we held our nerve and stuck to our principles. And now informed opinion has turned in our direction …."*

Consistent with this view, they fought the election arguing that Labour's plans for bringing the deficit down were too slow. Although the Liberal Democrats had in the 2010 election presented fiscal plans which appeared closer to Labour than the Conservatives, as part of the Coalition agreement they endorsed George Osborne's policy. In his budget of June 2010, George Osborne announced a number of measures that would help achieve their target of eliminating the current deficit by 2015. In particular

spending was to be cut by an additional £32 billion by 2015, and the VAT rate was to be increased from 17.5 per cent to 20 per cent at the beginning of 2011. The burden of reducing the deficit was planned to fall mainly (80 per cent) on cuts to spending, with the remainder (20 per cent) accounted for by higher taxes. (In the event a larger percentage of the actual reduction in the deficit has been achieved through spending cuts.)

What lay behind the view that additional austerity was required in 2010? If the government's budget deficit is viewed as analogous to that of an individual, the answer is obvious. The deficit was very large, so the ratio of debt to GDP was rising rapidly, which suggested that the sooner this was brought under control the better. However the government is not like an individual, for reasons that have been understood by macroeconomists since Keynes. This was why governments, supported by the IMF, had taken measures that increased their deficits in 2009 in an effort to tackle the recession that followed the financial crisis. From a Keynesian perspective, large government deficits were simply the counterpart to a large increase in private sector saving, and the increased government debt was providing the financial assets that the additional private sector saving required.

In 2010 fiscal policy switched from supporting demand in a Keynesian fashion to focus on deficit reduction. This major change in focus was not limited to the UK, and at the global level was motivated by a concern that the emerging Eurozone crisis could spread to other countries. In a recent evaluation (IMF, 2014), the IMF has concluded that this strongly influenced their own switch from advocating fiscal stimulus in 2009 to advocating austerity in 2010. This may also have led the Liberal Democrats to change their position as they became part of the government. However that IMF evaluation also concludes that this switch was a mistake, because the Eurozone debt crisis occurred because individual Eurozone countries could not print their own currency, and the ECB was not prepared (until the OMT programme of September 2012) to act as a sovereign lender of last resort. The key reasons why a debt funding crisis is highly unlikely to occur if the government has borrowed in its own currency issued by its own central bank under a floating exchange regime are described in Krugman (2014).

To be fair, as 2010 evolved that point was not clearly understood (until De Grauwe, 2011, in particular), and the Coalition government certainly used this fear of a Greek-style funding crisis as part of their justification for additional austerity. For example, in his June 2010 Budget speech, Osborne said: "Questions that were asked about the liquidity and solvency of banking systems are now being asked of the liquidity and solvency of some of the governments that stand behind those banks. I do not want those questions ever to be asked of this country."

Another possible reason for advocating additional fiscal austerity in a recession might be a belief that this would in itself encourage sufficient private sector demand that it would become expansionary. Such a view goes against basic macroeconomic models and teaching, but it did briefly become popular following empirical work by Alesina and Ardagna (2009), before other studies emerged that were more consistent with standard theory. How important a belief in 'expansionary austerity' was in motivating Coalition policy is unclear. In a *Financial Times* article[2] with Jeffrey Sachs, George Osborne did write: "There are many well-studied examples of 'negative fiscal multipliers', in which credible fiscal retrenchments in fact stimulated the economy, via greater consumer and investor outlays, by reducing borrowing costs and spurring confidence." However, a more typical line taken by the Coalition was to sidestep the question of what impact austerity might have on output, rather than trying to argue that it would directly assist recovery by expanding demand.

George Osborne and David Cameron did argue against Labour's fiscal expansion in 2008/9, which was well before the Eurozone debt crisis. In a speech delivered to the RSA in April 2009, George Osborne gave a short account of some history of macroeconomic thought, which included the following section:

> *"[New Keynesian] Models of this kind underpin our whole macroeconomic policy framework – in particular the idea that by using monetary policy to manage demand and control inflation you can keep unemployment low and stable. And they underpinned the argument David Cameron and I advanced last autumn – that monetary policy should bear the strain of stimulating demand –an argument echoed by the Governor of the Bank of England last month when he said that "monetary policy should bear the brunt of dealing with the ups and downs of the economy". We now appear to be winning that argument hands down."*

The idea here is that although austerity in itself would reduce demand (as is typically the case for cuts in government consumption or investment in New Keynesian models), active monetary policy in the context of an inflation target would move to fully offset that impact. As George Osborne put it in a speech in September 2009:

> *"Monetary activism to keep interest rates low and stimulate the economy. Fiscal responsibility to restore confidence and rebuild our battered public finances."*

I have argued elsewhere (Kirsanova *et al*., 2009) that this view did indeed reflect the academic consensus that emerged during the period before the financial crisis. Monetary policy should be assigned the task of stabilising demand and inflation, and fiscal policy should focus on achieving targets for government deficits or debts. However, that view was predicated on analysis that assumed that monetary policy was unconstrained, and in particular that nominal interest rates were free to move in either direction. At about the time that George Osborne gave the speeches quoted above, UK interest rates were reduced to what has become their lower bound of 0.5 per cent.

When interest rates hit their Zero Lower Bound (ZLB), many had argued (following Keynes) that monetary policy needed to be supported by an expansionary fiscal policy. This was the advice that the IMF had given during the worst of the recession. An alternative that a number of macroeconomists had also explored as a result of Japan hitting the ZLB in the 1990s was to move monetary policy away from unchanging inflation targets (Krugman, 1998; Eggertsson and Woodford, 2003). A third possibility was that the Quantitative Easing (QE) policy already adopted could completely substitute for the inability to reduce nominal rates below zero. By enacting a more severe fiscal contraction, and keeping the inflation target unchanged, the government was effectively taking this third position. I shall argue in section 3.3 that this was a major mistake.

3. Macroeconomic outcomes

I will consider outcomes in the same order as innovations, thereby saving the most important (what happened to the economy and the role of monetary and fiscal policy in influencing this) to last.

3.1 The Office for Budget Responsibility

There is now a political consensus that the OBR was a successful innovation. Around the world a growing number of similar organisations have recently been established. This consensus is, quite rightly, not based on the accuracy of the OBR's forecasts. Forecasting success in any particular year is largely down to luck, so any sound judgement on forecasting ability would require decades of experience (and given institutional change might not be very meaningful as a result). Instead the perceived success of the OBR reflects the potential advantages in contracting out the forecasting process to an independent body. Most recently the shadow Chancellor, Ed Balls, asked for the OBR to review its own fiscal plans for 2015 onwards, which indicates a high degree of cross-party support for the OBR.

A key requirement for this to work is that the OBR is in fact independent. A concern expressed when the OBR was formed was that this would be very difficult, because with a relatively small staff (around 25) the OBR would still rely on parts of the government for some of the detailed fiscal forecasts. The OBR has responded to that concern by being highly transparent in its dealings with government, and in discussing in detail the source of its forecast errors. It is early days, but there is no obvious area where the OBR seems to have been deliberately misled by a government department. Its forecasts have suffered from over-optimism, but it has not been unusual in that respect.

We also have additional evidence of independence. During the first two years of its programme, the government was fond of suggesting that OBR forecasts and analysis supported its policy position. In a general sense this could not be the case, because the OBR was specifically precluded from examining alternative policies. When the Chancellor claimed support he was careful not to make false statements about what the OBR was actually saying. So, for example, he would quote the OBR as reporting that the poor outturn of the economy compared to forecast was not in its view due to fiscal austerity, and leave it to others to miss the key phrase 'compared to forecast'. On the one occasion the Prime Minister in a speech omitted that qualification, OBR head Robert Chote wrote to the Prime Minister pointing out his error (see Wren-Lewis Mainly Macro blogpost (C)). As we shall see, the OBR has documented the extent to which it believes austerity has reduced output. In addition, the OBR has not been shy of drawing attention to the unprecedented extent of the reduction in public spending planned by the Coalition after 2015.

The Treasury under the previous Labour government had greatly increased the transparency of its fiscal projections, including producing for the first time long-term forecasts of the government accounts. The OBR has continued and extended this practice.

One question that was raised earlier, and which remains for the future, is whether the OBR should be allowed to examine alternative aggregate fiscal policies to those chosen by the government. (It does this in its long-term projections, because the government's fiscal policy is not defined that far ahead.) The intellectual case for doing so

seems strong. It is natural for the body doing the forecast also to examine alternative policies, and such analysis would greatly enhance the public debate. It could be argued that by only allowing the OBR to analyse its own plans, a government can help smother alternative views.

The potential political costs to the government in allowing the OBR to examine alternative policies are also clear if the government's policy is not optimal. It could be argued that in its formative years it was better to avoid the controversy that would undoubtedly flow from such analysis, but those years have probably now passed. A similar issue has arisen as a result of Labour's request that the OBR should cost its fiscal proposals, a request which the government has refused. The Netherlands provides one example of an independent institution that, on request, costs the fiscal programmes of all major parties before an election.

3.2 Outturns for fiscal measures

Table 1 shows the OBR's projections in 2010 for the government's current balance, and compares it to the outturn as of December 2014. The original plan was to eliminate the current deficit by 2015, whereas the latest projection involves a current deficit of 2.6 per cent of GDP by then. Since around 2012, deficit reduction has been significantly slower than originally intended. As the table shows, this is equally true if we look at the cyclically adjusted figures.

There has been some debate about whether the slowdown in deficit reduction around 2012 means that 'Plan A' has changed to 'Plan B' – in other words, has there been a deliberate easing off in the pace of austerity? The government argues that because there has been no major change in discretionary fiscal policy, Plan A remains. The slowdown in the pace of fiscal consolidation instead reflects unexpected (in 2010) developments: in particular lower tax receipts not accounted for by cyclical movements. However, it is much more conventional to look at fiscal outturns in judging the intent of policy. In the years before the financial crisis, fiscal outturns were also disappointing relative to forecasts, and the government was (rightly) criticised for not responding quickly enough to those changes.

This is why the form of the government's primary fiscal mandate is so important. If its primary fiscal rule had been to achieve current balance by 2015–16, then policy would have been forced to become more contractionary to meet that target. However, because the target involved a rolling 5-year horizon, the government could afford to slow down the pace of budget consolidation and still remain within its mandate. As any additional fiscal contraction would have reduced output (unless monetary policy could have offset its impact) this flexibility has turned out to be important and useful.

In contrast, the government's secondary target was that debt should be falling as a share of national income in 2015–16. This is now not expected to happen until 2016–17, and so this secondary target has not been met. A possible motivation for the secondary target is that the main mandate excluded public investment. The path of public net investment is shown in table 1. It rose to over 3 per cent of GDP in 2008–9 and 2009–10, but was then cut back to an estimated current level of 1.5 per cent. There is a general consensus that the multiplier (the total impact on GDP) associated with public investment can be particularly high, because of beneficial supply as well as demand side effects.

Table 1. Fiscal aggregates, forecasts and outturns

	Current balance June 2010 Budget	December 2014 Statement	Cyclically adjusted June 2010 Budget	December 2014 Statement	Public net investment December 2014 Statement
2008–9	–3.5	–3.4	–3.1	–3.4	3.2
2009–10	–7.5	–6.9	–5.3	–4.8	3.3
2010–11	–7.5	–5.9	–4.8	–3.9	2.5
2011–12	–5.7	–5.0	–3.2	–3.1	1.9
2012–13	–4.0	–5.0	–1.9	–3.1	2.1
2013–14	–2.3	–4.2	–0.7	–2.6	1.5
2014–15	–0.9	–3.5	0.3	–2.7	1.5
2015–16	0.0	–2.6	0.8	–2.2	1.4

Sources: OBR Economic and Fiscal Outlooks; June 2010 (Table C1) and December 2014 (Table 4.47, page 189). Supplementary data from OBR Public finances databank (Dec 14).

The actual form of the secondary target, which is that the debt to GDP ratio should fall in 2015–16, cannot explain why public investment was cut back so sharply before then. As reduced public investment would have no direct impact on the primary fiscal mandate (which involves the current balance), the reason for this decision – which was clearly harmful in macroeconomic terms – must lie elsewhere.

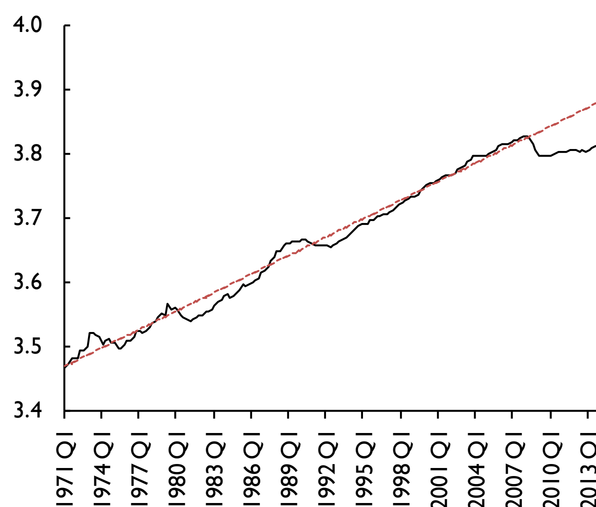
Overall the government's fiscal consolidation was less than planned, and became 'front-loaded'. Arguments that austerity was beneficial because the economy grew substantially in 2013 – while pretty ludicrous on *a priori* grounds – become doubly so if austerity had slowed significantly by then. It would be more accurate to claim that *abandoning* the original pace of fiscal consolidation helped the recovery in 2013. Although the government's rolling target allowed this reduction in the pace of fiscal consolidation, it is interesting to ask why the government chose to allow this to happen. Why didn't the government cut spending further, or raise taxes, in an effort to meet its original deficit reduction plans?

The natural answer is that this further tightening would have damaged a weak economy, but it is difficult for the government to use this argument while also insisting that the policy implemented in 2010–11 did not delay the recovery. The government could argue that by 2012 panic over financing the deficit had passed. Interest rates on government debt, which fell during the recession, never picked up significantly after that date, and by 2012 were lower than during the recession. It did not make this argument. Thus the pause in the pace of austerity remains both denied and unexplained.

3.3 Policy's contribution to economic outturns

Figure 1 plots the log of UK per capita GDP. Per capita rather than total GDP gives a simple measure of average prosperity. The long time period helps illustrate the unprecedented nature of what happened following the financial crisis. The recessions of the early 1980s and the early 1990s were followed by recoveries that eventually made up the ground lost. I have included a trend line that increases at about 0.55 per cent a quarter, and GDP has in the past always caught up with that trend. Not only was the recession caused by the financial crisis much larger, but in the UK there has been no sign of any catch-up back to that trend. In fact the divergence from that trend increased even when output began to rise again, and the recovery since 2013 has done nothing to close the gap. From 2010Q3 to 2014Q3, the average quarterly growth in GDP per capita has been about 0.25 per cent, which is well below the pre-recession trend.

Figure 1. UK GDP per head, chained volume, logged



Source: ONS (IHXW).

Another way of making the same point is to compare the *total* growth in output per capita from 2010 to 2013 of just under 2 per cent to the two previous recoveries from recessions (both under Conservative administrations): in both cases, 1981 to 1984 and 1992 to 1995, growth was over 8 per cent. In short, the performance of the UK economy over the period of the Coalition government has been a disaster.

Is there any way of coming to a different conclusion about UK economic performance since 2010? One possibility is to argue that the underlying trend in output per head began to slow down well before the Great Recession. This is exactly what the cyclical adjustment methods of the OECD and IMF (but not the OBR) assume *ex post*. If that were done aggressively, you could bend the trend line so that growth since 2010 did not look so bad. However a consequence would be to recast 2006/7 as the peak of a very substantial boom. This seems completely inconsistent with other data (as well as assessments at the time), including unemployment and inflation (see Wren-Lewis, Mainly Macro blogpost (B) and Broadbent, 2012). There is a tendency to assume that the pre-recession period must have involved overheating because house prices rose rapidly, but by that token 2014 would also suggest an overheating economy, which is clearly nonsense.

Table 2 compares GDP per capita in the UK with the experience in the US, Japan and the Euro area. Numbers are normalised to be 100 in 2007. The recession had a

Table 2. GDP per capita (2007=100)

	2008	2009	2010	2011	2012	2013
UK	98.9	93.9	95.0	95.7	95.7	96.8
US	98.8	95.2	96.8	97.7	99.2	100.7
Japan	99.0	93.6	98.1	97.4	99.0	100.7
Euro12	99.8	95.1	96.7	97.9	97.0	96.5

Sources: UK – ONS, Euro 12 – Eurostat, US and Japan – FRED.

similar impact in all four areas, but since then there have been important differences. In 2010 and 2011 recovery was slowest in the UK. The US and Japan have continued to recover more rapidly, such that GDP per capita is now above 2007 levels (although of course still below the pre-recession trend). The Euro Area has entered a second recession, such that alongside the UK output per capita in 2013 was well below 2007 levels.

In growth accounting terms, this failure to make up the ground lost in the recession was not due to a failure to reutilise labour – employment has increased rapidly – but a standstill in labour productivity growth. Both monetary and fiscal policy can influence labour productivity in the short term, as firms hold on to labour as demand falls (or are slow to take extra labour on as demand rises), but rapid growth in employment is not normally a sign of a shortfall in demand. However it would be a mistake to conclude that therefore the stagnation in output that occurred before 2013 was a largely a supply side phenomenon, and not influenced by monetary or fiscal policy. What may have happened instead is that firms have substituted labour for capital as a result of the unusual fall in real wages over this period (Pessoa and Van Reenen, 2013).

It is of course nonsense to assume simply that this poor performance was the result of government policy. Experience from other countries in the past suggests recoveries from financial crises can be slow with permanent losses compared to pre-crisis trends (IMF, 2009).[3] The obvious question to ask is whether the austerity programme announced in June 2010 might have contributed to a tepid recovery. The OBR has assessed the impact of fiscal contraction on output, as part of their forecast evaluation report. It suggests that austerity in 2010/11 and 2011/12 reduced GDP growth by about 1 per cent in both years (so the level of GDP was 2 per cent lower in 2011/12 as a result). As we have already noted, fiscal consolidation slowed down substantially after that, so the subsequent contributions to GDP growth are minor by comparison.

There are good reasons to think that these numbers are too conservative. The first issue relates to the size of fiscal multipliers. The OBR uses multipliers that come from historical experience. Jorda and Taylor (2013), among others, find evidence that fiscal multipliers are larger in a depressed economy compared to a strong economy. (See also Bagaria *et al.*, 2012.) They too have calculated the impact of UK austerity, and have larger (and much more long-lived) numbers than the OBR. In addition, there are also good theoretical reasons for thinking that multipliers will also be larger when interest rates are at the ZLB, because monetary policy finds it more difficult to counteract any fiscal impact. The second important factor is announcement effects. The OBR analysis is based on when measures are implemented, rather than when they are announced. It seems reasonable to assume that the credible announcement of a five-year period of fiscal contraction in 2010 might have had a larger immediate impact than just those measures implemented in 2010. Third, the effects of fiscal contraction when output is depressed may have significant longer-term hysteresis effects, as DeLong and Summers (2012) discuss.

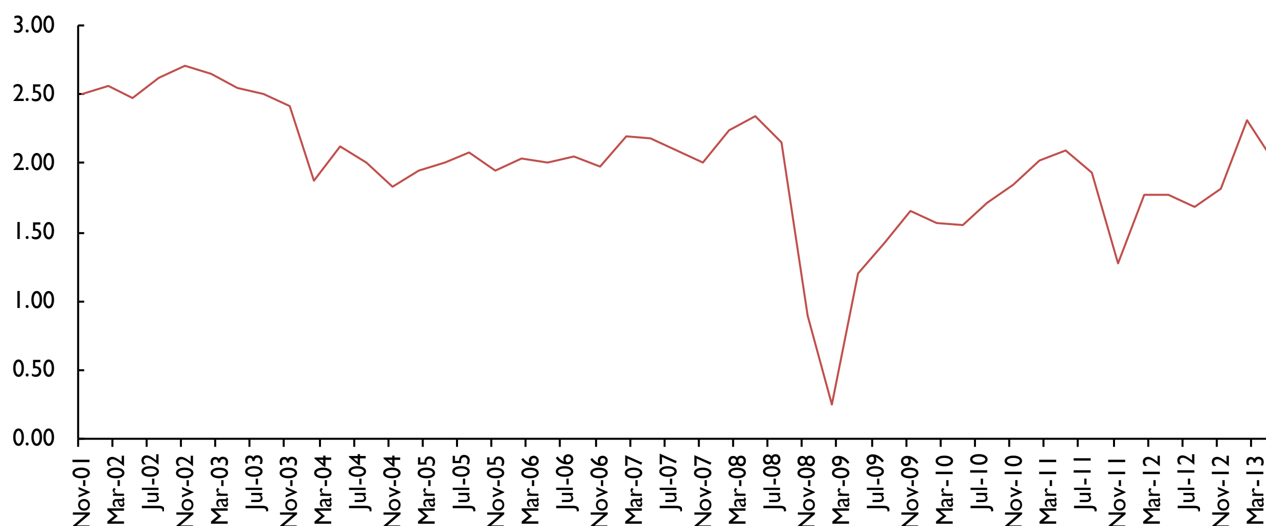
These numbers do not suggest that austerity can account for all or even the major part of the weakness in the UK recovery, but it does seem appropriate to conclude that it played an important part. Even if we make the conservative assessment that the cumulative output losses as a result of austerity since 2010 are of the order of 5 per cent of GDP, this is a very large figure in terms of lost resources. However, there remains one important issue to address and that is what monetary policy might have done if fiscal policy had been looser.

3.4 Monetary policy

The monetary policy operated by the Bank of England and the MPC since independence is often called flexible (or forecast) inflation targeting. Lags mean that it would be both difficult and costly (in terms of output variability) to target current inflation, so it makes more sense to target expected inflation some years ahead. Although the period ahead has never been laid down formally, members of the MPC and the Governor have often used the two-year-ahead reference point, which is also as far as the Bank's published forecast traditionally went.

Figure 2 plots the inflation forecast two years ahead by date of inflation report. (This is based on its forecast using market expectations of future short rates. The Bank does not publish its own forecasts for short rates.) The inflation target became 2 per cent in 2004, and

Figure 2. Bank of England forecasts of inflation two years ahead, by date of forecast



Source: Wren-Lewis, Mainly Macro Blogpost (A).

the forecast has been pretty close to 2 per cent from that date until the recession. This, and experience until the end of 2003 when the target was 2.5 per cent, are certainly consistent with the targeting of inflation two years ahead.

Short-term interest rates hit their UK lower bound of 0.5 per cent in March 2009. In the same month the Bank started its Quantitative Easing (QE) programme, buying £200 billion of private sector assets (mainly government debt) between then and January 2010. Although CPI inflation was well above target at 2.9 per cent in March 2009, it was expected to fall rapidly as a result of the recession (together with the impact of the temporary cut in VAT in December 2008), which it did until it hit 1.1 per cent in September 2009. From that point onwards, CPI inflation started rising again, reaching a peak of 5.2 per cent in September 2011.

This increase in inflation posed a difficult dilemma for the MPC. The recovery had yet to get going, but a combination of the lagged impact of the 2007/8 depreciation in sterling, higher commodity prices and the increases in VAT meant that inflation was well above target. By the spring of 2011 three members of the committee voted to increase interest rates. However, by October 2011 the prospects that inflation would decline rapidly seemed more firmly based, and with the economy still stagnant the MPC voted to increase QE purchases by an additional £75 billion. There were further increases of £50 billion in February 2012 and July 2012. That brought the total amount of QE to £375 billion, where it has remained.

Against that background, what might have happened if fiscal policy had been less contractionary after 2010? The Bank's forecast GDP growth would have been stronger, and so it is likely that its forecast for inflation would have been higher. Instead of almost raising interest rates in early 2011, might the MPC have actually raised rates in 2010? Would this have been enough to offset the expansionary effect of less fiscal contraction, leaving the economy no better off (but with additional government debt)?

Figure 2 suggests an answer. We can see that during 2009 and 2010 the Bank was expecting inflation to be below the 2 per cent target even after two years, which suggests that because of the ZLB – and despite QE – they were not able to stimulate the economy enough. For a brief period in 2011 the forecast goes back to 2 per cent, before falling again in 2012. This is consistent with the operation of the QE programme, which was expanded during periods in which inflation was expected to be below 2 per cent even after two years.

This suggests that if the prospects for output growth had been moderately stronger in 2009, 2010 or 2012, the Bank may have taken no action, and all that would have happened is that expected inflation would have

been closer to target. Only in 2011 might the MPC have reacted to higher expected growth and inflation by raising rates. (It was early 2011 when the MPC actually came close to doing so.) It therefore seems unlikely that monetary policy would have offset the impact of any fiscal easing except for a brief period in 2011.

There are additional qualifications that need to be made to the monetary policy offset argument. First, inflation would have been lower without the 2010 increase in VAT. Perhaps the MPC simply 'saw through' this effect, and also assumed that wage setters would do the same, but maybe not. Second, the offset argument implies either very good forecasts by the Bank, or an absence of lags. Even if the Coalition government had tightened less in mid-2010, and interest rates had been increased sometime in 2011, the impact on growth might not have been felt until later, by which time a more robust recovery might have been underway.

Fascinating though such counterfactuals are, I think they miss the essential point of criticism of government policy. Once you make the reasonable assumption that QE is not a complete substitute for lower nominal interest rates, the fiscal contraction of 2010 took a large risk with the economy. It is not so much that the OBR's forecast was wrong, and that therefore austerity was a mistake. Forecasts are often wrong, and good policy allows for these risks. Once you take the ZLB seriously, good policy does not take risks with the economy by implementing a substantial fiscal contraction at the ZLB unless something forces you to do so. What monetary policy might or might not have done in 2011 is beside the point, because decisions in 2010 cannot have anticipated subsequent events. Interest rates might have been increased in 2011 if there had been less fiscal austerity, but if inflation had not risen so quickly (which was unexpected) rates need not have increased. Once again, good policy anticipates risks.

The only justification for ignoring the ZLB when undertaking fiscal austerity and retaining inflation targeting is if QE is a complete alternative to varying the nominal interest rate. Here we can cut through a great deal of discussion of very tentative econometric results based on very little evidence (and which are still hotly debated – see Woodford, 2012) by talking about uncertainty. Even if it is possible to duplicate the impact of nominal rate cuts by an appropriate amount of QE, we have virtually no idea of what that required quantity of QE is. As a result, using QE to regulate the economy means that the economy is subject to much more risk than if you were using conventional monetary (or fiscal) policy. So once again, good policy does not take risks with the economy by implementing a substantial fiscal contraction when interest rates are at (or even near to) their ZLB.

The problems associated with the ZLB were well known to macroeconomists as a result of Japan's 'lost decade'. As we noted in section 2.3, both Paul Krugman and Michael Woodford had proposed a means by which the impact of the ZLB could be reduced using a modification of the inflation target strategy. Essentially the central bank would promise to let inflation go above target (and the output gap be positive) sometime in the future, when the ZLB constraint no longer applied. To the extent that the private sector is forward looking, expectations of higher future inflation (and lower future short-term interest rates) would reduce long-term interest rates today, as well as stimulating inflation, consumption and investment today. As a result, the impact of the recession today would be reduced.

One difficulty with this 'promise to be irresponsible' in the future (Krugman's phrase) is that it is time inconsistent. Once the work of the promise in moderating the recession has been done, the central bank has an incentive to go back on its promise and keep inflation at target. If the public understands that, it may not believe the promise. This difficulty might be reduced if the policy could be embodied in an alternative to an inflation target, by having a price level target or a (level of) nominal GDP target for example.

None of these possibilities could have been implemented by the MPC alone, because they all conflict with their mandate. However the Coalition appears to have had no appetite for a change in the inflation target regime, despite the weak recovery up to and including 2012. In March 2013 the government published a 'Review of the Monetary Policy Framework'. This did three things. The first was to re-affirm commitment to the 2 per cent inflation target, and thereby reject alternatives such as nominal GDP targeting. The second was to say that government would have no problem with the MPC targeting inflation three (or more) years ahead, rather than the 2-year-ahead target that it appeared to have been following. The third was to give the green light to forward guidance, which the new governor Mark Carney was known to favour. Here forward guidance (which the US Fed had already implemented) is quite different from the kind of forward commitment to excess inflation discussed above. These changes are best regarded as minor tweaks to an inflation targeting regime rather than any radical shift in monetary policy.

Was the Coalition too conservative in retaining the inflation targeting regime, particularly when interest rates were at their lower bound and fiscal policy was ruled out as a stabilisation tool? Although the alternative of targeting the level of nominal GDP was gaining converts among the academic community throughout this period, any final verdict on this will have to wait until we have some practical experience with such a scheme.

3.5 Funding for Lending and Help to Buy

The Coalition did introduce two important innovations on the interface between monetary and fiscal policy in 2012 and 2013: the Funding for Lending (FFL) scheme introduced in July 2012, and the Help to Buy (HTB) scheme, the full version of which came into effect in 2013. They share a common feature, in that they involve providing incentives to increase the amount of private sector borrowing. FFL involved providing subsidies to banks to increase lending to both households and companies. HTB is targeted at house purchase, and in part offers to guarantee up to 20 per cent of a loan. The economic rationale for both measures is similar. The financial crisis may have made banks too risk averse in either the amount of lending they were prepared to do or the conditions required for loans (such as a loan-to-value ratio for houses). By providing incentives to lend, or additional insurance, the government could counteract the negative effect this risk aversion was having on aggregate demand.

In 2013 the pace of the recovery increased, with successive quarterly growth rates of between 0.5 per cent and 0.9 per cent. We have already noted that, according to the OBR's analysis, fiscal policy as conventionally measured ceased to be a drag on growth by 2012, but nor was it a significant stimulus. Net trade contributed little to growth in 2013, so the pickup came from domestic demand. It is beyond the scope of this paper to assess how much either FFL or HTB may have contributed to this. It is possible, for example, that the pickup in consumption, which in turn reflected a decline in the savings ratio, might have occurred anyway as consumers came to the end of a period of 'balance sheet correction' following the financial crisis.

It is also possible that one or both schemes had a significant effect on demand. For example, by effectively reducing the amount of deposit a homebuyer required from 25 per cent to 5 per cent, this would free up a lot of savings that could now be consumed. However, the HTB scheme proved highly controversial among economists. A major concern was that, by linking future fiscal outcomes more closely to house prices, the scheme provided an incentive for governments to keep house prices high when the optimal policy might be to take measures that have the opposite effect. Others questioned why the government felt it was able to create a contingent liability that might have significant future fiscal consequences, while at the same time stressing the need to reduce current government borrowing.

4. Conclusions

The Coalition government introduced two important and successful innovations into fiscal policymaking. The first was establishing the OBR, albeit with a fairly restricted mandate. The second was the *form* of its main fiscal mandate, which in normal times I would argue is a sensible way to conduct fiscal policy. The tragedy for the Coalition government was to implement the rule at the one time that it should have been cast aside, when interest rates were at their lower bound.

Sometimes governments are unlucky, and get blamed for macroeconomic outcomes they could do little about. A part of the stagnation in UK labour productivity since the recession may turn out to be a case in point. In other times governments take macroeconomic risks that they get away with, and history is forgiving even though it should not be. The analysis in this paper suggests that the enhanced UK austerity announced in 2010 is neither of those: it did take a risk with the UK economy and this risk materialised. Austerity reduced GDP growth by at least 1 percentage point in both 2010 and 2011.

A natural question is why this mistake was made. Other governments also undertook austerity at around the same time. In the United States the fiscal contraction occurred a year later, which may have allowed its recovery to gather pace. The Eurozone is still awaiting a recovery as it has pursued austerity with much more vigour. The fact that many governments made the same mistake, introducing fiscal contraction well before recovery was complete and while interest rates were stuck at the ZLB, suggests a common cause.

One obvious common factor was the Eurozone debt crisis of 2010. I suspect that had an important impact on many policymakers, and it may well have been influential in persuading the Liberal Democrats to change their mind on austerity as part of the Coalition agreement. It may have influenced central bankers in the advice they gave, and led them to be overoptimistic about the potential effects of QE.

However there are two problems in using the Eurozone crisis as an explanation for the Coalition's error on

fiscal policy. The first problem is that by 2011 it had become clear that any debt funding crisis was specific to Eurozone economies, and arose because the ECB was unwilling to act as a sovereign lender of last resort. In the UK and US, interest rates on government debt were falling, and there was no prospect of a bond market panic. With the prospect of a double-dip recession in the UK, 2011 was the obvious time for a publicly announced policy reversal, but instead we had to wait another year for fiscal consolidation to slow down, and the public line remained that austerity was continuing. The second problem is Conservative policy before they entered government.

The Chancellor appears not to have believed that fiscal policy might need to take account of the state of the economy even at the height of the recession. The Conservative opposition argued in 2009 against the countercyclical measures undertaken by the Labour government, and their justification for doing so was in effect to say that the ZLB was not a problem. This view did not reflect the consensus among academic macroeconomists at the time. Why the Chancellor chose to take this unconventional view is beyond the scope of this paper to assess. He proposes to renew the pace of fiscal consolidation over the next few years, despite interest rates remaining at or close to their lower bound, which suggests he and the Prime Minister continue to hold this unconventional view.

The delay in the UK recovery over the first part of the Coalition government's term is at least in part a result of the government's fiscal decisions. I have argued that these decisions were a mistake not just in hindsight but when they were taken. It will be many years before we can settle on a figure for the total cost of that mistake, but measured against the scale of how much governments can influence the welfare of its citizens in peacetime, it is likely to be a large cost.

NOTES

1. In December 2014 the Coalition proposed changing this to a three-year rolling target, a time period that is in danger of being too short to adjust optimally to persistent shocks.
2. Osborne, G and Sachs, J. (2010), "A frugal policy is the better solution", *Financial Times*, 14 March. My thanks to John McHale for bringing this to my attention.
3. This IMF study does however note (p.123) that "the evidence suggests that economies that apply countercyclical fiscal and monetary stimulus in the short run to cushion the downturn after a crisis tend to have smaller output losses over the medium run."

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