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Was There A Government Expenditures Rule in Disguise During 2014-19? Some Evidence for India

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"Model-dependent realism applies not only to scientific models but also to the conscious and subconscious mental models we all create in order to interpret and understand the everyday world" Stephen Hawking

Abstract: An expenditure rule takes the form of a limit on real spending by the Government. It is a prerequisite to ensure stability of the economy. Such rules, generally, impose restriction on the budget deficits, if stipulated as a law even in disguise. The purpose is to ensure macro-economic stability by rendering negative externalities, if any, of pursuing an independent fiscal policy from that of a previous government. Such rules are in place, officially, in several advanced and emerging economies (*Cordes et al*, 2015). In this short study, the authors deploy an easily understandable model and set it against data for India, over the period 1992-93 to 2018-19 split up into three sub-periods. These three sub periods roughly approximate the periods when a different political party was in government in New Delhi. The government at the beginning of the third period claims to have observed an expenditure rule in guise, with a view to keeping the 'deficit' at 3.5 percent or less. The empirical evidence, however, seems to be slightly in disagreement with the claim.

Introduction

A policy is like a responsibility that should keep the capacity to respond if required. At the same time, a policy that does not polish its premises, generally, cannot be expected to deliver desired results. In this sense, fiscal rules try to anchor discipline and tend to help stabilization. These rules *per se*, operate in an institutional and political environment conducive to sensible implementation.

What are Expenditure Rules?: An expenditure rule generally takes the form of a ceiling on nominal or real spending by the Government. The ceiling

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is expected to help rein- in the fiscal deficits. Often, expenditure rules are used in connection with other policy rules. Expenditure rules are generally established through statutory norms in emerging market economies and they cover the central governments. Expenditure rules are deployed, generally, with the objective of economic stabilization or with a debt- rule for debt sustainability. Often expenditure rules are deployed in disguise as part of a political party's policy strategy in the absence of a conducive-political environment for the party in government concerned. This deployment of the rules is generally reflected in the size of the public fiscal deficits.

Why the Expenditure-Rules are essential?: Expenditure rule is mainly deployed for holding down the deficits. Fiscal illusion, like money illusion is often said to goad governments into spending spree. Good fiscal policy, generally, entails holding down fiscal deficits. It suggests that when government revenues are not fully transparent or are not fully perceived by taxpayers, government spending is said to be less expensive than it actually is. Expenditure rules to be formal require institutionalization, often, through legislative process in general. If political parties do not agree on this mutually, then, they can be observed in disguise by any political party.

Is there a Guiding link between Government Expenditures and the GDP? The reported literature on this topic is immense. There are two ways of looking at the relationship between government expenditures and economic growth. Public finance studies look at the relationship through the lense of Wagner's Law (Ganti and Kolluri, 1979). This is the earliest attempt to explain the growth in government expenditure, as caused by economic growth. The Keynesian school of thought puts the emphasis on government expenditures as causing economic growth. This is equivalent to saying that government expenditures do positively impact on the GDP and its growth in developing nations.

The other strain of thought explains that beyond a point, further growth in government expenditures as share of GDP would hamper economic growth. Several reasons are put-forth in support of this explanation. Firstly growing government expenditures are said to "crowd out" private expenditures. Secondly, as government expenditures grow especially as welfare expenditures – they create work disincentives and disincentives to save and invest. The accompanying bureaucracy and regulation are said to stifle innovation followed by the productivity- plumet. Such an economy may ultimately resort to more government borrowing leading to rise in the debt service burden. Thus, government spending can undermine economic performance by resource displacement if the spending goes beyond a desirable share of GDP. This phenomenon is known as Rahn Curve in graphical form (Rahn R and Fox H, 1996). It is the government expenditures

counterpart to the Laffer curve of taxation. The curve traces that low levels of government expenditures stimulate economic growth; but beyond a certain share of the economy, the same mostly hurts growth. The Rahn curve with a simple modification is also known as the Sculley curve (Scully, 1989) or in general known as the BARS ((Barro(1990); Arcmey(1995); Rahn (1996) and Scully (1995)) curve.

Further to the earlier discussion, it is also equally important to look at the possibility of unwanted variations in government expenditures. In a developing economy, the need to reduce variations in government expenditures by observing an 'expenditures rules', even in disguise, if not as an institutionalized policy- rule is warranted. This is analogous to the "golden rule" of government spending. The phrase golden- rule seems to appear in all ancient writings including in the *New Testament*. It seems to imply "do unto others as you would have them do unto you". The output gains from reducing the variations in government expenditures follow from the improved allocation and utilization of resources and of capital especially. The efficiency boost flowing from the allocation is likely to boost economic growth.

The Government Expenditures- Rule Model: All empirical models need to use simplifying assumptions. Accordingly, an empirical model is said to be a good model: 1. if it is elegant containing few arbitrary assumptions and 2. if it explains most of the data the model is expected to explain (Stephen Hawking and Leonard Mlodinow,2010). Most models in economics are representations of mimicking the conditions of the situations prevailing in the economy that we want to explain. All empirical models deploy simplifying assumptions (Gerard Sculley,1989) – once head of Apple Computers – said that simplicity is the ultimate sophistication. In these days of highly sophisticated computable general equilibrium models and time series pyro-techniques, to rely upon a simple single equation model looks simplistic but not really so (Thoronton 1990). Sophistication can cloud the purpose but common sense can help suggest the model. The government expenditures rule model is one such simple but highly useful model and it can be developed as follows:

The Model: Let Y = P+G (1) where Y = real GDP, G = real government expenditures and P = Y-G where P = private sector real GDP. In variance form (1) can be written as:

$$\sigma_Y^2 = \sigma_p^2 + \sigma_G^2 + 2p_{PG}\,\sigma_P\sigma_G \qquad (2)$$

where σ_Y^2 = variance of Y, σ_P = standard deviation of P and 2_{PG} is the correlation coefficient between the P and G variables. Dividing (2) with σ_G^2 throughout we get:

$$\left(\sigma_Y^{\,2} / \sigma_G^{\,2}\right) = \left(\sigma_P^{\,2} / \sigma_G^{\,2}\right) + 1 + 2\,P_{PG}\left(\sigma_P / \sigma_G\right) \tag{3}$$

In general $$\left(\sigma_Y^{\,2} / \sigma_G^{\,2}\right) \underset{>}{\overset{<}{}} 1 \tag{4}$$

This, of-course, depends on the condition

$$\left(\sigma_Y^{\,2} / \sigma_G^{\,2}\right) + 2P_{PG}\left(\sigma_Y / \sigma_G\right) \underset{>}{\overset{<}{}} 0 \tag{5}$$

This result implies that for the G-rule to be effective in stabilizing the GDP, the correlation coefficient should satisfy the condition that

$$\rho_{PG} < -\frac{1}{2}\left(\sigma_P / \sigma_G\right) \textit{implying } \sigma_P > \sigma_G \tag{6}$$

This suggests that $ó_P$ indicates the size of policy action by the government and the correlation coefficient P_{PG} serves as a measure of the timing of the government policy.

Next, it is true that the private sector GDP (P) is determined by G. In this sense P can be modelled as :

$$P = kG + e, \text{ where e is error term} \tag{7}$$

Then rewriting (1) using (7) we obtain

$$Y = P+G = kG + e + G = (1+k)\,G + e \text{ and} \tag{8}$$

$$\sigma_Y^{\,2} = (1+k)^2\ \sigma_G^{\,2} + 2(1+k)P_{Ge}\,\sigma_G\,\sigma_e + \sigma_e^{\,2} \tag{9}$$

Diving (9) with $\sigma_G^{\,2}$ throughout we obtain

$$\left(\sigma_Y^{\,2} / \sigma_G^{\,2}\right) = (1+k)^2 + 2(1+k)P_{Ge}\left(\sigma_e / \sigma_G\right) + \left(\sigma_e^{\,2} / \sigma_G^{\,2}\right) \tag{10}$$

It is necessary to note here that $ó_e$ may be constant by assuming homo-skedasticity and it will be present. For G to act as a stabilizer – a la "G-rule" – the condition required is

$$2(1+k)P_{Ge}\left(\sigma_e / \sigma_G\right) < -(1+k)^2 - \left(\sigma_e^{\,2} / \sigma_G^{\,2}\right)$$

It implies that

$$P_{Ge} < -\frac{(1+k)}{2}\left(\sigma_e / \sigma_G\right) - \frac{1}{2(1+k)} - \left(\sigma_e / \sigma_G\right) \tag{11}$$

Regression Results: The equations estimated are

(i) P = kG + e1 and

(ii) y = (1+k) G + e2.

Since we want to verify the validity of the 'G' – rule for three different periods (when a different political party was in government in New Delhi,) the same periods consist of I 1992-93 to 1997-98; II 1998-99 to 2013-14 and III 2013-14 to 2018-19. Beyond 2018-19, we did not include the data as it has been already disturbed by the Covid 19 virus and the consequent lockdowns in the country. The regression results are as follows:

P = 7.56G + error – I

(1.19)

P = 8.62G + error – II

(0.39)

P = 7.47G + error – III

(0.67)

Standard errors of the regression coefficient estimates are shown in parenthesis beneath each estimate respectively.

The RHS of equation 11 for the three periods are: -1.7977 (I); -3.2689 (II) and -2.9237(III) respectively. It is true that a smaller negative number is always greater than a larger negative number. The interest of our study lies in the comparison between the RHS numbers for the periods II and III. It has been reported by the budget commentaries that stretching or contracting fiscal deficit by a small percentage point would not be growth-supporting. Further, demonetization of the Rs.500 and Rs.1000 currency bills (with replacement by new ones) to minimize the counterfeit threat across the borders has also resulted, perhaps in the RHS III turning out to be slightly marginally larger than that in RHS-II.

Concluding Remarks

The purpose of this short study has been to find out, whether or not capping the budget deficits intention of the Government during 2014-2019was really reflected in the numbers when compared with those for the previous period II. Formulating a fiscal rule model, we tried to verify the intentions of the government during the period 2014-2019 with the results for the immediate previous government period. The empirical results for period III do not largely reject our hypothesis when compared with those for the immediate previous government period.

Notes

1. Fiscal illusion is a complex phenomenon that is said to consist of several forms of illusion due to complexity of the tax, expenditures and debt structures. For a detailed account on this see Wallace E. Oates (1988) and Dollery and Worthington (1996)
2. Instead of a government expenditures share, if government expenditure and taxation as a share of GDP are measured on the horizontal axis and GDP growth rate on the vertical axis the corresponding curve is known as Scully curve (1989)

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