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23. June 2010

Online at http://mpra.ub.uni-muenchen.de/23785/
MPRA Paper No. 23785, posted 11. July 2010 17:56 UTC

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Abstract:

The currently larger than normal national debts in numerous countries makes this a good time to look at the rationale behind government debt. Four of the main reasons are considered here. The conclusion is that they range from hopeless to unimpressive. First there are political reasons which can be demolished in a few sentences. Second there is having government 'borrow and spend' with a view to stimulus. The main flaw in this policy is that where a government issues its own currency and borrows units of its currency, it is borrowing something which it can create itself in limitless quantities: similar to, and as pointless as a dairy farmer buying milk in a shop. In relation to stimulus, a zero borrowing system was set out long ago by Karl Marx, Milton Friedman, and others: it is called 'Functional Finance'. This is a viable alternative to borrow and spend. Moreover, quantitative easing amounts to a move in the direction of functional finance and an admission of the weaknesses in borrow and spend.

Third there is borrowing with a view to the purchase of assets, like infrastructure investments. The arguments for borrowing here are passable. Fourth there is borrowing to smooth out the erratic timing of government expenditure and income from taxation. The arguments for borrowing here are poor.

On balance, the arguments for government debt are not impressive. Hopefully the arguments below will assist those trying to curb such debt.

Note: This version of this paper is identical to the version submitted to the Athens Institute for Education and Research (ATINER) July 2010 Conference, except for the last sentence of the conclusion (i.e. last sentence of the paper). This sentence is a more recent addition, and it has two references to works by William Mitchell which have been added to the list of references.

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Introduction

Four of the more important reasons for government debt are examined here. The first reason, or set of reasons, is political. Second there is having government borrow and spend with a view to economic stimulus, which occupies the bulk of the paper. Third there is borrowing to fund the purchase of assets, e.g. infrastructure investments. Fourth, is borrowing with a view to smoothing out the erratic timing of government expenditure and receipts from tax.

The political reasons are dealt with in a few sentences below, while the others are considered in more detail.

The second reason, borrowing with a view to stimulus, is written just with countries that issue their own currencies in mind. Thus care must be taken in applying the points here to the Eurozone as a whole or to individual Eurozone countries. The other three reasons are applicable to both countries which issue their own currencies and those which are part of a common currency system.

The word government is sometimes used below to refer to 'government and central bank combined'. In contrast it is sometimes used to refer to politicians and the bureaucracy as distinct from the central bank. The change in use is indicated where it is not obvious from the context.

The words stimulus and reflation are used as synonyms: they refer to raising aggregate demand.

1. Political reasons for borrowing

Politicians tend to think they can win votes by borrowing rather than raising taxes. Amongst other reasons this is because it is obvious to voters who to blame when taxes rise but less obvious when interest rates rise as a result of increased government debt. This reason for debt is clearly unjustified.

A second political motive with ostensibly more justification because it seems to involve social justice is that politicians probably think that when borrowing rises it is the cash rich who supply the funds. Actually the evidence is that funds become available primarily because debtors and potential debtors reduce the amount they borrow thus releasing funds for government to borrow (Musgrave (2010:9-11). This is just another way of saying that when governments borrow, crowding out occurs.

Objections to crowding out

Some readers may object to crowding out for the following reason. Many governments have substantially increased their borrowing in the last year or two, yet their interest rates have declined rather than increased.

The answer to this is that crowding out as interpreted here is based on the 'other things being equal' assumption. That is, if government borrows and

spends the relevant money but makes no other changes, an interest rate rise (or a reduced availability of funds for private sector borrowers) is almost inevitable: government out-bids the private sector for funds.

In contrast, over the last year or two, governments have both borrowed more and flooded the market with liquidity. In this instance, other things are not equal.

2. Borrow and spend with a view to stimulus

A conventional view is that governments should borrow and spend so as to bring stimulus. In contrast, there is a set of ideas called 'functional finance' which objects to the borrow part of borrow and spend. 'Modern monetary theory' is a more recent name for functional finance. (The word government is used in the sense 'government and central bank combined' here.)

Karl Marx was the first to set out the basics of functional finance, though there is nothing left wing about it. The next and much the most influential all time advocate of functional finance was Abba Lerner (born: 1903, died: 1982).

Keynes said of Lerner, 'Lerner's argument is impeccable, but heaven help anyone who tries to put it across to the plain man at this stage of the evolution of our ideas'. (See Landes (1994:220). Friedman (1948) also backed functional finance, though he did not often use the phrase functional finance. Another economics Nobel Laureate who advocated functional finance was William Vickrey: see Colander (2003).

The basic idea behind functional finance is that the fact of government spending exceeding income (or vice versa) is not important. (The word government is used here in the sense 'government and central bank combined') That is, there is no merit in government balancing the books just for the sake of it.

Under functional finance, the only important considerations are the 'functional' effects of government income and expenditure, much the most important being the effects on inflation and unemployment. That is, governments should use their income and expenditure to bring the maximum level of employment that is compatible with acceptable inflation. For example, given high unemployment and subdued inflation, government spending should exceed income. To that extent functional finance is similar to conventional policies. But the big difference is that functional finance says governments should not borrow to make up the difference between income and expenditure.

One reason for not borrowing is that when government borrows, it borrows something (money) which government itself has created and which it can create in limitless amounts. Thus for a government which issues its own currency to borrow units of its currency is similar to, and as pointless as a dairy farmer buying milk in a shop.

A second objection to borrowing is that borrowing involves crowding out. Crowding out would not matter if there were agreement on the extent of the problem. But there is a lack of agreement. Thus introducing crowding out

firstly introduces uncertainty. Secondly, if crowding out is a serious problem - say 90% of borrow and spend is nullified by crowding out - the expansion in the national debt for given stimulus will be about nine times the expansion in the monetary base required for the same stimulus. The latter outcome is hardly desirable, particularly in view of recent concerns about the size of national debts. Indeed, it is possible that the recent large increases in national debts combined with resulting increases in demand which have been scarcely enough to counter the recession are explained by crowding out.

Incidentally, Friedman (1948) dismissed the need for government debt in about two hundred words. The main valid reason for government borrowing he could think of was a scenario where there was a sudden and large need to constrain private sector spending, like in war time. In contrast, as he rightly pointed out, in peace time, government spending is more or less constant from year to year. In the latter case, there is little need for government borrowing.

To summarise, functional finance essentially consists of government creating and spending extra money when unemployment is excessive and doing the reverse when inflation looms. By 'reverse' I mean destroying money, that is raising taxes and extinguishing the money collected.

The irrelevance of the structural deficit

A nice example of the irrelevance of the actual size of the deficit is the so-called structural deficit: much discussed recently, at least in the U.K.

Government net spending in 2012 or thereabouts will clearly be less than was planned prior to the recession, even if an economy returns to near normal. The difference between the deficit in these two scenarios is the structural deficit. But what is the practical relevance of the structural deficit concept?

Suppose that in 2012 the private sector is still deleveraging. That would justify a larger deficit than normal. Conversely, if the private sector is exhibiting irrational exuberance, to use Alan Greenspan's phrase, that would justify a smaller deficit, or even a surplus.

To summarise (and repeat) the size of the deficit or surplus in any given year should be whatever looks like optimising the inflation unemployment relationship. The actual size of the deficit or surplus is almost irrelevant.

Advocates of functional finance disagree with each other

Economists are famous for disagreeing with each other, a fault found amongst functional finance advocates as much as with any other group. Thus the version of functional finance set out here inevitably has the author's stamp on it. So for those new to functional finance, this paper should be taken as an introduction to the subject, with further reading required.

The advantages of functional finance

Functional finance has several advantages over conventional policies. One is simplicity: it cuts out some well-paid middlemen in the world's financial centres and for the following reasons.

Conventional stimulus consists of the following. 1. Treasury borrows $X. 2. Treasury gives $X worth of securities to lenders. 3. Treasury spends $X. Under functional finance, stage 1 and 2 become obsolete. (This simple illustration assumes that the Treasury incorporates central bank functions, of course.)

A second advantage of functional finance is that the likelihood of owing money to other countries is reduced. Third, less national debt means less interest paid to creditors. Fourth, and to be cynical, the simplicity means fewer economic illiterates in high places talking nonsense about national debts, and doing immense economic damage in the process. Fifth, government is less in thrall to 'bond vigilantes' because there are fewer government bonds or none at all.

Quantitative easing is a move towards functional finance

Returning for a moment to the above three stage illustration in which the Treasury borrows $X, if it then quantitatively eases the $X worth of securities, this amounts to reversing stage 1 and 2. That is, assuming it is government debt rather than private sector debt that is quantitatively eased, then QE comes to the same thing as stimulus functional finance style. Indeed, QE amounts to an admission of the limits of borrow and spend and the merits of functional finance. And just to rub it in, borrowing combined with dropping interest rates (mentioned above) amounts to a similar admission, because to force interest rates down, the central bank may well have to engage in QE.

Inflation

The inflationary dangers of functional finance are obvious, but this is not a strong criticism because conventional policies, if taken too far, can be just as inflationary. Four reasons are set out below for discounting inflationary dangers.

1. Dollar for dollar, 'print and spend' is doubtless more potent than 'borrow and spend'. But that does not of itself mean inflation. If a more potent fuel is fed to a car engine but constant power output is required, it does not take a genius to work out what to do: use less fuel! Similarly for given stimulus, print and spend requires less expenditure than borrow and spend. Incidentally and in relation to money creation, the word 'print' is used in this paper as a synonym for 'create': that is, it is not just the physical printing of say dollar bills that is referred to.

2. It is debatable as to how big a difference there is between what might be called 'formal' money (monetary base, M1, etc) and various assets which are effectively used as money, like government debt, as Klein (2009) makes clear.

3. There is the argument that expanding the monetary base enables commercial banks to then lend some multiple of the monetary base expansion. This sort of idea still appears in some text books, but it is obsolete and for the following reasons.

i) One of the main constituents of commercial bank reserves is monetary base and there are no reserve requirements at all for Canadian banks.

ii) There was an astronomic and unprecedented increase in the monetary base of the U.S. and U.K. in 2009. The effect was certainly not a dramatic increase in bank lending.

iii) If commercial banks do lend more simply because they have money to lend, that suggests that banks are lacking in competence. It suggests they are not too good at performing one of their basic functions: distinguishing between credit worthy and non credit worthy customers. This calls for tighter bank regulation e.g. banning 100% or 90% mortgages.

iv) Plenty of articles and papers which explain the unimportance of reserves can be found by typing the phrase "banks are capital constrained not reserve constrained" into a search engine.

4. On converting national debt to monetary base, there is no reason it has to be done on a dollar for dollar basis. Indeed, a dollar for dollar conversion would probably be too stimulatory, and thus inflationary. But the solution is to obtain some of the money for buying back the debt from increased tax (or reduced government spending) the effect of which is deflationary. (The word deflation is used in this paper to refer to damping economic activity rather than to falling prices – though of course the former sometimes causes the latter.)

This means there are two methods of buying back, one being stimulatory and/or inflationary, and the second deflationary. They are respectively 'buy back with printed money' and 'buy back with money from tax or reduced spending'.

This in turn gives two levers which can be adjusted to bring any rate of national debt repayment desired, plus any stance on the reflation – deflation scale that is desired. For example, for a faster rate of national debt reduction, apply more of both levers. And for a more deflationary method of debt reduction, apply more of the second relative to the first.

Extreme circumstances

The differences between functional finance and conventional policies are more pronounced in extreme circumstances (e.g. a recession) than in normal circumstances.

For example, given the extensive deleveraging and cash hoarding by the private sector that has taken place in the aftermath of the recession, there is no alternative, if demand is to be maintained, to a *very large* deficit.

That is if households hoard cash instead of spend it, then total spending declines, which raises unemployment. The authorities, certainly in the U.S. have failed to grasp this point. They expanded the monetary base by around a trillion dollars in 2009, but as Galbraith (2009) pointed out, a trillion was not enough.

This difference between normal and extreme scenarios may help explain why Keynes and Milton Friedman approved of functional finance, but did not devote huge efforts to advocating it: they may have thought that the sort of credit crunch we have recently experienced was unlikely.

Central banks under functional finance

The rules governing central banks under functional finance would be similar to those that currently obtain. The rules would be approximately as follows. (Government and central bank are treated as separate entities here.)

Rule 1. Politicians must work on the assumption that a small annual deficit is permitted. The reason for this stems from the widely held view that inflation of around 2% is optimum. The reasons are thus.

i) 2% inflation means a 2% reduction in the real value of the monetary base per year other things being equal. Thus to maintain the value of the base in real terms, a deficit equal to 2% of the base per year is required.

ii) Where an economy expands by X% a year in real terms, and assuming the value of the base relative to real GDP is to be maintained, a further amount of deficit is required equal to X% of the base.

iii) A very similar point applies to the national debt, if there is one.

The above three items amount to significant amount of annual deficit: a deficit required even where neither stimulus nor deflation is required. (Incidentally, exactly the same deficit is required under conventional policies: it is just that, to be impolite, advocates of functional finance are clearer on what size deficit is required and why than those with more conventional views. Put another way, the contribution to the debate from some conventional sources has consisted, at worst, of little more than getting hysterical about the large numbers involved.)

Rule 2. The central bank shall be responsible for holding employment as high as is consistent with acceptable inflation. If unemployment is too high and there is room for reflation (i.e. stimulus), the central bank shall inform government of what extra sums it (the central bank) will allow government to spend without any corresponding tax collection or borrowing. Conversely, if inflation looms, the central bank may have to inform government that the latter rein in spending or collect more in tax, or even collect more in tax than it spends. This surplus money collected is remitted to the central bank where it is extinguished.

'Borrowing' so as to extinguish money

Under functional finance, where inflation looms, government (in the sense that includes central banks) needs to rein in money either by raised taxes or reduced spending.

However the purpose of this so-called borrowing is definitely not to *spend* the money: the objective is to extinguish or shred the money, or render it temporarily inoperative. This activity is not borrowing in any normal sense of the word.

Abba Lerner favoured borrowing, while Friedman (1948) did not and nor does Mosler (2010 – see second last paragraph). However, Lerner did not favour 'borrowing as a source of funds' (Lerner (1943:355). His attitude to borrowing was the same as his attitude to government income or spending, that is, 'functional'. In other words, the only important question for him was 'what is the effect of borrowing?'. He favoured an interest rate policy so as to bring about the optimum level of investment. But that is a very questionable idea and for several reasons.

i) Does anyone actually know the optimum level of investment?

ii) Investment suffers from diminishing returns. In other words the most worthwhile investments in any economy have been made long ago. While the additional investment that comes from dropping interest rates from say four percent to two percent brings negligible benefits.

iii) The returns on investments vary from plus a hundred percent and more p.a. to minus a hundred percent and more p.a. Again, in the light of this, the above change of interest rate from four to two percent is of negligible importance.

iv) There is the argument that government can control the price of money or the quantity, but not both. Lerner seems to think governments can control both. The view taken in this paper is that governments can control only one, and that should be the quantity. (As to interest rates these would tend to be near zero - as obtains at the time of writing. See Mosler (2005) for more on this.)

To summarise, to the extent that Lerner favoured borrowing, it was borrowing not in any normal sense of the word. And even this latter form of borrowing is questionable because the aim is near impossible: optimising the amount of investment.

Is monetary base a debt owed by central banks?

A possible criticism of functional finance is that it involves replacing national debt at least to some extent with monetary base, and the latter appears on the liability side of central banks' balance sheets. Thus it could be argued that not much has changed in that monetary base is borrowing or a central bank liability of sorts, much like the securities that governments issue.

One answer to this was given by Buiter (2008) who said 'These monetary base 'liabilities' of the central bank are not in any meaningful sense liabilities,

because they are irredeemable.' (Willem Buiter is a former member of the Bank of England Monetary Policy Committee.)

Does borrow and spend increase private sector assets?

In the above illustration where the Treasury borrowed $X, the net result appears to be that the private sector is $X better off, which should be stimulatory. However part of the reason that Treasury securities have value is the interest they earn. But this interest comes out of the pockets of taxpayers, thus the creation of these securities involves the creation of a liability as well as an asset! Thus the size of the net increase in private sector assets is debatable: yet another uncertain aspect of borrow and spend.

In contrast, print and spend undoubtedly gives the private sector additional assets.

Borrow and spend with a view to stimulus: the conclusion

Borrow and spend involves uncertainties of which crowding out is just one. For this is and for other reasons given above the zero borrowing alternative, functional finance, should be given serious consideration.

3. Borrowing to purchase assets

A third reason governments borrow is to purchase assets, for example infrastructure investments. The points made here apply both to countries which issue their own currency and to countries that are part of a common currency area.

The first flaw in this form of borrowing is that governments just do not need to borrow in order to fund capital projects. This is for two reasons. First, the total of all such investments in any given country is much the same every year. Thus if a country *does* borrow, to fund this expenditure, it will just end up devoting much the same proportion of its budget to these investments every year (in the form of loan repayments, interest, etc) as if it pays for the investments out of income.

Second, governments do not face a problem that micro economic entities like firms or households often face. This is that the latter sometimes make investments worth several times their annual income. A family buying a house is an example. Here, there is normally no alternative to borrowing.

Conclusion: the need to fund capital projects does not justify government borrowing. However, the case for borrowing here is stronger than is the case with the other reasons for borrowing considered in this paper. Indeed, there is not much difference between funding a public sector investment and debiting it

with a nominal sum for interest, and on the other hand, actually borrowing the capital sum and paying interest to lenders.

Spreading the cost across generations

A plausible sounding argument for government borrowing to fund capital projects is that this spreads the burden across generations because future generations ostensibly have to repay some capital and/or pay some interest. The flaw in this argument is that while various members of the next generation inherit the above liability, others inherit a corresponding asset, namely government debt or bonds. These two net to nothing.

Put another way, the brute physical reality is that it is impossible to build a road this year (2010) without diverting concrete, steel and so on from other uses in 2010 (assuming constant aggregate demand). That is, people living in 2010 have to sacrifice the consumption of other products to have the road built. Or put a third way, it is a physical impossibility to build a road in 2010 with concrete produced in 2050.

The only way to have future generations in one country to pay for today's investment is for the country to borrow the capital sum from some other country, and gradually pay the money back, as pointed out by Musgrave (1939: 269). But if every country adopts the latter policy, it becomes self-defeating.

Moreover we all benefit from investments made by previous generations where the relevant debt has long been paid off. An example is education: capital costs apart, these costs are normally born and paid off annually (e.g. teachers' salaries). Thus allocating the costs of investments to each generation in any sort of accurate way is a bureaucratic nightmare. It is probably simpler just to accept that each generation inherits huge benefits from previous generations, and that each generation should 'leave the world as it found it', that is fund and pass on a roughly equivalent amount of investment to succeeding generations.

To summarise, having future generations pay for the investments they inherit is, first, almost a physical impossibility, and second, even were it possible, the idea is more trouble than it is worth. Thus government borrowing aimed at the latter objective is also more trouble than it is worth.

4. Does the erratic timing of tax receipts and expenditure within each year justify borrowing?

The quick answer to this is that given a short term lack of income, government can easily print money; then, a few months later, when income exceeds spending, government can do the opposite, that is rein in money and extinguish it. It could be claimed that the latter money printing would be inflationary. However, there are flaws in the latter claim.

First, inflation is unlikely to take off just because the money supply is more than optimum for three months and then an equivalent amount below optimum for the next three months.

The next flaw involves Ricardian equivalence of a sort: that is, where a private sector entity knows there is a $Y tax liability in the pipeline and has sufficient cash to meet this liability, that entity is almost certain to use the cash to meet the liability, rather than spend the cash on something else in the interim.

This argument gains support from examining what might be called the counterparties to the regular annual government shortages and surpluses of income. These counterparties are very definitely not the sort of people who might blow a temporary excess of cash.

For example a significant proportion of people living on social security might spend any temporary excess cash; however a large majority of these people (at least in the UK - pensioners or those on invalidity benefit) receive a fairly regular income from the state and thus do not cause erratic changes in government net income.

As to a more responsible or talented or lucky section of the population, employees, this section of the population also has a regular income. As to income tax, this is deducted from wages and salaries, both where wages are paid weekly and where paid monthly (at least in the UK). Thus this section of the population does not contribute much to changes in government income either.

Finally, the sections of the economy which really cause the irregularities in government income are corporations and the self employed. These sections of the economy (at least in the UK) pay tax on profits once or twice per year. However, it is precisely this section that is least likely to blow a temporary excess of cash. Any corporation or self employed person with a propensity for this sort of behaviour will not last long in business.

Conclusion: the variations in government net income through the year are not a reason for governments to borrow.

Main conclusion

Of the four alleged justifications for government borrowing examined here, three are feeble. The only one without serious flaws is borrowing to fund capital projects like infrastructure investments. But even here, the merits of borrowing are debatable.

But that is not a message that Goldman Sachs, other banks or the well-paid employees in the world's financial centres want broadcast. They have an interest in seeing governments heavily in debt. They devote millions and will devote further millions to furthering their interests: foisting debt on governments. Hopefully the arguments in this paper will help governments counter banks' sales pitch. Indeed there was one particularly odd case in Australia in 2002 where banks managed to foist extra debt on the Australian

government despite the fact that the latter was running a surplus and happily paying off its national debt – see Mitchell (2002 and 2010).

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