

# **Fiscal Policy in Today's Endogenous Money World**

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**Abstract:**

The role of central banks and monetary policy in the New Consensus view is so prominent that the macroeconomic role of discretionary fiscal policy is rarely mentioned in modern economics or policy making alike. This paper challenges this view in several ways. Firstly, it argues that there is nothing inherently monetary about the nature of stabilization policy in the New Consensus view. Secondly, it lends support to the view that ideology, policy mistakes and particular historical circumstances played a role at least as important as economic theory in the rejection of post-war Keynesianism, and the consequent downgrading of fiscal policy. Finally, the existence of partial or complete crowding-out in the modern New Consensus/endogenous money framework is decided by the central bank rather than by the 'market'. Also, in this framework the different forms of financing real government spending are endogenously decided by private agents rather than exogenously set by policy makers.

## **Introduction**

There is now a well established proposition in our profession, namely that there is a New Consensus in macroeconomics, which can be easily deployed to analyze a broad range of policy issues. In fact, the New Consensus model is so popular and easily applicable to a variety of policy exercise, that it is slowly but increasingly used to replace the iconic *IS-LM* model in undergraduate macroeconomic textbooks (e.g. Carlin and Soskice, 2006, Ch. 3). Most, if not all, of the success is related to a combination of theoretical and practical arguments.

Starting with the theoretical arguments, the New Consensus model marks a dramatic shift from the quantity-theoretic framework defended by monetarists and neo-classical synthesis Keynesians alike, toward a non-quantity theoretic framework in the spirit of the monetary contributions of Wicksell and Keynes (Fontana, 2007, Table 1). This non-quantity theoretic framework has shown remarkable flexibility, being able to encompass modern theoretical advances, including the natural rate hypothesis, and the expectations-augmented or inertial Phillips curve. It has also absorbed the rational expectation hypothesis, and built on the insights and methodology of the real business cycle theory.

The practical arguments in favour of the New Consensus view are not less powerful and innovative. Most central banks around the world including the Bank of England and the Federal Reserve have all rejected the monetarist credo and its policy prescriptions. Central banks do not control monetary aggregates, but the short-run nominal interest rate. The stock of money is thus a residual, an endogenous rather than an exogenous element of the economic process. The old causal relationship between money

and price is untenable. Similarly, any recommended cure for inflation based on a monetary targeting rule is considered impracticable. The void left by the monetarist credo and its policy implications has been replaced by new analyses and policies, which are consistent with the New Consensus view. Central banks now use the short-run nominal interest rate to achieve a particular combination of current and potential levels of output, the so-called output gap, which delivers the desired rate of inflation.

An interesting but often ignored implication of modern developments in macroeconomics is that the role of central banks and monetary policy in the New Consensus view is now so prominent that discretionary fiscal policy is rarely mentioned in modern economics or policy making alike. The purpose of this paper is to challenge this view in several ways. Firstly, this paper will argue that there is nothing inherently monetary about the nature of stabilization policy in the New Consensus view. Secondly, it will lend support to the view that ideology, policy mistakes and particular historical circumstances have played a role at least as important as economic theory in the rejection of post-war Keynesianism, and the consequent downgrading of fiscal policy. Finally, it will suggest that the existence of partial or complete crowding-out in the modern New Consensus/endogenous money framework is decided by the central bank rather, than by the 'market'. Also, in this framework the different forms of financing real government spending are endogenously decided by private agents rather than exogenously set by policy makers.

The paper is organised in three main sections. Next section presents a simplified algebraic representation of the New Consensus view, and it discusses its policy implications. The following section reviews recent works on the possible historical

causes of the current downgrading of fiscal policy at the advantage of monetary policy. The final section considers the theoretical explanations that are traditionally used to explain the ineffectiveness of fiscal policy, with a particular focus on the crowding-out arguments, within both an exogenous money framework and an endogenous money framework.

### **The New Consensus View and Its Policy Implications**

The New Consensus view is based on a 3-equations model: a Phillips curve, an *IS*-type curve, and a monetary policy equation. The model has several standard New Keynesian features. All three equations can be derived from explicit optimizing behaviour of individual agents in the presence of market failures, including imperfect competition, incomplete markets, and asymmetric information. These market failures generate transitory price and wage stickiness, which in turn give support to the view that in the short run the aggregate supply respond to changes in the aggregate demand. Aggregate demand has thus a transitory, yet non-trivial role in determining the equilibrium level of output and employment in the economy. In other words, where individual agents behave rationally, the outcome of their actions has adverse macroeconomic effects. On this basis, activist government actions are then justified to eliminate or limit some of these effects.

In terms of the mechanics of the model, price and wage stickiness plays a key role in relating the monetary policy rule to the *IS*-type curve. The central bank via changes in the short-run nominal interest rate is actually able to control the short-run real interest rate. In this way, the central bank is able to affect the consumption and investment

components of aggregate demand. This is an important theoretical result, because it goes well with another important tenet of the New Consensus view, namely that low and stable inflation is conducive to growth, stability and the efficient functioning of market. When the economy is hit by shocks, taking it away from its natural path, it is the central bank which is responsible for achieving the desired rate of inflation in the medium term, and subject to that, also for bringing output and employment to their equilibrium levels in the shorter term (Allsopp and Vines, 2005)<sup>1</sup>. However, in pursuit of its objectives the central bank faces a (short-run) trade-off between inflation and output. This trade-off is captured by the Phillips curve, which can be thought as the aggregate supply component of the New Consensus model.<sup>2</sup>

Drawing on Carlin and Soskice (2005), Clarida *et al.* (1999), Meyer (2001) and Walsh (2002) a simplified version of the New Consensus model can thus be represented by a set of three equations describing the dynamics of changes in the inflation rate (Equation 1), the output gap (Equation 2), and the interest rate policy rule (Equation 3).<sup>3</sup>

$$\dot{\pi} = g(y - \bar{y}) \quad (1)$$

$$y - \bar{y} = f(r; X) \quad (2)$$

$$r - r^* = h(\pi - \pi^T) \quad (3)$$

Equation (1) is a Phillips equation explaining changes in the inflation rate in terms of the output gap, namely the difference between current ( $y$ ) and potential levels of output ( $\bar{y}$ ). The *IS* curve is represented by Equation (2). The output gap is influenced by changes in the real interest rate ( $r$ ), and by a vector of exogenous variables ( $X$ ) like government expenditure, the tax structure, and net exports that also influence the *IS*-type

curve. Finally, Equation (3) is a simple monetary policy rule. The difference between the actual real interest rate ( $r$ ), and its long-run equilibrium level ( $r^*$ ) is a function of the difference between current ( $\pi$ ) and target ( $\pi^T$ ) rates of inflation.

The set of Equations (1-3) summarises the core propositions of the “New Consensus” view, and its policy implications: given short-run price and wage rigidities, by changing the short-run nominal interest rate, central banks are able to influence the short-run real interest rate ( $r$ ). Equation (2) then shows that central banks change the output gap, which via Equation (1) affects the rate of change in the inflation rate. When the rate of inflation is at its target level (Equation 3), the actual real interest rate ( $r$ ) is equal to its long-run equilibrium level ( $r^*$ ), and the output gap is nil.

However, there is nothing intrinsically monetary about the nature of stabilization policy in the New Consensus view. If anything, from a theoretical point of view fiscal policy should actually have the most prominent role in the New Consensus view. Basically, the role of the policy instrument in the New Consensus model can be theoretically played by any variable affecting demand and thereby the output gap (Equation 2), which in this way is used to control changes in the inflation rate (Equation 1), and hence to achieve the desired or targeted inflation target (Equation 3). For instance, Equation (2) could be replaced with Equation (4) below, which highlights the role of fiscal policy variables rather than the standard monetary policy instrument. In its new version, the *IS* curve explains that the output gap is influenced by changes in real government expenditure ( $G$ ), taxes ( $T$ ), and by a vector of exogenous variables ( $X$ ), which in this case include the real interest rate ( $r$ ) as well as net exports. This means that government expenditure, tax structure and net exports are not entirely exogenous.

Equation (4) makes plainly evident that governments are not fully responsible for fiscal deficits, since at least in part they respond to the inflationary or deflationary effects of changes in the output gap.

$$y - \bar{y} = f(G, T, X) \quad (4)$$

Theoretically the replacement of Equation (2) with Equation (4) in the New Consensus model should reinforce the policy transmission mechanism described above. It is worth remembering that in the set of Equations (1-3), the central bank is able to affect the output gap, and hence hit the inflation target only in the restrictive case of some price and wage stickiness; the reason being that the central bank controls the nominal short-run interest rate ( $i$ ) rather than the real short-run interest rate ( $r$ ). The difference between the two rates is measured by the change in the price level. Therefore, it can be safely assumed that the central bank can control the real short-run interest rate ( $r$ ) only when prices and wages are sticky. This is the essence of the so-called Taylor principle, namely the proposition that central banks can stabilize the economy by raising the nominal short-run interest rate ( $i$ ) instrument more than one-for-one in response to higher inflation (Davig and Leeper, 2005).

The Taylor principle implicitly assumes either that prices and wages are fixed in the short-run, or that whatever little change in their value, this is known to the central bank, which can then use this information in order to attain, via changes in the controlled nominal interest rate ( $i$ ), the desired level of the real short-run interest rate ( $r$ ). These assumptions severely limit the applicability of the New Consensus model, and the effectiveness of its monetary policy prescriptions. For instance, it is a well known proposition in economics that prices and wages are flexible in the long run, which

automatically rules out any possibility for the central bank to affect the real interest rate, and hence to influence real variables in the long run.

By contrast, the fiscal authority does not encounter any of these problems or limitations: there are no implicit or explicit assumptions on the values that price and wage can take either in the short or long run. Furthermore, it is not necessary to make unrealistic assumptions about the level of knowledge required by the fiscal authority in order to achieve its New Consensus policy prescriptions. The fiscal authority can directly affect aggregate demand, and hence the output gap, by moving real government expenditure ( $G$ ) and/or taxes ( $T$ ) (Equation 4). Like in the traditional interpretation of the New Consensus model, then the fiscal authority can manipulate the output gap such that to bring the inflation rate to its target level, and the actual real interest rate ( $r$ ) to its long-run equilibrium level ( $r^*$ ).<sup>4</sup>

### **Why Fiscal Policy Fell Out of Use: A Speculative History**

The previous Section has argued that one of the most important practical implications of the New Consensus view in modern macroeconomics is the prominent role assigned to central banks in achieving an inflation target either explicitly, like the case of UK and Sweden, or implicitly, as in the US. In fact, the role of monetary policy in the New Consensus view is so prominent that today the macroeconomic role of discretionary fiscal policy is rarely mentioned in economics or policy making alike.<sup>5</sup> In the few cases when fiscal policy is discussed, the aim is to limit its role to exceptional circumstances, when monetary policy is either unusable or little effective, like in the case of the lower bound problem on the short-run interest rate (Krugman, 2005), or country-

specific shocks in monetary unions (Kirsanova *et al.*, 2007). But why has the role for fiscal policy been downgraded? Is this a novel feature of modern macroeconomics or the New Consensus view has borrowed it from past contributions?

The few recent papers on the subject almost universally start with a statement about the hegemonic role of fiscal policy over monetary policy in the 1940s and 1950s, reaching its apogee in the 1960s (see, for instance, the papers in Symposium, 2005). It is also hinted that the success of monetarism in the 1970s and 1980s has played an important role in the modern downgrading of fiscal policy, but little is told of this historical change. A possible reason for the unspoken downgrading of fiscal policy is that this historical shift is rather complex, possibly an interplay of theoretical and practical factors. It is also likely that these factors have played distinct roles at different times, and in different countries. For instance, as the standard Mundell-Fleming model shows, a move from a fixed to a floating exchange rate system affects the effectiveness of fiscal policy to the advantage of monetary policy. Following the United States decision to suspend the convertibility of dollars to gold in 1971, the Bretton Woods system of fixed exchange rate *de facto* collapsed. However, countries adopted a flexible exchange rate at different times, and in different ways. Furthermore, the policy implications of a move from a fixed to a floating exchange rate system depends on the size of the country in the world economy, and on its participation to a monetary union like the Euro area.

Notwithstanding the likely complexity of the historical process that has led to a downgrading of fiscal policy at the advantage of monetary policy, it may be worth speculating on some of the possible causes of it, by looking at some recent contributions on the subject. In a recent paper aptly titled “The case against the case against

discretionary fiscal policy” Alan Blinder has reminded us that in the three decades following the publication in 1936 of the *General Theory of Employment, Interest, and Money* (Keynes, 1936), discretionary fiscal stabilization policy gradually but steadily conquered hearts and minds of academics and practitioners alike. By the 1960s it was a common proposition that governments should cut taxes, increase cash transfer payments as well as goods and services purchases in order to combat a recession. Blinder also refers to some anecdotal evidence about the marginal role in policy making assigned to the chairman of the Federal Reserve Board. It is said that President Kennedy (1961-1963) only remembered the name of the chairman of the Federal Reserve Board, namely William McChesney Martin, because his surname started with the same first letter of monetary policy. Still more indicative of the time, is the fact that Walter Heller, the then chairman of the Council of Economic Advisers in the index of his well-know book *New Dimensions of Political Economy* (Heller, 1966) does not make any reference to William McChesney Martin. However, Blinder argues that times have dramatically changed:

Multiply by -1, and you have a capsule summary of the conventional wisdom today. ... Discussion of stabilization policy by economists – whether it is abstract or concrete, theoretical or practical – is about monetary policy, not fiscal policy (Blinder, 2004, p. 1).

The last few decades have in fact witnessed a decline of interest in discretionary fiscal stabilization policy at the advantage of monetary policy. Blinder complains that it is not only academics, but also policy makers who discuss almost exclusively monetary policy strategies. On the rare occasion when fiscal policy is discussed, it is mostly to argue against its use for stabilization objectives or inflation control. The present writer has tried to replicate the “Kennedy-experiment” with his macroeconomics students during a seminar on monetary and fiscal policy strategy in US: all students knew the

name and the policy view of the current chairman of the Federal Reserve Board, namely Ben S. Bernanke, but no one was familiar with the name, let alone the policy view of the current chairman of the Council of Economic Advisers, namely Edward P. Lazear.

According to Blinder, there are two main reasons explaining the current decline of interest in discretionary fiscal policy. Firstly, there are potentially long inside lags for fiscal policy compared to monetary policy. In other words, there are long delays between a disturbance in the economy and the time policy makers recognize that a policy action is required and then implemented. This is what Blinder calls practical or political arguments against discretionary fiscal policy.<sup>6</sup>

Secondly, there is the so-called “Ricardian equivalence” view suggesting that it does not matter whether a government finances spending with debt or tax increase, the total level of demand in the economy is the same. This means that any attempt by the government to influence aggregate demand, and hence the level of income and employment in a country by using fiscal policy, will prove fruitless. Putting it boldly, if consumers are “Ricardian” they will save more now to compensate for current higher taxes (in the case of tax-financed government expenditure), or future higher taxes (in the case of bond-financed government expenditure), as the government has to pay back its debts. The increased government spending is therefore exactly offset by decreased consumption on the part of private agents, with the result that aggregate demand does not change. This is what Blinder calls theoretical or economic arguments against discretionary fiscal policy.

Blinder maintains that the interplay of these practical and theoretical arguments together with adverse historical circumstances explain the dramatic debacle in the late

1960s of the post-*General Theory* support for discretionary fiscal stabilization policies. He uses the case of USA with great effect. The Vietnam War caused a massive increase in public spending at a time of a near-full employment situation. Against the counsel of his Keynesian advisers, the US President Lyndon Johnson (1963-1969) neither reduced public spending nor raised taxes with the result that inflation kept rising. When in 1968 taxes were finally raised, the Vietnam-induced inflation was unaffected. This historical accident supported well the practical and theoretical arguments against the use of discretionary fiscal policy. Firstly, it showed that the inside lags for fiscal policy could be very long. Okun (1970, Ch. 3) argues that the advisers to President Johnson urged an increase in taxes as early as 1965. The President resisted the advice till middle 1967, and it then took another 18 months for the Congress to approve the temporary income tax increase. Secondly, consistently with the “Ricardian equivalence” view, the 1968 income tax increase proved to be ineffective. The change in fiscal policy failed to affect consumer spending, and hence the rate of inflation.

It should be added that whereas the long inside lag of the 1968 fiscal restraint is unanimously accepted, Blinder is sceptical of the “Ricardian equivalence” interpretation of the event. He laments that the “Ricardian equivalence” view is based on unrealistic theoretical assumptions, including long time horizons, perfect foresight, perfect capital markets, and the absence of liquidity constraints. It is also poorly supported by empirical evidence (see, also, Hemming et al., 2002). Drawing on his own study of the 1968 episode (Blinder, 1981), Blinder blames the temporary nature of the income tax rise as the cause of the poor impact on aggregate demand. In any case, a similar experience followed with the deep recession of 1974-1975, when first President Richard Nixon

(1964-1974), and then President Ford (1974-1977), failed to use countercyclical fiscal measures until it was too late, and with little impact. Blinder concludes that these practical and theoretical factors apparently supported by historical circumstances destroyed faith in fiscal policy, and more generally discretionary stabilization policy.

Long inside lags, weak tax effects due to the PIH [the permanent income hypothesis (PIH) implies that temporary tax changes should have small effects on consumer spending], and the vertical long-run Phillips curve have precious little to do with the monetarist claim of fiscal impotence owing to a vertical LM curve. But all these problems with fiscal policy seemed to get mixed up together in the anti-Keynesian backlash, and fiscal stabilization fell deeply out of favour (Blinder, 2004, p. 12).

From this perspective, the modern New Consensus view represents the final outcome of an historical process, which started in the late 1960s, and steadily downplayed the role of discretionary fiscal policy at the advantage of discretionary monetary policy. Interestingly, in his concluding remarks just quoted, Blinder introduces two new causes for the downgrading of fiscal policy, namely the emergence of monetarism and the existence of a vertical Phillips curve. Monetarism and the Phillips curve are actually the main topics of another recent contribution on the subject.

James Forder (2007a, 2007b) argues that the historical downgrading of fiscal policy in the last few decades is due in large part to the success of the “expectation critique” of the Phillips curve. According to this critique expected inflation affects the wage bargaining process such that any reduction in unemployment would be short-lived. The expectation critique is usually attributed to Milton Friedman (1968) and Edmund Phelps (1967). It is therefore dated towards the end of the 1960s, which marks roughly the beginning of the end of the use of discretionary fiscal policy for stabilization purposes. More importantly, Forder maintains that the expectation critique forms the

backbone of a convenient myth in economics about the supposed weaknesses of Keynesian economics, and its support for discretionary fiscal policy.

Mythology has it that, until the view was rebutted by Friedman (1968), or Phelps (1967), or perhaps Friedman (1966), the work of Phillips (1958) had the economics profession, and the Keynesians in particular, convinced of the exploitability of an inflation-unemployment trade off. That rebuttal, it is held, came in the form of what is now sometimes called 'the expectations critique' ... One can only speculate. But there is a certain utility in dating the discovery of the expectations critique late in the Keynesian era. For one thing, it helps to provide the profession with a collective excuse for the inflation of the 1970s. Whilst there are other aspects to this, it should be apparent that with the inflationary failures of that period so evident, it is convenient to be able to lay the blame as fully as possible on a single mistake. There is no fundamental flaw in the system, and perhaps not in the operators; there was one error and that has now been corrected. By this line of thinking, the myth of Friedman's innovation is made to provide absolution through logical insight.

It is also the case that according to the conventional presentations, attempts to exploit the Phillips curve were at the center of Keynesian policy. Although a history may be fictitious, it still benefits from being internally consistent, and that requires that the 'failure of Keynesianism' be explicable in terms of the discovery of the flaw in reasoning about the Phillips curve. One could not tell even a superficially convincing story to the effect that practical Keynesianism revolved around a stable Phillips curve if one acknowledged the common sense status of the expectations critique all through the period. ...

So the deprecation of Keynesianism, the wisdom of the post-Friedmanite orthodoxy, and the scientific status of economics are all buttressed by this particular piece of amnesia. One should perhaps not be too surprised that such a convenient myth persists (Forder, 2007a, p. 1 and pp. 12-13).

There are two major points in these long quotations, which are relevant for the purpose of this paper. Firstly, Forder (2007a) argues that the expectation critique of the Phillips curve originates much earlier than the end of the 1960s. He maintains that even before the publication of "The relation between unemployment and rate of change of money wage rate in the United Kingdom" by Phillips (1958), it was a well accepted proposition in economics that expected inflation will affect the wage bargaining process such that any reduction in unemployment would not last forever (see, for instance, Champernowne, 1936). It is therefore misleading to present, like Friedman (1968) did,

the expectation critique of the Phillips curve as the reason for the rejection of Keynesianism and discretionary fiscal policy by academics and policy makers alike.

Secondly, Forder (2007b) challenges the role usually assigned to the Phillips curve in the development of post-war macroeconomics. In his Nobel lecture, Friedman (1977) argues that Keynesian scholars adopted with alacrity Phillips' analysis and used it, or better misused it, for policy purposes by arguing in favour of inflationary policies with the aim of lowering unemployment. In this way, Friedman set the Phillips curve at the heart of all post-war attempts by Keynesian economists of lowering unemployment. The rise of inflation and unemployment in the 1970s could then easily be used as historical evidence against Keynesian theories and policies. By contrast to this view, Forder actually shows that Keynesian scholars were sceptical of the Phillips curve, and there is very little evidence to suggest that they used the trade-off between inflation and unemployment in order to lower unemployment.

It should be noted, however, that although it is only a myth, Friedman's depiction of a naïve and indeed rather stupid professional consensus of the 1960s may not be entirely harmless. Two consequences in particular should be considered. The first is that Friedman subjected the Keynesians not merely to criticism, but to derision. He suggested that the greatest economists of the time had, to what can only be the deepest professional discredit, committed the most foolish of intellectual blunders. Once that is accepted, it hardly needs to be added that, shameful as it was ever to have made those inflationary mistakes, it would be more shameful still ever to make them again. Thus this romance of a Dark Age of Economics does much, I suggest, to shore-up support for approaches to policymaking based on central bank independence, inflation targeting, and fiscal conservatism. ...

Secondly, whilst he is remembered for dismissing the possibility of a long-run trade-off, Friedman's greater achievement was to put the short-run trade-off at the centre of almost everyone's macroeconomic analysis. The historically attested theoretical alternative to the vertical Phillips curve is not a trade-off in the long-run, but a denial of it in the short-run. To the Keynesians, the problem of unemployment was, over a very wide range, simply a different problem from the problem of inflation. It is as much the triumph of Friedman's history as of his theory that it has become almost impossible to articulate the view that

macroeconomic policy should be concerned with unemployment without seeming merely to plan a day-trip up the Phillips curve. But this is in fact not the only view one might take (Forder, 2007b, pp. 16-17).

For the purpose of this paper, it is thus interesting to record that the traditional explanation for the current disaffection with discretionary fiscal stabilization policy is to say the least not unanimously supported by historical evidence. The traditional story goes that IS-LM Keynesianism and its policy implications failed to provide any understanding of the event of the 1970s, let alone to solve them, and hence it was replaced by a new theoretical framework, namely New Classical Macroeconomics (Lucas and Sargent, 1978). Whatever the merit of the contributions by New Classical macroeconomists, the work of Blinder and Forder discussed above seems to suggest an alternative story, where ideology, policy mistakes and particular historical circumstances played a role at least as important as economic theory in the rejection of *IS-LM* Keynesianism, and the consequent downgrading of fiscal policy.<sup>7</sup>

### **Why Fiscal Policy is Ineffective: An Endogenous Money Perspective of the Crowding-out Debate**

The previous sections have discussed the main features of the New Consensus view in macroeconomics and its policy implication that monetary policy must play the dominant role in order to deliver price stability in the medium-to-long run. They have also argued that theoretically there is nothing inherently monetary about the nature of stabilization policy in the New Consensus view. Any policy instrument affecting the *IS*-type equation, and hence the output gap (Equation 2 above), could deliver price stability.<sup>8</sup> In other words, theoretically fiscal policy could well play the current role assigned to monetary policy.

Over the last few decades several arguments have been developed to the effect that fiscal policy instruments are ineffective. Hemming *et al.* (2002), and Arestis and Sawyer (2003) provide an excellent review of the theoretical and empirical literature on the effectiveness of fiscal policy in stimulating output and employment. Following their works, the arguments supporting the view that fiscal policy is ineffective could be grouped under three headings. Firstly, there is the crowding-out debate, which discusses the effects in the economy of changes in interest rates and the exchange rate due to a fiscal expansion. Secondly, there is the natural rate of unemployment or NAIRU literature, which discusses the role of changes in the aggregate demand in the context of a supply-determined level of output and employment (Sawyer, 2002). Finally, there is the so-called “Ricardian equivalence” view (Barro, 1974), which analyses the conditions under which a reduction in public savings is compensated by an increase in private savings.

Fontana and Palacio Vera (2007) and previous sections had already dealt with the second and the third arguments supporting the view that fiscal policy is ineffective (see, for an elaborated critical view of the “Ricardian equivalence”, Arestis and Sawyer, 2006). Therefore the main focus of this Section is on the crowding-out debate in the case of the traditional *IS-LM* exogenous money framework, and of the modern New Consensus endogenous money framework. For the sake of simplicity, the crowding-out debate is discussed in the case of a closed economy.

The crowding-out debate concerns the efficacy of fiscal policy in stimulating the level of output and employment in the economy. The debate is usually set in a standard *IS-LM* and *AD-AS* framework, with finite elasticity in the *IS* and *LM* curves with or

without the existence of wealth effects. For simplicity, let us assume that the private sector does not have liabilities, and that wealth consists only of money ( $M$ ) and perpetual bond holdings ( $B$ ). Private wealth ( $a$ ) is then defined as following:

$$a_t = \frac{1}{P_t} \left( M_t + \frac{B_t}{i_t} \right) \quad (5)$$

where  $P$  and  $i$  are the price level and the nominal interest in period  $t$ , respectively. Similarly, for simplicity let us ignore interest-induced wealth effects, and the full-employment case (i.e. a vertical  $AS$  curve). In the case of a money-financed increase in real government spending, the results are unequivocal: the  $IS$  curve shifts rightwards, like it does the  $LM$  curve, and as a result of these shifts the level of output and employment rises. In Figure 1, the new equilibrium in the economy is at point ( $B$ ).

### **Please Insert Figure 1**

These results are not overturned by considering wealth effects. For any given level of money, the increase in income triggers wealth effects in the demand for money function, the reason being that as wealth rises, a person wishes to hold more money. The interest raises, and the  $LM$  curve shifts slightly leftwards (i.e.  $LM_2$ ), whereas at the same time the  $IS$  curve shifts further rightwards (i.e.  $IS_2$ ). The final equilibrium in the economy is thus at point ( $C$ ), where ( $C$ ) could be on the right or slightly on the left of point ( $B$ ). In short, there is only partial crowding out (i.e.  $Y_2$  is always on the right of  $Y_1$ ).

Different is the case of a bond-financed increase in real government spending (Blinder and Solow, 1974). It is now important to distinguish first-round effects from second-rounds effects. In the former case, wealth effects are absent. The  $IS$  curve shifts rightwards (i.e.  $IS_1$ ), but the  $LM$  curve does not move. In other words, as a result of the

increase in real government spending, the level of output and employment rises, though to a lesser extent than the money-financed case, because by assumption the money supply does not change. In Figure 2, the new equilibrium in the economy is at point (*B*). Second-rounds effects include wealth effects, which now shifts the *IS* curve further rightwards (i.e. *IS*<sub>2</sub>), whereas the *LM* curve moves leftwards (i.e. *LM*<sub>2</sub>).

### **Please Insert Figure 2**

Like in the case of a money-financed increase in real government spending, the *LM* curve shifts leftwards because of negative wealth effects on the demand for money. However, in this case the wealth-induced *LM* curve shift may even offset the expansionary effect of the wealth-induced *IS* curve shift altogether, the reason being that *ceteris paribus* with a fixed money supply the interest rate must rise higher than the previous case to compensate for the wealth-induced increase in the demand for money. In Figure 2, the final equilibrium in the economy is at point (*C*), with an output level equal to (*Y*<sub>0</sub>). In other words, in this case the wealth effects bring the economy back to the original position. The aggregate demand curve moves rightwards and then leftwards (i.e. from *AD*<sub>0</sub> to *AD*<sub>1</sub> and then back to *AD*<sub>0</sub>). In short, there is a complete crowding-out.

In summary, in a standard *IS-LM* closed economy framework with finite elasticity in the *IS* and *LM* curves, and in presence of wealth effects, the economy experiences partial crowding-out in the case of a money-financed increase in real government spending, and possibly a complete crowding out, like in Figure 2, in the case of a bond-financed increase in real government spending.<sup>9</sup>

Let us now repeat the same type of exercise, namely the analysis of a money-financed and a bond-financed increase in real government spending, when money is

endogenous rather than exogenous like in the *IS-LM* model (Fontana, 2008, Chapters 6-7). For the purpose of the analysis here, an endogenous money model is simply the *IS-LM* model with the central bank setting the short-run interest rate on monetary reserves rather than the quantity of money, either directly or indirectly via the standard reserves multiplier story (Fontana, 2004, 2006). This seemingly innocuous change in central banking behaviour has dramatic implications for the analysis of the crowding-out phenomenon. Immediately there is a problem of definitions, because in the endogenous money case it is arbitrary to differentiate money-financing and bond-financing real government spending. As it is argued below, the decision of money-financing or bond-financing real government spending rests with the private sector rather than the public sector. The different forms of financing real government spending are endogenously decided by private agents rather than exogenously set by policy makers. In other words, the form of financing government spending is a residual outcome of the portfolio preference of households between different liquid assets. Table 1 and Table 2 show the effects of an increase in government spending, through an analysis of the balance sheets of commercial banks and the central bank.<sup>10</sup>

### **Please Insert Table 1**

Let us suppose that the government wants to increase spending by £100 millions in order to employ more nurses in public hospitals. Table 1, row 1 illustrates that the government will then sell £100 millions short-run bonds (i.e. Treasury bills) to commercial banks in return for the opening of deposits of equal value. Table 1, row 2 shows the second-round effects of the government spending. As the Treasury fulfils its spending plans, the deposits are transferred from the government to households. If the

economic process stopped here, it could be concluded that the £100 million increase in government spending is bond-financed. However, once households receive their payments, they may wish to hold part or all of it in banknotes. Let us suppose that households wish to hold all deposits in banknotes. Table 2, row 1 shows the effects of this decision on the balance sheets of commercial banks and the central bank, respectively.

**Please Insert Table 2**

Banks sell Treasury bills to the central bank in return for the opening of deposits of equal value. This means that banks have now replaced Treasury bills with reserves at the central bank. Table 2, row 2 records the second-round effects of the process. Since households wish to hold all deposits in banknotes, they withdraw money from banks. Commercial banks accommodate the request by using their reserves of banknotes at the central bank. In this case, the £100 million increase in government spending is money-financed. In reality, it is likely that households wish to hold only part of their deposits in banknotes. This means that the proportion of government spending that is bond-financed or money financed is the outcome of households' choice between deposits and banknotes, and it can be represented by a combination of Table 1 and Table 2.

Before moving to an analysis of a money-financed increase in real government spending, it is worth highlighting some of the implications of replacing the exogenous money hypothesis of the *IS-LM* model with the endogenous money hypothesis. They are related to the role of the central bank as the residual supplier of liquidity to the economy. The acceptability of bank deposits as means of payments rests on the confidence of households that deposits can always be used for buying goods and services. This means

that deposits must always be exchangeable for legal tender, i.e. banknotes, on demand. Therefore, whenever households desire to have some deposits transformed into banknotes, the commercial bank cannot but borrow reserves from the central bank.

Table 3 below show the effects of a money-financed increase in government spending, through an analysis of the balance sheets of commercial banks and the central bank. Like before, let us suppose that the government wants to increase spending of £100 millions in order to employ more nurses in public hospitals. Table 3, row 1 illustrates that government will then sell £100 millions short-run bonds (i.e. Treasury bills) to the central bank in return for the opening of deposits of equal value. Table 3, row 2 shows the second-round effects of the government spending. As the Treasury fulfils its spending plans, the deposits are transferred from the government to households, which place them at the commercial banks. This means that £100 millions reserves are recorded on the assets side of the commercial banks, where £100 millions deposits of households are recorded on the liabilities side of commercial banks.

### **Please Insert Table 3**

Table 3, row 2 corresponds to Table 2, row 1. Therefore, the analysis of previous paragraphs also applies to this case. In particular, like in the case of a bond-financed increase in government spending, the proportion of government spending that is bond-financed or money-financed does not depend on the favoured finance choice of the government, but rather on the choice of households between holding liquidity in the form of deposits or banknotes.

There is a second important difference for the analysis of an increase in real government spending, when money is endogenous, rather than exogenous like in the *IS-*

*LM* model. When money is endogenous, the existence of a partial or complete crowding-out is decided by the central bank.<sup>11</sup> It is worth recalling that in the standard *IS-LM* framework with finite elasticity in the *IS* and *LM* curves and in presence of wealth effects, the economy experiences crowding-out because of the assumption of a fixed money supply. For instance, in the case of a bond-financed increase in real government spending, the wealthier households are, the more money they wish to hold. With a fixed supply of money, this means that the interest rate must increase to release some money from idle balances to active balances. The higher interest rate crowds-out private-sector investments, and it offsets completely the positive income effects of the increase in government expenditure. Similarly, in the case of a money-financed increase in real government spending, the interest rate will rise to accommodate the wealth-induced increase in the demand for money. However, in this case the higher interest rate does not fully crowd-out private-sector investments, because part of the increase in the money demand is accommodated by the increase in the money supply in order to finance government spending.

It should then be clear the reason for the absence of a partial or complete crowding-out in the case of an increase in real government spending, when money is endogenous. Partial or complete crowding-out is the final outcome of increase in the interest rate due to an excess of the demand for money over a fixed supply of money. But, when money is endogenous, by definition the money supply responds to the demand for money, though the central bank may raise the price for supplying monetary reserves (i.e. the short-run interest rate). This means that when money is endogenous, there is no such a thing like a market-driven interest rate response to the wealth-induced excess of

money demand. Therefore, no crowding-out needs to take place. It is rather an autonomous and deliberate decision of the central bank to intervene in the money market by increasing the interest rate that creates the conditions for the crowding-out of private investments. The adjustment process in the monetary market becomes a matter of administrative decision rather than a market mechanism.

## **Conclusions**

This paper has presented the New Consensus view and its major policy implications, namely the prominent role assigned to central banks in achieving desired inflation target strategies. The role of central banks and monetary policy in the New Consensus view is so prominent that the macroeconomic role of discretionary fiscal policy is rarely mentioned in modern economics or policy making alike. In the few cases when fiscal policy is discussed, the aim is to limit its role to exceptional circumstances, when monetary policy is either unusable or little effective, like in the case of the lower bound problem on the short-run interest rate, or country-specific shocks in monetary unions. But why has the role for fiscal policy been downgraded? Is this a novel feature of modern macroeconomics or the New Consensus view has borrowed it from past contributions?

This paper has tried to answer these questions. Firstly, the paper has reviewed recent works on the possible historical causes of the modern downgrading of fiscal policy. The traditional story is that post-war Keynesianism failed to provide any understanding of the stagflation of the 1970s, let alone to solve it, and hence it was replaced by a new theoretical framework, namely New Classical Macroeconomics.

However, recent work on the subject seems to suggest an alternative story, where ideology, policy mistakes and particular historical circumstances played a role at least as important as economic theory in the rejection of post-war Keynesianism, and the consequent downgrading of fiscal policy.

Secondly, the paper has considered the theoretical explanations that are traditionally used to explain the ineffectiveness of fiscal policy, with a particular focus on the crowding-out arguments, within both the standard *IS-LM* (exogenous money) framework and the modern New Consensus (endogenous money) framework. The analysis has led to two main conclusions. The different forms of financing real government spending are endogenously decided by private agents rather than exogenously set by policy makers. More importantly, the existence of partial or complete crowding-out is decided by the central bank rather than by the 'market'.

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<sup>1</sup> The reader should note this New Consensus policy prescription implicitly assumes that this output stabilization objective does not leave any long lasting effect on the economy. In other words, the New Consensus view subscribes to the axiom of neutrality of money and monetary policy in the long run. See Fontana (2007), and Fontana and Palacio Vera (2004, 2007) for a critical assessment of this axiom.

<sup>2</sup> Interestingly, the Phillips curve has gone through some unnoticed change in the last couple of decades: in the New Consensus view causation runs from the output gap to inflation (see Equation 1

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below), whereas in the supply component of the traditional New Classical macroeconomic model, causation runs from inflation (surprises) to output (see, on the policy implications of this change, Sawyer, 2008).

<sup>3</sup> More realistic representation of the “New Consensus model” will include distributed lag relations, expected values of the exogenous variables, as well as complex monetary policy rules *à la* Taylor (see, for instance, papers in Arestis, 2007). However, in order to keep the analysis as simple as possible, these complications are set aside.

<sup>4</sup> A different issue is the repayment of the national debt and the debt service payments, a problem faced by the fiscal authority, but not by the monetary authority. This issue is not discussed here, though it is worth to recall that it cannot be excluded that public expenditure is self-financing in the long run (e.g. Christ, 1968).

<sup>5</sup> A noteworthy exception is Taylor (1993, 2000).

<sup>6</sup> These potentially long inside lags for fiscal policy are also used by more sympathetic supporters of fiscal policy to justify support for changes in taxes and government transfers at the expenses of countercyclical variations in government purchases (e.g. Seidman, 2003; Solow, 2005).

<sup>7</sup> This alternative story draws also attention to the misleading calculations in the 1970s of the impact of fiscal policy. Budget deficits were usually calculated in nominal but not real terms, with the result that higher inflation led to higher nominal interest rates and apparently increasing budget deficits (e.g. Eisner and Pieper, 1984)

<sup>8</sup> Of course, strictly speaking a zero output gap can deliver constant inflation, no price stability. Also, the delivery of the target rate of inflation depends on expectations. One simple argument to finesse these issues is that the use of an inflation targeting regime is uniquely able to foster the ‘right’ expectations (see, for instance, Goodfriend, 2007).

<sup>9</sup> The form of financing the increase in real government spending explains the size of interest rate rise, hence the nature and origin of any crowding-out. How this rise feeds through to other interest rates in the economy, the interest rate responsiveness of investment or consumer expenditure, and the phase of the business cycle are the remaining factors accounting for the full extent of the crowding-out. These factors

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explain the slope of IS and LM curves and for the sake of simplicity ignored in the analysis of Figures 1 and 2.

<sup>10</sup> See, for a further discussion of balance sheet analysis, Lavoie, 2003.

<sup>11</sup> An early suggestion in this direction is to be found in Champernowne (1936, pp. 204-206), who argued that monetary authorities are responsible for moving actual unemployment toward basic unemployment, where the latter is “the amount of unemployment that there would be in that situation if each man demanded neither more nor less than his basic real wage” Champernowne (1936, p. 203).