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Macroeconomic Policies on Shaky Foundations

Whither Mainstream Economics?

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The Research Network Macroeconomics and Macroeconomic Policies (FMM)

Since 1996 the Research Network Macroeconomics and Macroeconomic Policies (FMM) has existed as a platform for analysis, research and discussion of macroeconomic issues. It is primarily based in the German-speaking area but cooperates closely with similar networks in other countries, particular in Europe. The Network is concerned to promote the revival and development of macroeconomic approaches which have tended to be eclipsed since the 1970s, especially in Germany, as a result of the dominance of neoclassical, monetarist and supply-side approaches. The Network aims to be both a platform for discussions about economic theory as well as a forum for economic policy debates: Macroeconomic theory is seen as the basis for policies which aim at high employment, environmentally sustainable growth, price stability, reduced inequality, and the elimination of poverty. In particular, the Network seeks to promote an exchange between competing theoretical paradigms.

Organisationally, the Network is based at the Macroeconomic Policy Institute (IMK), Hans Boeckler Foundation. It is politically independent. The Network's activities are directed by a coordinating committee. The main activities involve promoting an organised exchange of views between economists through an annual conference, organising publications, and providing support for younger economists. The coordinating committee maintains a web site and a newsletter. The Network is open to anyone who is interested in discussions around the research themes outlined below. As with any network, the FMM is not a membership organisation, but rather an open association of people interested in similar issues.

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Fiscal policy on shaky foundations: Post Keynesian and Chartalist lessons for New Consensus economists

Pavlina R. Tcherneva

1. Introduction

In recent years fiscal policy has recaptured the attention of neoclassical economists. This is somewhat surprising given that Ricardian Equivalence is a major theoretical pillar of mainstream theory. The return to policy effectiveness has been especially encouraging to Post Keynesians, who have always advocated fiscal policy for macroeconomic coordination and stabilisation. A closer look at the mainstream developments, however, reveals that they only reinstate the presumed distortionary and inflationary effects of government action and allow it to operate primarily in extraordinary and deflationary circumstances. These new mainstream contributions have served to bolster support for *sound finance* policies all over again and do not represent a genuine return to fiscal policy effectiveness.

Despite these unfortunate conclusions, the mainstream has nevertheless produced important *new* findings with respect to government finance that do indeed offer an opportunity for dialogue. These findings, albeit subtle and underemphasised, maintain that sovereign currency nations do not face inherent financial constraints to government spending – a claim that Chartalists, a subset of the Post Keynesian school, have continually made. This view of government finance is best articulated in the Fiscal Theory of the Price Level (FTPL), which has become the key theoretical

challenge to the Ricardian Equivalence Hypothesis. The FTPL was first proposed in Woodford (1995) but is also associated with the work of Sims (1994) and Cochrane (1998 and 2000). Despite the apparent convergence on issues of government finance between some mainstream and Chartalist literature, the two approaches reach diametrically opposed conclusions about the stabilisation effects of fiscal policy.

The task of the present chapter is to examine those mainstream contributions that support a limited use of fiscal policy. While many economists argue that the mainstream has entered an era of new economic consensus in macroeconomics (Goodfriend 2004, Zouache 2004), the FTPL has stirred much controversy. As a consequence, there has been no consensus around the role and place of fiscal policy. Furthermore, the ultimate effect of the FTPL is to reject the equation of exchange as the basis of price determination, undermine the notion of central bank independence, and illustrate how fiscal debts and deficits could be forever sustained under a sovereign currency regime. These are all propositions advocated by Chartalist economists.[1]

After considering the FTPL, the chapter looks at the Chartalist contributions to discuss some of the important points of convergence between the two approaches. Finally, the chapter considers their respective treatment of full employment. For Chartalists, including Keynes himself, the elimination of involuntary unemployment is the primary objective of fiscal policy, whereas for new consensus economists, involuntary unemployment is simply assumed away. This distinction has important implications for the stabilisation effects of fiscal policy in both approaches.

2. *Fiscal policy in the new consensus*

After several tumultuous decades in macroeconomic theory, the mainstream has arguably arrived at a New Economic Consensus (NEC), which rests on the following pillars. First, micro and macro outcomes are based on essentially the same principles, rooted in the intertemporal decision-making of rational individuals. Second, the economy tends to its

[1] The monetarist explanation of price determination as a consequence of the quantity equation relationship has been rejected by all Post Keynesians, but few of them embrace the Chartalist claims of sovereign government finance which will be explained here.

long-run equilibrium whereby short-term deviations from natural output emerge from imperfect information or rigidities in the labor and capital markets. Third, short-run corrections to deviations from natural output or inflation targets can be delivered most effectively by monetary policy. Finally, the full employment definition of the early Keynesians, as the condition where all those who want jobs are gainfully employed, is abandoned in favor of some *optimal* level of unemployment that does not accelerate inflation (i.e., the Non-Accelerating Inflation Rate of Unemployment, NAIRU). The mechanics of the NEC are encapsulated in the familiar three-equation model, after Woodford 2003:

$$y_t = g_t + E_t(y_{t+1} - g_{t+1}) - \sigma(i_t - E_t\pi_{t+1}), \quad (1)$$

$$\pi_t = k\left(y_t - y_{pt}\right) + \beta E_t\pi_{t+1}, \quad (2)$$

$$i_t = i_n + \phi_\pi\,(\pi_t - \pi_{t*}) + \phi_y\,(y_t - y_{pt}). \quad (3)$$

The first equation illustrates the IS relationship from the ISLM model, where current output y_t is a function of some composite exogenous disturbance g_t and a given real interest rate (i_t is the nominal target and $E_t\pi_{t+1}$ are current expectations of future inflation rates). The second equation specifies the rate of inflation π_t as a function of the output gap (or the difference between real and potential output $y_t - y_{pt}$) and current expectations of future inflation rates; it is essentially the expectations-augmented Phillips curve. The final equation provides the policy guide: the nominal interest rate should be adjusted as a response to deviations of actual output and inflation from their targets, according to the implicit desired funds rate (the Wicksellian *natural* rate of interest i_n). This is the so-called Taylor rule, which allows the monetary authority to address the output and inflationary gaps simultaneously via a singular policy tool – the federal funds rate. Monetary policy fine-tuning is omnipotent, except when the funds rate reaches its zero bound. The Taylor rule is a direct consequence of the now common view that the central bank has no ability to change exogenously the money supply but instead controls the federal funds rate as its exogenous operating target. The new consensus now subscribes to the notion that money is endogenous.

There is no fiscal variable in the above three-equation model because for decades fiscal policy was believed to be ineffective (as per the Ricardian Equivalence hypothesis). The mainstream, however, has been disturbed by the prospects of a Japanese-style recession where a zero interest rate prevailed for five years during the 1990s without any noticeable effect on prices or output from monetary policy. It is in these extreme circumstances that fiscal policy is called to the rescue (Bernanke 2003a, Bernanke et al. 2004, Krugman 2005, Solow 2005). Nevertheless, because government action, as it will be explained below, is considered to be especially inflationary, it must be exercised with caution. Once the economy begins to recover, monetary policy must return as the macroeconomic policy tool of choice (Bernanke 2003b, Blinder 2004, Woodford 2000). The NEC is, therefore, *fundamentally a monetary approach.*

2.1 Controversy: The Fiscal Theory of the Price Level

To justify the renewed effectiveness of fiscal policy, mainstream economists have had to adequately deal with the Ricardian Equivalence hypothesis. As it is well known, under the choice theoretic model of intertemporal decision-making, rational individuals will not spend their windfall from government deficits in anticipation of offsetting future tax increases (Barro 1974). Although many economists have doubted the realism of these assumptions, there has not been a serious theoretical challenge to this hypothesis in the mainstream (exceptions to Ricardian Equivalence are normally explained by market rigidities and information imperfections).[2]

In the FTPL Woodford argues that, normally, governments do not face a hard intertemporal budget constraint. In other words, it is possible in certain cases for the fiscal authority to run deficits without any offsetting action in the future. The FTPL rests on the important proposition that countries with, what Woodford calls, government-issued money (Woodford 1995: 5), do not necessarily face spending constraints, unless they are artificially imposed. This is very similar to the Chartalist view of government finance in sovereign currency nations (Wray 2003). This

[2] For Post Keynesian challenges to Ricardian Equivalence, see e.g., Arestis and Sawyer (2004).

claim has added an important level of realism to mainstream analysis which has nevertheless considerably undermined the neoclassical consensus in macroeconomics.

Let the government budget constraint, as discussed in the literature, be given by:

$$B_t / P_t = \textit{Present value of primary fiscal surpluses as of time } t, t = 0, 1, \ldots, \quad (4)$$

where B_t is the nominal value of government liabilities at the beginning of period t and P_t is the price level (see Bassetto 2008).

Under a Ricardian regime, an increase in bond-financed government spending today will be offset by future tax increases, i.e., the present value of primary surpluses will adjust to maintain the equilibrium condition. Woodford, by contrast, argues that non-Ricardian regimes are the norm, where the government has made no promise (or simply fails) to offset today's deficit spending by tax increases in the future. In these cases, the equation above will be equilibrated by an increase in the price level, which will erode the real value of the nominal debt to bring it into equality with the present value of the (unchanged) primary fiscal surpluses. This basic proposition of the FTPL has had the following two effects on neoclassical theory. First, it specifies the price level solely as a function of government spending (as per Woodford 1995, 1998 and 2000), undermining the importance of the equation of exchange in price determination. Secondly, since such non-Ricardian fiscal policy is ultimately inflationary, an inflation-fighting monetary policy is not technically independent from the fiscal authority. To explain how and why these new developments have undermined consensus in the NEC, we need to address several implications of the FTPL and Woodford's corresponding analysis.

The first issue concerns the intertemporal budget constraint. How is it possible for the government to increase deficit spending today without adjusting its future surpluses? If taxes are not raised to pay for those deficits, would the private sector not simply refuse to lend to the government, undermining its future ability to finance expenditures by issuing bonds? In other words, does this decision by private agents not constitute the effective hard intertemporal budget constraint? All of these concerns

have led some to challenge the very notion of a non-Ricardian regime (Buiter 1999, McCallum 2001).

Secondly, even if it were the case that non-Ricardian regimes existed, what would make government spending inflationary, i.e., what is the transmission mechanism that would cause prices to increase? Previously, the equation of exchange was the basis for the theory of price determination, as it linked increases in the money supply (controlled by the monetary authority) to inflation. Now, according to the intertemporal budget equilibrium condition in (4) above, prices are a function of fiscal policy alone. Even though, as the name suggest, the FTPL is a theory of price determination, it is this transmission mechanism that gives us the renewed claim for fiscal policy effectiveness, which concerns us here.

Finally, if fiscal policy is inflationary, does it not pose challenges to an inflation-fighting monetary authority? In what sense can we talk about monetary policy independence? Should monetary policy always offset the inflationary effect of government spending in a non-Ricardian regime? If it does not, would it lose its monetary policy credibility? And if it does, would monetary policy not neutralise the inflationary impact of fiscal policy, rendering it ineffective once again? What then is the optimal policy mix between monetary and fiscal policy? All of these questions are discussed next.

2.1.1 The intertemporal budget constraint

For Woodford, the intertemporal budget constraint is not technically a constraint on government spending; it is only an equilibrium condition, where prices serve as the adjusting factor. But how is it that government bonds need not be repaid in the future; would the private sector not stop financing these deficits, making the issue of government nominal liabilities unsustainable in the long run?

To answer these questions Woodford argues that governments have the capacity to rollover their debt in perpetuity from one generation onto the next, without any need to ever increase taxes (Woodford 2000: 30). The private sector's refusal to buy the government debt still does not represent a *de facto* government budget constraint, because the central bank will step in as the residual buyer (ibid.). For Woodford, private sector agents choose to buy financial assets on the basis of their portfolio allocation strategies. If they stop buying government debt, then the central bank must necessarily buy the rest. This is because, Woodford argues, modern central banks are charged with maintaining the price of short-term bonds, i.e., the interest rate, which means that they will buy and sell government debt on demand to maintain their interest rate target. This is what Woodford calls a "bond-price support regime" (Woodford 2000: 8). In such a regime, private agents do not make the decision whether to finance government spending or not, rather they determine the amount of bonds they will hold in their portfolios based on their liquidity preference. Thus, the proper interpretation of government debt held by the private sector is the following:

> "[It] is a consequence of optimal wealth accumulation by households, not of any constraint upon government borrowing programs other than the requirement that in equilibrium someone has to choose to *hold* the debt that the government issues." (Woodford 2000: 30, original emphasis)

From here Woodford reaches the most important *novel* discovery in the neoclassical consensus, namely that the government liabilities are fundamentally different from those of the private sector in that they need not ever default. Under a *bond-price regime*, the government faces no technical constraints to deficit spending. Although this is not a central piece to Woodford's analysis, it is a core implication of the FTPL. He explains:

> "A subtler question is whether it makes sense to suppose that actual market institutions do not actually impose a constraint of this kind upon governments (whether logically necessary or not), given that we believe that they impose such borrowing limits upon households and firms. The best answer to this question, I believe, is to note that a government that issues debt denominated in its own currency is in a different situation than from that of private borrowers, in that its debt is a promise only to deliver *more of its own liabilities*. (A Treasury bond is simply a promise to pay dollars at various future dates, but these dollars are simply additional government liabilities, that happen to be non-interest-earning.) There is thus no possible doubt about the government's technical ability to deliver what it has promised; this is not an implausible reason for financial markets to treat government debt issues in a different way than the issuance of private debt obligations." (Woodford 2000: 32, original emphasis)

Bernanke has also underscored the fact that government spending is not technically operationally constrained. He puts it in even simpler terms:

> "The US government has a technology, called a printing press (or, today, its electronic equivalent) that allows it to produce as many US dollars as it wishes at essentially no cost." (Bernanke 2002)

Although printing press analogies can be counterproductive, especially because they imply an inherent inflationary aspect to fiscal policy, the quote emphasises that the government can always pay by issuing more of its own liabilities. Woodford's analysis of government bond finance and Bernanke's electronic printing press analogy reveal that because bonds and currency are both government-issued liabilities, there is no limit to which the government (including its two agents, the treasury and the central bank) can exchange one liability for the other. If private sector agents wish to cash their bonds, the government can always issue more liabilities – this time non-interest earning ones, i.e., currency – at any future date to redeem those bonds. Because the government denominates its bonds in its own issued currency, it is in a very different position from that of any other agent who issues debt. As it will be shown later, this is a key point for Chartalists economists, who have argued that only the government can deliver its own liability for the repayment of debt, while all other private agents must deliver a *third* party's liability to settle debt obligations (more below) (Bell 2001, Wray 1990). Once again, although Woodford does not examine the full extent of these implications, the proposition that the federal government sector does not face technical spending constraints is key. The immediate conclusion from the foregoing analysis is that it is far more instructive to contemplate issues of government solvency than of debt sustainability (Wren-Lewis 2000).

This is very similar to the Chartalist claim that solvency is undermined when the link between the "political sovereignty and fiscal authority on the one hand and money creation, the mint and the central bank, on the other" (Goodhart 1998: 411) has been severed. This would be the case in the European Central Bank or under Currency Boards, for example, where government spending is artificially constrained by the institutional separation of the fiscal authority from its central bank. Other Chartalists have argued that solvency is considerably undermined in fixed exchange rate regimes as well, where the government promises convertibility of the domestic currency into some other currency over which it has no sovereign control (Mosler 1997 – 98, Wray 2003). But in the case of sovereign currency nations with flexible exchange rate regimes, government deficits and debt are forever sustainable. To this end, as some mainstream economists have also recognised, when exploring the stabilizing potential of government spending, we need not be concerned too much with non-existent tight and binding government budget constraints (Allsopp/Vines 2005, Wren-Lewis 2000).

2.1.2 A bond drop theory of inflation: The transmission mechanism

After dispelling the notion of government budget constraints, the next question to address is how government spending affects the economy according to the FTPL. The simple transmission mechanism is through the wealth effect on bond holders. In a non-Ricardian regime, the bond drop will not be offset by future tax increases, thus improving the actual wealth (financial asset holdings) of individuals. They, in turn, adjust spending patterns according to this permanent increase in lifetime income. Because the economy is assumed to operate near-full employment, the increase in expenditures will boost both output *and* prices of goods and services. These inflationary pressures gradually erode the value of the new financial assets in private portfolios, until the intertemporal budget equation is brought into equilibrium and the now lower real value of government debt is balanced perfectly with the unchanged present value of future primary surpluses. In the meantime, the wealth effect of fiscal policy has produced inflationary growth.

These macro-effects, however, can only be understood in the context of intertemporal individual decision making. Had the government failed to articulate to rational individuals that it was operating in a non-Ricardian environment, i.e., that it would not raise taxes in the future to offset the deficit, then agents would not adjust their behavior as a consequence of this permanent windfall to incomes. This is why fiscal policy transparency and consistency are absolutely essential for the policy action to be effective.

All this means is that a bond drop will do very little to stimulate the economy unless it has an impact on expectations. Consider the discussion offered by Ben Bernanke on addressing the Japanese 1990s recession via

fiscal policy (Bernanke 2003a). Suppose that the government implements a large tax cut financed by the central bank. Suppose also that it makes no plans to raise future taxes to pay for the resulting deficit. Bernanke continues:

> "[T]he government's concerns about its outstanding stock of debt are mitigated because increases in its debt are purchased by the BOJ [Bank of Japan] rather than sold to the private sector. Moreover, consumers and businesses should be willing to spend rather than save the bulk of their tax cut. They have extra cash on hand, but – because the BOJ purchased government debt in the amount of the tax cut – no current or future debt service burden has been created to imply increased future taxes. Essentially, monetary and fiscal policies together have increased the nominal wealth of the household sector, which will increase nominal spending and hence prices." (Bernanke 2003a)

This scenario, Bernanke quickly points out, will work as long as taxpayers recognise that this policy action leads to a permanent increase in their incomes (ibid.). It is a much preferred type of stimulus, because there is no intergenerational debt held by the public, since it is the central bank which has purchased the government bonds to pay for the tax stimulus. This bank-financed tax cut is essentially Friedman's old helicopter drop of money. Now, however, forward-looking rational agents are not *fooled*; instead, they understand that the bond drop will not be offset in the future and therefore boost spending until the wealth effect dissipates from the resulting price increase. Long-term equilibrium is restored.

Inflation is due to the optimising consumption behavior of forward-looking rational agents. Although the fiscal effects, as described by Woodford's bond drop and Bernanke's money drop (via bank financed tax cuts) are somewhat different, the ultimate result is that they are both inflationary – hence the policy conclusion that fiscal policy should only be used in a deflationary environment. The FTPL reaffirms that, in normal times, governments should abide by the rules of *sound finance*.

2.2 The optimal policy mix

Since fiscal policy affects both output and inflation, there are two implications for NEC theory. First, an inflation-fighting monetary authority can neutralise the fiscal effect. In other words, fiscal policy works only

when the monetary authority *allows* it to operate. Since the inflationary fiscal effects force the monetary authority to contemplate a policy response, this means that monetary policy itself is *not* independent from fiscal policy. If the central bank fails to address these inflationary pressures in hope to preserve its independence, then it could be criticised for not being credible or consistent. If the central bank does counteract the fiscal measures, then it would maintain consistency and credibility by giving up its policy independence. Misapplied monetary policy may nullify the effect of fiscal stimuli when they needed most. This is one more reason why fiscal policy is called to the rescue only in circumstances as in Japan during the 90s and in the US during the current crisis, i.e., when monetary policy is no longer able to reduce interest rates in hope to stimulate its economy. In such a zero-interest rate environment, Bernanke et al. (2004) have argued, fiscal policy should be allowed to dominate.

If, by contrast, the economy is experiencing only a mild recession, discretionary fiscal and monetary policy can combine to restore full employment, but the optimal policy mix is a matter of debate. An aggressive fiscal stimulus may produce inflation far greater than the monetary authority is willing to tolerate. In such cases, the central bank will increase its target rate to offset the inflationary impact of government spending. Some have cautioned that such a move may exacerbate inflation, if the central bank's Taylor rule is too aggressive (Christiano/Fitzgerald 2000: 32). This is because the rise in the interest rate will also increase the service burden on outstanding government debt, thereby *increasing* the amount of government liabilities in circulation relative to the present value of future surpluses. Prices must rise to bring the intertemporal budget condition to equilibrium, eliciting an additional response from the monetary authority. Thus, fighting inflation too aggressively may be self-defeating and may even lead to hyperinflation (Loyo 1999). All this has stirred a new debate on the question of the optimal policy mix. The foregoing analysis only reaffirms the old conviction that fiscal policy is problematic, validating earlier rejections of discretionary fiscal policy at all costs during normal times, leaving monetary policy to fine-tune the economy.

2.3 *Consensus on fiscal policy?*

There is no consensus in the mainstream when it comes to fiscal policy. The mere rejection of Ricardian Equivalence by the FTPL has presented neoclassical economists with logical problems stemming from the new theory. While there is a considerable layer of realism with respect to government finance, the implications of this theory are devastating for much of the neoclassical theory: the quantity relationship does not explain price determination, monetary policy is no longer independent, and the optimal policy mix is uncertain. The only way to reconcile this clash between the FTPL and earlier mainstream theory is simply to argue that fiscal policy must abide by *sound finance* principles at all times. Because of its inflationary and distortionary effects, it can serve as a policy of last resort only in severe recessions.

3. *Post Keynesians, Chartalists and fiscal policy*

Chartalists, who have long argued that sovereign governments spend on fundamentally different principles from those of the private sector, reach entirely different conclusions about the stabilisation effects of fiscal policy. While they stress that government spending and debt are forever sustainable, they also reject the notion that fiscal policy is *inherently* inflationary, even if there is such a thing as too much government spending.

The Chartalist insights rest on two theoretical propositions. The first is that government liabilities are intrinsically different from those of private agents because their acceptability is independent from the public sector's capacity to *earn* revenue. The second is that government spending and taxation have an important effect on the banking system, which has not received adequate attention in the NEC or Post Keynesian literature. Thus to fully grasp the effects of fiscal policy, one must study the consolidated government balance sheet, including that of the central bank and the treasury.

Once Chartalists make the case that government spending is not operationally constrained and need not be inflationary, the cardinal measure of fiscal policy effectiveness becomes, not the size of the deficit, but its economic impact (Mosler 1997 – 98, Tcherneva 2006, Wray 1998). This is well known as the functional finance approach to fiscal policy first proposed by Lerner (1943). The approach has also been endorsed by

other (Post) Keynesians, such as Arestis and Sawyer (2004), Colander and Matthews (2006), and Eisner (2003). Nevertheless, not all fiscal policies are equally effective and some deliver better results than others. Before addressing this question, we turn to the points of convergence on the matter of government finance between Chartalism and the New Consensus.

3.1 *Endogenous money and the role of government liabilities*

As mentioned earlier, the most significant agreement in the NEC has occurred around the role and functions of monetary policy. In contrast to the monetarist counterrevolution, the mainstream now believes that central banks cannot exogenously alter the stock of money. Instead, they can only set the short-term interest rate, leaving the money supply to be endogenously determined by the credit needs of the economy.

There is a crucial difference between the endogenous approach to money in the NEC and that in the Post Keynesian and Chartalist literature. In the former, money is only endogenous because its velocity is somehow unstable. But money in and of itself is still neutral with respect to production and output and only affects nominal values. In other words, money is what *greases* the economic wheels by eliminating transaction costs and generating nominal equivalences. In the Post Keynesian and Chartalist view, by contrast, money is never neutral. In a monetary production economy, money is a real input of production and it is the vehicle that *sets* the economic wheels in motion. Money contracts are essential in reducing the fundamental economic uncertainty that agents face and any setback to expectations has a real impact on money contracts and, thereby, on output (Davidson 2002).

Despite these core differences, NEC economists like Woodford and Bernanke, acknowledge the unique nature of government liabilities – an important point of emphasis for Chartalists that is not necessarily endorsed by all Post Keynesians. In most of Post Keynesian history, government spending was treated in much the same way as that of private agents who finance their economic activities by borrowing from the banking sector. Therefore, Post Keynesians see money as a credit-debt relationship, where money is endogenously created in the process of financing spending and investment. Post Keynesians explain how *loans*

create deposits and *deposits make reserves* and thus stress the non-discretionary nature of reserves and reverse the money multiplier story of neoclassical theory (Moore 1988, Lavoie 1992, Wray 1990). The endogenous money approach puts the focus squarely on private credit needs and banks' role in financing these needs. Money is credit (or debt) created in this process of bank finance.

The Chartalist contribution to the Post Keynesian endogenous money approach is that, while all money is a credit-debt relationship, government-provided (or state) money is fundamentally different from private debt, since governments need not borrow from banks to finance expenditures. This is because only the government can issue more of its own liabilities to repay past debts irrespective of its earning capacity. The consolidated government, including the treasury and the central bank, is never revenue constrained in its own resource. To understand the unique nature of government finance, we must examine the hierarchical ordering of all debts in the economy and the impact of government spending on bank reserve management.

3.2 The unique position of government debt

If money broadly speaking is a credit-debt relationship, then anyone can issue money (i.e., debt) but not all debts will be equally acceptable (Minsky 1986: 228). If these social debt relationships are organised in a pyramidal fashion, then the least acceptable forms will sit at the bottom of the pyramid, while the most acceptable ones will be on the top. For example, to be accepted, household or firm IOUs must be at least convertible into deposits (i.e., into bank money) or into cash (i.e., into state money). Likewise, to be accepted, bank deposits must necessarily be convertible into reserves or cash (i.e., into government high-powered money). Government-provided money is always at the end of the convertibility chain. To settle debts, *all* economic agents except one, the state, are always required to deliver a *third party's* IOU, or something *outside* the credit–debt relationship. Since only the sovereign can deliver its own IOUs to settle debts, its liability sits at the top of the pyramid and the only thing the state is *liable for* is to accept its own IOUs at public pay offices (Wray 2003: 146 – 9).

For Chartalists, money is a *creature of the state* (Lerner 1947) in the sense that the state imposes obligatory taxes, fines, and fees on the population and then declares what it will accept in payment. In modern economies, the state issues the very thing that settles the population's tax liability. In this sense, Chartalists say that taxes drive money, since they create demand for otherwise worthless state currency. Taxes are also the vehicle by which the state manages to coerce the private sector to transfer (or sell) some of its real resources to the public sector, in the process of earning the very thing that will help them extinguish the tax liability. The state clearly has an unlimited power to issue its own liabilities but it is the tax obligation that makes government-provided money valuable to the population. If the state issued its own IOUs (in the US, dollars), but required payment of taxes in some other state's IOU (e.g., yen), it would undermine the acceptability of its own currency. Agents would need to pay taxes in yen and would therefore prefer to earn yen, not dollars, to settle tax obligations. Thus, not only would the government erode the value of its own currency, but it would also abdicate one of its important sovereign powers, namely to tax in its own liability.[3] As Woodford and Bernanke recognise, the state is in a very different position from that of all other agents, because to settle past debt commitments, it must issue more of its own liabilities. This is not the case for any other agent. What they do not recognise is that taxes create demand for government-provided money and that the state is nevertheless liable for accepting its own IOUs at public pay offices. This tax liability has an important impact on individual liquidity preference (more below).

3.3 Reserve effects of fiscal policy

The effect of fiscal policy on bank reserves has also attracted limited attention (see Bell/Wray 2003 and Fullwiler 2006 as two important exceptions). Contemporary economies operate on the basis of high-powered money systems, where high-powered money includes reserves, coins,

[3] There is a large body of literature linking the origins of money with the power of the state to impose non-reciprocal obligations on the population and declare how they will be repaid. For details see Knapp (1924[1973]), Keynes (1930[1976]), Lerner (1946) and more recently Goodhart (1998), Mosler (1997 – 98), and Wray (1998).

federal notes, and treasury checks, which are all liabilities of the government (including its two agents – the treasury and the central bank). The provision and withdrawal of government liabilities through government spending and taxation has important effects on the banking system. Government spending adds to bank reserves, while taxation drains them. Both of these actions affect the overnight interest rate and would normally prompt an offsetting response from the monetary authority in order to maintain its target rate.

Just as Bernanke has stated, the government has at its disposal a technology called the electronic printing press to facilitate government spending. Although *printing money* is decried by many economists, in reality, this is the only way in which modern governments with sovereign control over their currency spend – i.e., by electronically crediting bank accounts or by mailing checks, which the central bank then clears via electronic reserve credits. This results in a net injection of reserves, which will be leveraged depending on the private sector spending and investment needs. Whatever reserves remain in excess in the banking system will be drained via central bank open market sales to maintain the nominal rate of interest. As Woodford has pointed out, in equilibrium, someone will always end up holding the debt. This does not mean that the private sector has financed government spending; rather, the private sector's liquidity preference has resulted in a certain distribution of the net new financial assets between bonds and base money. In other words, the level of outstanding government debt has been endogenously determined. Put differently, government spending always results in a *crowding in* effect, since the net injection of high-powered money, *ceteris paribus*, causes the interest rate to fall. It is monetary (not fiscal) policy that does the crowding out by offering bonds for sale to drain those excess reserves. There are various institutional structures, such as tax and loan accounts in the US that exist to minimise the effect of government spending on reserves (see Bell 2000 for details). They do not change the fact that government spending, *ceteris paribus*, results in net credits to the private sector. Conversely, government taxation produces a net reserve drain which will cause the overnight rate to increase beyond its target. This will necessitate an immediate offsetting action by the monetary authority. The central bank will supply the needed reserves by buying bonds from banks.

For this reason, Chartalists prefer to talk about interest rate maintenance actions (IRMA) (Mosler 1997 – 98) rather than Woodford's bond price support regimes, although technically they amount to the same thing. The reason why Chartalists prefer the IRMA analogy is because they wish to stress that bonds are never a financing vehicle for the government. Instead, they only offer an interest bearing alternative to holders of non-interest bearing assets (reserves). To eliminate the illusion of debt financed government spending, Chartalists have recommended simply paying interest on reserves.

Thus Woodford's discussion of the wealth effect from a bond drop is not technically correct. To acquire bonds, the private sector must pay with reserves, leaving its net wealth position unchanged. This is why a wealth effect cannot be generated from a bond drop but will come from a reserve drop that results from government spending. Only if the amount of reserves created is greater than what banks wish to hold, will the central bank offer bonds for sale to drain them.

Because the amount of government bonds held by the private sector ultimately depends on private liquidity preference, the Chartalist view can be made consistent with Woodford's discussion. Bond holdings, as Woodford has stated, is a result of the optimal portfolio allocation of individuals. In equilibrium, someone has to hold the debt (whether it is private agents or the central bank). What is not understood is that, as the single supplier of the currency, the government can also set the terms of exchange of these liabilities. Woodford states:

> "[N]o one would doubt the ability of a government to issue an arbitrary amount of currency, without any commitment to retiring it from circulation (e.g., by running budget surpluses) at some later date. Market participants do not consider whether newly issued government liabilities of this kind exceed some bound on what it is considered prudent for the government to issue before deciding whether to accept them as payment for real goods and services; instead, *each agent makes an individual decision about the terms on which to accept such government paper, that depend upon the expected rate of return on the asset in equilibrium.*" (Woodford 2000: 32 – 33, added emphasis)

The difference here is that, according to Chartalism, the return on this asset must also include *at the margin* the tax liability that a private agent can extinguish by delivering the government liability back to the gov-

ernment. Government-provided money is the ultimate means of settling debts and represents a source of net saving for the private sector, the desire for which can be a bottomless sink. Hoarding of net financial assets, as Post Keynesians have demonstrated, can produce unemployment. Thus, Chartalists argue that there is no inherent need for the government to restrict the supply of its own liabilities but, instead, can provide them in a manner consistent with full employment. By doing so, it can also set the terms of exchange of its own currency. In other words, unlike Woodford, Chartalists would argue that it is *not the private sector* that should make the decision about *the terms on which to accept such government paper*, but rather, that it is the monopoly issuer that must stipulate how its liabilities will be provided in order to ensure that government spending or lending is not inflationary.

So while Bernanke and Woodford recognise that sovereign governments face no spending constraints, they do not make full use of this knowledge when discussing fiscal policy. The only occasions for cranking up the printing presses, according to Bernanke, is in extreme deflationary circumstances as in Japan, not acknowledging that government always spends by creating electronic credits to the banking system. Chartalists, by contrast, contend that because sovereign currency nations face no operational constraint to government spending, it is incumbent on the government to exercise functional finance, i.e., to provide net financial assets to the private sector through fiscal policy for full employment.

4. *Fiscal policy and full employment*

The final point to consider is what, if any, is the connection between fiscal policy and full employment. For Chartalists, fiscal policy effectiveness is to be measured by its ability to secure true full employment without generating inflationary pressures. For new consensus economists, however, fiscal policy is always inflationary and full employment considerations are completely outside the purview of theoretical analysis. Although Bernanke has professed a strict adherence to the Humphrey-Hawkins mandate (Seidman 2006), which charges him with maintaining full employment and price stability, the very existence of involuntary unemployment has been rejected by the new consensus both on methodological and theoretical grounds.

4.1 *The irrelevance of unemployment concerns in the new consensus*

When Keynes made the connection between fiscal policy and full employment, he was primarily concerned with how to eliminate involuntary unemployment. In the NEC, the dynamic general equilibrium model, originally developed by Real Business Cycle theorists and later embraced by New Keynesians, does not permit the study of involuntary unemployment. In fact, because of methodological necessity, the type of unemployment that the NEC framework is able to model is only frictional, i.e., purely voluntary (Zouache 2004). Zouache explains:

> "[T]he convergence of New Keynesian Economics and Real Business Cycle theory has a consequence on the conception of unemployment in macroeconomics, particularly with regard to dynamic general equilibrium models amended with a matching function. The unemployed are then defined as workers without jobs and looking for new jobs (and the vacancy as unemployed jobs looking for workers)." (Zouache 2004: 111 – 112)

The reason why unemployment is considered to be temporary in these models is because most of the unemployed have had jobs at some point in the past and will hold a job at some point in the future. Except for a few discouraged individuals, most of the unemployed are treated as workers between jobs. Unemployment appears to be "voluntary in dynamic models with a matching function" because "separations between firms and workers are desired by both" (Zouache 2004: 112). In other words, there is no way of telling whether the individual left the workplace voluntarily or is involuntarily unemployed. If a worker leaves a firm, he could take back his position at a wage that would facilitate the matching between him (the now unemployed) and his firm (the now vacant job). However, although he has voluntarily left his job, if at some point in the future he decides that he wants to exchange his situation (of voluntary unemployment) with someone who is employed, it would appear as though he is involuntarily unemployed since he now wants a job. In short, we cannot tell the difference between voluntary and involuntary unemployment (Zouache 2004).

Zouache also points out that the NEC adopts the long standing Lucas belief (echoed by Blanchard 2000) that involuntary unemployment has

no place in the macroeconomic research programme (Zouache 2004: 113). Zouache concludes:

> "New NeoClassical Synthesis could be interpreted as the final step of the process that will lead to the end of the concept of involuntary unemployment in macroeconomic research [...]. Now a methodology is not neutral since it is based upon a set of theoretical and quantitative tools more or less suited to the analysis of certain issues. And the emerging methodological consensus in macroeconomics will necessarily lead to the study of certain conceptual issues and to the neglect of others. In particular, it seems that the New NeoClassical Synthesis will definitely exclude the concept of involuntary unemployment from the research agenda of future macroeconomics." (Zouache 2004: 113 – 114)

Thus the NEC leaves us with very grim prospects for the possibility of addressing unemployment problems through fiscal policy. If the NEC is not capable methodologically to deal with this concept, then the only goal for fiscal or monetary policy is to correct short-term fluctuations around a full employment equilibrium that has been assumed *a priori*.

4.2 Fiscal policy for full employment in Chartalism

Involuntary unemployment was *raison d'etre* for Keynes's revolutionary theory. For most Chartalists, as for Keynes himself, the cardinal measure of fiscal policy effectiveness is its *employment creation* effect. Therefore, many Chartalists endorse the employer of last resort (ELR) programme as an effective economic stabilisation policy that secures full employment without generating inflation (Wray 1998, Tcherneva 2006). Chartalists have also stressed that this programme has the added benefit of anchoring the value of the currency at the margin.

There are several characteristics that make the ELR proposal a viable non-inflationary full employment policy. Hiring the unemployed takes place in a countercyclical manner, where the public sector labor force becomes the *de facto* stabilising buffer stock (Mitchell 1998). Spending occurs on a fixed price – floating quantity rule, which means that the price of the buffer stock – the wage – will be exogenously determined, while the quantity of the buffer stock – the number of employed individuals in the public sector – will fluctuate endogenously with the business cycle. The buffer stock will expand in recessions and shrink in expansions, thereby stabilising the price of the buffer stock. Because the ELR wage is a base wage, or a floor, it will anchor all other wages in the economy. It will serve as the effective minimum wage since firms will hire public sector workers into private sector jobs at a premium. As long as the ELR wage is not indexed to inflation, it will be a perfectly stable wage anchor. Furthermore, the ELR hires off the bottom, directly targeting the poorest segments of the population, stimulating the economy from below: it is a bubble-up approach, not a trickle-down policy (Minsky 1968). The ELR programme increases both the demand for and supply of output, alleviating demand pull-inflation. Additionally, if the ELR workers produced some consumption goods and services for sale, spending on ELR-produced output by ELR workers would absorb part of the ELR wage bill, further alleviating price pressures from this full employment condition (Minsky 1986). The ELR also enhances human capital, contributing to the wholesale education and training of those who are considered to be unemployable by private sector employers. Finally, because the government spends on a fixed price-floating quantity rule, it essentially anchors the exchange value of the currency at the margin, i.e., 1 hour of ELR work = $6 (for example), which means that $1 is worth 10 minutes of work. The ELR is a direct job creation programme that hires off the bottom, fluctuates counter-cyclically, and stabilised wages and employment.

As Keynes had argued "the real problem, fundamental yet essentially simple [..., is] to provide employment for everyone" (Keynes 1980: 267). This he believed was the task of fiscal policy. The ELR solution, normally advocated by Chartalists, is one among many Post Keynesian solutions. The new consensus by contrast is incapable of addressing the problem of unemployment theoretically or methodologically.

5. Conclusion

If the new consensus has resurrected fiscal policy effectiveness, it is surely on shaky foundations. While mainstream economists like Woodford and Bernanke understand the unique nature of government liabilities in sovereign currency regimes, there is yet no recognition that non-inflationary government spending is possible. Thus the important realisa-

tion that government deficits and debt are forever sustainable is of little help in contemplating economic stabilisation via fiscal policy. The core conclusion that government spending is inherently inflationary and must be controlled via sound finance does not represent a genuine return of fiscal policy to macro-theory.

Chartalists by contrast, like all other Post Keynesians, believe that fiscal policy is potent and must be the tool of choice for macroeconomic stability and coordination. Because it is important how governments spend and what type of fiscal policies they implement, Chartalists normally endorse the ELR proposal, which many Post Keynesians are not yet ready to embrace. Whatever the policy debates among Post Keynesians, they all agree on one thing – it is far more instructive to exercise functional finance than to rely on outdated notions of sound finance.

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