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Fiscal Policy: The Wrench in the New Economic Consensus

Abstract: *The so-called new economic consensus has begun to reassess the role and place of fiscal policy and is calling for its restitution in certain cases. Although a "consensus" may exist on various macroeconomic issues within this literature, fiscal policy is not one of them. The debate is stirred largely by the new fiscal theory of the price level, which not only reintroduces fiscal policy effectiveness but also undermines some core neoclassical notions such as government budget constraints, central bank independence, and the quantity equation relationship. The paper evaluates these new developments in the policy writings and actions of current Federal Reserve chairman Ben Bernanke.*

Keywords: *alternative quantitative easing, Ben Bernanke, fiscal policy, fiscal theory of the price level, NEC*

It took no more than three decades after the publication of J.M. Keynes's *The General Theory of Employment, Interest, and Money* (1936) for the virtual abandonment of fiscal policy by mainstream economists. Keynes, of course, developed a revolutionary new theory of employment and output determination that motivated the need for fiscal policy for macroeconomic coordination and stabilization. But his work also set off a long-standing debate on issues of theory and policy in macroeconomics throughout the twentieth century. Those vigorous debates, particularly

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in the mainstream, have seemingly subsided, and some economists have suggested that orthodox economics has entered an era of new neoclassical synthesis also known as the new economic consensus (NEC) (Goodfriend 2004; Snowdon and Vane 2005). As the global economy reels from the most severe crisis in postwar history, the early theoretical schizophrenia around macroeconomic stabilization policy is creeping back into academia. One thing is certain, however, fiscal policy is back in vogue.

Although many theoretical issues may have been resolved in the NEC, this paper argues that fiscal policy is not one of them. Even before the present crisis, the orthodox camp had begun reassessing its position on fiscal policy (e.g., Allsopp and Vines 2005; Bernanke 2002, 2003c; Blinder 2004; Krugman 2005; Solow 2005; Wren-Lewis 2000), but there is still a considerable debate on its importance and effectiveness, a debate that will surely intensify as economists attempt to formulate adequate policy responses to the current economic situation.

It is thus timely and appropriate to evaluate the renewed role for fiscal policy in the mainstream and its coherence with the rest of the NEC theoretical corpus. This paper specifically examines the fiscal theory of the price level (FTPL) as discussed in Woodford (1995, 1998, 2000), which is the theoretical development that circumvents the restrictions of the Ricardian equivalence hypothesis and gives us the contemporary version of fiscal policy effectiveness. The FTPL introduces potentially seismic shifts in mainstream theory with regard to the nature of government finance—contributions that not only undermine long-held beliefs about the intertemporal government budget constraint but also erode consensus on other mainstream claims such as budget sustainability, central bank independence, and the quantity equation relationship. The FTPL has thus stirred a whole new controversy within orthodoxy (see, e.g., Bassetto 2005, 2008; Buiter 2002). The ultimate effect of fiscal policy, however, rests on its impact on expectations of rational agents—a core proposition that holds the NEC together.

Post-Keynesians, who have long advocated fiscal policy for macroeconomic stabilization, have taken an interest in the NEC model and worked to assess its assumptions and policy implications. Arestis and Sawyer (2004) in particular have challenged the crowding-out effect of government spending as well as the Ricardian equivalence hypothesis. Empirical studies have demonstrated that the fiscal rectitude in balancing government budgets, espoused by the mainstream, has produced devastating social consequences (Baragar and Seccareccia 2008) and mounting private sector debts (Leclaire 2008). Post-Keynesians have also offered amendments to the NEC model either to explicitly include a fiscal variable (e.g., Setterfield 2007)[1] or to produce post-Keynesian results within the NEC structure that would allow fiscal and monetary policy to influence the level of output, employment, and capacity utilization (e.g., Kriesler and Lavoie 2007). This paper adds to this body of literature by conducting an internal critique of the NEC model and its theoretical developments regarding fiscal policy.[2] There are two important conclusions of the paper. First, the new view of fiscal policy in the mainstream has

produced a host of theoretical problems that significantly erode whatever consensus currently exists. Second, these developments have reintroduced with full force the controversial mainstream claims about the inherently inflationary and distortionary effects of government spending.

Consensus in the New Economic Consensus

The new consensus is an amalgamation of the developments in macroeconomics from the neoclassical synthesis to the present day. It is an approach whose defining characteristic is the claim that choice-theoretic microfoundations determine macroeconomic outcomes. It is now settled in the mainstream that to explain changes in aggregate employment and output, all macroeconomic models must adequately incorporate individual intertemporal decision making based on rational expectations. In this framework, deviations from natural output equilibrium are possible (unlike in the new classical and real business cycle theory), but they are due to the behavior of rational individuals within the confines of a myriad of rigidities in the labor and capital markets. Natural output is no longer the same thing as Keynes's full employment output equilibrium; rather it is the level of output that would occur under perfectly flexible prices and wages (Leith and Wren-Lewis 2005). In the short run, it is also the level of *un*employment that does not accelerate inflation.[3] Therefore, the inflation–unemployment tradeoff encapsulated in the expectations-augmented Phillips curve is another hallmark of the NEC, in which unemployment is usually captured in the NEC models by the output gap. Finally, if individually constrained optimization takes place in imperfect or incomplete markets, there is an important role for short-term corrective policy. The shape and form of these remedial measures is another major feature of the NEC. Specifically, it is argued that important stabilization effects can be delivered via monetary policy.

Perhaps the most significant consensus has occurred on the role and functions of monetary policy. In contrast to the monetarist counterrevolution, the new consensus now holds that central banks cannot exogenously alter the stock of money. Instead, they can only set the short-term interest rate exogenously, leaving the money supply to be determined endogenously by the credit needs of the economy. In the NEC, the real business cycle claim that money is endogenous has replaced Friedman's monetarist view that central banks control monetary aggregates.[4]

The monetarist idea that the central bank is nonetheless responsible for controlling inflation remains a central tenet, but now the main tool for inflation control is the interest rate, not the money supply. This notion, coupled with the old IS/LM model idea that changes in interest rates affect investment and output, has produced a consensus that monetary policy can affect both output and inflation through adjustments in the rate of interest. The combination of the interest-investment relationship and the interest rate control mechanism in the NEC indicates that

monetary policy *can* perform aggregate demand management functions if output deviates from its natural level. Because discretionary changes are discouraged due to policy time-inconsistency considerations (Sargent and Wallace 1973), the type of monetary policy that is advocated by NEC is one based on a reaction function à la Taylor rule (see Taylor 1993). In fact, because the latter specifies both an output gap and an inflationary gap, it is believed to be the best policy tool to tackle the dual challenge of inflation and unemployment.

The above are considered to be the core propositions of the NEC, abridged in the following three-equation model (after Woodford 2003):

The IS equation:

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

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 New Keynesian Phillips curve:

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

where the rate of inflation π_t is 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 an expectations-augmented Phillips curve.

The Taylor rule:

$$i_t = i_n + \varphi_\pi(\pi_t - \pi_{t^*}) + \varphi_y(y_t - y_{pt}), \quad (3)$$

where the current operating target (the funds rate i_t) adjusts to an implicit desired funds rate (which is the Wicksellian "natural" rate of interest i_n) and to changes in output and inflation rates from their targets.

To be effective, short-term demand management via monetary policy must be automatic, transparent, and credible.[5] So what is the designated place and role for fiscal policy in this approach?

The Return of Fiscal Policy

Recent calls for the restitution of fiscal policy in the NEC generally emerge from concerns with the zero interest rate bound to monetary policy (e.g., Bernanke, Reinhart, and Sack 2004; Krugman 2005). Because the short-term rate is the main policy lever under central bank control, once it reaches zero, no further economic stimulus from monetary policy is possible. It is in this context that fiscal policy is being called to the rescue. This is effectively a reformulation of the old liquidity trap problem. The IS/LM Keynesians argued that when an increase in the exogenous money stock produced no fall in the rate of interest, monetary policy was ineffective, as all new money/cash balances were being absorbed instead of being directed toward new investment. In the NEC, the short-term rate is the exogenous

variable under central bank control and, as long as it keeps falling, *some* increase in investment will occur. When it reaches its nominal bound of zero, however, we observe a modern-day liquidity trap à la Japan. In Japan, monetary policy was considered to be largely ineffective, and zero interest rates prevailed for five years without a noticeable recovery in sight. Eventual recovery began only after heavy government spending, triggering renewed interest in fiscal policy as a tool for macroeconomic stabilization. Interest in fiscal policy has intensified further with the increasing recognition of the parallels between the protracted Japanese slump and the current U.S. economic crisis.

In the NEC literature, however, as in the current political discourse, the dominant view is still that fiscal policy is distortionary and inflationary and therefore useful only in extreme deflationary periods (see, for example, Krugman 2005). Blinder also opposes "the case against discretionary fiscal policy," but he explicitly refuses to advocate the "case for" fiscal policy. In fact, in *normal* times, Blinder supports "the now-standard view that the Central Bank *should* and *does* have a dominant role in stabilization policy" (Blinder 2004: 2). Bernanke has also argued that, in the short run, fiscal authorities may have important reasons to deviate from a balanced budget stance, especially when faced with national emergencies or deep recessions. In the long run, however, to preserve the public's confidence, fiscal discipline must be exercised and the national debt must remain at stable and moderate levels (Bernanke 2003b).

What has changed in the NEC is that fiscal policy is no longer considered ineffective as the new classical and real business cycle theories once viewed it. Instead, its distortionary and inflationary effects can be exploited in difficult times to complement stabilization via monetary policy. This new role for fiscal policy must be studied in the context of endogenous money. Furthermore, it must be recognized that if fiscal policy affects output and inflation, it necessarily affects monetary policy as well. Similarly, an inflation-targeting monetary policy can in turn influence those fiscal effects (Woodford 1998). For these reasons, far from being independent from each other, some NEC economists are beginning to recognize that monetary and fiscal policies must be closely coordinated (Bernanke 2002; Woodford 1998; Wren-Lewis 2000).

The impact of fiscal policy on demand within the NEC is based on wealth effects from deficit spending that the Ricardian equivalence hypothesis previously rejected. There have been many challenges to the latter, but the most influential (and still controversial) comes from Woodford's 1995 FTPL. Although as the name suggests this is a theory of price determination, it is this approach that gives us the renewed role for fiscal policy effectiveness. To understand this new role, it is important to examine the following issues: (1) the effect of government spending and debt on the behavior and expectations of rational consumers, (2) the method of financing government spending and whether there is a binding budget constraint, and (3) the impact of fiscal policy on the banking system and central bank policy.

Mainstream Challenges to Ricardian Equivalence

As noted, subscription to the Ricardian equivalence hypothesis as in Barro (1974) invalidated fiscal policy effectiveness. The only role for fiscal policy under this scenario is when it affects margins or *incentives* (Sargent 1986). The NEC readily embraces supply-side effects of fiscal policy. Nonetheless, Ricardian equivalence has been challenged on several grounds. First, it is quite possible that individuals may face liquidity constraints that prevent them from maintaining constant patterns of spending. Under Ricardian equivalence, when taxes are cut, individuals do not increase their spending because they know that a tax increase will be coming, which will offset the temporary windfall to incomes. But if individuals face borrowing/liquidity constraints (due to imperfect or incomplete financial markets, for example), they *will* reduce their demand and fiscal policy will have an effect. In a similar vein, Campbell and Mankiw (1990) have argued that this consumption-smoothing effect is not empirically supported. This, according to the authors, is not because the permanent income hypothesis is false but because there are rigidities that prevent the proper adjustments.

Another challenge to Ricardian equivalence critiques Barro's assumption of an infinite household lifespan. Individuals are mortal, and if they believe that the current budget deficit will be offset *far* into the future (meaning that future generations will pay for today's deficit), they may in fact feel better off today and increase their expenditures (Myles 2000). Solow (2005), for example, has recently observed that during the Japanese recession government deficit spending was not hoarded, as suggested by Ricardian equivalence, but was instead spent, which proved to be effective in reviving the Japanese economy. Households, it seems, adjust their spending due to a windfall from deficits.

Fiscal Theory of the Price Level and Ricardian Equivalence

The final and more important challenge to the Ricardian view of fiscal policy comes from the above-mentioned FTPL (Woodford 1998). In this theory, Woodford claims that Ricardian equivalence is one special case among many. In fact *non*-Ricardian fiscal policy regimes are the norm. Under those regimes fiscal policy is effective. Woodford reminds us that, according to Ricardian equivalence, the following condition must always be satisfied.

$$B/P_t = \text{present value of primary fiscal surpluses as of time } t,\ t = 0, 1, \ldots \quad (4),$$

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

This relationship states that the real value of government debt today must always equal the net present value of future surpluses. In a sense, real primary surpluses are believed to "finance" real government debt. So today's deficits (which increase government debt) must necessarily be offset by the discounted future primary surpluses.

But there may be fiscal regimes that do not behave this way. In other words, there may be no fiscal authority commitment to increase future taxes to offset the current rise in nominal government liabilities and balance the above budget constraint. In such cases, prices must *necessarily* adjust. The instances when governments promise no future offsets to today's spending are called non-Ricardian fiscal regimes (this is Woodford's terminology, but these regimes are also quite similar to Leeper's [1991] "passive" monetary and "active" fiscal policy regimes). It is under such regimes that fiscal policies will have sizeable demand-side effects on both inflation and output, which are manifested via a wealth effect mechanism.

Suppose that we are in a non-Ricardian fiscal regime in which the government has made no commitment to abide by the above intertemporal budget constraint. Suppose also that issuing bonds finances a sudden increase in government spending, as Woodford (1995) argues. Rational individuals (the bondholders) will interpret the new injection of bonds as a permanent windfall to their wealth, realizing that no future tax increases will offset today's government spending. From this wealth effect, households will "demand goods and services in excess of those the economy can supply except insofar as prices rise" (Woodford 2000: 19).

The resulting boon to demand is only temporary, however, as the accompanying price increase eventually erodes the real value of the new financial assets, and equilibrium is reestablished. Debt has risen and spending has increased and so have prices to balance the intertemporal budget constraint above. This is the *bond drop* theory of inflation (Allsopp and Vines 2005: 489; Woodford 1995: 22–24): government bond-finance produces a wealth effect and induces price increases.

A Radical New View of Government Finance?

Some economists have questioned the implications of non-Ricardian fiscal regimes under the FTPL. Although there are such regimes, they argue, do government bonds not still need to be repaid sooner or later? Does the government not face a budget constraint after all? If governments keep issuing nominal liabilities, would this not lead to an unsustainable explosion in the government debt? Woodford's answer to all these questions is "no," but before I explain why, I need to discuss the traditional view of government finance and budget constraints—a view that is prevalent in the NEC, save for the few voices like Woodford's (see also Allsopp and Vines 2005; Bernanke 2002).

The traditional view of government finance is well known. Governments are considered to be no different from individuals and firms, whose optimizing behavior is subject to budget constraints. Because of the distortionary supply-side effects of government spending, it is commonly believed that "good housekeeping" in the form of "sound finance" must generally be practiced (Allsopp and Vines 2005: 486). Governments must abide by their intertemporal budget constraints and offset their spending today by current or future taxes. Ideally, these offsets should not occur too far into the future, to guarantee intergenerational equity (i.e., future generations should not finance present generations' well-being). Furthermore, large deviations from these constraints are believed to undermine the sustainability of the government budget. Sustainability, therefore, is a major common concern for mainstream economists, but there is a growing disagreement about what exactly it means. In most analyses, it means that the government will simply be unable to borrow from the private sector, making deficit spending unsustainable. But others have argued that sustainability should mean *solvency,* because the government, unlike the private sector, can always borrow from its central bank.

Allsopp and Vines summarize the main two criteria for sustainability: one concerns the solvency of the state and the other refers to "tight and binding constraints to budget deficits and debt, intending to limit the freedom of the fiscal authorities" (Allsopp and Vines 2005: 486). The two authors argue in favor of the former definition, as in reality the interaction between the monetary and fiscal authority under an interest rate peg permits sizeable fluctuations in the debt stock—a position that originates in Woodford's FTPL (see Woodford 1998) and that Kirsanova, Jari Stehn, and Vines (2005) also adopt.

Solvency for Allsop and Vines is not in question (2005). According to this criterion then, one could argue that government spending is forever sustainable. The implication of this definition is that one need worry not about budget sustainability but about the real effects of deficit spending on the economy. This is reminiscent of the calls for functional finance by early Keynesians such as Abba Lerner, who argue that government policy should not be judged by the size of the deficit but by the impact it has on the economy (Lerner 1943). However, this is hardly a proposition embraced by the NEC. In fact, the "sound finance" perspective dominates, suggesting that debt-to-gross domestic product (GDP) caps are necessary to avoid the distortionary and inflationary effects of government spending. Furthermore, as mentioned above, a main goal for policy is to avoid the intolerable tax burden on future generations: "When it comes to the aggregate stance of fiscal policy, the focus of interest for government today is in issues of sustainability and intertemporal equity rather than short-run stabilization" (Wren-Lewis 2000: 92).For these reasons, Allsopp and Vines argue that the general assignment of fiscal policy in the NEC is the "control and sustainability of the public finances as well as . . . the resource allocation and distributional effects of budgetary policy" (Allsopp and Vines 2005: 486).

Both Wren-Lewis (2000) and Allsopp and Vines (2005) reject this assignment of fiscal policy and instead advocate its important demand-side effects. Leith and Wren-Lewis also observe that traditional concerns with budget constraints suggest that if governments should play any stabilization role at all, it should generally be confined to stabilizing the debt stock through fiscal instruments (Leith and Wren-Lewis 2005: 592). In this context, discretionary fiscal policy is particularly problematic as compared with automatic stabilizers, because it will likely lead to ever-increasing deficits and debts. Furthermore, discretionary and temporary changes to government spending are believed to cause higher than normal deficits,

as suggested by the tax-smoothing literature (Henning 2005: 28). The intertemporal budget constraint is an important underlying condition for understanding the role of fiscal policy in mainstream theory.

These are some of the deeply entrenched mainstream views on government finance. There are nevertheless a handful of dissenting voices, such as Woodford's. How does Woodford answer the above three questions (repeated again here): (1) Is it not the case that government bonds need to be repaid sooner or later? (2) Does the government not face a budget constraint after all? and (3) If governments keep issuing nominal liabilities, would they not cause an unsustainable explosion in government debt?

The answer to the first question is that the government can always issue more liabilities and roll over its debt indefinitely. As an example, Woodford suggests that "it is possible for a government to finance transfers to an initial old generation by issuing debt that it then 'rolls over' forever, without ever raising taxes" (Woodford 2000: 30).[6] But what if the private sector simply refuses to buy these government liabilities? Is this not the effective budget constraint?

It is easy to interpret the rejection of the public to buy government debt as a refusal to finance deficit spending. This could lead one to believe that the public's preference for other assets would be a barrier to government financing. But such an interpretation, Woodford argues, would be a mistake. There are two ways to circumvent this problem. First, if the government makes it clear that this is a permanent increase in nominal debt, people will buy it because it represents an increase in net wealth. Second, Woodford does not think that it is reasonable to assume that people will ever refuse to buy government bonds (if the government wants to sell bonds, someone will buy them), but if they do, the central bank will step in.

In an interest rate peg regime (which Woodford calls a "bond price-support regime"), it is the responsibility of the central bank to maintain the price of the short-term bond, that is, the interest rate (Woodford 2000: 8). If the government decided to exogenously increase spending by debt finance, the central bank would serve as the residual buyer of bonds. Thus, even though households end up holding government bonds, it is still not the case that the private sector imposes limits on government spending. For Woodford, the proper interpretation of government debt owned by the public 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).

In other words, the private sector's liquidity preference determines the amount of debt held by the public in equilibrium. Finally, the answer to the third question is that an explosion of debt is possible but not necessarily *technically* unsustainable (as we will see later, there is a greater danger that an overly *tight* monetary policy stance would cause such an explosion). Although Woodford does not belabor this point, he is in fact arguing that there are no technical constraints to government spending, as is traditionally believed. The government is a very different agent from the private sector. Woodford summarizes these points as follows:

> 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)

The unique nature of government liabilities, which has long been discussed by Keynesian economists and Chartalists in particular (e.g., Keynes 1930; Knapp 1924; and more recently Goodhart 1998; Wray 2003), is now being recognized by some new consensus economists in support of the view that fiscal policy does not face traditional budget constraints. Allsopp and Vines also adopt the Woodford position to argue that, when exploring the stabilizing potential of fiscal policy, it is much more useful to talk about solvency than sustainability subject to some tight and binding constraints. Now that we have examined government finance, let us revisit the FTPL transmission mechanism of government spending and its wealth effect.

The Wealth Effect and the Bond Drop

Woodford's bond drop creates a wealth effect when these bonds are sold to private agents. In his initial statement of the FTPL (Woodford 1995), he literally assumes a "helicopter bond drop," much like Friedman's helicopter drop of money. But in a modern economy, how such a bond drop is financed needs to be explained. This is important because the wealth effect occurs *only* when the total private holdings of *net* government liabilities have increased. In other words, the relevant measure of nominal government liabilities for the discussion of the "wealth effect" is the *sum* of government debt in the hands of the public and the monetary base (Eggertsson and Woodford 2003). This would mean that if private agents use reserves to buy bonds, there would be no wealth effect, because they would be exchanging one government liability for another. Note that using "near monies," such as private checking accounts, to buy government bonds will not do the job, because clearing such payments with the Fed, in fact, destroys an equivalent amount of reserves.

In flexible exchange rate systems with government-provided money, there are many reasons viewing the private sector as "financing" government spending by purchasing its debt makes little sense. The main reason is that in sovereign currency nations, governments always spend by electronically crediting bank accounts, that is, by creating reserves (see Wray 2003). Once these reserves have been created, the private sector could choose to purchase government bonds, but this would hardly

constitute financing of government spending via a bond drop. Rather, government spending is financed by a "reserve drop" first, that is, by creating new reserves that could later be used to buy bonds.

Woodford does not acknowledge this fact, even as he recognizes that a bond drop, which occurs from Federal Reserve open market operations (OMOs), does not create net new government liabilities and therefore produces no wealth effect. Although he does not provide an explicit statement of how private purchases of bonds are financed, he does state that if the private sector refuses to buy government bonds, the Fed will do the job as a residual buyer (thereby removing any private sector financing constraint on the government). In his analysis the bond drop aims to explain how an increase in total government liabilities in the hands of the public can produce a wealth effect that will induce changes in prices. When the private sector increases its holdings of net nominal government liabilities, the amount of which is greater than the present value of exogenously determined future surpluses, the private sector will understand that taxes will not be raised to offset the bond drop. Expecting greater overall lifetime consumption, households increase their spending, push prices up, and in the process erode the value of these government liabilities, until the budget constraint in (4) above is again in equilibrium. In fact, for Woodford, the condition in (4) is just that—an equilibrium condition—and not an actual constraint on the government imposed on it by private agents.

The Wealth Effect and Inflation

These results are radically different from most mainstream analyses. First, inflation is *not* a monetary phenomenon. In fact, the implication of Woodford's approach is that inflation is *purely* a fiscal phenomenon. This is the source of much controversy in the mainstream with regard to the effects of fiscal policy, as it suggests that the quantity theory of money is irrelevant. Money is endogenously determined, velocity is unstable, and now prices are determined by the relationship of government deficit spending relative to the real value of future primary surpluses. This also means that there may be many different price levels that will be consistent with the quantity equation relationship, and they will all depend on the level of nominal debt issued by the government. A bond drop via OMOs conducted by the monetary authority is not inflationary, neither is a bond purchase (which is the same thing as the monetarist helicopter drop of money), because the total level of nominal government liabilities remains unchanged.

A money drop, however, from money-financed government spending (often called "the monetization of debt" by the mainstream) creates a wealth effect and *is* believed to be inflationary. Note also that it was previously believed that the fiscal authority forced the monetization of debt on the central bank to allow the government to extract seigniorage revenue. This is *not* a core proposition of the NEC. In fact, it is generally agreed that seigniorage is so small as to be irrelevant to the understanding of the monetization of debt (e.g., Sims 1994; Woodford 2000). The

FTPL turns neoclassical monetarist propositions on their head and opens the door for a more realistic view of government finance in a world of endogenous money. As I have suggested, this view still suffers from some serious limitations, but it nonetheless adds a layer of realism absent from mainstream theory up to now. What is paradoxical, however, is that the assumption of the inherently inflationary impact of government spending has served to reinforce belief in the need to impose hard budget constraints, to the detriment of useful stabilization or full employment policies. Sound finance remains unchallenged.

Monetary Policy Independence

What is particularly interesting in the NEC debates is that the FTPL seems to erode the traditional view of monetary policy independence. Thus another important issue to consider is the interaction between the monetary and fiscal authorities under this "passive monetary active fiscal regime" (Leeper 1991). Allsop and Vines argue that fiscal policy ineffectiveness within the NEC carries a very specific meaning. There is a possibility, the authors suggest, that "the behavior of the fiscal authorities will be taken into account by the monetary authorities, leaving the overall macroeconomic behavior of the system little changed" (Allsop and Vines 2005: 494). In other words, the central bank can "internalize" fiscal behavior. Monetary policy still sits at the steering wheel and only "allows" fiscal policy to be effective.

One could argue that an inflation-fighting central bank could increase interest rates to offset the inflationary impact of government. But the ability of the monetary authority to neutralize the fiscal inflationary effect is also debated. Remember the budget constraint in Equation 4.

If the central bank raises interest rates to fight inflation, it may in fact considerably increase debt service payments and, therefore, total government debt. Because prices are a function of fiscal policy, they begin to rise to eliminate the wealth effect and equilibrate the intertemporal budget constraint above. The monetary authority, observing that interest rate increases have failed to halt prices, will respond with another rate increase, thereby increasing the debt service burden of government further. If the process goes on, real government debt will continually rise relative to the net present value of the primary surplus, generating a wealth effect that turns out to be hyperinflationary. Woodford makes a similar argument, suggesting that a reaction function like the one Taylor (1993) proposed may actually *accelerate* the inflationary effect of government spending (Woodford 1998). A fiscal policy disturbance may become more serious in an inflation-fighting monetary policy regime than in the traditional IS/LM framework, in which the shift in the IS curve can be neutralized by monetary policy (Woodford 1998: 21).

The above analysis rests on two conditions: (1) the monetary rule Taylor proposed is too aggressive (Christiano and Fitzgerald 2000), and (2) if the initial value of nominal public debt is very large, such a policy, according to Woodford, will surely backfire. Christiano and Fitzgerald also explain that a higher nominal interest rate

intended to fight the inflationary effects of high government debt would lead to a more rapid increase in the nominal debt. Because the expected future primary surplus does not change, prices must adjust, leading to an increase in inflation. An inflation-targeting monetary authority, which uses a more aggressive Taylor rule, will automatically increase the nominal interest rate, further worsening nominal debt and therefore inflation. An inflationary spiral results (Christiano and Fitzgerald 2000: 32). This according to Loyo (1999) was the case in Brazil during the 1990s, which he describes as the "tight monetary paradox."[7]

The foregoing analysis undermines the traditional view of central bank independence. Woodford, for example, supports the definition of independence in the sense of pursuing "*autonomous* monetary policy, . . . a rule for setting its instrument (in practice, a nominal interest rate) that is *independent of fiscal variables*" (Woodford 2000: 4). But he makes it clear that, if this nominal rate rule is too aggressive, it may turn out to be destabilizing and inflationary if the fiscal stance is consistent with large nominal debt (he therefore suggests alternative rules to circumvent this problem). It is unclear how fiscal policy can be separated from monetary policy. Both have an impact on output and inflation according to this interpretation. We have entered a new age of policy effectiveness in which the optimal policy mix is in dispute. Some have argued that fiscal policy is responsible for this policy mix and that once it has been established it could have significant stabilizing effects (Allsopp and Vines 2005).

Although some NEC authors have called for coordination between monetary and fiscal policy, it is still the choice-theoretic assumptions that drive the analysis of the effects of monetary *or* fiscal policy. If fiscal policy is clearly articulated to the public as being Ricardian (i.e., that today's deficit increases are always exactly offset by rises in tomorrow's surpluses), fiscal policy will be ineffective; but if it is non-Ricardian, fiscal policy, monetary policy, *and* their interaction must be made clear and transparent to the public, so that rational agents can make optimal decisions.

Because there is a widespread agreement that fiscal policy is inherently inflationary, it is believed to be useful mainly in deflationary conditions. In normal times, monetary policy must dominate and fiscal policy should remain passive, with its only aim being to anchor expectations adequately. If fiscal policy is needed, it needs to be automatic, transparent, and credible and must abide by rules.

Policy Action and the New View of Fiscal Policy

The application of the new consensus view to policy is perhaps best illustrated by the writings and policy actions of Federal Reserve chairman Ben Bernanke. Bernanke embraces the core concepts of the NEC (the IS curve, the Phillips curve, and the Taylor rule), and unlike his predecessor Alan Greenspan, avidly supports inflation-targeting policies (2003b). In theory at least, he has defended Taylor rules as very effective in meeting the dual challenge of inflation and unemployment (Seidman 2006: 20), although in practice there is little indication that he is in fact abiding by such a rule, especially in the context of the current downturn.[8]

Also unlike Greenspan, he has advocated fiscal policy as a stabilization tool in times of crises.[9] To be effective, however, fiscal policy must be closely coordinated with monetary policy. This coordination, as mentioned above, puts into question traditional central bank independence. For Bernanke, the role of a central bank is different in inflationary and deflationary environments. In the latter, he feels there may need to be a "more cooperative stance on the part of the Central Bank" (Bernanke 2003c), a belief that is clearly reflected in his current policy actions. He suggests that fiscal policy may need to take the reins during severe downturns and that monetary policy must facilitate it. Unlike monetarists, he is suggesting that fiscal policy should be allowed to dominate. How might this be accomplished and what type of coordination does Bernanke suggest?

For Bernanke, as for other NEC economists, fiscal policy has an important role to play in a Japanese-style deflationary environment, when monetary policy reaches its zero interest rate bound. However, unlike Woodford, the fiscal effect comes *only* from a wealth effect via a money drop (not via a bond drop); such a helicopter drop of money can occur when the Fed facilitates a money-financed government tax cut.

Fiscal and Monetary Quantitative Easing

Before we look at this effect, it is worth keeping in mind that the objective here is quantitative easing, which could be carried out by the central bank in several different ways. For Bernanke, as for traditional monetarists, the money supply will increase as a result of OMOs, when the central bank buys short-term debt from the private sector and supplies reserves. Bernanke suggests, however, that in a Japanese-style recession, alternative quantitative easing may be necessary via nontraditional OMOs, when the Fed buys long-term government debt and brings long-term interest rates to zero (Bernanke 2003c).[10] But this is still in the realm of monetary policy and, as already discussed, the NEC now agrees that the Fed does not have exogenous control over the money supply.

Central bank quantitative easing via purchases of various short- or long-term assets may not work because the central bank has "no unilateral authority to rain money on the population" (Bernanke 2000: 163). But a quantitative easing via a money-financed tax cut can be undertaken via fiscal channels (Bernanke, Reinhart, and Sack 2004: 20). Think of George W. Bush's tax rebate checks.

Bernanke argues that the Fed can accomplish such a quantitative easing through a fiscal money drop, that is, via money-financed government stimuli, among which he has indicated preference toward tax cuts (Bernanke 2003c). Resorting to fiscal policy is necessary because even with the alternative monetary policy, even if the Fed is able to buy short- or long-term assets from the banking system, there is no guarantee that the extra reserves it supplies will find productive uses, that is, that this new cash will be redirected into the hands of consumers and investors. This may happen either because banks are still unwilling to lend or because individuals are

still unwilling to borrow. A bank loan even at a zero percentage rate of interest still has to be repaid, whereas a tax rebate puts cash in the hands of households with no strings attached. For such a quantitative easing to occur, some intragovernmental cooperation is required (Bernanke 2003c: 23). So how do we accomplish such a "money-financed tax cut"? Bernanke answers,

> Under a fiat (that is, paper) money system, a government (in practice, the central bank in cooperation with other agencies) should always be able to generate increased nominal spending and inflation, even when the short-term nominal interest rate is at zero. . . . The U.S. government has a technology, called a printing press (or, today, its electronic equivalent) that allows it to produce as many U.S. dollars as it wishes at essentially no cost. (2002)

In other words the central bank will finance the government policy by creating electronic credits to taxpayer accounts and by providing the requisite reserves. Bernanke further argues that these tax cuts will be spent and not saved (which is similar to Woodford's wealth effect in non-Ricardian regimes). Bernanke continues,

> In practice, the effectiveness of anti-deflation policy could be significantly enhanced by cooperation between the monetary and fiscal authorities. A broad-based tax cut, for example, accommodated by a program of open-market purchases to alleviate any tendency for interest rates to increase, would almost certainly be an effective stimulant to consumption and hence to prices. . . . A money-financed tax cut is essentially equivalent to Milton Friedman's famous "helicopter drop" of money. (2002)

Thus Friedman's helicopter drop is reincarnated in the new consensus via fiscal policy. From Bernanke's analysis, cash in the hands of people creates the wealth effect (not bonds, as in Woodford). One could argue, therefore, that there is no particular reason fiscal policy should involve tax cuts; spending too could theoretically do the job. But the strong supply-side bent in the NEC continues to favor tax cuts, and there are few who argue for government spending as a stabilizing tool (e.g., Krugman 2005; Leith and Wren-Lewis 2005). Research on this topic will surely change with the return of public works proposals to policy debates.

Fiscal Policy Effectiveness: The Role of Expectations

If we compare Bernanke's version of fiscal policy effectiveness with Woodford's, we find them to be very similar, although Bernanke clearly argues for a fiscal money drop, whereas for Woodford both a money and a bond drop would have an effect. Both policies are effective because they increase net nominal wealth. Bernanke also prefers a money-financed tax cut, because this policy does not increase total government debt. He explains this effect in the context of Japan's latest recession:

> Consider, for example, a tax cut for households and businesses that is explicitly coupled with incremental Bank of Japan purchases of government debt—that the tax cut is in effect financed by money creation. Moreover, assume that the Bank of Japan has made a commitment, by announcing a price level target, to reflate the economy, so that much or all of the increase in the money stock is viewed as permanent. . . . Under this plan . . . the 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. The health of the banking sector is irrelevant to this means of transmitting the expansionary effect of monetary policy. (Bernanke 2003c, quoted in Seidman 2006: 25)[11]

The important choice-theoretic point of agreement between Woodford and Bernanke is that the wealth effect depends on *expectations*. Bernanke is quick to point out that this policy will work as long as taxpayers perceive the tax cut to be a permanent windfall, which future tax increases will not offset. In fact, precisely because the central bank is purchasing the government debt, there is no need to raise taxes to repay it at a later date. Therefore, rational agents understand this to be a permanent increase in their incomes. The job of policy is not only to be non-Ricardian but also to communicate this regime to the public. If fiscal policy is transparent, it too can anchor expectations appropriately.

The role of expectations in fact delineates the difference between the money drop under monetarism in which it produces a money illusion and the money drop in the NEC. The new consensus mechanism is reminiscent of the early "money illusion" adjustment, except that it is now couched in rational expectations terms. Previously, agents perceived an exogenous increase in the money supply to be an actual boon to nominal incomes. Suffering from adaptive expectations and not realizing that this increase in the money supply is only inflationary, agents increase their spending, which pushes prices up and neutralizes the effect of the increased demand. Full employment is reestablished but with higher prices. In monetarism we have past-binding expectations, which generate money illusion that causes consumers to spend more. In the NEC, rational and forward-looking agents face not an exogenous increase in the money supply but an exogenous increase in government spending. Instead of a *monetary* helicopter money drop, we now have a *fiscal* helicopter bond *or* money drop. Rational agents are not "fooled," instead they understand that the bond drop will not be offset in the future. They boost spending until the wealth effect dissipates as prices rise. Long-term equilibrium is restored.

The difference between the old monetarist transmission mechanism and the one in the NEC is that inflation is due to forward-looking expectations, which alter the consumption behavior of optimizing agents. The size of the bond drop will determine the inflationary impact of deficit spending, as long as fiscal policy is transparent and expectations are well anchored, that is, as long as households

understand what the size of the deficit is and whether it will be offset. The reason demand increases relative to supply (and produces the inflationary effect) is we face labor market (or other) rigidities, which prevent the system from equilibrating immediately to full employment.

Whereas for Woodford inflation is determined by the amount of government liabilities injected into the economy through fiscal policy relative to future surpluses—that is, it is purely a fiscal phenomenon—for Bernanke inflation is quite simply a consequence of "overissuance of nominal government liabilities" (Bernanke 2003a: 211), be it as a result of fiscal or monetary policy. It seems that Bernanke, unlike Woodford, is not ready to give up the old quantity equation relationship and, in this respect, the Bernanke view of fiscal policy coheres with the old monetarist interpretation of inflation. Ultimately, however, in the NEC, it does not matter whether the government finances its spending by bonds or by printing money, excessive amounts of each will be inflationary—an effect that can be exploited in times of crisis or deflation to boost output and employment.

Conclusion

Whether these new developments represent a genuine resurrection of fiscal policy effectiveness is debatable. Both Woodford and Bernanke are still unable to escape their sound finance background. Bernanke believes that fiscal policy must be sound to anchor expectations in the short run, which would make it more potent during recessions (Seidman 2006: 27). The inflationary effect of fiscal policy in Woodford's analysis also motivates fiscal discipline and a commitment to certain debt limits (Woodford 2000: 71). Both economists make the case for fiscal policy only in extraordinary circumstances. To this end the NEC, as encapsulated in the three-equation model above, is an *inherently monetary approach,* that is, one that upholds an omnipotent monetary policy, save for cases of severe recessions when fiscal policy can come to the rescue. In normal circumstances, however, discretionary fiscal policy is to be avoided at all costs.

Because fiscal policy is nevertheless exercised in normal times, it has been suggested that fiscal policy rules should replace discretion. This would instill both credibility and transparency in government policy. Although fiscal and monetary rules are preferred in normal circumstances, Bernanke argues that in a deflationary environment, fiscal policy should dominate via *discretionary* tax cuts. These cuts should be immediate but temporary, should have long lead lags, and should not cause major changes in the federal government's structural budget deficit (Bernanke 2008). Whether the economy is in a recession or a boom, monetary and fiscal policies are *interdependent,* and the optimal policy mix is of crucial importance. It is not enough for the fiscal and monetary authorities to select the "correct" policy stance; they must also make rational agents *believe* that these are the appropriate policies. This is because fiscal (like monetary) policy is ultimately a policy of *managing expectations.*

All the above-mentioned effects will be invalidated if rational agents do not believe fiscal policy to be credible and expect a reversal in the stimulus, regardless of whether it is provided through Woodford's bond drop or Bernanke's fiscal money drop. Fiscal policy affects both inflation and output by anchoring expectations appropriately. Whatever the renewed role of fiscal policy in the mainstream, it hinges entirely on the choice-theoretic foundations Bernanke, Woodford, and all other NEC economists so readily embrace: fiscal policy works as a supply-side or demand-side tool only if it manages to affect incentives and expectations.

What is stirring so much controversy in the mainstream is the issue of government finance. It is slowly being recognized that, in the context of endogenous money/interest rate maintenance regimes, governments do not face technical/operational constraints to spending. Yet notions of sound finance and intertemporal budget constraints pervade new consensus thinking. More importantly, the mainstream has reinstated the presumed inflationary and distortionary effects of fiscal policy with full force. It is for this reason that the conclusions of the mainstream remain a far cry from J.M. Keynes's theoretical support for fiscal policy as a tool for macroeconomic coordination, stabilization, and full employment. This also begs the question of whether post-Keynesian fixes and amendments to the NEC model are even at all possible. Economic instability is a pervasive feature of market economies, and business cycles require stabilization irrespective of the severity of the downturns; it is therefore questionable that the mainstream offers a genuine resurrection of fiscal policy effectiveness if the latter is only relegated to once-in-a-century occurrences, such as the current economic collapse.

Notes

1. These are similar to what Taylor (2000) has dubbed "fiscal rules."
2. Elsewhere, I have specifically challenged the NEC's "novel" analysis of government finance (Tcherneva 2009).
3. Paradoxically also referred to as the "full employment level of unemployment."
4. Even Milton Friedman has recanted the notion that the money supply is exogenous (Friedman 2003). It took the mainstream a while to recognize that money is endogenously created, even though endogenous theories of money have existed at least as far back as the Banking-Currency school debates from the mid-1840s. In the modern literature, the post-Keynesian school of thought has most rigorously developed these theories.
5. Many have claimed that central bank independence is also a major prerequisite for monetary policy effectiveness but, as I argue later in this section, the new developments in the NEC on the interactions between fiscal and monetary may necessitate abandoning policy independence as an objective.
6. One could interpret his argument to support the view that social security faces no funding constraints, ever.
7. Others have argued that we can eliminate the inflationary effect of government by imposing spending constraints, debt-to-GDP limits (e.g., the Maastricht criteria in the European Union), but Woodford shows that spending bounds do not change his conclusions. In fact imposing a ceiling on government spending could make self-fulfilling deflation possible (Woodford 1998: 3). Thus monetary and fiscal policy must be very carefully coordinated.

This does not happen because the Fed monetizes the government's debt. In fact, for Woodford the monetization analogy is not useful. The only thing that matters is that large deficit spending may create expectations of even bigger future deficits, which through their excessive wealth effect produce hyperinflation (Woodford 1998).

8. Seidman (2006) reports that Bernanke personally adheres to the Humphrey Hawkins dual mandate unreservedly and that inflation targeting does not sacrifice employment for price stability.

9. Laurence Seidman has argued that Bernanke's writings and speeches are much more lucid than Alan Greenspan's and that "after Bernanke has established his anti-inflationary credentials, he will adopt a policy that balances concerns over unemployment and inflation" (Seidman 2006: 19). It is interesting to note that Bernanke's first major challenge two years after his appointment as Federal Reserve chairman is not to fight inflation but to prevent the financial meltdown and economics collapse from evolving into a full-fledged deflation. Whether he will be successful is yet unclear, but Bernanke has moved quickly to cut interest rates aggressively, orchestrate various financial bailouts, and offer new sources of liquidity to various domestic and international financial institutions.

10. Note that this is exactly what Bernanke was doing in early 2008 to rescue the economy. He is implementing nontraditional OMOs and is allowing banks to use bad mortgage assets as collateral for borrowing from the Fed. In addition, he is extending lender of last resort assistance not only to commercial banks but to investment banks as well.

11. Note that Bernanke adds another important reason fiscal policy is potent. The financial system may be in disarray and monetary policy through the usual transmission mechanisms will not work, not only because of the zero interest rate bound but also due to the poor health of the financial system. However, with a money-financed tax cut, fiscal policy sidesteps the financial difficulties and offers a direct stimulus.

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