Fiscal Policy within the New Consensus Macroeconomics Framework

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Abstract

Recent developments in macroeconomics, which has come to be known as 'New Consensus in Macroeconomics', downgrades the role of fiscal policy and upgrades that of monetary policy. This contribution aims to consider this particular contention by focusing on fiscal policy. We consider fiscal policy within the current 'new consensus' theoretical framework, which views fiscal policy as ineffective. We review and appraise recent and not so recent theoretical and empirical developments on the fiscal policy front. We also pose the question of whether fiscal policy rules should replace monetary policy rules. The possibility of fiscal and monetary policy coordination is also discussed to conclude that it deserves careful consideration. Our overall conclusion is that even within the confines of the 'New Consensus in Macroeconomics' framework, fiscal policy as a tool of macroeconomic policy deserves a great deal more attention paid to it than hitherto.

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1. Introduction[1]

The purpose of this paper is to examine the role of fiscal policy within the 'New Consensus Macroeconomics' (NCM). In Arestis (2007) we put forward the NCM theoretical framework in the case of an open economy, and discussed at length the implications for monetary policy. Utilizing this framework we will explore in this contribution the role of fiscal policy within the NCM, and its potential impact on the economy.

While net government spending adds an equal quantity of net financial assets to the combined non-government sectors by identity, the impact of fiscal policy on aggregate demand and economic activity depends heavily on the theoretical model and its assumptions about the real world where the policy is implemented. In the old macroeconomic models with sluggish prices, fiscal policy has positive demand implications. Expansionary fiscal policy adds to aggregate spending, and allows demand-constrained firms to sell more output, thereby increasing income and employment. The inflexibility of prices due to mark-up pricing makes output demand determined. Prices adjust gradually and they follow cost-push increases in wages as captured in some versions of the Phillips-curve type of specifications. The fiscal policy multiplier is positive, although its size can be affected by a number of factors, of which the main ones are as follows: productive capacity close to full use; higher interest rates from anticipated central bank interest rate changes that may crowd out private demand; fiscal policies that may cause the central bank to implement higher interest rates, reflecting higher risk premia; currency depreciation in a flexible exchange rate open economy; composition of the fiscal measure, where government spending is thought to be more effective than tax changes. These factors are likely to produce a positive, but small, fiscal policy multiplier.

The NCM view of fiscal policy is rather different. Those factors, which produce weak Keynesian results, are given more prominence in a way that weakens fiscal policy substantially. Furthermore, fiscal policy is thought to have further implications in view of the emphasis given to the expectations of economic agents concerning their future income and wealth, thereby producing demand-side, as well as supply-side effects. All these effects so weaken fiscal policy that it is rendered ineffective as a macroeconomic stabilisation instrument of policy. Recent contributions, though, begin to question a number of the assumptions adopted for the purposes of deriving these results. In addition, empirical evidence appears to support the basis of these concerns. In what follows we elaborate on these propositions and look at the available empirical evidence.

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[1] I am grateful to Warren Mosler, and to the two editors of this volume, for helpful comments.

We begin by sketching the 'new consensus' theoretical model in section 2, followed by a discussion of the role and effectiveness of fiscal policy within this theoretical framework in section 3. Recent theoretical developments and empirical findings on the fiscal policy front are appraised in section 4. This is followed by a discussion that poses the question of whether replacing monetary policy rules by fiscal policy rules might make any difference to the NCM theoretical framework and its policy implications (section 5). This leads neatly into the question of 'What role for fiscal policy', which is the main theme of section 6. Finally, section 7 summarises the argument and concludes.

2. An open economy NCM

We present NCM when extended to an open economy (see, also, Agénor, 2002), although it is fair to suggest that the model is normally portrayed in a closed economy context. We utilise a six-equation open-economy model, which has been used in the context of a similar exercise to highlight NCM and monetary policy (Arestis, 2007). This model can be described as follows.

$$(1) \qquad Y^g_t = a_0 + a_1 Y^g_{t-1} + a_2 E_t(Y^g_{t+1}) + a_3[R_t - E_t(p_{t+1})] + a_4(rer)_t + s_1$$

$$(2) \qquad p_t = b_1 Y^g_t + b_2 p_{t-1} + b_3 E_t(p_{t+1}) + b_4[E_t(p_{wt+1}) - E_t\Delta(er)_t] + s_2$$

$$(3) \qquad R_t = (1- c_3)[RR^* + E_t(p_{t+1}) + c_1 Y^g_{t-1} + c_2(p_{t-1} - p^T)] + c_3 R_{t-1} + s_3$$

$$(4) \qquad (rer_t) = d_0 + d_1[[(R_t - E_t(p_{t+1})] - [(R_{wt}) - E(p_{wt+1})] + d_2(CA)_t + d_3 E(rer)_{t+1} + s_4$$

$$(5) \qquad (CA)_t = e_0 + e_1(rer)_t + e_2 Y^g_t + e_3 Y^g_{wt} + s_5$$

$$(6) \qquad er_t = rer_t + P_{wt} - P_t$$

with $b_2 + b_3 + b_4 = 1$ in equation (2). The symbols have the following meaning: Y^g is the domestic output gap and Y^g_w is world output gap, R is nominal rate of interest (and R_w is the world nominal interest rate), p is rate of inflation (and p^w is the world inflation rate), p^T is inflation rate target, RR* is the 'equilibrium' real rate of interest, that is the rate of interest consistent with zero output gap, which implies from equation (2) a constant rate of inflation; (rer) stands for the real exchange rate, and (er) for the nominal exchange rate, defined as in equation (6) and expressed as foreign currency units per domestic currency unit, P_w and P (in logarithms) are world and domestic price levels respectively, CA is the current account of the

balance of payments, and s_i (with i = 1, 2, 3, 4, 5) represents stochastic shocks, and E_t refers to expectations held at time t. The coefficient a_0 is often treated as a constant, but could reflect, inter alia, the fiscal stance. The change in the nominal exchange rate appearing in equation 2 can be derived from equation (6) as $\Delta er = \Delta rer + p_{wt} - p_t$.

Equation (1) is the aggregate demand equation with the current output gap determined by past and expected future output gap, the real rate of interest and the real exchange rate (through effects of demand for exports and imports). It emanates from intertemporal optimisation of a utility function that reflects optimal consumption smoothing. It is, thus, a forward-looking expectational aggregate demand relationship. There is, however, an acute potential problem with the formulation of equation (1), and this relates to the size of the coefficient a_3. To the extent that this coefficient is 'too small' (and empirically it is, as suggested by, for example, Chirinko et al., 1999), it implies that effective interest-rate stabilization would require changes in the rate of interest that are implausibly large.

Equation (2) is a Phillips curve with inflation based on current output gap, past and future inflation, expected changes in the nominal exchange rate, and expected world prices (with the latter pointing towards imported inflation). Equation (3) is a monetary-policy rule, where the nominal interest rate is based on expected inflation, output gap, deviation of inflation from target (or 'inflation gap'), and the 'equilibrium' real rate of interest. The lagged interest rate represents interest rate 'smoothing' undertaken by the monetary authorities. The 'equilibrium' real rate of interest (RR*) in equation (3) is of some importance that relates closely to this paper - see section 5 below. Equation (3) stipulates that the central bank should set the rate of interest by reference to RR* (the Wicksellian natural rate of interest), amongst other variables as stipulated in the same equation. The problem with this formulation is that there is a great deal of uncertainty in terms of its imprecise nature when it comes to empirically verifying RR*. Weber (2006), the President of the Deutsche Bundesbank, is very categorical on this problem: "within the very active theoretical literature on optimal monetary policy under uncertainty the question remains prevalent what to do with the – up to now very imprecise – estimates of the natural rate of interest" (p. 18). Under these circumstances, the stability properties of the model are compromised.

Equation (4) determines the real exchange rate as a function of the real interest rate differential, the current account position, and expectations of future exchange rates. It is actually a reduced-form of equations that represent a number of theories, most important of which are the uncovered interest rate parity and forward-looking expectations. Equation (5) determines the current account position as a function of the real exchange rate, domestic and world output gap. Finally, equation (6) expresses the nominal exchange rate in terms of the

real exchange rate. There are six equations and six unknowns: output, interest rate, inflation, real exchange rate, current account, and nominal exchange rate as defined in (6).

In terms of fiscal policy, equation (1) is of particular significance. There is no explicit mention of fiscal policy, though changes in the fiscal stance could be seen as reflected in a change in a_0. A number of arguments have produced to support the proposition that the use of discretionary fiscal policy should be seen as the exception rather than the rule. The norm for fiscal policy should be to let automatic stabilisers to operate in an environment of balanced budgets over the business cycle, and the operation of those stabilisers may be reflected in the coefficients a_1 and a_2.[2] A number of arguments have been put forward to make the case against the use of discretionary fiscal policy and of long-term budget deficits. The most important, and more widely accepted, are those of crowding out, the Ricardian Equivalence Theorem (RET) and what has been labelled as 'institutional aspects of fiscal policy' (Hemming, Kell and Mahfouz, 2002). The latter arguments can be briefly summarised. Model uncertainty, in that longer and more uncertain lags prevail than it was thought previously; there is the risk of pro-cyclical behaviour in view of cumbersome parliamentary approval and implementation; increasing taxes or decreasing government expenditure during upswings may be politically unrealistic, and this may very well generate a deficit bias; spending decisions may be subjected to irreversibility, which can lead to a public expenditure ratcheting effect; and there may be supply-side inefficiencies associated with tax-rate volatility.

Arestis and Sawyer (2003) deal with these issues and conclude that the case for fiscal policy as in the NCM theoretical framework is not supported by the available evidence and theoretical arguments. Even if the institutional factors just alluded to were shown to be theoretically and empirically pertinent, should not detract from the fact that fiscal policy is still effective. Wren-Lewis (2000) makes this point and proceeds to utilise a simple calibrated model and a more complex econometric macroeconomic model to conclude that "changes in government spending, income transfers, and indirect taxes can still have an important impact on demand in the short run" (p. 104). Three related studies strengthen the argument. Hemming, Kelly and Mahfouz (2002), when reviewing the literature on the issue, conclude that "There is little evidence of direct crowding out or crowding out through interest rates and the exchange rate. Nor does full Ricardian equivalence or a significant partial Ricardian offset get much support from the evidence" (p. 36). Another relevant study (Hemming,

[2] Automatic stabilisers are "those elements of the tax and spending regime which 'automatically' tend to stabilise the economy over the cycle. For example, during an upswing, incomes will rise and tax receipts will

Mahfouz and Schimmelpfennig, 2002) summarizes the argument along similar lines: "Estimates of fiscal multipliers are overwhelmingly positive but small. Short-term multipliers average around a half for taxes and one for spending, with only modest variation across countries and models (albeit with some outliers). There are hardly any instances of negative fiscal multipliers, the exception being that they can be generated in some macroeconomic models with strong credibility effects" (p. 4). A more recent study (Briotti, 2005) is also supportive of these results; it actually concludes that "Although many empirical studies strongly reject the full Ricardian Equivalence, the behaviour of private consumption may still be consistent with a partial Ricardian effect. However, empirical evidence is somewhat mixed and no clear conclusions can be reached about the existence and size of the Ricardian effect. A major difficulty stems from measurement problems and methodological issues that greatly affect the estimation of parameters" (p. 21). Interestingly enough, Arestis and Sawyer (2006) argue that the appearance of a partial Ricardian effect may come from the operation of stabilising fiscal policy. Still more important are the recent developments on the role of fiscal policy within the NCM. We discuss these issues in this paper, but we first examine further the theoretical premises of the NCM fiscal policy.

3. The theoretical premise of NCM fiscal policy

The NCM approach combines the optimising general equilibrium framework with short-run nominal price stickiness. Fiscal policy can have demand implications if it affects the expectations of economic agents concerning their future income and wealth (demand-side effects). It could also have supply-side effects to the extent that it helps to enhance labour market efficiency and labour supply along with the competitiveness of the economy. The latter effects, in their turn, affect the non-accelerating inflation rate of unemployment (NAIRU). Agents in this theoretical framework are expected to be forward looking and not be liquidity constrained; they are assumed to form expectations in terms of how future developments in government budgetary policies and public finances will affect their lifetime income and wealth.

The introduction of expectations as we have just highlighted, along with the acceptance of the RET,[3] implies that expectational and wealth effects might outweigh the Keynesian type of multiplier effects. An increase in government deficit, for example, that is perceived as

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increase tending to dampen the cycle. Similarly, in a downturn, unemployment benefit payments will rise tending to moderate the slowdown" (HM Treasury, 2003, p. 4).

[3] It should be noted that the main theoretical property of RET is the irrelevance of the government's financing decisions vis-à-vis taxes and debt. For example, a fiscal expansion prompts expectations of future fiscal contractions regardless of the way financing is undertaken. Private savings increase to compensate for the reduction in government saving, in the expectation of future tax increases, with the multiplier effect of the fiscal expansion brought to zero in the limit (Barro, 1974).

permanent by agents, would imply an increase in the future tax burden and a permanent decrease in their expected income and wealth. Agents would decrease their current consumption and save more in anticipation of lower future income. Higher lump-sum taxes would decrease household and worker wealth. It is the case that the initial increase in public spending generates a larger decrease in current consumption. Labour supply would decrease as a consequence of the negative wealth effects and so would production. The latter comes about in view of the expected increase in future taxes, which induces expectations of lower production as a result of the distorting effects of higher taxation. There are also other supply-side effects in that the increase in public employment reduces private sector labour supply, exerting an upward pressure on wages, which decreases the present discounted value of the future stream of profits. This affects investment adversely. The latter is also affected by higher interest rates in view of the increased deficit (the usual crowding-out effect).

In effect, the NCM model downgrades fiscal policy, but it upgrades monetary policy. We further discuss this role of fiscal policy in what follows in this contribution. We focus on recent developments, and show that this theoretical construct entails a number of assumptions, which may or may not be validated in the real world. This makes it imperative that we also look at the extent of these assumptions being empirically validated.

4. Recent theoretical and empirical developments

In general terms, the early empirical studies on the effectiveness of fiscal policy within the confines of the NCM concluded that it was ineffective. The rationalization of this proposition relied essentially on three assumptions: that households optimized intertemporally, that households were not subject to any liquidity constraints, and that households were able to anticipate intertemporal financial constraints (Hemming, Kell and Mahfouz, 2002, survey the theoretical arguments along with the empirical findings of the literature on this approach). However, more recently that unfavourable empirical evidence on fiscal policy has been questioned (see, for example, Van Aarle and Garretsen, 2003), and, in addition, studies have shown results that are contrary to the NCM propositions on the issue of the effectiveness of fiscal policy (Hjelm, 2002). There have also been studies that advocate greater emphasis on fiscal policy as a key economic policy tool in macroeconomic stabilization and that fiscal policy is more effective than previously thought (Wren-Lewis, 2000). We explore these more recent contributions in what follows.

A further aspect we discuss in this section is the importance of distinguishing between developed and developing countries in the study of the role of fiscal policy. One aspect of this distinction is the difference in the evidence adduced from developed and that from developing economies. This is necessary, we maintain, for reasons that have to do with data

deficiencies in developing countries. This explains to a large extent why there is rather less evidence on the short-run impact of fiscal policy for developing rather than for developed countries (Hemming, Kell and Mahfouz, 2002). An important observation in this context is that significant differences between developed and developing countries may arise from the nature of the tax systems in the two sets of countries. A progressive tax system, which may be more typical of the developed country case, would generate counter-cyclical behaviour, whereas a regressive one, most likely to prevail in developing countries, would generate pro-cyclical behaviour. A further important distinction is the extent to which the level and degree of economic development affects the effectiveness of fiscal policy. Unfortunately, it is true that most of the literature on the effectiveness of fiscal policy has focused on developed countries. But then it is not difficult to come up with arguments that show that fiscal policy could be more effective in developing countries. For example, a factor that enhances the effectiveness of fiscal policy in developing countries is the possibility of a relatively high marginal propensity to consume identified for these countries. Such a result would, of course, increase the size of the impact of fiscal policy significantly.

At the same time, though, there are arguments that suggest the existence of serious constraints in the use of fiscal policy in the developing world. Agénor et al. (1999) argue that because the developing world is more likely to be influenced by supply shocks, fiscal policy as a tool of demand management is most likely to be used far less frequently and intensely there than in developed countries. Furthermore, there is the argument that suggests that a possible deficit bias may be relatively higher in developing countries. In fact, Hemming, Kell and Mahfouz (2002, p. 12) argue that governance, as it relates to poor tax administration and expenditure management, is probably the most important and significant factor that affects this bias. Still, a further major constraint on fiscal policy in developing countries is the unavailability and high cost of domestic and external finance. It follows that access to finance should determine to a large extent the size of the fiscal deficit. An increase in the fiscal deficit beyond a level that can only be financed on unacceptable terms may be associated with severe crowding-out effects. Relaxing these constraints, therefore, enables fiscal policy to have significant stimulative effects (Lane et al., 1999).

Consequently, it is paramount to distinguish between the developed-country case and the developing-country case in what follows in our discussion of the role of fiscal policy. We begin with the developed-country case.

4.1 The Developed-Country Case

An interesting recent study on the possible effects of government spending on private consumption within the confines of a similar model postulated in equations (1) to (6) above,

and in the case of the euro area, is Coenen and Straub (2005). The novelty of this study is that it attempts to resolve the typical prediction of the NCM type of theoretical models that government expenditure has a strong negative effect on consumption, while the empirical literature concludes on a positive, or at least, not significant negative effect on consumption.[4] It would appear that the evidence does not validate the assumptions of the theoretical model. In view of the latter finding, Coenen and Straub (op. cit.) rely on the Mankiw (2000) study where the argument is advanced that models that attempt to study the effects of fiscal policy should allow for two types of households. One type of households (the 'Ricardian' households) are those that behave in an optimizing, fully forward manner, by trading in asset and other markets and are, thus, able to smooth consumption over time; these households hold expectations about the future, which are essentially consistent with a full-employment situation. Another type of households (the 'non-Ricardian' households) follow non-optimizing simple rules of thumb (they do not optimize intertemporally or intratemporally), cannot and do not participate in asset markets, and they merely consume their net-of-tax disposable income; their expectations of the future, therefore, need not be consistent with a full-employment situation. There is actually empirical evidence that supports the contention that a significant proportion of consumers and firms are actually non-Ricardian in that they are not especially forward-looking or their behaviour is constrained (for example, evidence suggests that many households have little wealth, or are financially constrained, to be able to undertake intertemporal consumption smoothing); this is also supported by survey-based evidence (HM Treasury, 2003; Campbell and Mankiw, 1989; Mankiw, 2000).

Coenen and Straub (2005) also rely on a study by Galí et al. (2004), where a model is put forward that allows for the coexistence of non-Ricardian and Ricardian households and their interaction with firms that change prices infrequently and a fiscal authority that issues debt to finance part of its expenditure. This study concludes that calibrating such a model can explain the available evidence on the impact of government expenditure shocks on consumption. The study by Coenen and Straub (2005) proceeds to include both Ricardian and non-Ricardian households in an extended version of the euro area stochastic dynamic general equilibrium model developed by Smets and Wouters (2003),[5] and also employs Bayesian inference

[4] Coenen and Straub (2005) offer a comprehensive summary of the literature on the two contrasting issues discussed in the text.

[5] The study by Smets and Wouters (2003) is used as a benchmark specification in the Coenen and Straub (2005) study. The latter is an augmented specification with non-Ricardian households in relation to Smets and Wouters (2003).

methods.[6] The presence of non-Ricardian households is crucial. The quantitative impact of government spending on consumption is higher as compared to the benchmark case without non-Ricardian households.

Nonetheless, the chance of government expenditure crowding-in consumption is rather small in view of the relatively low share of non-Ricardian households assumed in the study. However, the possibility of crowding-in is strengthened once it is recognized that the presence of non-Ricardian households and their behaviour can have significant effects on that of the Ricardian households. To the extent that the increase in consumption of non-Ricardian households following a budget deficit, impacts on the income stream of the Ricardian households, then crowding-in becomes a distinct possibility. Further possibilities suggest themselves. Different fiscal policy rules of the type discussed in section 5 below, may very well enhance crowding-in. Also allowing for an endogenous response of the long-run government debt-to-GDP ratio to persistent government spending may enhance our understanding of the empirical dimension of the problem. Indeed, modifying the assumption of government expenditure evolving exogenously over time, so that agents would form expectations about government spending shocks, would give the model more realism and could produce results that strengthen the impact of government spending shocks.

Blanchard and Perotti (2002) employ the Structural VAR (SVAR) approach in studying the quantitative impact of fiscal policy. They argue that this approach is superior to those that utilise large-scale econometric models or reduced-forms. Large-scale econometric models "largely postulate rather than document an effect of fiscal policy on activity" (p. 1), while the reduced-form approach registers the effect of a summary statistic of fiscal policy, and yet no theory suggests this is pertinent. The SVAR approach is argued to be more appropriate in the study of fiscal policy simply because, unlike monetary policy for example, decision and implementation lags imply that there is no response of fiscal policy to economic activity. So that fiscal shocks can be identified and their dynamic effects on economic activity can be traced through the SVAR approach. Blanchard and Perotti (2002) employ post-war US data along with SVAR to conclude that spending multipliers for consumption and output are anything between one third and unity. However, Perotti (2005) and Mihov (2003), using VAR-based evidence, argue that after 1980 the effectiveness of fiscal policy weakened substantially in the US. Three possible explanations of this change have been put forward. One relates to the financial liberalisation era, which took place at the time. The increasing

[6]Bayesian inference methods rely on the use of prior information obtained from earlier studies in the estimation of a stochastic dynamic general equilibrium model. Such methods are particularly useful when the sample period of the data is short, and also when it is necessary to solve highly non-linear estimation relationships.

asset market participation has enabled households to smooth consumption in the desired way, thereby influencing the impact of fiscal policy. Another explanation refers to the increasing use of monetary policy since the 1980s in relation to the pre-1980s. It is true that a considerable change has taken place in the way the nominal interest rate is adjusted in response to expected inflation; monetary policy has been more hawkish ever since the 1980s. And a third explanation emphasises the change in the degree of deficit financing, which has assumed more persistence post-1980. These explanations imply that while fiscal policy has a strong and persistent effect on economic activity, this is less significant and persistent post-1980. Bilbiie, Meier and Müller (2006) attempt to throw light on the empirical support of the three explanations just summarized. They conclude that increased asset market participation accounts for some of the change, while the degree of deficit financing is crucial. But the key quantitative factor is, in their empirical findings, monetary policy. But complementarity of the three factors is also very important.

Of equal, if not more, importance for fiscal policy is public investment, which assumes particular significance in view of the emphasis placed upon it in the UK over the recent past. 'Golden rule' is the term used by the UK Treasury in its approach to public investment. Government deficit should only be undertaken for public investment but the current account should be balanced over the cycle, implying a balanced current account. This 'golden rule' is associated with a 'sustainable investment rule', which limits net public debt to a 'stable and prudent level' of no more than 40 per cent of GDP. Such a golden rule implies public investment of 2 per cent of GDP with a 5 per cent nominal growth rate (applying the well-known formula of $g = pi_g/b$, where g is the nominal growth rate, pi_g is public investment as a percentage of GDP, and b is the debt to GDP ratio). A question in this context is whether the 'golden rule' can ensure a sufficient level of public investment without hurting the sustainability of public finances. Recent research appears to be supportive of assigning a significant role to public investment. In their attempt to test for these propositions, Creel et al. (2006) elaborate on the Blanchard and Perotti (2002) approach, which, as implied above, popularized the VAR technique in a short-run analysis to account for the long-run properties of fiscal policies. Creel et al. (op. cit.) account for debt dynamics in the case of a closed economy, and by utilizing the SVAR approach, they conclude that public investment, and current outlays, in the UK have positive and permanent effects on real GDP.

4.2 The Developing-Country Case

The experience of a number of developing countries suggests that fiscal policy is in practice pro-cyclical rather than counter-cyclical in these cases. This means that budget deficit, as percentage of GDP, increases in booms, but decreases in recessions. This is contrary to the

counter-cyclical case where the budget deficit, as a share of GDP, decreases during booms but increases in recessions (Kaminski et al., 2004; Alesina and Tabellini, 2005). The pro-cyclical argument applies particularly to the discretionary changes in fiscal policy, but would not apply in the case of the operation of the automatic stabilisers, which provide a counter-cyclical component of fiscal policy. Persson and Tabellini (2000) and Alesina and Tabellini (2005) resort to a political agency problem to explain it. In countries where voters lack significant information, and are faced with corrupt governments that use parts of government revenue for unproductive public consumption, pro-cyclical fiscal behaviour is possible. Voters demand higher utilities for themselves, especially so under booming conditions. They are not irrational; they merely lack full information of the ability of the government to satisfy their demands without creating budget deficits. The government is forced to borrow to satisfy voter demands, for otherwise there is the fear of future electoral losses. The more corrupt the country is, the more pro-cyclicality may be observed. In fact, pro-cyclical behaviour is mainly observed in countries with widespread corruption. Where governments are subject to 'check and balances', voters would not impart pro-cyclicality to fiscal policy.[7] In fact, under conditions of recession corrupt governments are assumed to be able to reduce public deficits in the absence of voter pressure.

Alesina and Tambellini (2005) employ data on 87 countries over the period 1960 to 1999 to test the counter-cyclicality and the pro-cyclicality assumptions just discussed. They conclude that in the OECD countries fiscal policy is counter-cyclical, while in 36 out of 64 non-OECD countries pro-cyclicality is confirmed. The 36 countries are essentially Sub-Saharan African and Latin American countries, thereby supporting the political agency phenomenon in the case of these countries. They also depend on the nature of the tax system and on the expenditure system – a progressive tax and social security system would aid counter-cyclical budgets whilst a regressive system would point in the other direction. It is also shown that credit constraints impose obstacles to developing country governments to borrow the desired amounts, but it does not appear to be as a significant variable of pro-cyclicality as the political agency variable.

Turn next to the developing-country case, we may note that in terms of the evidence produced on the impact of fiscal policy, this is not dissimilar to that obtained for developed economies. If anything actually fiscal multipliers tend to be rather higher in the case of developing rather than developed economies (see, for example, Hemming, Kelly and

[7] Alesina and Tabellini (2005) note that pro-cyclicality can only materialise in democratic regimes. In a dictatorship where corruption may be thriving, voters cannot influence fiscal decisions and thus pro-cyclicality would not be observed.

Mahfouz, 2002, p. 33). This is due to the relatively high marginal propensity to consume, which can increase the size of the impact of fiscal policy significantly, a possibility discussed earlier in the paper.

A point that relates to both developed and developing cases is the extent to which budget deficits are measured appropriately in the studies referred to above. Eisner (1989) was very persistent on the importance of proper definitions. In another contribution, Eisner and Pieper (1984), it is suggested that "an appropriately adjusted high-employment budget turns out to have been not in deficit in recent years, as usually supposed, but in considerable surplus. The view that fiscal policy has generally been too easy and overstimulatory is contradicted" (p. 23). In the same study it is also argued that "official measures of the federal debt and budget deficits are misleading by any of several reasonable standards. Gross public debt figures ignore financial asset accumulation as well as the real assets, which have contributed to a growing government net worth. Budget flows have failed to distinguish between current and capital accounts, and measures of surplus and deficit have been inconsistent with changes in the real value of net debt" (Eisner and Pieper, op. cit., p. 23).

It is clear from the discussion in this section that fiscal policy does have a significant role to play in macroeconomic stabilization, provided fiscal measures are appropriately measured. Should one then conclude that fiscal policy rules might be better than monetary rules? This is the question dealt with in section 5.

5. Should fiscal policy rules replace monetary policy rules?[8]

A strong and growing interest in fiscal policy rules has been evident over the recent past. Fiscal policy rules aim at containing public sector deficits and at reducing public sector debts by specifying targets for government deficits, debts or spending. As such, they can potentially ameliorate the time inconsistency and deficit-bias problems, through anchoring expectations about the sustainable course of future policies.[9] Interestingly enough, a fiscal policy rule that replaces the monetary policy rule embedded in equations (1) to (6) above could potentially tackle these problems. More important from the point of view of this contribution is that such replacement could have further interesting implications. We explore this possibility in the rest of this section.

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[8] It should actually be 'additional' fiscal policy rules. Additional, that is, to the automatic stabilisers embodied in equations (1) – (6) and discussed above.

[9] Time inconsistency problems prevail when governments announce *ex ante* fiscal adjustments, but *ex post* there may always be economic or political reasons for governments to renege on the *ex ante* promises (Kydland and Prescott, 1977). A deficit bias emanates from the democratic political process (Mueller, 2003). For example, rational but imperfectly informed voters are able to influence politicians and indeed persuade them to pursue expansionary policies before elections.

We may, then, proceed to replace equation (1) with (1)' and (3) with (3)' as shown immediately below (Taylor, 2000; Setterfield, 2006):

$$(1)' \quad Y^g{}_t = (a_0' + PSBR_t) + a_1 Y^g{}_{t-1} + a_2 E_t(Y^g{}_{t+1}) + a_3[R_t - E_t(p_{t+1})] + a_4(rer)_t + s_6$$

$$(3)' \quad (PSBR)_t = (PSBR)_0 - c_1 Y^g{}_{t-1} - c_2(p_{t-1} - p^T)] + s_7$$

where the variables are as above, with the exception of PSBR, which stands for Public Sector Borrowing Requirement, and $(PSBR)_0$, which is a constant that purports to capture the structural 'dimension' of PSBR and is actually invariant to short-run disturbances. In fact, formulation (3)' can be thought of as decomposing PSBR into a structural part and a cyclical part. ($PSBR_0$) is the structural part, and it represents the result of discretionary fiscal actions. The cyclical part is the rest of the right-hand side in equation 3' other than $PSBR_0$, with c_1 proxying the effect of automatic stabilisers.

An additional assumption is necessary to close the model, as in equation (7):

$$(7) \quad [R_t - E_t(p_{t+1})] = RR^*$$

i.e. the actual real rate of interest is continuously equal to the equilibrium real rate of interest. The new model comprises equations (1)', (2), (3)', (4), (5), (6) and (7). Fiscal policy in this revised model overcomes the problem relating RR* and the monetary policy rules, as in equations (1) to (6) of the model discussed above. Some of the differences between the two models can actually be significant. One in particular stands out. This relates to the RR*, which is no longer important in the fiscal rule reformulation. The argument that relates to the uncertainty that surrounds RR* in terms of its imprecise nature when it comes to empirically verifying it (see Weber, 2006; also the discussion in section 2 above), is no longer relevant. We should also note at the same time, though, that Y^g is still the same in both cases, with all the difficulties in attempting to estimate it. A further important difference is that to the extent that expenditure is insensitive to changes in the real rate of interest, then the coefficient a_3 is not statistically different from zero, a matter of grave importance to the monetary policy rule case (see, also, footnote 1). Such a case, though, is of no consequence in terms of the effectiveness of fiscal policy rules. A remaining problem is, of course, the decision upon the 'right' inflation target in the long run.

Still the question remains as to whether fiscal policy rules are effective. No straightforward answer is possible. To begin with, it ought to be acknowledged that for policy rules to be effective, they should be enforced. Furthermore, since fiscal outcomes are the result of both

policy and endogenous economic outcomes, it becomes difficult to judge whether they comply with a rule or they are the result of other economic circumstances. The two should then be separated in an attempt to ascertain the extent to which fiscal policy rules can affect budgetary policy. This is by no means an exercise that can be undertaken with clear-cut results.

6. What role for fiscal policy?

The overall conclusion of this brief excursion into the recent developments on the effectiveness of fiscal policy is that incorporating a number of additional assumptions to NCM, implies favourable results for fiscal policy. The most important of which can be succinctly and briefly summarized (see, for example, Botman and Kumar, 2006). Overlapping generation models in the tradition of Blanchard (1985) and Weil (1989), which enable the relaxation of the Ricardian equivalence assumption, is probably the most important one. It implies short-planning horizons by households so that intertemporal smoothing of consumption is not possible. This implies, of course, that even temporary changes in fiscal policy affect household decisions to consume and work. Another assumption is that of liquidity-constrained households, consistent with the evidence that even in developed countries up to a third of households do not have sufficient access to financial markets (Botman and Kumar, 2006). Under such circumstances, changes in fiscal policy that affect household disposable income would have significant real effects. Still another feature is the endogenisation of labour supply and capital accumulation. Since they are affected by after-tax real wage and after-tax rate of interest, respectively, changes in fiscal stance, as they affect after-tax real wage and the rate of interest, can have real effects.

It clearly follows that fiscal multipliers and other relevant exercises undertaken, tend to provide strong support to fiscal policy as an instrument of stabilization policy. This conclusion is strengthened by more recent findings, which are based on the value of the fiscal multipliers under conditions of coordination between fiscal and monetary policy. Eggertsson (2006) utilising a calibrated model, not dissimilar in substance to the one portrayed in section 2, concludes that under fiscal and monetary policy coordination fiscal multipliers are higher than when no policy coordination prevails. Indeed, they are bigger than those found in the traditional Keynesian literature.[10] This large difference in fiscal multipliers is explained by the expectations channel, which is very much emphasized in the Eggertsson (op. cit.) study. This channel works via inflation expectations. Fiscal expansion increases expectations about

[10] The fiscal multipliers reported in Eggertsson (2006) under fiscal and monetary policy coordination are 3.4, in the case of the real spending multiplier, and 3.8, in the case of the deficit spending multiplier. When there is no

future inflation, real rate of interest is reduced (provided the central bank collaborates with the fiscal authority) and spending is stimulated. Expectations of future income also improve, thereby stimulating spending further. This result is particularly important in view of much current theory and practice that see fiscal policy better divorced from monetary policy, as shown in section 2. This contribution would suggest that macroeconomic stability is the joint responsibility of the monetary and fiscal authorities. Potentially destabilising behaviour by one authority can be offset by an appropriate stance of the other authority. Perhaps more importantly the monetary authority can trade off some inflation for lower unemployment, even in the long run.

Coordination of fiscal and monetary policy does not imply that the respective authorities need to lose their 'independence'. For example, this cooperation need not mean that central bank independence is reduced. So long as the fiscal and monetary authority have *a common objective*, for example maximisation of social welfare, this need not imply that the two authorities should lose their 'independence' (Eggertsson, 2006). In the words of the current Fed Chairman "any more than cooperation between two independent nations in pursuit of a common objective is inconsistent with the principle of national sovereignty" (Bernanke, 2003). This is not dissimilar to Wren-Lewis's (2000) proposal for delegating fiscal actions to an independent body, outside the government. This could take the form of a 'fiscal regulator' with two objectives: to advise on short-run discretionary action and to supervise the long-run sustainability of the government finances. It is also argued that the Bank of England Monetary Policy Committee (MPC) can play such a role, alongside monetary policy. This is paramount in this view, given the requirement of proper coordination of fiscal and monetary policies (Wren-Lewis, op. cit., p. 104).[11] In the same spirit of analysis, Linnemann and Schabert (2003), utilizing a model of wage and price stickiness, demonstrate that fiscal policy can affect output if the monetary authority does not react aggressively to output changes. Furthermore, in models where capital accumulation is also accounted for, as in Arestis et al. (2007) for example, aggregate demand, which would now include investment expenditure more prominently, would be more susceptible than otherwise to changes in the rate of interest. This consideration gives more credence to the proposition that coordination of fiscal and monetary policy becomes paramount.

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policy coordination, i.e. when the central bank is 'goal independent', the real spending multiplier is unchanged, while the deficit spending multiplier is zero.

[11] A number of authors have proposed delegating decisions on fiscal policy to 'an independent fiscal policy committee' to improve its effectiveness and the financial discipline of the government. See HM Treasury (2003, p. 74) for a brief summary of a number of these propositions.

These policy prescriptions are rather different from Taylor's (2000) suggestion of fiscal policy and monetary policy coordination, with the two policies being interdependent but *with different objectives*. A monetary policy concerned with output stabilization around the cycle in the short-run and with controlling inflation in the long run. And a fiscal policy that focuses on a passive act in the short run through automatic stabilizers, but on a series of medium- to long run-run objectives to be achieved by discretionary action. The UK appears to be a good example of this policy prescription. An activist monetary policy as just described, along with a passive short-run fiscal policy (which supports monetary policy via the operation of the automatic stabilisers), but with an active long-run fiscal policy to deal with objectives that include low debt, the provision of public services and investment, social equality, and economic efficiency. The success of this coordination is predicated on a leadership role for fiscal policy (it takes precedence in cases of conflict), but without either policy losing its ability to act independently (HM Treasury, 2003; Hughes Hallett, 2004).

The conclusion from this discussion is two-fold. The first is that fiscal policy does have a significant role to play as an instrument of economic policy. Second, coordination of fiscal and monetary policies is probably the best way forward in terms of macroeconomic stabilization.

6. Summary and conclusions

We have examined in this paper the role of fiscal policy in the NCM. We have shown that this policy has been downgraded for a number of reasons, which have been explained therein. Similarly, we have produced a number of arguments that suggest that the reasoning behind these arguments can be shown to rely on weak foundations. The empirical evidence on the effectiveness of fiscal policy is not always supportive of the NCM view on it. This is particularly the case in view of recent theoretical developments and new evidence produced. Modifying the NCM model from monetary policy rules to fiscal policy rules is shown to possess certain advantages. We are thus led to the conclusion that although problems would always prevail on the policy arena, fiscal policy does not deserve to be so downgraded as in the new macroeconomics consensus. In any case, it is true to say that there is broad agreement, at least, about the main factors that can influence the size and sign of fiscal multipliers. The complexity of the theoretical arguments and the difficulty of arriving at clear-cut empirical results notwithstanding, the analysis in this paper suggests that fiscal policy can be an effective instrument of regulating the level of aggregate demand. This is particularly so when fiscal policy is properly coordinated with monetary policy. It would appear to be the case that coordination of fiscal and monetary policies appears to gain a great deal of support.

Still, proponents argue, there are perceived risks of deficits that block the use of fiscal policy. They revolve around three arguments: solvency and sustainability; generational issues; financial burdens and danger of high interest rates due to deficits. We briefly comment on these issues as an overall conclusion.

Solvency and sustainability: proponents continually warn that deficits are unsustainable and that national solvency is at risk. For example, they argue that when the debt interest rate is higher than the rate of growth it leads to insolvency. Also, they warn that markets will 'punish' the government well in advance should they take the first step in this direction. This is unsupported rhetoric. The risk of deficits may be inflation.

Generational issues: 'we are leaving this debt to our children' is heard repeatedly. This would imply that 20 years from now if our children build 20 million cars they will need to send them back to 2007 to pay off the debt, for example. At the macro level each year's GDP gets distributed to whoever is alive, and the distribution process is under the full control of the government at any time.

Financial burdens and danger of high interest rates due to deficits: it is heard repeatedly that if the debt gets large enough all the government income will go towards interest and there will not be anything left for other spending. This is inapplicable. Government spending is not operationally revenue constrained. Government can spend whatever it wants regardless of whether it is in surplus or deficit. Any constraints are self-imposed. And, of course, the government sets the interest rate it pays on its debt, not the market. Note that Japan paid near 0 rate of interest for a decade with a debt of 150% of GDP, annual deficits of 7% of GDP, and a very low credit rating; the ability to make payment was never even the slightest issue.

There is, thus, very little theoretical and empirical grounds to suggest that fiscal policy should not be used as an instrument of stabilization policy. Indeed, proper co-ordination with monetary policy might be the way forward.

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