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Ambulance economics: The pros and cons of fiscal stimuli

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The current world economic crisis has many aspects. What caused it? How can a future crisis be avoided? How much blame attaches to the world's financial sector, or which specific parts of it? Or, was it the 'global imbalances' that one should blame? Perhaps blame attaches to particular governments, in particular the US and UK ones (bearing in mind that Congress is part of the US government)? There is the question the Queen asked when she visited the London School of Economics 'Why did no one see the crisis coming?' Could it have been foreseen? Why did it have such different effects on different countries?

It will take time, and many PhD theses, articles and books to resolve these matters. People are still discussing details of the Great Depression, and this latest crisis that did not turn into a depression (but might have) will no doubt similarly stimulate the economics profession. Perhaps no issue is as important as the causes of the international financial sector breakdown, and what changes are needed in regulations of that sector. Is the sector overstaffed, overpaid and over powerful?

The world economy has had a heart attack, the heart and the arteries being the financial sector. This is a fruitful analogy developed by Caballero (2009). Ambulance economics is about the immediate, urgent, temporary rescue process. I have in mind here the *Keynesian* ambulance that was never really called upon in the Great Depression. We cannot wait to form our views about it, whether we should call the ambulance (or leave it to the market?), whether it might do more harm than good, and whether it will leave us with a costly legacy. Decisions must be made, and it is not appropriate to say: just wait for research. Indeed, the research should have been done since we have had over seventy years to think about it.

I have therefore written a general think-piece about fiscal stimuli – about the ambulance that has been called upon all over the world, from China and Japan, to the US and Germany, and about all those hostile arguments that have been thrown at it as it hurtled past. To oversimplify, it does seem that Keynes has won. The policies that his disciples have inevitably favoured have, to a great extent, been implemented. Time will tell to what extent they have been successful. Provisionally I would suggest that, thanks to the ambulance, a Great Depression has been avoided. This would be a tremendous achievement.

The world economy has had a heart attack, the heart and the arteries being the financial sector. Ambulance economics is about the immediate, urgent, temporary rescue process.

Quite early in the crisis the IMF produced an excellent guide to the ambulance – IMF (2008) – and this essay might be regarded as a supplement to this guide. I have also found most useful another, later, IMF document – IMF (2009) – which is about 'The State of Public Finances' and has information about different countries, forecasts, and so on. Two OECD documents – OECD (2009a) and OECD (2009b) – contain detailed information about fiscal policies in many countries and are full of interesting country information. There is very little data in this paper here, so that I recommend these IMF and OECD publications to readers in search of data.

I. The Keynesian ambulance and its problems

The basic theory: The main effects and how the future is affected

I begin with a simple model that is more fully expounded in CEPR *Policy Insight* No. 34, i.e. Corden (2009). The country has a floating exchange rate and starts with an actual or potential output gap. We can think of this gap as being substantial, representing even a depression. The cause is a breakdown in the credit system and the inability of expansionary monetary policy to revive the economy. Hence fiscal policy comes to the rescue. One might call this the story of 2008-09.

I shall analyse the effects of a fiscal expansion taking the form of expenditure on infrastructure, which is financed by the sale of bonds on the world or the domestic market. One can also allow for other forms of public expenditure or reductions in taxation. The main point is that there will be a budget deficit, which will increase the public debt. The increased expenditure relative to the recession situation will give rise to a famil-

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iar multiplier process, which will revive domestic output and employment and also consumption.

As is familiar from Keynesian theory, there will be leakages from the income stream into taxation, imports and savings. The increased tax revenue that results will reduce the extra debt incurred. Assuming that the current account has to stay in its initial balance as extra foreign finance is not available, the leakage into imports will lead to exchange rate depreciation, which will raise exports and reduce imports somewhat, so that any net leakage on that account will end. But there will be a series of leakages into savings that will finally add up to the original net stimulus in the form of the original budget deficit minus the extra tax revenue. Thus the debt incurred will finally be equal to the increase in savings brought about by the fiscal stimulus.

Let me label as Period 1 the present period when there would have been a recession (or even Great Depression) if there had not been the fiscal stimulus, while Period 2 is 'the future'. No one would deny that in Period 1 there has been a gain as a result of the stimulus, reflected in higher consumption in that period. But what about Period 2? Here it is usual to emphasise the liability for taxpayers that has been created as a result of the debt incurred in Period 1. Hence it seems that there is a gain now (Period 1)) and a cost or loss later (Period 2). I term the emphasis on the later loss 'the Conservative Allegation'.

Stimuli projects should not be stopped in midstream even when the aggregate demand (Keynesian) purpose has evaporated. In the short-run private investment would then be deliberately crowded out in order to complete public investments.

Consider now the Period 2 loss. There are actually two qualifications. Firstly, if additional government expenditure in Period 1 has taken the form of capital investment, perhaps in infrastructure, it may yield some benefits in Period 2. This depends on how efficient the investment is. Secondly, the higher savings that have resulted from the original government spending, followed by the multiplier process that raised incomes in Period 1, will enable residents to buy financial assets equal in value to the extra debt. As savers they have more assets and as taxpayers they have more liabilities. If they were the same persons these two effects would cancel out. Only the net gain from Period 1 investment would be left.

The main point is that, in the absence of the stimulus policy, output in Period 1 would just be lost. This would be the result of the output gap. There is clearly a gain from this extra output. Some of it goes to Period 1 consumers and some is available in Period 2 through the higher savings out of the higher incomes of Period 1. In addition there is a loss to taxpayers in Period 2 owing to the extra debt, and a possible gain through the fruits of Period 1 public investment.

This is the basic story. A country's fiscal stimulus actually has three parts. I am focusing on the first part here. This is the *discretionary* stimulus, of which investment in infrastructure is an important example. The second part consists of the *automatic stabilisers*. Here it is important to remember that these stabilisers must actually be financed; if they are not financed their effects will be offset by higher taxes or reduced government spending. In that case they would fail to stimulate (or stabilise) the economy, and also would not increase debt. The third part I do not discuss here. This is government finance provided to rescue or assist the financial sector. This will certainly increase the public debt, but may not directly lead to extra spending and hence may not have an immediate stimulus effect. It will just help in eventually reviving the financial sector and hence the economy.

Additional future costs and benefits

I continue here with the cost-benefit analysis of fiscal stimuli, focusing just on the costs and benefits in the future or Period 2.

The principal future cost not taken into account in the preceding analysis is that of the need to increase taxation because of the bigger public debt stock. The fiscal stimulus has provided the community as a whole with the extra financial resources to pay this tax – namely through the extra savings that the stimulus made possible. The extra economic cost consists only of the administrative and possible distortion costs (such as disincentive costs if based on income tax) of extra taxation.

One might also add a political or 'perception' cost. Taxpayers will forget that they owe their extra financial resources to the savings that they made only because of the rise in their incomes resulting from the stimulus. These resources, of course, are only 'extra' relative to the true counterfactual, namely a period of deep recession in Period 1. But people may forget this, and may take their financial resources as given, and thus resent the taxes.

I would put heavier weight on the future (Period 2) benefits from a fiscal stimulus that are not mentioned in the previous section. These are the benefits from avoiding a depression in Period 1. Here we need only think of the Great Depression. What harm did it do that lasted into later years? First, prolonged and severe unemployment lead to a loss of human capital, in the form of work experience and the confidence that goes with it. Secondly, the Great Depression led to popular support for anti-capitalist (or anti-free market) policies that in some countries went well beyond the need for them – an argument that should appeal to conservatives – and finally it led to social unrest, xenophobia, and finally to Hitler and the second world war.

Practical problems of fiscal stimuli

Timely, temporary, targeted

Next, we come to more practical aspects of fiscal stimulus policies. This is a topic that will particularly benefit in the future from empirical research on the recent experience of fiscal stimuli in many countries.

The IMF paper (2008) was an influential early guide internationally to fiscal policy in the crisis. It laid down the much-quoted criteria 'timely, temporary, and targeted' I would add 'efficient ', and also the need to define 'targeted'. There are three possible targets, or target 'categories'. We might target (a) spending rather than saving, (b) investment rather than consumption, and (I add cynically) (c) votes and interest groups, rather than foregoing all political benefits. Now, let us consider each of these in turn.

a) **Spending, whether consumption or investment, not saving.** This is obvious. Funds that are saved are not lost, but they do not fulfil their immediate Keynesian purpose. Saving is less likely when the recipients are 'liquidity constrained', that is, they cannot easily borrow, and so will spend all they receive. In general, poorer people are more likely to be constrained in this way, so that a bias in giving (or lending) funds to such people fits in with the usual income distribution concerns.
b) **Investment rather than consumption, and the higher the return, the better.** The future will thus benefit, and this will help to offset the future cost of the debt created. The present (Period 1) will benefit through the Keynesian spending effect, and the future (Period 2). will benefit through the returns on the investment.
c) **Votes and interest groups.** I include this category for completeness. I am sure that close study of recent discretionary stimuli policies shows that this has entered the governments' calculations, even when (a) and (b) above also enter. In the US and Australia in 2009 it has clearly been a motive in the detailed formulation of stimulus policies, as one might expect in a democracy. In the US case one should emphasise the role of Congress here.

There are inevitable trade-offs. Infrastructure investment meets target (b), but the quicker it gets started – that is, the timelier it is – the less efficient it is likely to be. Permanent tax cuts, usually favoured by conservatives, meet targets (a) and (c) but are not temporary. On the other hand, 'hand-outs' and temporary tax cuts may fail to meet target (a).

Efficient infrastructure investment, which meets target (a) and is temporary, may not be completed when the need for stimulus has ended. There are two ways of dealing with that problem. The first is to concentrate on small investments (for example, school improvements, as in Australia), and break up major developments into sections that can individually be completed fairly quickly. The second is to give priority to completion of such projects relative to new private sector developments. This means that, if the output gap has disappeared, and monetary policy has revived, the interest rate must be raised sufficiently to avoid inflation. Stimuli projects should not be stopped in midstream even when the aggregate demand (Keynesian) purpose has evaporated. In the short-run private investment would then be deliberately crowded out in order to complete public investments.

Automatic stabilisers

As I noted earlier, these are only effective as stabilisers, and only add to the public debt, if they are actually financed. This cannot be taken for granted. In the US potential stabilisers operating through the States were only partially financed by the Federal government, while the States themselves have not been free to borrow.

Automatic stabilisers are timely and temporary, and, from the point of view of conservatives, also have the virtue of not requiring new government initiatives. A disadvantage is that they cannot be targeted to finance investment. In general, the higher the share of government in an economy, the more scope there is for automatic stabilisers . This explains why automatic stabilisers have had a higher share of stimulus expenditure in Europe than in the US.

Pre-existing budget deficit or debt problem

It is well known that most or all developed countries have a long-term potential public debt problem for demographic reasons. Most or all countries need pension and health reforms that have not yet taken place, but that will be needed if public solvency is not eventually to be at risk. Some countries had even before the crisis very high ratios of public debt to GDP, notably Japan and Italy. Fiscal stimuli and related policies that are likely to be pursued for two to three years will clearly intensify this problem.

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This problem becomes even more evident when ratios of prospective budget deficits relative to GDP for the next few years are calculated. For example, for the US this ratio was 2.9% in 2007, and (in March 2009) was forecast for 2010 at nearly 9%. (and since then higher figures have been cited). For the UK it was expected to rise from 2.7% in 2007 to 11% in 2010.

An excellent IMF document (2009) discusses in detail this whole issue of the outlook for public finances of the various forms of fiscal stimulus and other interventions and effects resulting from the crisis. It is full of useful facts and estimates, which I do not reproduce here. I will just note two important conclusions.

Firstly, one needs to get the fiscal effects of the current crisis in perspective relative to the pre-existent long-term problems. These effects of the crisis will only last for a few years, and hence are much less important than the long-term effects of the well known demographic changes.

For the 12 advanced countries that are members of the G20, the report calculates the 'net present value of impact on fiscal deficit' of crisis and of age-relayed (demographic) spending. (See Table 11, p. 45 of IMF

2009). Of course these are only estimates, but – to sum up – for the group as a whole the burden of the crisis is only about 5% of the total (age-related plus crisis) burden. The reason is that the demographic effects will last for a long period while the crisis effects are a matter of a few years. Looking at figures for particular countries, the figure is 6.4% for the US, 7.9% for the UK, and about 5% for Australia, Germany and Spain. For Japan it is 15%.

In particular the IMF has urged (and I agree) that countries should not switch to fiscal consolidation – which of course is eventually needed because of the demographic effects – until the current crisis is clearly past.

The other conclusion, strongly supported in various IMF documents, is that concern with the adverse long-term effects on public debt of fiscal stimulus policies should not lead such policies to be ended or modified prematurely. Taking all effects discussed in this paper into account there is highly likely to be a net benefit from fiscal stimulus policies.

In particular the IMF has urged (and I agree) that countries should not switch to fiscal consolidation – which of course is eventually needed because of the demographic effects – until the current crisis is clearly past. Thus, premature departure from fiscal stimulus should be avoided. Every country is a special case, and it may well be that Australia is ahead of the pack. But one should remember the adverse effects of premature fiscal tightening in the US that led to the 1937 recession, and also several short episodes of fiscal tightening in Japan, which always led to recessions, discussed in Koo, 2008.

Capital flows and the exchange rate

Consider a country that has a floating or at least flexible exchange rate. Before the crisis it had a current account deficit. Now the crisis comes, having two effects. Firstly it leads to a decline in domestic spending (perhaps owing to the ending of a stock market or real estate bubble). At a constant exchange rate, this would certainly cause a recession. Secondly, foreign capital stops flowing in and the current account therefore has to be balanced. Thus a balanced current account now represents 'external balance'.

To maintain internal balance (constant employment) and the new level of external balance the exchange rate will have to depreciate. Furthermore – and this is the important point – the level of domestic real expenditure must decline. But it might have to decline more or less than the decline that resulted from the crisis. It is even possible that the decline in domestic spending resulting directly from the crisis was just enough. Hence it is not certain that a fiscal stimulus would be needed in this case; indeed, a fiscal contraction might be appropriate. It all depends on the required current account and hence on capital flows. In any case, the output gap created by the initial contraction of demand needs to be filled partially, wholly or even more than wholly by an increase in net exports.

In the current crisis capital inflows into some countries (e.g. the Irish Republic, and the Baltic states) did stop, while, at first at least capital flows increased into the US and into Switzerland.

The UK case is interesting. I draw here on Wilkes (2009). Before the crisis the UK, like Australia, had a booming export sector, namely the financial services sector, which brought plenty of money into the UK Treasury. Even more than in Australia, this revenue was merrily spent. In both cases it was not realised that it was a very short-term boom, though clearly the crash was much bigger in the UK. Now the UK's booming sector is not so prosperous and its prospects do not look so good. The UK is poorer (say by 5%) than it was thought. In fact the UK government relied too much on the fruits (in the form of tax revenue) of an unsustainable bubble. This differs from the Australian case, as perceived at present. The pound sterling has depreciated but, unlike the small country case I have just discussed, the UK can continue to finance a current account deficit. Hence the UK still follows a fiscal stimulus policy, mainly through automatic stabilisers. But there will be a serious long-term public finance problem.

II. The sceptics: no ambulance please

In many countries there have been plenty of people to argue against fiscal stimuli. Don't call the ambulance! Usually these have been political conservatives, but in the US strong opposition has also come from some influential economists. I have found many of these arguments in the 'Comments' pages and 'Letters to the Editor' pages of the *Financial Times*, as also on the web. Some will be familiar to Australians. Many need to be considered carefully. It is interesting that in some cases similar arguments were advanced at the time of the Great Depression. Hence, I proceed now to examine Seven Arguments against Fiscal Stimuli.

1. The economy is recovering. Why did we need a fiscal stimulus? Perhaps it would have recovered without the stimulus. Anyway, let us stop the stimulus now.

The central issue here is that success cannot be clearly seen. It is really measured by something that did not happen, namely a major prolonged recession or even Great Depression. One must compare with the right counterfactual. The best example here is the Japanese experience in the nineties. In the absence of huge prolonged fiscal deficits there would have been a deep recession, perhaps depression, Non-financial companies devoted themselves to reducing their debt (owing to the ending of an earlier bubble) and hence did not borrow, but actually added to national savings. This is described in detail in Koo (2008), where the episode is described as a potential balance sheet recession. The net effect of this lack of private sector demand combined with Keynesian fiscal policy was a long period with a low positive growth rate. Did this reflect a failure of the fiscal policy? Koo convincingly argues that Japan's coun-

terfactual would have been a thoroughly negative growth rate – that is, a deep recession – much worse than the actual low-growth outcome.

2. If a government borrows to finance a deficit, the wise far-seeing taxpayers will anticipate that taxes will have to go up in the future to repay this debt. They will then save additionally to prepare for this event. This is the theory of *Ricardian equivalence*. Thus, cutting taxes now while raising them later will not make them richer. Hence total spending will not change. There is therefore no point in a fiscal stimulus.

I am over-simplifying a little here, but such Ricardian equivalence is a favourite idea of some modern macro-economic theorists. It is described and discussed, for example (without being approved) in the textbook by Mankiw (1994, pp 423-30). David Ricardo had the idea but did not regard the key assumption as realistic. The Japanese case of the nineties does not support it; household savings as a percentage of GDP actually declined while public debt was accumulating.

If the policy is designed to forestall the emergence of an output gap one may never see such a gap.

The US 'Reagan' episode of 1982 to 1987 is very relevant here. Substantial tax cuts led to a big budget deficit. But over the period the household savings ratio actually fell. I analysed this episode in Corden (1994, pp 196-97). Let me quote my conclusion:

Hence this episode did not give support to the Ricardian equivalence theorem. It is likely that the low concern for the future – and the confidence that something, such as high productivity growth, will turn up – influenced both the elected rulers of the US and the savings behaviour of the private sector. Hence there was both public and private profligacy, rather than that the profligacy of the former was offset by the prudence of the latter. (p 197)

3. A recession – like the Great Depression – may be caused, or at least set off, by a consumption boom or a stock market or real estate bubble, or even all of these. There had been *too much optimism and a lack of prudence.* Then it all crashed. Surely then, it must be wrong to cope with the consequences by increasing the fiscal deficit. Imprudent public policy would follow imprudent private behaviour! Surely, too much spending, whether for consumption or just speculation, should be followed by corporations and individuals cleaning up their balance sheets, and not by the government copying the follies of the private sector and messing up its own balance sheet.

What is the answer to that? To maintain or restore aggregate demand, when private spending declines government spending must increase, or government deficits should stimulate private spending through tax cuts, handouts and so on. That is the Keynesian message. *But what about prudence?* The answer is that extra spending, whether by government or the private sector, should then be for investment rather than for current consumption or speculation. That is, at least, one alternative. The other, discussed above, is that extra demand for domestically produced goods and services could come from higher net exports – more exports and lower imports.

4. Some critics of fiscal stimuli deny that an output gap exists initially or – more realistically – they argue that the stimulus, including its potential multiplier effects, exceeds the output gap. The measured multiplier in real terms will then be low. Inflation, rather than increases in output, may result.

This is an empirical issue. Furthermore, if the policy is designed to forestall the emergence of an output gap one may never see such a gap . This is the same point as discussed in point 1 above: a mistake may be made in choosing the counter-factual.

5. Fiscal expansion will *crowd out private investment* (and also consumption) through raising interest rates. This is very clear in the IS/LM model. The LM curve is given, representing a given real money supply, and fiscal expansion shifts the IS curve to the right, so that the interest rate rises and interest-sensitive investment and consumption decline.

Here an important feature of the fiscal stimulus policies that I have been discussing earlier should be noted. Constant monetary policy is defined not as a constant quantity of base money, determined by the central bank, but as a constant interest rate policy, also determined by the central bank. When the government increases the fiscal deficit and hence sells more bonds (thus potentially raising the market interest rate) the central bank is assumed to go into the market and buy sufficient bonds to keep the interest rate at its target level. (I have discussed this in more detail in Corden, 2009). If one thinks of monetary policy as consisting of management of base money, then one can regard monetary policy as being accommodating to fiscal policy. (This assumption is explicitly made in IMF 2008.)

6. The output gap may be caused by *real wages being too high.* Now, there is a fairly subtle point here, closely related to the model of Keynes' *General Theory.* The question is then: can an increase in nominal aggregate demand, whether brought about by monetary or fiscal policy, increase output and employment.

Suppose we have a model with diminishing returns, perhaps because of a fixed capital stock being combined with a varying quantity of labour, or with the quality of labour declining as employment increases. Next assume given nominal wages but flexible product prices. An increase in aggregate demand will then raise the price level relative to the wage level so that the real wage falls. This was, more or less, Keynes' General Theory model. The real wage and employment are determined simultaneously.

In the depression the reduction in aggregate demand actually caused the price level in the US (and also in Australia) to fall relative to the wage level, so that real wages rose. Keynes clearly was influenced by this histor-

ical fact. In this case one cannot say that high real wages 'caused' high unemployment. Rather the decline in aggregate demand did so, with real wages being endogenous.

This issue is interesting from an Australian point of view. In the late seventies and early eighties Australia had an unemployment problem which – in my view at least – was caused by real wages that were too high. Because real wages were (more or less) rigid – brought about by centralised wage determination and trade union pressure that ensured indexation. – any increases in nominal aggregate demand that raised the prices of goods and services would be followed by increases in nominal wages. The employment benefits of nominal demand increases brought about by fiscal or monetary policies would then erode or disappear. Keynesian demand expansion policies would be pointless. I discussed this analytically in Corden (1979). But this has not been the situation in the recent crisis. Real wages are not rigid, and increased unemployment in Australia has not resulted from increases in real wages.

7. Finally, for completeness I mention one approach that was popular at the time of the Great Depression but is somewhat discredited now. Some economists use models where *market failure is not possible* or, more sensibly, where such failure can happen briefly, but natural forces – without government intervention – eliminate it gradually.

To conclude, attitudes to active counter-cyclical fiscal policy have been much influenced by underlying views or biases on two issues. One is the weight placed on government failure relative to market failure. The other is the weight placed on the danger of another Great Depression relative to the danger of a revival of inflation.

In this crisis we have seen a major case of worldwide market failure. That can hardly be questioned. But can governments be trusted? It is too early to judge and compare government reactions. Here is important scope for research. But on the broad issue, let me refer to The Master.

In this crisis we have seen a major case of worldwide market failure. That can hardly be questioned. But can governments be trusted?

Keynes was certainly critical of governments. He was definitely not naïve. In his view governments did the wrong thing after the First World War, at the Versailles Treaty negotiations – so he wrote *The Economic Consequences of the Peace*. The British government did the wrong thing in 1925 when it returned sterling to the gold standard at an overvalued parity – so that he wrote *The Economic Consequences of Mr Churchill*. And the American, British and other governments failed, of course, during the Great Depression, especially by adhering too long to the gold standard, and by being preoccupied with budget balancing. But he did believe that governments can get it right, and he believed in his ability, and indeed duty, to persuade.

The other underlying issue is the relative weight one places on the danger of another Great Depression relative to a revival of inflation. I think that older people (like myself), are likely to weigh heavily the danger of another depression. There is also the issue of how much one knows about the Great Depression – a matter of knowing history. I find the concern about inflation in present circumstances surprising, though one has to accept that it is reasonable to focus on the 'exit' from the crisis, so as not to lay the foundation for another inflationary or bubble period.

Keynes was certainly critical of governments. He was definitely not naïve... But he did believe that governments *can* get it right, and he believed in his ability, and indeed duty, to persuade.

On this subject it is interesting to reflect on German attitudes. One can understand that, at the time of the Great Depression, many Germans were preoccupied with the danger of inflation. They had the recent memory of the socially and economically destructive hyperinflation of 1923. This affected the policies of the Weimar Republic governments, both in adhering to the gold standard and in being preoccupied with balancing budgets. It is harder to understand why, in more recent times, the Germans (or some of them) appear to have been more concerned with inflation than with unemployment, bearing in mind that the unemployment of the later Weimar Republic years, caused by the Great Depression, had such a destructive political effect. This memory cannot have been forgotten. I guess that the answer is that in recent years generous unemployment and other social benefits, combined with the more recent fashion of short-time working, have moderated the extent and adverse effects of unemployment in Germany.

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