Central Bank Independence and Fiscal Conservatism

by

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INTRODUCTION

An independent central bank is one of the possible solutions to the dynamic inconsistency problem inherent in monetary policy. A policy (announced in advance) is time inconsistent if the policy maker does not have appropriate incentives to implement it. In some cases the policy maker may want to announce in advance the policy to follow in order to influence the expectations of private decision-makers. However, after the private decision-makers have acted on the basis of his expectations, the policy maker may be tempted to renege on his announcements.

This problem in the sphere of 'monetarism' has encouraged those who believe that stability of money values can be achieved best by lifting control of the money supply as far as possible out of the arena of politics. The reason for this is the vulnerability of governments to temptations to create money by monetizing excessive fiscal deficits and thereby engendering inflationary spirals rather overt conservative fiscal measures.

Professor Milton Freidman in 1962 gave a candid response to the question, 'What kind of arrangements should a free society set up for the control of monetary policy?' He acknowledged that control over money is 'a potent tool for controlling and shaping the economy.' He remarked that 'the problem is to establish arrangements which will enable government to exercise responsibility for money, while at the same time limit the power from being in ways that will tend to weaken rather then strengthen a free society.'

Since Friedman's observations, a number of developments such as; the break down of Bretton Wood System of Fixed Exchange Rates, the two Oil Crises and of recent vintage; the rapid pace towards globilisation, has accelerated such calls for central bank independence from political control. Notwithstanding, the cataclysmic nature of these events, there remains widespread recognition and currency for Friedman's 1962 response, positing the important contribution an effective central bank can make to economic performance.

Monetary policy allows central banks to have a significant impact on a broad range of macroeconomic developments, including growth, employment; inflation, interest rates, exchange rates and the balance of payments. However, the fiscal policy making institutions and particularly the budget authorities also have a pervasive impact on economic developments.

This paper argues that to guarantee central bank independence a high degree of fiscal conservatism is required. Section one after defining central bank independence and fiscal conservatism outlines the theoretically basis central bank independence. Section two evaluates empirical studies relating to central bank independence and fiscal deficits. It musters support for the view that fiscal conservatism compliments independence of central banks. Section three gives a brief comparative look at the Caribbean nexus. The conclusion gives a brief passive remark of the paper. It conceives of a few observations to govern future relations between fiscal and monetary Policy.

SECTION ONE

THEORITICAL THOUGHTS ON CENTRAL BANK INDEPENDENCE AND FISCAL CONSERVATISM

CENTRAL BANK INDEPENDENCE

A. S. Blinder(1996), former Governor of the Federal Reserve Bank of the United States of America gives a double sword definition of independence; first that the central bank is free to decide how to pursue its goal, and second, the central bank's decisions cannot be countermanded by any other branch of government, except under extreme circumstances. According to him:

> 'The freedom does not mean that the Bank gets to select the goals on its own. On the contrary, in a democracy it seems not just appropriate, but virtually obligatory, that the political authorities should set the goals and then instruct-the central bank to pursue them.'

If central banks are to be independent, they must possess a great deal of discretion over how to use it instruments in pursuit of its assigned objectives. But it does not have to have the authority to set the goals by itself.

Central bank independence of political power is usually advocated as a remedy against the alleged inflationary bias of government. According to Cukierman (1992), this bias is explained by two arguments.

(1) The 'revenue motive' which focuses on the risk of the government exploiting the central bank's capacity to create 'purchasing power' to finance expenditure that the government is unwilling to finance out of current or future taxation.

(2) The 'unemployment motive' which focuses on the short run trade-off between price stability and output and on the assumption that political forces in democratic societies are primarily motivated by short-term reelection targets and may therefore be tempted to trade price stability for temporary increases in output.

Grilli, Masciandaro, and Tabellini (1991) constructed a related measure of central bank independence that reflects both "political independence" and "economic independence."

"Political independence is defined essentially as in Bade and Parkin(1982), as the ability of the central bank to select its policy objective without influence from the government. This measure is based on factors such as:-

(1) whether or not its governor and the board are appointed by the government,

(2) the length of their appointments,

(3) whether government representatives sit on the board of the bank,

(4) whether government approval for monetary policy decisions is required

(5) and whether the "price stability" objective is explicitly and prominently part of the central bank statute.

"Economic independence" is defined as the ability to use instruments of monetary policy without restrictions. The most common constraint imposed upon the conduct of monetary policy is the extent to which the central bank is required to finance government deficit. This index of economic independence essentially measures how easy it is for the government to finance its deficits by direct access to credit form the central bank.

Whereas an independent central bank is one that does not cooperate with the fiscal authorities in setting economic policy, a dependent central bank co-operates with the fiscal authority in setting policy (Pollard 1993).

FISCAL CONSERVATISM

Fiscal conservatism has much influence for an independent central bank. It relates to prudent management of government revenue and expenditure towards maintaining a low, manageable and non-inflationary fiscal deficit.

Government's fiscal operations could be viable in the long run on conditions that its

current debt burden plus the present value of its expenditure equals the present value of its revenue. Excessive fiscal deficits have to be financed either by foreign sources or domestic sources and these impose pressure of financing requirement on the various sources.

An independent central bank should therefore be better able to resist government efforts to have them monetize deficits. Thus government realizing that there may be some limit on their ability to issue bonds continuously to finance deficits may decide to limit deficit spending [(Pollard (1993)]. Consequently, if fiscal policy is conservative, an autonomous central bank, may bring price stability, and maintain unemployment rate consistent with a steady and lower inflation rate.

(B) *THEORETICAL BASIS FOR CENTRAL-BANK INDEPENDENCE*

Several scholars have constructed theoretical models predicting that when run by government, monetary policy will produce too high inflation.

Wood, Mills and Capie (1992) argued that monetary policy affects the general price level. Unexpected increases in the price level (but not expected ones) temporarily expands economic activity – example, there is a 'short-run Philips curve'. Since voters value expansion in output, but dislike inflation government has a motive to increase inflation and stimulate output. However, since voters know that, and therefore expect inflation, the policy maker must supply inflation to prevent a temporary squeeze on output. Since inflation is expected, it brings no output benefits, but the cost of inflation.

According to Fischer (1995), modern theory attributes the inflation bias either to the dynamic inconsistency problem of monetary policy in an 'Expectational Phillips-Curve Model of Output Determination' or to the revenue motive of inflation tax.

PHILLIPS CURVE EXAMPLE OF DYNAMIC INCONSISTENCY

According to Phillips Curve example of dynamic inconsistency. Suppose that the policy maker has a single period loss function quadratic in the rate of inflation (Π) and in the deviation of real output (y) from a target level:

$$L(.) = a\Pi^2 + (y - ky^*)^2 \,,\ a>0 \,,\ k>1 \,. \qquad \text{Eq(1)}$$

Where, y^* can be interpreted as full employment output. The target level of output exceeds the natural rate.

The assumption $k>1$ is very important here. It can be said that tax distortions cause the natural rate of employment to be too low. This allows the Loss function L(.) to be consistent with the single period utility function of private agents. There is another view that the government has different preferences than the private sector. Anyway, dynamic inconsistency may occur whether or not the private sector and the government sector have the same interests.

The intertemporal Loss function

$M_t(.) = \Sigma^{\infty}_{0} (1+\delta)^{-i} L_{t+i}(.)$; Eq(2)

where δ is the discount factor, may differ between a private sector and government in a system where periodic elections can result in the change of government. In such cases the government may have a shorter horizon than the private sector.

Phillips-Curve may also describe the relationship between output and inflation in each period:

$y = y^{*} + b(\pi - \pi^{e})$, Eq(3)

Where π^{e} the expected rate of inflation. Here two assumptions are made: (1) It is a one shot game and; (2) That government chooses inflation (π) after public or private sector has chosen π^{e}.

Now let us consider a one period game. Inflation rate is set by the policy maker under discretion which means that expected inflation rate is taken as given. Therefore,

$\pi = (a + b^2)^{-1} b[(k-1)y^{*} + b\pi^{e}]$ Eq(4)

If expectations are correct, the inflation rate will be positive at the level

$\pi_d = a^{-1} b(k-1)y^{*}$ Eq(5)

Where, subscript *d* represents "discretion". Thus the higher inflation rate the larger is *b* and therefore the greater the output gain from anticipated inflation, the larger is the distortion $(k-1)y^{*}$, and the larger is *a*, and the less costly is inflation.

So the value of Loss Function under discretion is :

$L_d = (k-1)^2 y^{*2}(1 + a^{-1}b^2)$ Eq(6)

This equilibrium is bad for the government as well as the private sector, (if it has the same utility function) than a zero inflation equilibrium because in zero equilibrium, the value of loss function will be equal to:

$L_p = (k-1)^2 y^{*2}$ Eq(7)

(subscript p for precommitment)

The policy maker does not choose an inflation rate of zero because under the rules of the game in which the private sector first chooses an expected inflation π^e,

$\pi = \pi^e = 0$ is not a Nash equilibrium. Eq(8)

If the private sector has committed itself to $\pi = 0$,the policy maker will chose the positive rate of inflation as given by;

$$\pi=(a+b^2)^{-1}\, b[(k-1)y^* + b\pi^e \quad \text{Eq(9)}$$

The inflation rate π_d is a Nash equilibrium that, if expected by the private sector, will be implemented by the government. However, if the policy maker decides to choose $\pi = 0$, the distorted second best outcome L_p can be obtained.

Sometimes the policy maker has the temptation to "cheat" in order to secure the benefits from inflation shocks. The benefits may include expansions of economic activity and reductions in the real value of the government's nominal liabilities. (Because of existing distortion in the economy, these benefits can accrue generally to private agents rather than merely to the policy maker.) But this tendency to cheat tends to move the economy towards the inferior equilibrium under discretion and will result in the loss of credibility of the policy maker thereby motivating the policy maker to abide by the rules. Then the policy maker forgoes short term benefits from inflation shocks in order to secure the gain from low average inflation over the long run.

Now we can calculate the inflation rate and value of the utility function in the fooling or cheating solution in which individuals expect the policy maker to create zero inflation but she instead acts opportunistically. With $\pi^e = 0$, the optimal rate of inflation is

$$\pi_f = (a+b^2)^{-1}[b(k-1)y^*] \quad \text{Eq(10)}$$

The corresponding value of loss function is:

$$L_f = (1+a^{-1}b^2)^{-1}(k-1)^2y^{*2} \quad \text{Eq(11)}$$

Thus:

$$L_f = (1+a^{-1}b^2)^{-1}\, L_p=(1+\theta)^{-1}L_p \quad \text{Eq(12)}$$

$$L_d = (*1+a^{-1}b^2)L_p = (1+\theta)L_p\,. \quad \text{Eq(13)}$$

Here, $\theta = b^2/a$ is a measure of the utility gain from unexpected inflation

b is the increase in output and

a is the utility loss from higher inflation

Thus the benefits of precommitments can be demonstrated by:

$L_f < L_p < L_d$ Eq(14)

We can say that discretionary solutions produce the largest loss because it results in a positive rate of inflation with no output gain. It appears on first sight that the policy maker would want to choose a zero inflation rate to attain L_p. Since the loss function is lower, if the government succeeds in cheating the private sector, they is the temptation to move away from the expectations. This is the case, if the private sector takes expected inflation to be zero and thereby succeeds only in raising the inflation rate and producing the worst of the three outcomes.

According to Kydland and Prescott (1977), policy makers should be constrained by rules because that would enable them to attain the precommitted solutions which will give better result than discretionary alternative. In the discretionary policy the announcement of low inflation is by itself not credible. Once expectations are formed, the policy maker has an incentive to renege on its announcement in order to reduce unemployment. Private economic actors understand the incentive to renege and therefore, do not believe the announcement in the first place.

Thus we may come to the conclusion that policy makers can sometimes better achieve their goals by having their discretion taken away from them. In the case of rational terrorists, there will be fewer hostages taken and killed if policy makers are committed to following the seemingly harsh rule of refusing to negotiate for hostage's freedom. In the case of the monetary policy, there will be a lower inflation without higher unemployment if the policy maker is committed to a policy of zero inflation.

SECTION TWO

EVALUATION OF EMPIRICAL STUDIES IN RELATION TO CENTRAL BANK INDEPENDENCE AND FISCAL DEFICITS

To the extent that government's expenditure minus revenue results in a public sector deficit, financing must be sought. It is this method of financing that forges the link between government's fiscal policy and the central bank's monetary policy. The autonomy of the central bank is affected when the method of financing the deficit comes from that institution.

Empirical studies have been undertaken to quantify the relationship between central bank independence and fiscal deficits. These were based on the assumption that once central banks cannot keep fiscal conservatism, they become less independent from their government.

This assumption has received strong support from Parkin (1987) who investigated this question for the same 12 countries as Bade and Parkin for period 1955-1983 [See appendix 1 for list of these twelve countries]. He found that there was some evidence of a negative relationship between central bank independence and the long-run behavior of government deficits as a percent of gross national product (GNP). The deficits of Switzerland and Germany, the countries with highest levels of central bank independence had long-run equilibrium value near zero with little variance.

However, other countries, notably France, that had low levels of central bank independence also had small long run deficits as a percentage of GNP.

Masciandaro and Tabellini (1988) looked at fiscal deficits as a percentage of GDP in Austrailia, Canada, Japan, New Zealand and the United States during the period 1970 -85. They found that New Zealand, which had the lowest level of central bank independence of the five countries during the period, had the highest fiscal deficit as a percentage of GDP. The United States however, with the highest level of central bano independence among this group of countries, had a deficit/GDP ratio similar to those of the other countries.

Grilli, Masciandaro and Tabellina (1991) found that there was generally a negative correlation between the deficit/GNP ratio and the degree of central bank independence. However if political factors as well as central bank independence were included in their regression, the latter variable was insignificant. Thus they concluded that an independent monetary authority apparently does not discourage the government from running fiscal deficits.

Further examination of the relationship between fiscal deficits and central bank independence, which is consistent with the work done by Alesina and Summers and De Long and Summers is presented here. Using the Same index of central bank independence and the same 16 countries [See Appendix (1)], there is some evidence of a negative correlation between average deficits as a percentage of GDP and central bank independence for the period 1973 – 89 as in figure 1. The degree of independence however is not statistically significant (at $\alpha = .05$) determinants of the deficit/GDP ratio. The variability of the deficit as a percentage of GDP is also negatively correlated with central bank independence (See Appendix 3) and relationship is statistically significant.

Although at first glance these studies seem to indicate that a country that wants to lower its inflation rate and do so without hurting growth should create an independent central bank. Such a central bank apparently could also help reduce fiscal deficits and increase output.

The empirical evidence has therefore supported the view that fiscal conservatism complements the independence of central banks.

SECTION THREE

COMPARATIVE LOOK AT THE CARIBBEAN NEXUS

According to Venner (1994), there is an 'iron law' in open economies such as in the Caribbean that posits a one to one correlation between deficit financing and a deterioration in our balance of payment. It is therefore not a viable policy option to pursue and can lead to currency devaluation. Devaluation in the Caribbean region is equated to economic failure. It certainly in our small open economies, leads to inflation, whose containment in this new dispensation is the major objective of central banks.

Excessive money creation by the central bank to alleviate a government deficit, serves only to divert the central bank from pursuing its main functions in Caribbean typed of maintaining internal and external 'value of the currency and international price competitiveness. According to Davis (1992), this is because the increased domestic financing emanating from the central bank affects Net Domestic Assets (NDA) and through the multiplier process a subsequent increase in the money supply is attained.

$$B = C + R = NIR + NDA \qquad \text{Eq(15)}$$

$$M = mm \times B, \quad mm > 1 \qquad \text{Eq(16)}$$

Where:

B = Money Base

C = currency with the non-bank public

R = commercial bank's reserves

NIR = Net International Reserves of Central Bank

NDA = Net Domestic Assets of Central Bank

m = Money supply

mm = Money multiplier

In the Caribbean context the increase in the money supply will manifest itself in a general increase in domestic prices, exchange rate devaluation and a general loss in foreign reserves. Where the central bank lacks control over government's demand for fiscal accommodation, then if government do not exercise fiscal conservatism an international financial institution such as the International Monetary Fund (IMF) may provide the institutional context for macro-economic Adjustment. They can sometimes serve only to further lower the degree of independence of the Nation's central bank.

According to Davis (1992), in the Caribbean region the Central Bank that comes closest to being independent, is the Eastern Caribbean Central Bank (ECCB). In terms of monetary management the ECCB has been relatively successful, especially when compared too other Banks in the region.

Constraints of the ECCB include,

(1) Constrained in its power to Grant credit to its member governments.

(2) Temporary advances and holdings of treasury bills issued by member governments.

(3) Holdings of securities other than treasury bills in respect of all governments

(4) Statutory credit limits imposed by the ECCB Agreement, provides the monetary authorities with control over the extent to which budget deficits are accomodated by printing money.

(4) Although the ECCB has the power to conduct open market operations in order to influence the money supply, this potential is constrained by a relatively unsophisticated financial system.

The ECCB arrangements have served to force a high degree of fiscal conservatism on part of member countries Governments.

The money supply has remained relatively stable. Prices also remained stable as well as other macro fundamentals. This is linked to the fiscal covservatism arising from the sharing of a common currency.

The Central Bank of Jamaica over the years has taken a Quasi-fiscal function. This quasi-fiscal role of the bank has created an entanglement of fiscal and monetary policy. This has compromised the ability of the bank to defend its currency. The bank being owned by Government along with its senior management being appointed by Government finds itself in a compromising position of frequently accommodated Governments fiscal policies. This accommodation comes at the expense of the integrity of monetary policy and central bank independence.

The Central Bank of Barbados Act point to a fair amount of control over monetary policy by the Government. The Governor and Board of directors, like Jamaica are appointed by the Minister of Finance for a limited number of years. The quality of economic management of the economy has been given priority attention both by government and Central Bank alike. Monetary policy has regarded as an addition to the armory of economic management. The performance of the fiscal policy management compared to Jamaica has been more conservative. However, studies of Government expenditure growth done by Mascoll (1986) show government expenditure racing ahead of revenue mainly in the year following up to election.

Over fiscal expansion has had disequilibriting in 1981/82, 1985/86, 1990/91. It is note that after the election years 1981 and 1990 that the IMF undertook a standby Arrangement and Stabilization and Structural Adjustment Program respectively. Over these reference periods the fiscal deficit, central bank credit to government, the money supply and the current account of the Balance of Payments Deficit were all up while the foreign reserves were down to worrisome levels. Although ravages of recession were significant contribution factors to this precarious position the dependence of the central Bank was contributing factors. This point is especially borne out in 1990 when the statutory credit limits of central bank was amended in Parliament from its maximum ceiling of $250 million to $350 million.

CONCLUSION

In general, there is overwhelming evidence that entanglement of fiscal and monetary policy has reduced Central Bank independence of governments' fiscal excesses. The empirical evidence shows that central bank independence does have the potential to improve longer-run inflation performance.

In a democracy there is no real case for a Central Bank which is totally independent from government. Its boils down to the question of the degree of independence. Nations seeking to provide their central banks with legal and institutional arrangement to give protection from political interference has a horrendous task at hand. The predominance of the state in a competitive political will always have short term goals of stimulating economic growth and creating unemployment. This is root problem of Dynamic Inconsistency of monetary policy as the Expectational Phillips curve explains.

There are many other solution to dealing with the problem of dynamic inconsistency (some of which were alluded to in section one). These though beyond the scope of this paper, are listed below;

1. Reputation
2. Delegation
3. Punishment equilibria
4. Incentive contracts
5. A 'conservative' central bank
6. An exchange rate mechanism
7. Openness of the economy
8. Announcements

However, to guarantee Central Bank Independence it is extremely critical that Governments practice conservative fiscal policies.

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