Progressive approaches to budget deficits

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Abstract: It is argued that striving to have a balanced budget is to completely misunderstand the purposes of fiscal policy and unbalanced budgets. Seeking a zero budget deficit would for many countries be difficult if not impossible to achieve, simply because there is a tendency for the (average) propensity to save to be larger than the (average) propensity to invest. Some of the distributional arguments raised against budget deficits are outlined and then dismissed. If high levels of employment and economic activity are to be secured what are the alternatives to budget deficits ?. Promotion of investment and of net exports are considered and it is argued that they are not a general route. It is argued here that the progressive approach to reducing budget deficits is a massive redistribution of income, from rich to poor, from profits to wages, which would lower the propensity to save, thereby stimulating aggregate demand, and thereby permitting a higher level of demand with a lower budget deficit.

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1.   Introduction

The first wave of macroeconomic policy responses to the onset of the financial crisis in the autumn of 2008 included acceptance of large rises in budget deficits through a combination of allowing automatic stabilisers to operate and some discretionary tax cuts and public expenditure increases, and monetary policy stimulus through very low policy interest rates and quantitativ easing. Fiscal policy stances which sought to place limits on the scale of budget deficits were in effect suspended – within the eurozone countries far exceeded the 3 per cent of GDP limit on budget deficits, in the UK the 'golden rule' of public finance was formally suspended. The logic of the budget deficit rising during recession whether through automatic stabilisation or discretionary policies would entail budget deficits falling during recovery, and that no specific action would be needed to address the budget deficit 'problem' other than unwinding the discretionary changes in the fiscal stance as recovery comes about. The answer to the question on how quickly should the deficit come down is then simply at the speed with which the economic recovery takes place with the consequent revival in tax revenues.

Policy debates in many countries and within the European Union are now heading firmly in the opposite direction. It is not only that there is a predominant focus on reducing the budget deficit (whatever the consequences for economic actrivity) but also striving to enforce essentially balanced structural budgets. The extreme case of this (though the relevant Constitutional change was conceived before the onset of the financial crisis) has been the German requirment for a Federal budget deficit of 0.35 per cent of GDP by 2016 and a balanced budget from 2020 onwards. The UK government has declared its intention to remove the structural budget deficit by 2015/16[1]. 'Cyclically adjusted public sector net borrowing will be reduced by 8.4 percentage points, from 8.7 per cent of GDP in 2009-10 to 0.3 per cent of GDP in 2015-16' (Treasury 2010a, p.16). The EU is proposing much more stringent restraints on national budget deficits and more strignent application of the rules of

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[1] 'The Government has therefore set a forward-looking fiscal mandate to achieve cyclically adjusted current balance by the end of the rolling, five-year forecast period' (HM Treasury 2010a, p.1). However the figures given in their Table 1.3 for 2015/16 indicates a cyclically adjusted current budget surplus of 0.8 per cent of GDP, and cyclially adjusted net borrowing of 0.3 per cent of GDP (and implies public investment of 1.1 per cent of GDP, which is rather below the figure for recent years).

the Stability and Growth Pact which has within it notions of overall budget being in balance or small surplus over the cycle. The British and German proposals represent a considerable tightening as compared with the 'golden rule' (borrowing for investment purposes) previously in place.

This paper argues that striving to have a balanced budget (or indeed setting aims for budget deficits in numerical terms where the number is 'plucked out of the air') is firstly to completely misunderstand the purposes of fissal policy and unbalanced budgets. It secondly argues that seeking a zero budget deficit would for many countries be difficult if not impossible to achieve, simply because there is a tendency for the (average) propensity to save to be larger than the (average) propensity to invest. Thus striving to attain a zero budget deficit not only pushes the economy in a deflationary direction but may well be unachievable. There are a range of classic arguments deployed against the use of fiscal policy and specifically budget deficits – the reaction of financial markets, the crowding out of private investmemnt, upward pressure on interest rates. It is also well-known that when fiscal policy is considered from a 'functional finance' perspective – that is budget deficits are incurred where it is necessary to support aggregate demand, and in effect absorb the excess of private savings over private investment—these arguments have no validity (as was shown long ago by Kalecki, 1944; see also Arestis and Sawyer, 2004, Sawyer, 2008). There are though some distributional arguments which are deployed to the effect that budget deficits are anti-progressive. The 'burden on future generations', the interest payments on public debt go to the rich (or to foreigners) are frequently mentioned. These arguments are considered. It is though argued that in so far as there are transfers which many would seem as anti-progressive (e.g. transfers from poor to rich effected by taxes on the poor to fund interest payments to the rich), these should not be associated with budget deficits *per se* but rather with the inequalities of income in the economy. For example, payment of interest to foreigners arises from borrowing from overseas, and that arises through there being a current account deficit.

These considerations lead into the fourth part of the paper, namely if high levels of employment and economic activity are to be secured what are the alternatives to budget deficits. Once it is recognized that the need for budget deficits comes from imbalances between savings and investment and in the current account position, then it readily follows that budget deficits would not be required if there was the right balance between savings, investment and the current account position. Drawing heavily on Kalekci (1944) ('Three Ways to Full Employment'), it is argued here that the progressive approach to reducing budget deficits is a massive redistribution of income, from rich to poor, from profits to wages,

which would lower the propensity to save, thereby stimulating aggregate demand, and thereby permitting a higher level of demand with a lower budget deficit.

2.   The macroeconomics of budget deficits

The relationship between savings and investment has been central to much macroeconomic analysis. The 'classical view' (to use Keynes's phrase) was in effect that the rate of interest could adjust to bring savings and investment into balance (consistent with full employment) in a loanable funds manner. This idea has come to the fore in recent years in the 'new consensus in macroeconomics' (NCM) which has given a key role to the 'natural rate of interest' (in a Wicksellian sense). The attention within the NCM has been on the role of inflation targeting with small adjustments of the policy interest rate to keep inflation on track. But central to that, and the operation of Taylor's rule, has been the notion of a 'natural rate of interest' which is consistent with supply-side equilibrium (usually expressed as zero output gap) and (often implicitly) bringing savings and investment into balance (at a level of output equal to trend output). The Central Bank is given the role of setting the policy interest rate in a manner consistent with the 'natural rate of interest'.

Kalecki and Keynes gave investment and savings central roles but, albeit for different reasons, ruled out the interest rate as able to adjust to balance savings and investment, and viewed the level of economic activity as adjusting in the face of discrepancies between (intended) savings and investment. Whereas the mainstream has through a variety of routes asserted that there is no issue in the balance between *ex ante* savings and investment achieve at high levels of economic acvtivity, post Keynesians have seen matter differently. The simple expression is the idea of quantity adjustments to bring savings and investment into balance. Budget deficits are then seen as a way of absorbing 'excess' savings (intention to save in excess of intention to invest) without the deflationary implications.

The sectoral relationships can be written as:

(1) $(S – I) + (T – G) + (M – X) = 0$

where S is private savings, I private investment, T tax revenues, G government expenditure, M imports, X exports (including NI net income from abroad). In the event that the rate of interest was set at the 'natural rate' and the exchange rate consistent with current account balance, then the budget deficit would be zero. A post Keynesian perspective would doubt the existence of any 'natural rate' (or even that such a concept is well-defined) and would not generally see the exchange rate playing that role. In that event, there are inter-sectoral flows which permit some sectors to run surpluses and others deficits. The post-Keynesian perspective (particularly as developed in the stock-flow consistent approach) recognizes that

surpluses and deficits, borrowing and lending are two sides of the same coin – the ability of one sector to run a deficit relies on another sector being willing to run a surplus. It is also recognized that deficits imply rising debt (or diminishing assets) and surpluses rising assets (or declining debt). Changing assets and liabilities have implications for future flows of interest payments, dividends etc.. It is useful to disaggregate (1) further into the following:

(2) $(S_h + DS_h - I_h) + (S_f - I_f) + (T - G) + (M - X - NI) = 0$

where S_h is acquisition of financial assets by households and DS_h net increase in debt by households, and hence the first term in the equation is net household savings, S_f savings by firms (retained profits), I_f, I_h investment by firms and households respectively. An individual household may be both saving and dissaving at the same time (e.g. making contributions to pension funds but also taking out consumer credit). Further much savings is undertaken by corporations. A significant element here is the degree to which relative low household savings involves considerable dissaving by many households with the consequent build-up of consumer debt.

The question then has to be asked as the forces which would help to bring private domestic savings and private domestic investment into line with one another. The post Keynesian perspective is that there is a lack of any clear forces which help to bring private domestic savings and private domestic investment into line with one another at a high level of economic activity. The approach has rather been to view the level of economic activity as adjusting to bring savings and investment into balance, though that may be at a relatively low level of economic activity. But when there is a large difference between the propensity to invest and the propensity to save the resulting adjustment in economic activity would be large. For example, if investment is linked with the growth potential of the economy, the implication for net investment is roughly v (capital output ratio) times the growth of output; which with growth of around 2 ½ per cent, v of around 4 would imply net investment of around 10 per cent of GDP; depreciation on capital stock approximately equal to v times GDP, would be v.δ GDP (δ rate of depreciation) say around a further 10 per cent of GDP. In that example, gross investment intentions would amount to around 20 per cent of GDP. In the event that the overall propensity to save was markedly above 20 per cent, there would be a large deflationary gap which could not be bridged by changes in the level of economic activity. In that event, there are a number of possible system responses. One (which we think may correspond to the recent Japanese experience) is to run rather large and quasi-permanent budget deficits and current account surpluses.

There has, in effect, been a system response, relevant to the development of the financial crisis, of the encouragement of debt, particularly in the household sector, as a way of offsetting the gap between savings and investment. It is evident that household debt rose substantially in many countries, often seemingly underpinned by rising property prices. Deficit spending by households may provide an unsustainable 'push' to consumer spending – it can be seen as unsustainable through the implications of rising debt levels.

The broad relationship between the desires to save and the desires to invest can be seen as of considerable significance. There are clearly many cases (notably in non-industrialised countries) where the needs for investment far exceed the ability to save. But when the desire to save (by firms and by households) exceeds the desire to invest, there can be deflationary consequences. However, those consequences can be mitigated through overseas lending and through budget deficits. When the savings comes not so much for 'desires' but from the institutional arrangements and pressures (e.g. compulsory pension contributions) then a response can be extended to the rise of consumer debt. There may be further pressures on the relatively low income groups to maintain consumption through borrowing. The argument here is that often overseas lending (and more its counterpart borrowing by other countries) and consumer debt may not be sustainable and subject to instability and 'crashes'. But also at the global level, there is no overseas lending, and hence any tendency for private savings to exceed private investment leads either to deflation or to growth of private or of public debt.

There is a tendency to associate savings with household behaviour. But the figures in Table 1 below indicate that, at least for the UK, household savings is a rather small component of overall savings, and the predominant savers are corporations. It can further be noted that within corporations savings tends to exceed investment, and then corporations need some outlets for their savings, whether in the form of lending to government, lending overseas or the promotion of consumer debt.

The suggestions in this section are that imbalances between savings and investment can lead to eras of deflation as the level of economic activity falls. An alternative is that some of the differences between savings and investment are absorbed by personal debt, by budget deficits, by international lending. These may often raise sustainability issues and can be associated with credit bubbles, and then followed by crisis.

There are some well-known (but often forgotten by the fiscal consolidationists) relationships between budget deficits and debt which we repeat here as an aid to discussion below. It can readily be shown that a total budget deficit (that is primary deficit plus interest on debt) ratio to GDP of b would, if sustained, lead to a debt ratio of $d = b/g$, where g is the nominal growth

rate. In numerical illustrations a figure of g = 0.05 is used as reflecting an approximation to the nominal growth rates of many EU countries. If the budget deficit is split into primary deficit b' and interest payments of r.d then it follows that b' = (g – r).d, and hence whether there is a primary deficit or surplus depends on whether g is greater or less than r. The case where g and r are equal (which we would argue is a rough approximation for the actual relationship, also remembering here that for the government it is the post-tax rate of interest which is relevant) is of particular interest. In those circumstances, b' = 0, and the overall budget deficit is equal to interest payments : borrowing from the rentiers to pay interest to the rentiers ! Pasinetti (1997, p. 163) remarks that this case 'represents the 'golden rule' of capital accumulation. … In this case, the public budget can be permanently in deficit and the public debt can thereby increase indefinitely, but national income increases at the same rate (g) so that the D/Y ratio remains constant. Another way of looking at this case is to say that the government budget has a deficit which is wholly due to interest payments' (p. 163).

The Browne Report (2010) proposes 'Students with higher earnings after graduation will pay a real interest rate on the outstanding balance for the costs of learning and living. *The interest rate will be equal to the Government's cost of borrowing (inflation plus 2.2%)*' (emphasis added). p.35). Unfortunately no source is given for this statement and it is presumed that this relates to the rate of interest paid by government. However, interest payments are liable to taxation for domestic holders. This significance of this figure is that a real rate of interest of 2.2 per cent is somewhat below the trend rate of growth of the UK economy usually put somewhere in the range 2.5 per cent to 2.75 per cent (recently Office for Budget Responsibility has pitched a little lower at 2.3 per cent). The significance of this is that it would imply that any primary deficit to GDP ratio would be sustainable in the sense that the debt ratio would eventually stabilise (at $b = d/(g-r)$): admittedly this would be at a high debt ratio – if g – r = 0.25 per cent, then b = 400 times d.

3. The functional finance view of budget deficits

The starting point for the 'functional finance' approach (Lerner, 1943, Kalecki, 1944) comes from interpreting equation (1) is *ex ante* rather than *ex post terms* and re-arranging as:

$$(3) \quad G – T = S(Y_f) – I(Y_f) + M(Y_f) – X(WY)$$

where Y_f is the intended level of income (which may be thought of as equivalent to full employment or to some supply side constraint), WY is world income (which is taken as given for the purposes of this equation). A tendency for savings to run ahead of investment leads to the view that a budget deficit is required (in the absence of any tendency for balance of trade

surplus). But it is a short-fall of investment over savings that creates the requirement for a budget deficit: in the absence of any such short fall (in *ex ante* terms) there is no need for a budget deficit. The analysis of budget deficits should then be undertaken in a context, which at least allows for the emergence of an excess of (*ex ante*) savings over (*ex ante*) investment corresponding to high levels of income. In the absence of any such excess, the 'functional finance' view would not see any cause for a budget deficit.

The case for an unbalanced budget rests on the proposition that the equality between *ex ante* savings and *ex ante* investment at full employment income cannot be assured (or indeed at any target level of income).[2] The general presumption of many Kaleckians and others (which was particularly evident in debates in the mid-1940s) has been that there is likely to be a deficiency of *ex ante* investment relative to *ex ante* savings, rather than the reverse. This does not rule out that there will be occasions (as in the late 1990s in the UK and the USA with conditions of low unemployment) when investment runs ahead of savings. In the former case, a budget deficit is a requirement if the potential excess of savings over investment is to be realised : while in the latter case a budget surplus would need to materialise.

A frequent objection to the use of fiscal policy is the argument that government may not be able to fund budget deficits, and hence attempts to stimulate the economy through fiscal policy and budget deficits will be frustrated. This argument is clearly wrong, since budget deficits are required because there is an excess of (*ex ante*) savings over investment (at desired level of income). If a budget deficit cannot be funded, that is because there is an absence of that excess of savings over investment, in which case a budget deficit would not be required. When there is an excess of savings over investment, then a budget deficit is required to absorb the excess savings, but that, of course, is precisely the situation in which the budget deficit can be funded.

Fiscal policy is often viewed in terms of the determination of government expenditure and taxation as undertaken without specific regard to the state of private aggregate demand. The 'crowding out' argument after all assumes that there is something to be crowded out. That approach to fiscal policy suggests either that fiscal policy has no effect on the level of economic activity (since there is crowding out) or that there is a positive link between government expenditure (budget deficit) and the level of economic activity. The investigation of fiscal policy through the means of simulation of macroeconometric models is concerned

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2 This discussion is cast in terms of a closed economy: adjustments to account for an open economy can be readily made without undermining the basic approach pursued here.

(usually) with the question of what happens if government expenditure is increased, other things being equal. The results of such simulations, generally, suggest that an increase in government expenditure does have a positive effect on the level of economic activity (Arestis and Sawyer, 2003). Indeed in the context in which these simulations are undertaken, it is somewhat surprising that positive results are obtained since such macroeconometric models generally build in a variety of ways by which there would be crowding out – the most notable one being that imposition of some form of supply-side equilibrium, and an adjustment process by which the economy moves to that supply-side equilibrium.

The effects of fiscal policy (especially when that takes the form of a budget deficit), start from the position that budget deficits are applied when there would otherwise be a deficiency of aggregate demand (below that required for the target level of economic activity), and conversely budget surpluses applied when there would otherwise be an excess of aggregate demand. This is not to say that fiscal policy has been always (or even usually) applied in this manner. But it is to argue that fiscal policy and its effects should be evaluated against this background. The evaluation of fiscal policy should not start from the presumption that there would otherwise be adequate effective demand in that all would agree that in the context of adequate private effective demand there is no requirement for budget deficits.

4.   The impossibility of zero budget deficits

It has been a rather general practice for governments to run budget deficits. In the past 40 years, the budget position in the UK has been in deficit in 34 years. The pre-crisis public debt had varied in the range 30 to 40 per cent of GDP, and it can be readily calculated that such a ratio is consistent with an average budget deficit of around 1.5 to 2 per cent of GDP (assuming a growth rate of nominal GDP of 5 per cent). Germany had operated according to some form of 'golden rule' with current budget intended to balance over the cycle with borrowing for investment. The UK had in place since 1997 a similar rule. Given the orders of magnitude of public investment the resulting structural deficit would be of the order of 2 to 3 per cent of GDP.

The acheivement of a structural budget position close to zero would for many countries be unprecendented (at least in the post war world). In other words, the intentions of the private sector (with regards to savings, investment and the current account position) have been consistent with a budget deficit (in general) and not with a budget deficit around zero. If a zero budget deficit is to be secured, there would have to be changes in private sector behaviour.

How should this record of generally budget deficits (rather than surpluses) be interpreted ? One claim could be that these budget deficits, as with all budget deficits, have crowded out private expenditure, with some form of Ricardian equivalence operating. But the question can be asked as to whether there was any evidence of crowding out and over heating : and this would not be at the top of the boom when after all budget deficits tend to be small – reflecting the idea that variations in economic activity come from variations in private demand to which tax revenue, budget deficits respond. Indeed the cyclical nature of budget deficits serves as evidence that private demand fluctuates (which would not be anticiapted from inter-temporal budget constraints or from Ricardian equivalence arguments). It is rather whether at the average position over the cycle when there was on average a budget deficit there was any evidence of crowding out.

We claim that seeking to achieve a structural balanced budget is undesirable in itself – as it will involve dramatic cuts in public expenditure – but unlikely to be achievable. This is argued not on the grounds that the government will 'lack the bottle' and face insurmountable obstructions – though that is not to be ruled out. It is rather that there is a failure to appreciate why budget deficits are generally necessary and a failure to appreciate that budget deficits can only be reduced if there are a set of changes in the behaviour of the private sector.

This says that government borrowing (budget deficit) is in effect funded by borrowing from private sector – which in turn is the excess of savings over investment plus borrowing from abroad. But the equation can also be read the other way round – that is the private sector can only save in excess of investment if there is an outlet for that excess in the form of lending to the government.

The statistics from the national accounts are organised in Table 1 for the UK for 2007 to 2009 to illustrate that identity. It can be readily noted that budget deficit is equal to the sum of savings minus investment plus current account deficit.

Table 1 near here

It now follows that if the budget deficit is to be reduced, then there would have to be corresponding changes in the combination of savings, investment and capital inflow. The oft quoted 'success stories' in a country reducing a budget deficit are generally associated favourable changes in world demand (lifting exports), with an investment boom or a slump in savings[3]. The simple question here is whether the changes required on the right hand side of

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[3] Canada in the 1990s has frequently been held up as an example of successful reductions in budget deficits without harm to growth. It is the case that from 1992 through to 2000 the

equation 2 to accompany a change on the left hand side (reduction of budget deficit) are plausible. In Table 2, we indicate the changes which would have been required in 2007 and 2009.

Table 2 near here

The year 2007 is chosen as the last pre-financial crisis year, when according to Treasury (2008a, Table 2.2) the output gap (for financial year 2007/08) was 0.3 per cent and for that financial year the actual budget deficit was 2.6 per cent of GDP (and cyclically adjusted 2.7 per cent of GDP)[4]. It can be debated as to whether the fiscal position in that year conformed to the Code for Fiscal Stability and specifically whether the budget deficit was consistent with a current budget balanced over the cycle. But the present UK government's aim is closer to total budget balanced over the cycle. Since pubic investment (relative to GDP) was around 2 per cent of GDP, the 'new' target represents a significantly tightening of fiscal policy as compared with the Code for Fiscal Stability.

In Table 2, we ask first what level of savings would have been consistent with a zero budget deficit, assuming that investment and current account deficit had remained unchanged. The exercise is then repeated for investment and for the current account deficit. The elimination of the budget deficit in 2007 would have had to be accompanied by a 14 per cent lower level of savings, equalivalent to 2 ¼ per cent of GDP, or a 16 per cent higher level of investment or the virtual elimination of the current account deficit. It is then worth recalling that in 2007 household savings ratio was less than 3 per cent (and the savings which did occur were in the form of increase in equity held in pension funds: making allowance for that savings directly out of money disposible income were negative, with dissavings of more than 1 ½ per cent of disposable income.

Now consider 2009 as the post-crisis year: we would anticipate a similar outcome if the exercise were repeated for 2010 when the figures for 2010 become available. It is not surprising that since a move from a budget deficit of around 10 per cent of GDP to balance would involve much greater changes than the figures for 2007. The elimination of the budget

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budget deficit was greatly reduced (though to almost exactly the same extent as in the UK), but accompanied by a very sharp drop in household savings and an export boom linked with NAFTA membership and devaluation.

[4] The Office of Budget Responsibility (2010) is in effect claiming that potential output had been systematically overestimated prior to 2009, and have begun adjustments. Treasury Budget 2010 p. 21 indicates around a 6 per cent difference between previous estimates of potential output and revised ones.

deficit in 2009 would have had to be accompanied by a 48 per cent lower level of savings, an 82 per cent higher level of investment or the current account position moving to an 8 per cent of GDP surplus.

These calculations have been undertaken on the basis of an unchanged level of economic acticvity in order to illustrate the shift in savings and investment behaviour which would have to accompany a reduction in the budget deficit. In one respect, the outlook based on 2009 is rather less pessimistic than the figures in 2009 seem to imply. Any recovery in the global economy, revival of investment sentiment and easing of credit limits, and of consumer confidence leading to higher spending (and hence lower savings) would aid a reduction in the budget deficit. This is though little more than saying that recovery will aid the reduction in the budget deficit. There are though other ways in which the picture is bleaker than portrayed in Table 2. The changes portrayed there were deemed to come from a change in savings behaviour etc.. But another way in which savings could decline is simply through a lower level of economic activity : in effect cuts in public expenditure and employment reduces household income, and the ability to save declines. Further in such a scenario lower consumer demand would tend to depress investment. In terms of reducing budget deficit the difference between savings and investment is what matters, and if both declined by much the same amount, the budget deficit would be left unchanged.

The central argument here is that the budget deficit will not be eliminated simply because the corresponding changes in savings, investment and current account position which would be required to accompany a balanced budget are highly implausible. The figures given for 2009 may rather overstate the case in that some recovery of investment and consumer expenditure can be anticipated. But the figures for 2007 tend to understate the case in that the tendency to save are likely now to be greater (through the rising consumer debt which was associated with the position in 2007) and the tendency to invest likely to be lower (through the knock to confidence and the 'credit crunch' effects).

Another, though similar, approach is to directly consider the net lending/borrowing of different sectors. Table 3 presents those figures.

Table 3 near here

The government's intention appears to be a structural balanced budget, that is a budget which would be in balance when the economy is operating with a zero output gap (actual output equal to trend output). The exercise which has been undertaken in Table 2 for 2007 could then be seen as particularly pertinent as the economy was operating in that year close to a zero output gap.

Table 4 near here

Another way to make the same point is to consider the forecasts recently produced by the UK government covering the next five years, during which time the intentioin is to eliminate the stuctural budget. These are summarised in Table 4, and these are 'official'forecasts. These forecsasts include investment rising between 2010 and 2015 by nearly 44 per cent, which would take it to 19.3 per cent of GDP, which can be compared with an average of 16.8 per cent over the past decade, and would be higher than anything achieved so far in this century (18.2 per cent in 2007). Exports are forecast to grow twice as fast as imports, and export growth in each year 2011 to 2015 would be higher than the 4 per cent average for 1999-2008, and import growth would be lower in each year than the 4.9 per cent average for 1999-2008 A positive trade balance to emerge by 2015 of £10 billion which would be the most favourable since 1983. Consumer expenditure grows by around 10 per cent, slower than the growth of GDP, and this could well reflect in part the squeeze on wages and the cuts in social security benefits. Household savings rate and overall savings decline somewhat, and these figures can be used to calculated that corporate savings decline by of the order of £20 billion, which is around a 10 per cent fall. This would come at a time when profits would be rising and investment rising sharply but the internal use of retained profits apparently declining.

The other route to a balanced budget is to depress the economy sufficiently and to produce a low enough level of income that savings and imports fall : as can be seen from equation above lower savings and lower imports (smaller current account deficit) would push in the direction of a lower budget deficit. But lower levels of investment would accompany a larger budget deficit. There is always the danger that the pursuit of lower budget deficits through expenditure reductions will reduce economic activity but have rather little effect on the budget deficit.

In the period 1992 to 2008, according to OECD *Economic Outlook* July 2010 statistics (Annex Table 28), the average cyclically adjusted budget deficit for the eurozone was 2.9 per cent of GDP. If over that period attempts had been made to secure a 0 per cent budget deficit, there would clearly have had to have been compensating changes in some combination of savings, investment and net exports. As this is a cyclically adjusted position, this would have had to be achieved without any effects on level of economic activity. It is then clear that there would have to have been a significantly lower level of savings or higher rate of investment to have made a zero budget deficit possible.

For a zero structural budget to be a credible objective of economic policy it would need to be established that there would be the required equality between savings plus capital account position equal to investment where actual output is equal to potential output.

5.   Sustainability and interest payments

At one level, interest payments on government debt can be treated as a transfer payment, and akin to the other range of transfer payments which are made by government. The objection which can be raised is that in general interest payments are a transfer from taxpayers to rentiers, and quite likely from the general taxpayer to the relatively rich.

It should be readily apparent that running a budget deficit enables people to save: when the intentions to save exceeds the intentions to invest, savings can only be realised in the presence of budget (and overseas lending). The inequality of the holding of debt arises from the inequality of savings, which in turn comes from the inequality of income. Further, whatever set of mechanisms are used to achieve a high level of economic activity, there will be a corresponding profile of savings. The savings will lead to accumulation of wealth and corresponding inequality of returns on the wealth.

But the main point to be made here is that the 'problem' arises from the inequality of income and the (likely) greater inequality of savings. For a given level of income, there would be a level of savings generated, which would depend on the inequality of income. If that level of income were achieved through a sufficient level of investment, there would be a pattern of savings and a corresponding pattern and distribution of wealth. There would be an inequality in the returns on savings. Now consider the same level of income but now generated through a combination of investment and budget deficit. The inequality of savings and of wealth would be rather similar to the previous case. If there is concern over the distribution of interest payments between households, the relevant policy is not to forego a budget deficit but to change the distribution of income.

The 'burden on future generations' argument can be readily dispensed with. Government debt is a liability for the government (and taxpayers) but an asset for the bondholders. The future interest payments will be a transfer from taxpayers to bondholders – though as indicated above when the real post-tax rate of interest on government debt is around the average real rate of growth of the economy, then the transfer is in effect from rentiers to rentiers, borrowing from rentiers to pay interest to rentiers.

Table 5 near here

It should also be asked who are the acquirers and holders of government debt. The figures in Table 5 indicate that over 30 per cent of government debt is held by insurance companies and

pension funds, 29 per cent is held overseas and over 23 per cent by the Bank of England (presumably the counterpart is the money which has been issued by the Bank of England). The first figure may suggest that in effect a significant part of government debt is providing returns on which pensions are based. In so far as that is the case, then the budget deficit is operating to permit savings to occur (which from equation 1 above would not occur in the absence of budget deficit) which will later produce the income on which pensions are based. A significant aside here is that the promotion of private provision for pensions contributing to a higher level of savings can only come to fruition if there is some combination of higher investment, budget deficit or capital account deficit (export surplus).

Government debt is also acquired by people and institutions outside of the country concerned, and then the 'internal transfer' aspects of interest payments are diluted. But it should be recognized that the borrowing (by whoever) from overseas is the counterpart of a current account deficit, and that deficit has to be filled somehow. Thus whether it is the government or the private sector which borrows, it has implications for the subsequent of interest (and other) payments from the country concerned.

In any case, as long as government debt is denominated in the domestic currency, the national government is always in a position to avoid default on the debt, whether that comes from its tax raising powers or *in extremis* ability via the central bank to create the necessary money.

The last figure would imply that the government's cost of borrowing is less than it appears in so far as it is (indirectly) money financed (through the actions of the Bank of England in exchanging money for interest bearing debt).

6.   Three (actually four) ways to full employment

In 'Three Ways to Full Employment' Kalecki (1944) envisaged three alternatives to securing a level of aggregate demand which would be consistent with full employment. These were (i) the use of budget deficits, (ii) stimulation of investment, (iii) income redistribution. From the equations above, the stimulation of net exports should also be added.

Investment

In order to provide full employment there has to be a sufficient capital stock in regard to size and distribution (across geographical areas). This is then a matter of having the relevant capital stock, and ensure that investment provides that capital stock.

The role of investment over a longer term as a component of aggregate demand is much more limited. Here we focus on two reasons. First, the share of investment in national income $I/Y = (I/K).(K/Y)$: the first term is the growth of the capital stock, which with a constant capital-

output ratio would be growth of output. Hence a capital-output ratio of 4 and growth rate of 2.5 per cent yields a 10 per cent net investment to GDP ratio. The capital-output ratio has tended to be constant. But even if the capital-output ratio was rising, the rate of profit would be tending to decline, (unless profit margins and profit share are rising).

Second, investment is clearly intended to be an addition to the capital stock and to enable growth of output to occur. There are clearly limits to how far and how fast growth can proceed on environmental and resource grounds. Consequently there are then limits on investment.

Net exports

The limitations of the use of net exports as a general means of stimulating aggregate demand are straightforward – not every country can improve their net export position. For a single country there may be possibilities through exchange rate variations and through industrial and similar policies. Apart from the limited number of countries which could pursue this route (and a number who have come to mind) it could also be said that in general the scale of a swing in net exports which would be required on its own to secure high level of demand compatible with a zero budget deficit would in its own terms be relatively large. By this we mean that the reduction of budget deficit from an average of 3 per cent of GDP to zero would require a shift in net exports of the same order of magnitude.

Reducing inequality

The broad changes in the distribution of income in industrialised countries over the past three decades are well-known – a general tendency towards increases in inequality in the personal distribution of income and a shift away from wages towards profits. The general presumption would be that this leads to a higher level of savings/lower level of consumer expenditure, with detriments on the level of demand.

As indciated above, the present pattern of savings behaviour (these remarks apply to the UK) are conducive to the build-up of debt as a response to 'over savings'. The household sector engages in savings into pension funds with low overall savings (as measured in national income accounts) but savings in cash terms being negative (as savings in national accounts are reckoned to include increase in equity in pension funds and pension contributions made by employees and by employers. Further, corporations have savings in excess of investment, and apart from lending to government (budget deficit) and overseas the lending of savings by corporations to households involve the latter in debt accumulation. This may occur directly (e.g. companies providing finance to households to facilitate puchase of goods produced by the companies, financial corporations are included in the corporation figures) and indirectly.

Hein and Truger (2011) provide similar and more extensive arguments, and give indications of elements of the trends towards inequality.

If wage share were say 5 percentage points higher, and there is a difference in the marginal propensity to consume between wages and profits of say 0.3, then savings would be lower by 1.5 percent of GDP. A redistribution of income from the top two deciles to bottom four deciles of 10 per cent of earnings – that is 6 to 7 per cent GDP, and the marginal propensity to consume difference of 0.2, a further 1.2 to 1.4 per cent; these two, rounded up to 3 per cent of GDP would solve much of the budget deficit problem.

Note that in Germany wage share declined by circa 15 percentage points over the past two decades or so. Figures in Office for Budget Responsibility (2010) suggest a decline of the order of 5 per cent between 2005 and 2015. In the UK, over the period 1977 to 2006, the shares of income (equivalised) by quintile changes from quintil1 8.3 per cent, quintile 2 13.4 per cent, quintile 3 19.5 per cent, quintile 4 24.1 per cent and quintile 5 34.7 per cent to 7.4 per cent, 11.7 per cent, 16.6 per cent, 23.3 per cent aqnd 41.0 per cent respectively, and hence the income share of bottom 60 per cent fell by 5.5 percentage points and that of the top 20 per cent rose by 6.3 percentage points[5].

Changes in the distribution of income would lead to changes in the distribution of savings, and at a later stage changes in the distribution of returns on savings including those coming from interest payments on government debt.

The policy measures designed to shift the distribution of income can be easily listed, but the issues of implementation are inversely related with the ease of listing them ! Significant increases in minimum wages where such exist and their introduction elsewhere, adoption of 'living wage' ordinances, structuring wage awards in the public sector to increase lower wages faster than higher wages, enhancing the power of trade unions. Making the tax system progressive through, for example, capital gains treated as income for tax purpose, removing caps on earnings limits for social security contributions (with no commensurate changes to social security benefits), enhanced property taxation.

7.   Concluding remarks

The budget deficit should be viewed as a response to private sector behaviour – changes in that behaviour (with regard to savings, investment and foreign trade) lead to changes in the budget deficit. The budget stance should be set to secure a high and sustainable level of

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[5] Figures taken from Jones, Annan and Shah (2008).

demand and economic activity, and the appropriate level of budget deficit (or surplus) depends crucially on private intentions with respect to savings, investment and trade.

Seeking to impose zero budget deficits without ensuring that there will be changes in private sector behaviour with respect to savings, investment, exports and imports becomes a recipe for deflation. It may turn out to be impossible to achieve a zero deficit in many countries simply because as declines in savings are matched by declines in investment, leaving the distance between savings and investment largely unchanged.

Securing a high level of economic activity and high level of employment requires a corresponding high level of aggregate demand. That requires the right and sustainable levels of savings, investment, budget deficit and net exports. Compared to where many economies have been (and even more where they currently are), that would require some combination of lower savings, higher investment, increased net exports and budget deficits. Whilst there is clearly room for investment levels to be higher than they currently are, we have argued that the potential for investment levels substantially higher than the pre-crisis levels is very limited. It has been further argued that increased net exports is clearly not possible across the board. This leaves budget deficits or lower savings as the only two alternatives. For those who wish to rule out (or limit to some arbitrary number) budget deficits, lower savings is then the only alternative. The socially desirable and sustainable way to lower savings would come from a combination of a substantial shift in the distribution of income and measures to reduce corporate savings. Reducing inequality is a win-win– it would reduce the transfer of funds to the rich through government debt, and it would reduce the need for budget deficits : not to mention all the other economic and social benefits which would come from reduced inequality.

References

Arestis, P. and Sawyer, M. (2010), 'The return of fiscal policy', *Journal of Post Keynesian Economics /* Spring 2010, Vol. 32, No. 3 327-346

Arestis, P. and Sawyer, M. (2004), 'On fiscal policy and budget deficits' *Intervention, Journal of Economics*, Vol. 1 (2004), No. 2, pp.61-74

Browne Report (2010), An independent review of higher education funding and student finance *www.independent.gov.uk/browne-report*

Hein, E. and Truger , A. (2011), 'Finance-dominated Capitalism in Crisis – The Case for a Keynesian New Deal at the European and the Global Level' in P. Arestis and M. Sawyer

(eds.), *New Economics as Mainstream Economics*, Basingstoke: Palgrave Macmillan, forthcoming

HM Treasury (2008a), *Budget 2008*, London: The Stationary Office, HC388

HM Treasury (2010a), *Budget 2010*, London: The Stationary Office, HC61

Jones, F., Annan, D. and Shah, S. (2008), 'The distribution of household income 1977 to 2006/07', *Economic & Labour Market Review*, vol 2, no. 12 December 2008

Kalecki, M. (1944), 'Three ways to full employment' in Oxford University Institute of Statistics, *The Economics of Full Employment*, Oxford: Blackwell

Office for Budget Responsibility (2010), Budget 2010:The economy & public finances – supplementary material

Pasinetti, L. (1997), 'The social 'burden' of high interest rates' in P, Arestis, G. Palma and M. Sawyer (eds.), *Capital Controversy, Post-Keynesian Economics and the History of Economics: Essays in honour of Geoff Harcourt*, London: Routledge, pp. 161-8

Sawyer, M. (2008), 'Kalecki on the Causes of Unemployment and Policies to Achieve Full Employment' in Philip Arestis and John McCombie (eds), *Unemployment: Past and Present*, ISBN 978-0-230-20244-3, Basingstoke: Palgrave, pp.7-28

Table 1 : Main macro-economic aggregates: UK

	2007		2008		2009	
	£billions	% GDP	£billions	% GDP	£billions	% GDP
Private savings	224792	16.00	236917	16.39	264129	18.97
Of which : households	24315	1.73	19326	1.34	68186	4.90
Corporations	200477	14.27	217591	15.05	195943	14.07
Private investment	230181	16.38	208293	14.41	153552	11.03
Of which: households	82107	5.84	67307	4.66	50672	3.64
Corporations	148074	10.54	140986	9.75	102880	7.39
Savings – Investment	-5389	-0.38	28624	1.98	110577	7.94
Current account deficit	36482	2.60	23776	1.64	15506	1.11
Exports						
Imports						
Net foreign income						
Government savings – public investment	-31093	-2.21	-52400	-3.62	-126336	-9.07

Source: Calculated from National Income Blue Book, 2010

Table 2 Compensating changes in savings, investment and current account deficit to accommodate budget deficit of zero

£ billions

2007	Actual	Hypothetical 1	2	3
Government savings – public investment	31093	0	0	0
Private savings	224792	193699	224792	224792
Private Investment	230181	230181	261274	230181
Current Account deficit	36482	36482	36482	5389
2009				
Government savings – public investment	-126336	0	0	0
Private savings	264129	137793	264129	264129
Private investment	153552	153552	279888	153552
Current account deficit	15506	15506	15506	-110830

(Statistical discrepancy for 2009 = 253)

Table 3: Net lending/borrowing by sector

	2007		2008		2009	
	£ billion	% GDP	£ billion	% GDP	£ billion	% GDP
Non-financial corporations	31267	2.23	35071	2.43	66640	4.78
Financial corporations	25128	1.79	53973	3.73	43903	3.15
Government	-38770	-2.76	-68577	-4.74	-150378	-10.80
Households	-51541	-3.67	-41002	-2.84	27295	1.96
Rest of the world	33916	2.41	20535	1.42	12287	0.88

Source: Calculated from National Income Blue Book

Table 4 Forecasts of main macroeconomic aggregates UK 2010-2015

£billions : constant prices

	Household consumption	General government consumption	Investment	exports	imports	GDP at market prices	household savings	trade balance
2009	825.5	288.8	182.4	323.3	353.4	1264.6	62.13	-30.1
2010	827.5	293.9	196.6	337.2	373.2	1279.3	61.33	-36.0
2011	837.8	290.5	208.9	355.8	380.8	1309.2	61.13	-25.0
2013	852.1	284.8	225.3	378.1	391.1	1346.3	58.26	-13.0
2013	869.9	278.2	244.7	401.3	405.4	1385.7	55.53	-4.1
2014	888.9	269.8	264.1	424.8	421.4	1423.3	52.73	+3.4
2015	908.7	264.1	282.1	448.9	438.9	1462	51.87	+10.0
Change 2015/2010	81.2	-29.8	85.5	111.7	65.7	182.7	-9.46	
%change	9.81	-10.14	43.49	33.13	17.60	14.28	-15.42	

Source: Table 1.11 and Table 1.6 (and Table 1.3 for household savings rate) of Office for Budget Responsibility, Budget 2010: The economy & public finances – supplementary material

Table 5 Holdings of UK government debt by sector

	£millions	Percent
Insurance companies and pension funds	257650	30.4
Overseas	243584	28.7
Bank of England	198275	23.4
Other financial institutions	84034	9.9
Banks	41781	4.9
Building societies	11593	1.4
Households	9172	1.1
Local authorities and public corporations	1504	0.2
Total	847593	100.0

Source: Debt management Office, Quarterly Review April-June 2010 available from www.dmo.gov.uk