THE ROLE OF GOVERNMENT EXPENDITURES IN AFFECTING FISCAL DEFICIT IN INDIA: AN EMPIRICAL ANALYSIS

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ABSTRACT

The present paper focused on fiscal deficit in India and tried to identify its relationship with capital expenditures and plan and non-plan expenditures. The present paper evaluated two models which examined the relationship between fiscal deficit and key public finance indicator of expenditures. Results from the Johansen Cointegration test concludes there exist one cointegrating relationship among variables in Model1 (fiscal deficit, revenue expenditure and capital expenditure) and those in Model2 (fiscal deficit, plan expenditure and non-plan expenditures). It reflects there is long run causality running from plan and non-plan expenditure to fiscal deficit and short run causality running from capital and revenue expenditure. The finding of the paper indicates that higher level of revenue expenditure leads to higher levels of fiscal deficit; whereas capital expenditures are low and helps in lowering the deficit, which has been shown by the Vector Error Correction model.

Keywords: Fiscal Deficit, Capital Expenditure, Revenue Expenditure, Plan Expenditure, Non-Plan Expenditure, Economic Growth.

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1. INTRODUCTION

Fiscal deficit has always been central in the analysis of the health of an economy. It gained attention in the 1980s when it received the blames for the economic ills that beset the developing countries. One of the most persistent discussions on fiscal deficit has been linked to its detrimental effect on raising inflation. In economic terms, fiscal deficit is a phenomenon, where the Government's total expenditure surpasses the revenue generated. It is essentially the difference between what the government spends and what it earns, generally expressed as a percentage of the Gross Domestic Product (GDP) (*Gross domestic product is the market value of all officially recognized final goods and services produced within a country in a year, or other given period of time*). It comes under the overall ambit of fiscal system; which refers to the mechanism through which financial resources for the government and its agencies are obtained or raised, and how the scale and pattern of allocation of such resources is determined. In the Indian fiscal system, the budgetary resources and expenditures are determined through the annual budget of the central government and the state governments.

For long, fiscal deficit has been seen to have negative impacts on the economy. It has been argued that high fiscal rates lead to lesser economic growth (Baily, 1980; Feldstein, 1980). High levels of fiscal deficit have also been seen to increase the debt-equity ratio, affect the savings and investment and ultimately growth (Rangarajan and Srivastava, 2012).

One of the other critical components of macroeconomic analysis is Government expenditures that the present paper aims to explore. The Keynesian approach says that public spending may increase the aggregate demand which further stimulates the economic growth and employment (Rashid and Sara, 2010). Government expenditure can be divided into plan and non-plan expenditure. Plan expenditure indicates what is covered in the Five Year Plan. Plan (Indian context) and is incurred by the Central Government. Non-plan expenditure does not mean that the expenditure is unplanned; it covers expenditures done in defense, interest payments and subsidies and grants provided to states. Non-plan expenditure can be further divided into revenue expenditure and capital expenditures.

2. THEORETICAL PERSPECTIVES ON FISCAL DEFICIT

There have been theories formulated over the fiscal deficit over the years and trying to assess its impact over growth and investments. While the neo-classical view considers fiscal deficits detrimental to investment and growth, the Keynesian theory says that is an important policy concern. Theorists persuaded by Ricardian equivalence assert that fiscal deficits do not really matter except that they smoothen ofadjustment to expenditure or revenue shocks. On one hand the neo-classical and Ricardian schools emphasize on the long run, the Keynesian view emphasizes the short run effects.

According to the Neo-Classical Theory, revenue deficit as a part of the fiscal deficit implies a reduction in the government savings, further implying that this will have a negative impact on the growth and development. It assumes that this leads to an increase in the consumption, which further leads to decreased savings and a fall in exports.

The Keynesian view (Eisner, 1989), visualize that an increase in autonomous government expenditure, whether investment or consumption, financed by borrowing would cause output to expand through a multiplier process (Ranjarajan and Srivastava, 2013). This further leads to a demand for money and if the money supply is fixed, and deficit is financed by bonds, interest rates will rise. But, the Keneysian argument also says that increased demand also leads to increased investments at any rate of interest.

The Ricardian Equivalence Perspective (Barro, 1974, 1976, 1989) believes that fiscal deficit has neutral impact on the growth of an economy. The deficit in any current period is equal to the present value of future taxation that is required to pay off the increment to debt resulting from the deficit. This can also be put up in other words, like government spending must be paid for, if now or later, and the present value of spending must be equal to the revenues from present value of tax and non-tax. The Ricardian equivalence believes that fiscal deficit is a useful device to mellow the impact of revenue shocks or for meeting the requirements of lumpy expenditures. The financing of these by taxes could be spread over a period of time.

3. CURRENT SCENARIO OF EXPENDITURES AND DEFICIT IN INDIA

The total non-plan expenditure in the year 2012-13 was Rs. 9, 72,727 Cr. and the plan expenditure was Rs. 5, 21,462 Cr. The non-plan expenditure was about 9.7% of the total GDP of

India in 2012-13 and the plan expenditure was about 5.2%. Plan expenditure can again be split on revenue and capital components.

The central government raises funds through revenue receipts and capital receipts. Under revenue receipts there is tax revenue and non-tax revenue. Taxes mainly include income tax, corporate tax, excise tax and custom duties. Its non-tax revenue come from interest received and surpluses of PSUs, financial institutions and other departmental undertakings like the railways, post etc. on the other hand capital receipts include recoveries of loans, other receipts, borrowings and other liabilities.

Both the plan and non-plan expenditures have components of capital and revenue expenditures. The total expenditure in the fiscal year 2012-13 was Rs. 12, 83,599 Cr. on revenue account and Rs. 2, 00,562Cron capital account. The expenditure on revenue account was around 12.8% of the GDP and that on the capital account was around 2.0% of the total GDP for the year 2012-13. Needless to say, a majority of the money is spent on revenue expenditure, i.e. salaries, overheads and other stuff, which does very little for the development of the economy.

The total receipts and expenditure rarely match. The discrepancy between two is the budget deficit (or surplus). In calculating fiscal deficit, government borrowings are not included in the revenue side of the budget. It is therefore the cash by which the government is short to cover the proposed expenditure. For the year 2012-13; GDP growth rate was 4.5% and fiscal deficit was 5.1% of GDP.

Revenue deficit is also a component of fiscal deficit and is the difference between the revenue receipts and revenue expenditure. It is of concern as it indicates the extent to which capital receipts are being used by the government to finance consumption expenditure- a situation that is clearly not viable or desirable in the long run. In the year 2012-13, the revenue deficit was around 3.5% of the total GDP of India. It is analogous to taking loan for feeding the guest at one's daughter marriage. The loan has to be repaid, but no additional productive assets have been created with which to repay.

The government's existing liabilities tell a sad tale. The government's total outstanding liabilities at the end of financial year 2012-13 is Rs. 44,68,714 Cr. Out of which internal liabilities is Rs.

42,84,660 Cr. and external debt (outstanding) is Rs. 1,84,054 Cr. The need for infrastructure investment is becoming more vital every year. The government cannot raise too much money from the market as this hampers economic growth. However, in situations when the inflation is under control, the government might just decide to spend, and monetize the deficit.

4. OBJECTIVES OF THE RESEARCH PAPER

In the view of the above theoretical background, which hovers around fiscal deficit; capital and revenue expendituresand planned and non-planned expenditures, the present paper aims to explore the following:

i)   To examine the short run and long run relationships between fiscal deficit and capital and revenue expenditures.

ii) To examine the short run and long run relationships between fiscal deficit and plan and non-plan expenditures.

iii) To assess the role of capital and revenue expenditure in inflating fiscal deficit

5. DATA SOURCE AND RESEARCH METHODOLOGY

The present research study is based on secondary time series data. The present research paper is based on a time series analysis of the public finance indicators, including fiscal deficit, revenue and capital expenditures and plan and non-plan expenditures. The data has been collated from various rounds of the Economic Survey of India*(Economic Survey of India is an annual survey been done by the Ministry of Finance, Government of India and provides time series data on fiscal indicators)*.The data has been analyzed for the last 23 years (from 1990-91 to 2012-13). The data analyzed for all the indicators are expressed as a percentage of GDP in that particular year. We have used the approach of proportions to ward off the effect of inflation and monetary fluctuations across the years.

Quantitative time analysis has been done in order to examine the objectives of this study.The analysis used Johansen Cointegration test, Granger Causality test, And Vector Error correction Model (VECM) techniques. The Johansen methodology confirms the existence of long run

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relationship between fiscal deficit and the selected variables. Tests for stationarity have been done using the Augmented Dickey-Fuller (ADF) unit root test which is derived from Dickey and Fuller (1979, 1981). It is noteworthy that when the number of observations is less, unit root tests have little power (Chebbi and Lachaal, 2007). So, to complement the ADF unit root test, the KPSS test for stationarity, derived from Kwiatkowski, Phillips, Schmidt and Shin (1992) is also been done. The model used by the ADF test is as under:

$$\Delta G_t = b_1 + b_2 t + dG_{t-1} + \sum_{i=1}^{m} a_i \Delta G_{t-i} + \varepsilon_t \qquad \ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where: G_t is the variable of interest; ε_t is a pure white noise error term; t is time trend; Δ is $G_t = X'_t \delta + \mu_t$ difference operator; b_1, b_2, d and a_i are various parameters. In the ADF approach, we test whether d=0 (*In the ADF test, the null hypothesis is that the variable in question has a unit root, i.e. it is not stationary*).

The Kwiatkowski, Phillips, Schmidt and Shin (KPSS) test is different from the unit root tests in that the series G_t is assumed to have a stationary trend under the null hypothesis. The KPSS statistic is based on the residuals from the ordinary least squares (OLS) regression of G_t on the exogenous variables X_t:

$$\ldots\ldots\ldots\ldots\ldots (2)$$

6. ECONOMETRIC SPECIFICATION

The present research paper explores the relationship between fiscal deficit and capital and revenue expenditure and plan and non-plan expenditures. The mathematical models used in the analysis are as under:

fisc_ deficit = f (cap_exp, rev_exp, plan_exp, nonplan_exp)………………………. (3)

The estimated Long run model is of the following form:

Δfisc_deficit= $\beta_1 + \beta_2$cap_exp$_t$ + $\beta_3$rev_exp$_t$ + μ_1………………….…………………..…… (4)

Δfisc_deficit= $\beta_3 + \beta_4$plan_exp$_t$ + $\beta_5$nonplan_exp$_t$ + μ_2…………….…………………..…… (5)

Where:

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- *fisc_deficit: Fiscal deficit, cap_exp: capital expenditure, rev_exp: revenue expenditure, plan_exp: plan expenditure, nonplan_exp: non-plan expenditure, Δ: first difference operator, $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ are coefficients and μ_1, μ_2 are error terms.*

7. DATA, FINDINGS AND DISCUSSION

The data for economic indicators of fiscal deficit, capital and revenue expenditure and economic growth rate has been collected and compiled from the various rounds of Economic Survey of India. The data from different rounds of the survey was compiled for the last 23 years, from 1991 to 2013.

The fiscal deficit of India in the year 1990-91 was as high as 8.3% of the GDP. This showed a decreasing trend till the year 2000-01 with little ups and downs, with the major shortfall in the year 1994-95, when it reduced from 7.5% in the preceding year to 6% (Table 2). This further showed a declining trend to a low of 2.6% in the year 2007-08. The next fiscal year of 2008-09 saw a radical upward shift in the fiscal deficit, when it rose more than double to 5.9%. Post this, it has showed a more consolidating trend and in the year 2012-13 stands at 5.1%.

The fiscal deficit in the year 1991 has been the highest in the last 23 years in India. The policies for economic liberalization in India were also implemented in the same year and its impact could be viewed very clearly in the further years when the fiscal deficit was controlled and declined. When we look at a more close level from economic specification, the years from 2006-08 have been the lowest in the fiscal deficit and the growth rate in GDP has been the highest during this duration (above 9%).

When looked into the trend of fiscal deficit with the other indicators, it could be seen that in the year 2007-08, when the fiscal deficit dropped to 2.6% from 3.3% in the previous year, the capital expenditure rose from 1.6% to 2.4% of GDP. In general, we can see that the revenue expenditure follows similar trend as fiscal deficit, but the capital expenditure has more dissimilar trend (Figure 1).

Further looking into the trends of plan and non-plan expenditure along with the fiscal deficit suggests that the planned expenditure as a percentage of the GDP has remained almost flat

throughout. The non-plan expenditure has shown more deviations and fluctuations and also corroborates to some extent with the trend of fiscal deficit (Figure 1).

Figure 1: Trends in fiscal deficit, capital and revenue expenditure, plan and non-plan expenditure in India from 1990-91 to 2012-13 (percent of GDP)

Source: Figures drawn on the basis of key Public Finance data on revenue expenditure, capital expenditure, plan and non-plan expenditure and fiscal deficit from several rounds of Economic Survey of India from 1990-91 to 2012-13

### 7.1 Testing for Unit Roots (ADF and KPSS)

The present research used the Augmented Dickey Fuller (ADF) test and the Kwiatkowski, Phillips, Schmidt and Shin (KPSS) test to test the stationarity and the order of integration among the variables used in the present research. The hypotheses of the Augmented Dickey-Fuller t-test are:

H_0 θ = (i.e. the data needs to be differenced to make it stationary)

H_1 θ < (i.e. the data is stationary and doesn't need to be differenced)

The KPSS test has reciprocal null hypothesis against ADF test. Where the ADF test has a null of non-stationarity in the time series data, the KPSS test has a null of being stationary and an alternate hypothesis of being non-stationary. The results from the ADF test of stationarity is presented in table 1. Results show that all the variables are stationary at first difference and thus are integrated of the first order, except capital expenditure and fiscal deficit.

To further augment the results from the ADF test, the results from the KPSS test are being shown
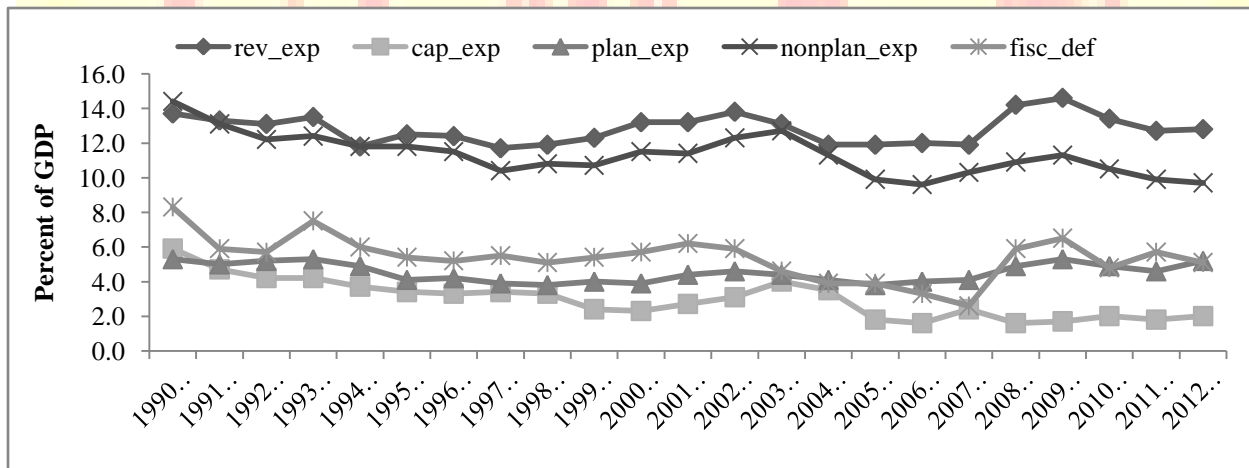
in Table 2. Results from KPSS test indicate that the null hypothesis of stationarity for the variables cannot be rejected at first difference for all the variables. Combining the results from

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the two tests of stationarity, for analytical purposes, we use the first order integration for all variables of revenue expenditure, plan expenditure, non-plan expenditure, capital expenditure and fiscal deficit.

Table 1: Results from Augmented Dickey Fuller (ADF) test of stationarity

Variables	Level		First Difference	
	Constant	Constant and Trend	Constant	Constant and Trend
Revenue expenditure	-3.03344 (0.0319)	-3.1017 (0.1058)	-3.6925 (0.004241)	-3.60208 (0.02957)
Capital expenditure	-0.270161 (0.9269)	-2.49685 (0.3297)	-2.635 (0.08589)	-2.67788 (0.2458)
Planned expenditure	-2.15509 (0.2232)	-1.50962 (0.8267)	-3.38152 (0.01164)	-4.11301 (0.005959)
Non-planned expenditure	-1.25954 (0.6505)	-3.39013 (0.05264)	-3.5722 (0.006346)	-3.40758 (0.0503)
Fiscal deficit	-0.290698 (0.924)	-1.67749 (0.7614)	-2.29172 (0.1747)	-2.33095 (0.4165)

Figures in brackets are the asymptotic p-value.

Source: Computed on the basis of key public finance data on revenue expenditure, capital expenditure, plan and non-plan expenditure and fiscal deficit from several rounds of Economic Survey of India from 1990-91 to 2012-13

Table 2: Results from Kwiatkowski, Phillips, Schmidt and Shin (KPSS) test of stationarity

Variables	Level		First Difference	
	test statistic	Critical value	test statistic	Critical value
Revenue expenditure	0.0938518	0.701	0.0798271	0.699
Capital expenditure	0.73511	0.701	0.205323	0.699
Planned expenditure	0.181334	0.701	0.266187	0.699
Non-planned expenditure	0.582625	0.701	0.11763	0.699
Fiscal deficit	0.419901	0.701	0.171781	0.699

Figures in brackets are the asymptotic critical values at 1 percent.

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Source: Computed on the basis of key public finance data on revenue expenditure, capital expenditure, plan and non-plan expenditure and fiscal deficit from several rounds of Economic Survey of India from 1990-91 to 2012-13

7.2 Johansen Cointegration Test

Having done the tests of stationarity and found that the variables are integrated of first order *I* cointegration tests conducted to see if there is a long run or an equilibrium relationship between the variables. The present research uses the techniques of Johansen Test for cointegration analysis. There are other tests for cointegration such as Engle-Granger test, which is useful when the regression is done between two time series with a unit root. The Johansen cointegration is comprehensive in terms of testing multiple cointegration relations. It uses the maximum likelihood approach and is based on the following vector autoregressive (VAR) model of order p:

$$Y_t = A_1 Y_{t-1} + --- + A_p Y_{t-p} + B X_t + e_t$$ ……………………..…… (6)

Where: Y_t is a k-vector of non-stationary variables; X_t is a d-vector of deterministic variables; and e_t is a vector of innovations.

The tests for Johansen cointegration has been done for two different models. Model 1 examines the relationship between fiscal deficit, capital expenditure and revenue expenditure. Model 2 examines the relationship between fiscal deficit, plan and non-plan expenditure. The results from the Johansen cointegration test are provided in Table-3.

Table 3: Results from the Johansen Cointegration Test

Rank	Eigenvalue	Trace test	p-value	Lmax test	p-value
Model-1 (Fiscal deficit, capital expenditure and revenue expenditure)					
0	0.74508	47.173	0.0161	27.336	0.0278
1	0.51062	19.837	0.2388	14.292	0.2432
2	0.24214	5.5451	0.5295	5.5451	0.5308
Model-2 (fiscal deficit, plan and non-plan expenditure)					
0	0.68419	31.372	0.0321	23.052	0.0242
1	0.31681	8.3197	0.4391	7.6196	0.4275
2	0.034397	0.70006	0.4028	0.70006	0.4028

The p-values are calculated at the 5 percent level

Source: Computed on the basis of key public finance data on revenue expenditure, capital expenditure, plan and non-plan expenditure and fiscal deficit from several rounds of Economic Survey of India from 1990-91 to 2012-13

The trace statistic and the Lmax test (α=0.05) rejects the null hypothesis of no cointegration in both the models (Table 3). It also shows that in both models, the null hypothesis of at least 1 cointegration vectors is not rejected. Therefore, the Johansen cointegration test shows that there is at least one cointegrating relationship between fiscal deficit, capital expenditure and revenue expenditure (Model1) and fiscal deficit, plan and non-plan expenditure (Model2).

The presence of cointegration among the variables suggests that there is a long run relationship between them in both the models. To further test the long run and short relationships between the variables in both the models.

7.3 Estimating relationships in Model1 (Fiscal deficit, capital expenditure and revenue expenditure in India)

Following the Johansen Cointegration Test, the relationship in this model was tested by the vector error correction model. The vector error correction model was estimated using four lags and one vector cointegration as suggested by the VAR estimation model and the Johansen Cointegration test. The overall model was also significant at 1% level (p=0.0049) and also passes the test of normal distribution of residuals (Jarque-Bera test) and no autocorrelation among the variables (Lagrange-multiplier test).

Results show that there is no long term causalitybetween fiscal deficit, capital expenditure and revenue expenditure (Table 4). This implies the fact that in the long run, these variables do not move in coordination. In the long run, capital and revenue expenditure are not cointegrated with each other {the coefficient _ce1-(0.3266675)} is significant at 5% level but has a positive sign)}. The estimation was further explored to see if there is any short run causality between the variables.

The estimation for the short run causality was done using the post-estimation testing of the lag coefficients of capital and revenue expenditure for the hypothesis of linear causality. Results

show that the null hypothesis of no short run causality between revenue expenditure and fiscal deficit could be rejected at 1% level (p=0.0033). Similarly the null hypothesis for no short run causality between capital expenditure and fiscal deficit could also be rejected at 1% level (p=0.0031).

Results from the data also show that the 2nd lag (p=0.038) and 3rd lag (p=0.008) of capital expenditures are significant predictors for fiscal deficit at 5% and 1% level respectively. Estimates for the revenue expenditure suggest that at level (p=0.009), it is a significant predictor for fiscal deficit at 1% level.

Table 4: Results from the Vector Error Correction Model for Model 1

	Coef.	Std. Error	P>|z|	[95% confidence interval]	
_ce1 (L1)	0.3266675	0.13144	0.013	0.0690498	0.5842852
Fiscal Deficit					
LD.	-0.9590511	0.3686349	0.009	-1.681562	-0.2365401
L2D.	-0.5802543	0.3421206	0.090	-1.250798	0.0902898
L3D.	-0.285752	0.3359951	0.395	-0.9442902	0.3727863
Capital expenditure					
LD.	-0.064527	0.5837237	0.912	-1.208605	1.07955
L2D.	0.9409642	0.4538189	0.038	0.0514955	1.830433
L3D.	-0.9455657	0.3576317	0.008	-1.646511	-0.2446205
Revenue expenditure					
LD.	1.022732	0.3892709	0.009	0.2597752	1.785689
L2D.	0.7416594	0.4581187	0.105	-0.1562369	1.639556
L3D.	0.3779595	0.4709322	0.422	-0.5450506	1.30097
Constant	-0.176402	0.2615727	0.5	-0.6890752	0.3362711
Lagrange-multiplier testfor autocorrelation (p=0.53101)*					
Jarque-Beratestfor normality of residuals (p=0.28684)*					

*Signifies that null hypothesis of no autocorrelation and normality of residuals cannot be rejected.

Source: Computed on the basis of key public finance data on revenue expenditure, capital expenditure, plan and non-plan expenditure and fiscal deficit from several rounds of Economic Survey of India from 1990-91 to 2012-13

7.4 Estimating relationships in Model2 (Fiscal deficit, plan expenditure and non-plan expenditure in India)

The relationship in this model was tested by the vector error correction model. The vector error correction model was estimated using four lags and one vector cointegration as suggested by the

VAR estimation model and the Johansen Cointegration test. The overall model was also significant at 10% level (p=0.0749) and also passes the test of normal distribution of residuals (Jarque-Bera test) and no autocorrelation among the variables (Lagrange-multiplier test).

Results show that there is a significant long run causality running from plan and non-plan expenditure to fiscal deficit (Table 5). This implies the fact that in the long run, these variables move in coordination. In the long run, plan and non-plan expenditure are cointegrated with each other {the coefficient _ce1-(-0.0430029) is negative and significant at 1% level (p= 0.008)}. The estimation was further explored to see if there is any short run causality between the variables.

The estimation for the short run causality was done using the post-estimation testing of the lag coefficients of plan and non-plan expenditure for the hypothesis of linear relationships. Results show that the null hypothesis of no short run causality between plan expenditure and fiscal deficit could be rejected at 10% level (p=0.0561). Similarly the null hypothesis for no short run causality between non-plan expenditure and fiscal deficit could also be rejected at 10% level (p=0.0563).

Results from the data also show that the level (p=0.037) 1^{st}lag (p=0.031) of non-plan expenditures are significant predictors for fiscal deficit at 5% level.

Table 5: Results from the Vector Error Correction Model for Model 2

	Coef.	Std. Error	P>|z|	[95% confidence interval]	
_ce1 (L1)	-0.0430029	0.0160835	0.008	-0.07453	-0.01148
Fiscal Deficit					
LD.	-0.2539025	0.3019075	0.4	-0.8456304	0.3378253
L2D.	-0.4471507	0.3018075	0.138	-1.038683	0.1443811
L3D.	-0.2286704	0.3673018	0.534	-0.9485687	0.4912279
Plan expenditure					
LD.	-1.312184	1.29457	0.311	-3.849495	1.225126
L2D.	0.3181625	0.9293993	0.732	-1.503427	2.139752
L3D.	0.0394676	0.8659235	0.964	-1.657711	1.736646
Non-plan expenditure					
LD.	1.061209	0.5095991	0.037	0.0624132	2.060005
L2D.	1.135644	0.5303185	0.032	0.0962394	2.17505
L3D.	-0.376997	0.3509719	0.283	-1.064889	0.3108952

Constant	-0.012548	0.231731	0.957	-0.4667324	0.4416363
Lagrange-multiplier test for autocorrelation (p=0.36376)*					
Jarque-Bera test for normality of residuals (p=0.57676)*					

*Signifies that null hypothesis of no autocorrelation and normality of residuals cannot be rejected.

Source: Computed on the basis of key public finance data on revenue expenditure, capital expenditure, plan and non-plan expenditure and fiscal deficit from several rounds of Economic Survey of India from 1990-91 to 2012-13

7.5 Impact of capital and revenue expenditures on fiscal deficit in India

Results so far indicate that fiscal deficit is co integrated with either capital/revenue expenditures or plan/non-plan expenditures either in the short run or in the long run. Going along with the finding that capital and revenue expenditure are integrated with fiscal deficit in the short run, the relationship between these variables has also been probed. A closer look into the expenditure data suggests that the share of revenue expenditure has been quite high historically than the capital expenditure (Figure 2). Revenue expenditure is a non-productive expense that does not builds up any assets. Therefore, high revenue expenditure may result in high fiscal deficit and further low economic growth. If the revenue expenditure is so high and the capital expenditure making only a small part, at a later stage, it might be difficult to pay off the debt and narrow down the fiscal deficit. This also might end in a vicious cycle of debt, as the entire economic growth model will be based on non-productive expenditures. Building assets is through capital expenditure is important to keep the fiscal deficit in control and to have a sustainable growth.
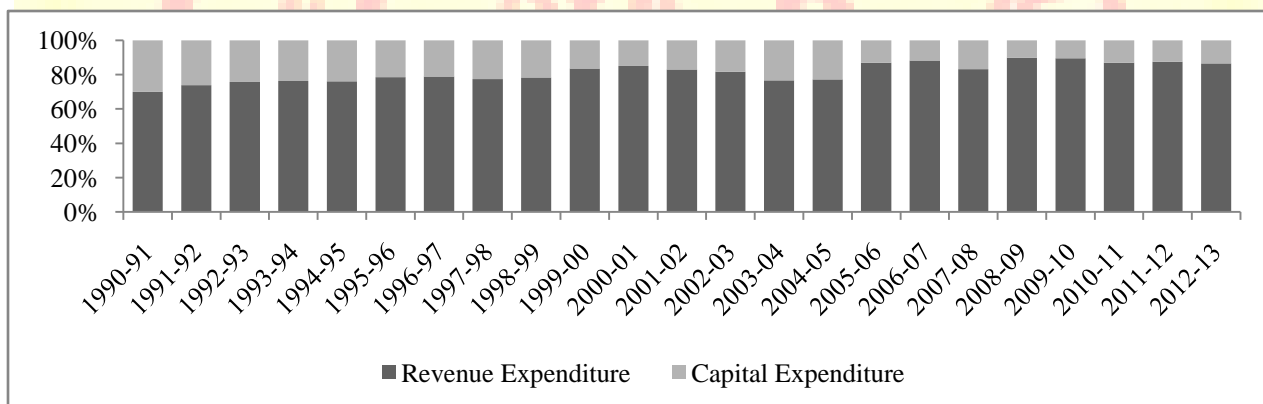

Figure 2: Percentage share of revenue and capital expenditure in the total Government expenditure (1990-91 to 2012-13)

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Source: Computed on the basis of key public finance data on revenue and capital expenditure from several rounds of Economic Survey of India from 1990-91 to 2012-13

Results from the data shows that capital expenditure is negatively related to fiscal deficit in India (β = -0.289, p<0.05), whereas revenue expenditure is positively related (β = 0.660, p<0.01). These relationships are significant and further strengthen the argument that non-productive expenditures are increasing the fiscal deficit. From a long term perspective, this might be dangerous for the economy as we base our growth on non-productive expenditures.

8. CONCLUSION AND SUGGESTIONS

There is little or no agreement among economist's basis econometric or analytical grounds that whether financing the expenditures in the government by incurring a fiscal deficit is good or bad. There are debates in terms of whether the real effect of fiscal deficit in the growth of economy is positive, negative or neutral. But, in most of the economies and in general terms, a high budget deficit is not appreciated, particularly in developing nations like India.

So what does the government do to better the budget deficit? It builds up its liabilities i.e. internal debt, external debt and other liabilities. Other liabilities are mainly debt held by common people in the form of public provident fund (PPF), small saving schemes, etc. Rising liabilities of the government should get us all agitated because these need to be serviced in future and current and future generations will ultimately bear the liabilities of the government. If the government deficit is financed by the RBI holding more T-bills and other G-Securities, and ultimately it will lead to RBI print more money. Monetization will then ultimately lead to an increase in inflation. The other option is market borrowing, which leads to more expensive debt for the government and also tends to crowd out private borrowing and investment, thus affecting the growth rate.

Findings from the present research shows that fiscal deficit in India has been fluctuating in the last two decades. An investigation into the short run and long run effects of fiscal deficit on plan and non-plan and revenue and capital expenditures has been done in the present research. The aspect of expenditures in relation to fiscal deficit holds prominence as to circumvent the higher fiscal deficit, the Government either builds up liabilities or goes for monetization, which raises inflation and slows down the economic growth. If the expenditures by the Government are done

in more productive and planned manner, then the fiscal deficit might be controlled to a greater extent.

Findings show that there is no long term causality between fiscal deficit, capital and revenue expenditure. This implies that in the long run, capital and revenue expenditure are not cointegrated with each other. But, when the data was examined for short run causality, it was seen that both capital and revenue expenditures are integrated in the short run with fiscal deficit. This elaborates that the impact of capital and revenue expenditures are immediate to fiscal deficit and impacts it in the short run, but in the long run their impact seizes. To further investigate this and to see for factors that might have long run causality with fiscal deficit, the relationship of plan and non-plan expenditures was looked into.

Findings also suggest that that there is a significant long run causality running from plan and non-plan expenditure to fiscal deficit. This implies that in the long run, plan and non-plan expenditure are cointegrated with each other. Analysis of data for short run causality led to the fact that there is no short run causality between plan/non-plan expenditures and fiscal deficit. This could explain the concern of what takes over the short run causality of capital revenue expenditures on fiscal deficit, but only to a limited extent. We looked into one of the aspects, but owing to the complex nature of any economy and its interdependence on a host of macro and micro-economic factors, it is a possible area of exploration that which other factors take over the short run impact of capital and revenue expenditures on fiscal deficit.

It was also observed that there is significant negative relationship between fiscal deficit and economic growth in the long run, which (Vector Error Correction model). Findings confirm that both the category of expenditures, viz. revenue/capital and plan-non plan have a causal relationship with fiscal deficit. It is critical for a developing nation like India to contain the fiscal deficit to maintain a steady growth rate and keep inflation in control. In the short run, both capital and revenue expenditures should be planned judiciously so as to not raise the fixed assets so much and invest a lot of money in their maintenance that leads to liquidity crunch in the market. This might lead to increased liabilities and monetization and a subsequent higher inflation. When we plan to control fiscal deficit in the short run through the mechanism of revenue and capital expenditure, we should also do long term planning for plan and non-plan

expenditures and should try and optimize the plan expenditures component as much as possible. This will help in managing fiscal deficits in the long run.

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