How can we stimulate growth in the UK economy?

First Prize – 2nd Year Undergraduate Category

OLLIE LEE† AND TRISTAN JOSE‡

"*The Governor of the Bank shows himself perfect happy in the spectacle of a Britain possessing the finest credit in the world simultaneously with a million and a quarter unemployed*" – *Winston Churchill, January 1925*

Abstract

Taking a simple Aggregate Demand (AD) equation, we use public data to plot changes in the identities that comprise AD. We find that government spending has been the most resilient component of AD since 2007, which we interpret as an *a posteriori* case for fiscal expansion as an effective policy. We organise our fiscal stimulus into three groups, from our most preferred (spend more) to the least contentious (cut later). Our AD analysis also shows that the component that has performed the most poorly since 2007 is investment and it is this that informs our argument for expanding the use of monetary policy and supply side measures.

Introduction

This essay examines proposals for stimulating economic growth in the UK economy. For four years growth in the UK has been negative or weak. There is no shortage of discussion on the causes of recession; our attention is solely on how to increase economic growth.

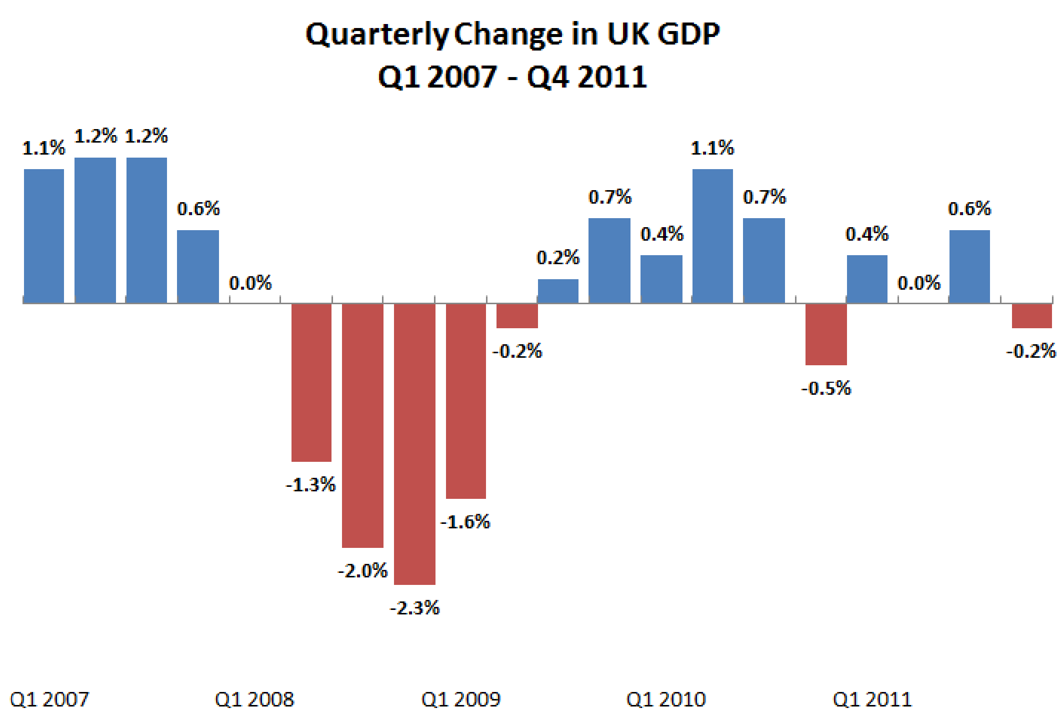
† BSc Economics
‡ BSc Economics

The case for stimulus is to increase employment, and the path to this is to increase demand. We set out proposals for stimulating demand using fiscal and monetary policy. We briefly examine supply-side measures effective in the short-run.

The Nature of the Problem: Weak Demand

The financial crisis that began in 2007 led to a recession in 2008-9 that saw economic growth in the UK to fall for four consecutive quarters. Four years after the start of the recession, GDP remains 4% lower than its 2007 peak (ONS, 2012).

Figure 2: UK GDP



The relationship between employment and growth can be said to run in both directions: employment-led growth, and growth-led employment. At the time of writing, (February 2012), the UK unemployment rate is currently at a 17 year high of 8.4% (HM Treasury, 2012). Employment has fallen in the public and private sector as a result of policy in the former and demand deficiency in the latter.

We emphasize the human impact of unemployment and the large negative effect it has on life satisfaction. Economists are well aware of the classical trade-off between inflation and unemployment. However, the Bank of England's remit to priority to inflation targeting demonstrates how the unemployment issue is (at least formally) a secondary concern. Insights from behavioural economics and studies on life satisfaction demonstrate that the negative impact of unemployment on happiness is more than twice that of inflation, as shown in Figure 1.

Figure 1: Life Satisfaction

Variables	Unemployment	Inflation
Life Satisfaction	-2.8	-1.2

(Tella, MacCulloch and Oswald, 2001)

With life satisfaction rated on a ten-point scale, Figure 1 shows that a one percentage point increase in unemployment will lead to a fall in life satisfaction of 2.8, whereas a one percentage point increase in inflation will only lead to a fall in life satisfaction of 1.2 (Tella, MacCulloch and Oswald, 2001). Having described the recent recession and unemployment we analyse some of the components of GDP.

Figure 3: AD Identities

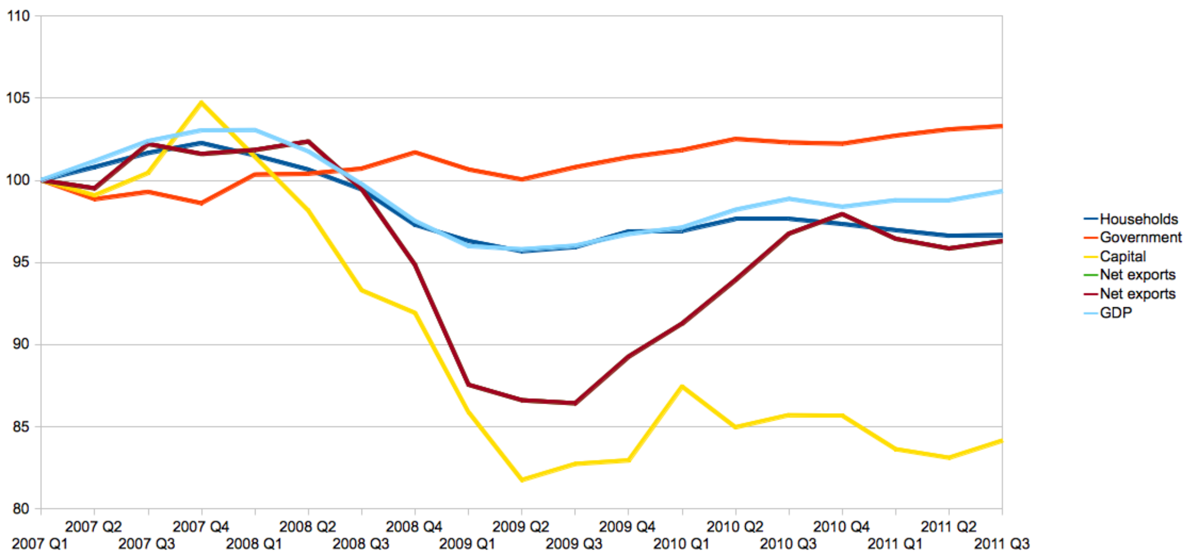
GDP = AD = C + I + G + (X-M)

Aggregate Demand identities		ONS Data Series	
AD	Aggregate Demand	ABMI	Gross domestic product at market prices
C	Consumption	ABJR	Household final consumption expenditure
G	Government Spending	NMRY	General government final consumption expenditure
I	Investment	NPQT	Gross fixed capital formation
(X-M)	Exports less Imports	IKBL	Trade in goods & services total exports, less imports

(Office of National Statistics, 2012).

Below we plot data that are analogous with the AD identities in the above table.

Figure 4: GDP components since Q1 2007 (Q1 2007 = 100)



Household final consumption expenditure (analogous to Consumption, *C*) fell with the recession and has stagnated since. Growth potential of *C* is limited by low consumer confidence and by consumers de-leveraging.

Net exports (*X*-*M*) fell during the recession but favourable currency changes have allowed a rise almost to pre-recessionary levels. Sterling depreciated by 25% against the Dollar and Euro, to which we attribute much of the improvement in net exports (Historical Statistics, 2012).

General Government final consumption expenditure (*G*) has increased quarter-on-quarter since the recession. Up to now this has mostly been traditional, counter-cyclical spending. We will set out the case for an expansion beyond the usual automatic stabilisers to full stimulus.

Gross fixed capital formation (a proxy for Investment, *I*) has fallen more than 16 percentage points with the recession and stagnated since (Bank of England, 2012). Confidence is low, a lot of investment is being deferred, and firms have not yet completed the de-leveraging cycle. Investment is the component of AD that has performed the most poorly relative to GDP; it is this that informs our supply-side suggestions.

Examining Debt: The Case for a Medium-term Increase in Debt

We believe that fiscal policy can increase demand, and that increased demand would increase employment. Viewed within our AD/AS model, current fiscal policy is contractionary and left unchanged will not help stimulate growth or employment in the short or medium term. We therefore advocate a fiscal expansion financed by debt. We discuss debt before we outline proposals for fiscal expansion.

There are two popular views that form the prevailing counter argument to a debt increase. The first is that debt is too expensive; the second is that the UK is at its debt limit. The first view is simple to refute. We argue that the current low cost of borrowing makes a debt increase attractive. We strengthen this view by citing recent Government analysis showing that increased bond yields would not significantly alter the UK's budget position. The second view can be challenged with evidence that the UK has not reached its debt limit, that it possesses adequate "fiscal space" (Ostry, Ghosh, Kim, and Qureshi, 2010).

The Low Cost of UK Government Debt and Implications for Policy

The yield on Gilts is lower than at any time since the 19th Century; in real terms the Government is able to borrow at negative interest rates. We believe that this is a greatly convincing case for debt-financing fiscal expansion. The prevailing counter argument (and the stated view of the chancellor) is that Gilt yields are low because the commitment to austerity has convinced investors that the UK is a safe haven; reversing or slowing austerity plans would alarm the markets and the yield on Gilts would increase. Moreover, it is frequently claimed that the UK would lose its AAA credit-rating.

We believe that the 'safe haven' argument holds some weight, but this is also true of most other developed economies with their own non-Euro currency, who have all seen a 'flight-to-quality' as the Sovereign Debt crisis has continued. With respect to the UK's credit rating, there are numerous historical examples of countries being downgraded by ratings agencies and then seeing bond yields fall: Japan in the 1990s, and the US (Wall street Journal, 2011) and France within the last twelve months (Bloomberg, 2012). We believe that the UK's risk of default is virtually nil, and so low yields are unlikely to be completely dependent on debt reduction.

Rather, we believe they reflect the perceived weak growth potential of the UK.

It is possible to circumvent this argument. The Office for Budgetary Responsibility published its 'Economic and Fiscal Outlook' in November 2011 (OBR, 2011). The report models the effect of increased yields on the Government's debt position, and finds that even a 150 basis point increase in yields only has the effect of decreasing the 2016-17 budget balance by 70 basis points. The report states that:

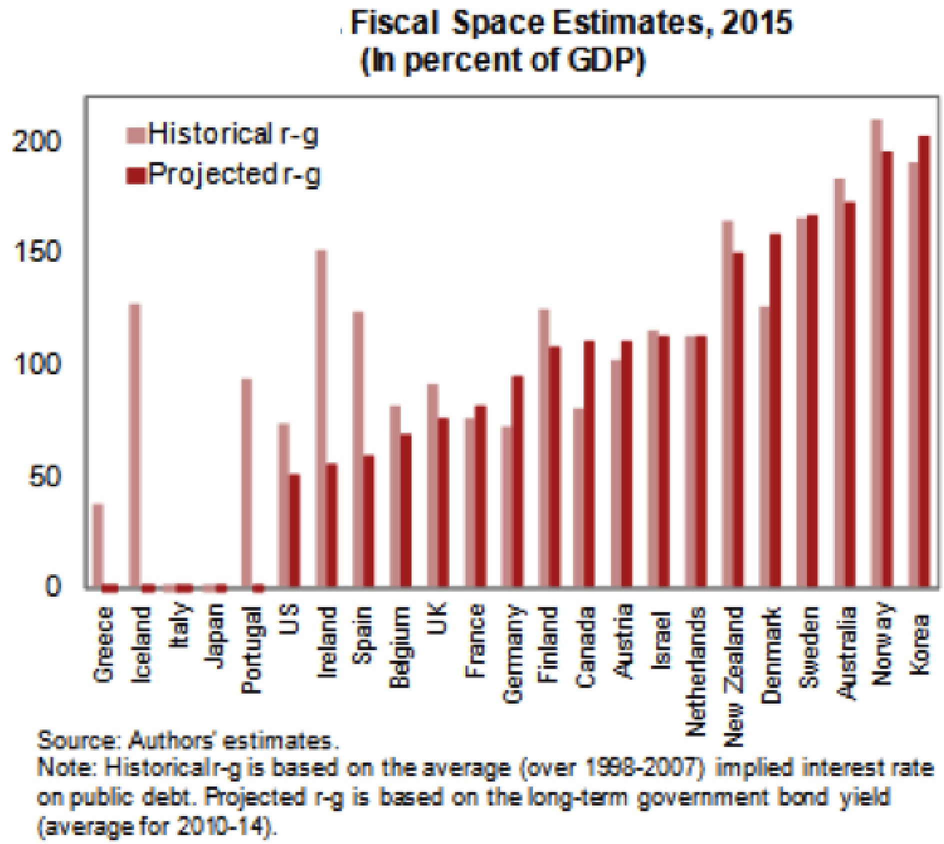
> "...Shocks to gilt rates have a relatively small impact on the chances of meeting the mandate and supplementary target. This is because an increase in rates only applies to new debt issuance, and the UK has a relatively long average debt maturity for conventional gilts of 131⁄2 years, and because new issuance is projected to fall as borrowing declines. Therefore over a short horizon, such as our five-year forecasting period, the impact of a shock to the average nominal rate on gilts is relatively small."

We interpret this as compelling evidence that a medium term increase in Government debt is not unaffordable, as frequently argued. We now challenge the view that the UK is at its debt limit.

The Scope for Additional Debt: Adequate Fiscal Space

A working paper from the IMF defined fiscal space as "the distance between current debt ratios and the corresponding debt limit", and the authors provide the data shown in Figure 6 (Vox EU, 2012).

Figure 5: Fiscal Space Estimates



The paper's authors stress that the values given should not be interpreted too literally. Commenting on the paper, Jonathan Portes, Director of the National Institute of Economic and Social Research, says that while the UK's fiscal space does not rank highly in comparison to other economies, the UK still belongs in the group of countries that possesses adeuqate room to expand fiscally in the short and medium term (Portes, 2012); the time-frames in which we have set our stimulus proposals. However, 'fiscal space' is somewhat conceptual, so we intend for it to be considered as supplementary to our first-order argument that the low price of debt should allow for more borrowing. Combined, this evidence forms the basis of our case for fiscal expansion.

Stimulating the Economy with Debt-financed Fiscal Expansion

Government spending is the only AD identity we list that is growing at a rate greater than GDP; to the extent that the UK has experienced recovery from recession, the recovery has been led by sustained Government spending (ONS, 2012). [1]

We begin our discussion on public expenditure by looking at the Government's calculated fiscal multipliers for different policies: their effectiveness. We then look at different levels of total spending: the direction of overall policy.

The Effectiveness of Policy: Fiscal Multipliers

Figure 6: Fiscal Multipliers

Table C8: Estimates of fiscal multipliers

	Impact multipliers
Change in VAT rate	0.35
Changes in the personal tax allowance and National Insurance Contributions (NICs)	0.3
AME welfare measures	0.6
Implied Resource Departmental Expenditure Limits (RDEL)	0.6
Implied Capital Departmental Expenditure Limits (CDEL)	1.0

Figure 6 lists the OBR estimates for the fiscal multipliers of different policies. The last three require elaboration. "AME [Annually Managed Expenditure] welfare measures" represents benefit payments. "RDEL" is Resource DEL [Departmental Expenditure Limits], while "CDEL" is Capital DEL. RDEL is made up of "current expenditure such as pay, allowances, and running costs". CDEL is "New investment in equipment and infrastructure that has a life over more than one financial year" (Budget, 2010). In these estimates RDEL and CDEL have the greatest multiplier effects, we interpret this in a broad sense as "efficiency" of policies, and these feature in our proposals for fiscal expansion.

[1] At the time of writing, government spending has reached new highs and the announced austerity program has yet to deliver reductions in total Public expenditure. Whichever position one takes on the effect of austerity, it is not the primary cause of the recessionary pressures that exist right now in the UK economy (Gemmell, 2011).

The Direction of Policy

With regards to expenditure all governments face three choices: spend more, carry on spending at the same level, or reduce spending. We identify the first ('spend more') as our preferred option, and we make a case where this could be achieved with increased infrastructure spending.

In the short-term capital spending offers the chance to increase demand and employment simultaneously, particularly the construction sector has declined precipitously since the recession. In the medium-term capital spending has the strongest impact multiplier, as described above. In the long-term, infrastructure improvements improve the economy's supply capacity (an inherently good thing).

Our second most preferred option is 'carry on spending'. Our simple AD/AS model would predict that a fall in Government Spending (G), *ceterus paribus*, would cause AD to decrease. We believe this outcome is especially dangerous because G, as stated, has helped mitigate the weak demand in the private sector since 2008. Our logic says that until the other components of GDP return to their pre-recession peak, it is premature to cut G. More concretely: private sector job creation has been unable to offset job losses in the public sector, so reducing public sector employment is to contribute to total unemployment (Peppes, A, Robinson, M and Wei, 2011)

Figure 5: Public Sector Employment

One perennial criticism using capital spending to fight recession is that time lags reduce the effectiveness: too few projects are "shovel ready" and so stimulus arrives too late (Boyer, 2012). Krugman, blogging specifically on the effects of austerity in the US, offers the view that simply resuming previous levels of local and state government spending would significantly reduce unemployment (Krugman, 2012). Applying a similar logic to the UK (unlike Krugman's example, we make no provision for population growth) we see that total Public Sector employment has fallen by 414,000 since its post-recession peak. The data we use extends to Q3 2011, at which point the Claimant Count was 2.64 million; these Public Sector job losses represent 15% of this (BBC, 2012). As stated above, departmental spending has an impact multiplier of 0.6, which is why we prefer this policy to tax cuts of the same magnitude.

Our least preferred option is 'cut later'. Though our least preferred, this policy would appear to be the least contentious in the political reality of 2012. Blogging in his capacity as the Chief Economist at the IMF, Olivier Blanchard offered "Ten commandments for fiscal adjustment in advanced economies" (Blanchard 2010). One of these 'commandments' is particularly pertinent for our argument to cut later: "you shall not front-load your fiscal adjustment". If one accepts the UK Government's case for deficit reduction, but agrees with our case for debt affordability,

then our AD/AS model allows the interpretation that the economy would receive some stimulus the cuts were implemented more gradually and evenly.

Stimulus by Monetary Policy: Targeting Growth within a simple Taylor Rule

Monetary policy is typically loosened in a recessionary environment. Interest rates have been at 0.5% since March 2009, and as such policy is at the 'zero-lower-bound' (Bank of England, 2012). At the lower-bound it is not possible to lower interest rates to increase the money supply, and so the Bank must use unconventional methods to inject money into the economy (Woodford, 2011).

We believe that the conventional and unconventional policy responses of the Bank have been sensible and have helped growth during and since the recession. Within the 'rules of the game' of monetary policy, the Bank has responded correctly. We advocate changing those rules to allow a larger (and still correct) response.

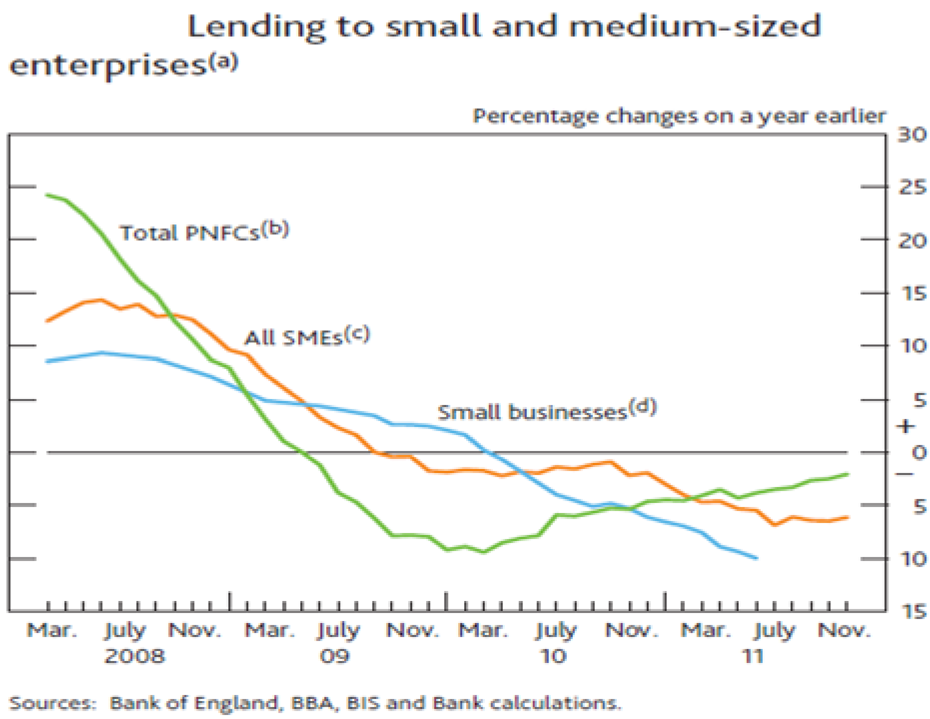
We can assume that, formally or informally the Bank uses some form of Taylor Rule. The two principal features of any standard Taylor Rule are inflation and the output gap. The output gap is a proxy for unemployment of resources (including but not limited to labour). We believe that the best chance for Monetary Policy to stimulate the economy is for the Bank to place less emphasis on inflation and more emphasis on the output gap. We advocate an expansion of QE – expansion in money terms and in the range of assets purchased.

Supply Side Measures: increasing Investment by encouraging lending to SMEs

Supply side improvements are the key to sustaining growth, but growth needs to be stimulated before it can be sustained. GDP is 4% below its 2007 peak. We believe that this is not because the UK's capacity to supply goods and services has fallen by 4%, but because there is inadequate demand for goods and services. We single out one supply-side policy as critical to stimulating UK growth within our expressed time period: increasing bank lending to small and medium sized enterprises (SMEs). The *prima facie* case for this is set out in our AD/AS analysis that showed Investment is the weakest component of GDP. We recognise two causes for this: some companies are choosing not to invest, while some others that want to cannot obtain the funds to do so. Both of these are the effect of a balance sheet recession: those companies not

investing are repairing their balance sheets; and a lack of funds for other companies is a as result of banks repairing their balance sheets. We identify the second cause, 'cannot obtain funds' as requiring Government action; and we are supportive of current policy on this issue. Bank lending turns savings into investment, and it is this process that has stalled, as shown in Figure 7.

Figure 7: Lending to Businesses



Net lending in fell quarter on quarter in 2011, prompting the Government to launch 'Project Merlin', with the aim of making banks increase their lending to SMEs (HM Treasury, 2011). The banks made gross new loans (to businesses of all sizes) of £214.9bn against a target that they were set of £190bn. However, they failed to meet the lending target for SMEs (£74.9bn against the £76bn target) and there is to be no repeat of project Merlin this year (BBC News, 2012). Instead the Chancellor is proposing a £20 billion credit easing national loan guarantee, which will cover loans and overdrafts to businesses with a turnover of less than £50 million for the next two years. It is hoped that this will reduce interest rates, making it easier for businesses to borrow. At a general level we support current policy because believe that Government action increases the likelihood of SMEs receiving more lending, increasing Investment and stimulating

growth. But at a more specific level we observe shortfalls in Government policy. More needs to be done to instil confidence in the businesses that are choosing not to invest; banks can be made to commit to lending more, but if businesses do not seek funding then the stimulus potential of Project Merlin *et cetera* is diminished.

Conclusion

We conclude that in order to stimulate growth in the UK economy, a number of different policy options have to be combined as a stimulus package. These policies fall under monetary, fiscal and supply side improvements. We argue that interest rates should be held, Quantitative Easing should be increased and fiscal policy should be expanded with debt-financing. Our monetary policy is aimed in the same direction as that of the Bank of England, though we believe that relaxing its inflation target would allow an increase in asset purchases that would be sufficiently great to provide stimulus.

We believe that fiscal policy can increase demand, and that increased demand would increase employment. Our AD/AS model shows that current fiscal policy is contradictory and left unchanged will not help stimulate growth or employment in the short or medium term. We advocate a fiscal expansion financed by debt. We conclude that the UK's debt position does not impede such expansion: the price of debt is low and global demand for low risk assets is high. While the UK's debt-to-GDP ratio is higher than before the recession (and the case for lowering this in the long term is compelling) it is still lower than in many OECD countries: the UK has adequate fiscal space to debt-finance government spending increases in the medium term.

In our AD/AS model our proxy for investment is the most depressed component. The link between savings and investment is made in the banking sector, and we identify inadequate bank lending to SMEs as harming investment and therefore growth. Our advocated supply-side policy is for the Government to apply more pressure on banks to increase lending.

References

Bank of England, Asset Purchase Facility, *"Quarterly Report",* 2011.

Bank of England, *"Quarterly Bulletin"*, Accessed 20/02/2012, <http://www.bankofengland.co.uk/publications/quarterlybulletin/index.htm>.

Bank of England, *"Bank Rate Decisions",* Accessed 20/02/2012, <http://www.bankofengland.co.uk/monetarypolicy/index.htm>.

BBC News, *"Economy Tracker"*, Accessed 20/02/2012, <http://www.bbc.co.uk/news/10604117>.

BBC News, *"Project Merlin: Bank net lending fell in 2011"*, Accessed 20/02/2012, <http://www.bbc.co.uk/news/business-17009985>.

Blanchard, O and Cottarelli, C, *"Ten Commandments for Fiscal Adjustment in Advanced Economies"*, Accessed 20/02/2012, < http://blog-imfdirect.imf.org/2010/06/24/ten-commandments-for-fiscal-adjustment-in-advanced-economies/>.

Bloomberg, "French yields drop at first bill sale since S&P downgrade of nation's debt", Accessed 20/02/2012, < http://www.bloomberg.com/news/2012-01-16/french-yields-drop-at-first-bill-sale-since-s-p-downgrade-of-nation-s-debt.html>.

Borjas, G, Immigrants in the U.S. Labor Market: 1940-80, "*The American Economic Review",* 1991, Vol. 81.

Boyer, R, The four fallacies of contemporary austerity policies: the lost Keynesian legacy, *"Cambridge Journal of Economics"*, 2012, vol. 36.

Corsetti, G, Kuetser, K, Meier, A and Muller, G, Debt Consolidation and fiscal stabilisation of deep recessions, *"EUI Working Papers"*, 2010.

Di Tella, R, MacCulloch, R and Oswald, A, Preferences over inflation and unemployment; Evidence from surveys in happiness, "*The American Economic Review"*, Mar., 2001, Vol. 91, No. 1, pp. 335-341.

Dornbusch, R, Fischer, S and Startz, R, *"Macroeconomics"*, McGraw-Hill Publishing, Eleventh Edition, 2011, p. 195-209.

Gertler, M and Karadi, P, A Model of Unconventional Monetary Policy, *"Journal of Monetary Economics",* 2010, p. 1-40.

Gemmell, N, Can a Fiscal Stimulus Boost Economic Growth Rates? *"The Economic Journal",* 2011, 121: F1–F3.

Guajardo, J, Leigh, D and Pescatori, A, Will It Hurt? Macroeconomic Effects of Fiscal Consolidation, *"IMF working papers: World Economic Outlook"*, 2010.

Harrison, R, Asset purchase policy at the effective lower bound for interest rates, *"Bank of England working paper",* 2012, vol. 444.

Historical Statistics, “UK exchange rates”, Accessed 21/02/2012, <http://www.historicalstatistics.org/>.

HM Treasury, *“HM Treasury statistics: National Statistics”,* Accessed 20/02/2012, <http://www.hm-treasury.gov.uk/national_statistics.htm>.

HM Treasury, *“Merlin Executive Remuneration Disclosure consultation”,* Accessed 20/02/2012, <https://financialsanctions.hmtreasury.gov.uk/consult_merlin_remuneration_disclosure.htm>.

Joyce et al, The financial market impact of quantitative easing, *“Bank of England Working Paper No. 393”*, 2010.

McCallum, Theoretical Analysis Regarding a Zero Lower Bound on Nominal Interest Rates, *“NBER Working Paper No. 767”*, 2000.

Office of National Statistics, *“National Income, Expenditure and Output”,* Accessed 20/02/2012, < http://www.statistics.gov.uk/hub/economy/national-accounts/national-income--expenditure-and-output/index.html>.

Office of National Statistics, *“Quarterly National Accounts”*, Accessed 20/02/2012, <http://www.statistics.gov.uk/hub/releasecalendar/index.html?newquery=*&title=Quarterly+National+Accounts&pagetype=calendar-entry&lday=&lmonth=&lyear=&uday=&umonth=&uyear=>.

Ostry, J, Ghosh, A, Kim, J and Qureshi, M, Fiscal Space, *“IMF working paper series”*, 2010.

Peppes, A, Robinson, M and Wei, K, The UK's quest for growth in an era of fiscal austerity, *“Public management and policy association report”,* 2011.

Portes, J, Fiscal Space, *“National Institute of Economic and Social Research Paper”,* 2012.

Ruhs, M, Will the migration cap fit, *“LSE politics and policy”*, 2010.

Shapiro, M and Slemrod, J, Consumer Response to Tax Rebates, “*American Economic Review*”, 2003, v93, p. 381-396.

Sloman, J and Wride, A, *“Economics”,* Pearson's Education Publishing, Seventh Edition 2009, p. 438, 562-73.

The Economic Times, *“World Economic Forum Davos 2012: No country immune to euro crisis”*, Accessed 20/02/2012, <http://articles.economictimes.indiatimes.com/2012-01-29/news/30674044_1_managing-director-christine-lagarde-eurozone-euro-crisis>.

The Wall Street Journal, *“U.S. Treasury yields fall despite downgrade”,* Accessed 20/02/2012, < http://articles.marketwatch.com/2011-08-08/markets/30909240_1_treasury-note-yields-credit-rating>.

Ugai, Effects of the Quantitative Easing Policy: A Survey of Empirical Analyses, *“Monetary and Economic Studies, Bank of Japan”*, 2007.

Vox EU, “Fiscal Space in advanced countries”, Accessed 21/02/2012, < http://www.voxeu.org/index.php?q=node/6182>.

Wadhwani, S and Dicks, M, Quantitative Easing and Policy Impotence *“Wadhwani Asset Management working paper”,* 2011.

Woodford, M, Policy Options in a liquidity trap, *“Cambridge: General Theory Conference”,* 2011.