

An Empirical Study of Fiscal Imbalances and Growth Prospects in Indian Economy in The Post Economic Reforms Period

Abstract

This paper is an attempt to investigate the trend of fiscal deficits in India. Such imbalances have its impact on many macro variables of the economy. The emphasis in this study is laid on the sustainability of growth. The methodology is a blend of econometric tools such as semi logarithmic model, granger causality test and linear regression model. The major findings are that compounded fiscal deficit growth is very high. This situation demands an urgent fiscal prudence and balance. Granger causality results show that deficits cause growth. Further the regression analysis reveals that there is inverse relationship between fiscal deficits and economic growth which implies a higher rate of fiscal deficits adversely affects the growth.

Keywords: Fiscal Imbalances, Growth Prospects, Post Economic Reform Period.

Introduction

The most serious weakness of the Indian economy is in the continuing and growing fiscal imbalances. High levels of fiscal deficit relative to GDP tend not only to cause sharp increase in the debt-GDP ratio, but also adversely affect growth. The problem of fiscal deficit has to be addressed both on the revenue side and the expenditure side. The tendency to focus excessively on expenditure reduction had proved difficult, the main components of which included interest payments, subsidies and pensions.

In 1990-91, India was struggling with an economic crisis which had its origin in the balances of payment crises and fiscal imbalances of the late 80s. By 1990-91, the consolidated fiscal deficit of the Centre and States had climbed to 9.1 per cent of the GDP and resulted in high Balance of payment deficits. In the eighties the high fiscal deficits was reflected in large current account Balance of Payment deficits, which were financed by foreign borrowing that brought in the crisis of 1991. In the late nineties the rising fiscal deficits adversely affected investment and growth. Despite increases in the revenue productivity from direct taxes, there is a fear that fiscal imbalances large fiscal deficits hampering growth, causing interest rates to harden and crowd out private investment.

Review of Literature

Many theories have been established relating interaction between fiscal deficits and growth. Karnik A (2002) undertook a study concerning whether fiscal policy can play a key role in the revival of the economy? The findings were that the states' gross fiscal deficit has deteriorated significantly. It is absolutely necessary therefore for the centre to be seen to be fiscally prudent which will be a signal to the states of the center's seriousness in regard to fiscal management. The results stress the need for restructuring of the composition of government expenditure in favor of investment in infrastructure. Kochhar K. (2004) presented a paper at the IMF /NIPEP conference which explored the macro economic impact of India's large and persistent fiscal imbalances. The period covered was 1990 onwards. Her study revealed that although policy makers recognize need for fiscal action but fiscal adjustment in country like India will not be easy. Given the infrastructure gap, the bulk of increase in tax revenue so raised should be directed toward



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infrastructure needs. India's fiscal imbalances have been financed by tapping larger portion of private sector saving.

D'Souza E. (2005) discussed the fiscal failure in the post reform period. The findings were that the orientation of fiscal policy should be on fiscal correction and long term issues. Debt GDP ratio increase as government issues debt to cover primary deficit and to pay interest on existing debt. Concerns should be towards long term issues regarding the relatively high deficit in public saving. However recognizing that the capital inflows are influenced by expectations of income as well as relative interest rates, monetary policy needs to be more expansionary as fiscal correction continues. Bhattacharya B.B. & Kar S. (2005) presented a paper at an IMF seminar which studied the impact of external and internal shocks in Indian economy. They categorized shocks as external and internal shocks. External shocks include capital flows, oil price hike and world trade while internal shocks include fiscal profligacy and rainfall. The conclusion of the study was that Capital outflow shock is more in long run on growth than short run. Further any shock affecting supply side will have a big impact on the GDP growth.

Dholakia R.H. et al (2005) revisited the proposition that India's debt problem is unsustainable in the light of recently changed outlook for growth and interest rates. They confined their study to the fiscal position of the centre and not the debt of the centre and state. The period of their study was 1991 onwards. They used a decomposition model to separate out the effects of growth and government behavior on the fiscal deficit in the past. They remarked that fiscal deficit problem specially grew during 1998-99. Further if real growth rate of 6.2% is posited in the coming years, only a modest degree of fiscal adjustment would be required or none at all to reach a tolerable level of debt to GDP ratio by 2009-10. They suggested that growth by itself cannot be expected to address the problem. There is need for reforms like decrease in government expenditure and increase in tax and non tax revenue.

Wilson e. Herber et al (2012) the relationship between fiscal deficits and inflation has provoked considerable interest in the macroeconomics literature. While the theory postulates that fiscal deficits lead to inflation, empirical research has been less conclusive about the relationship. This paper reexamines the issue in the context of a developing country, Nigeria, using data over 1970–2006, a period

of persistent inflationary trends. The results reveal a positive but insignificant relationship between inflation and fiscal deficits in Nigeria. We report a positive long run relationship between money supply and inflation in the Nigerian economy, suggesting that money supply is pro cyclical and tends to grow at a faster rate than inflation rate.

Hossein-Ali Fakher (2016) The relationship between public sector deficits and inflation is one of the important and controversial issues in the academic literature as well as in economic policy field. On the other hand, a major objective of macroeconomic policies is to faster economic growth and to keep inflation on a low level. So keeping the price stability plays an important role in determining the growth rate of output. The main objective of this paper is to investigate the effects of budget deficit, broad money supply, real GDP, import price index, interest rate and exchange rate on inflation (price deflator) in selected Asian economics, namely China, Japan, Korea, India, Taiwan, and Singapore in the period of 1993-2013. By applying the Pooled Mean Group estimation-based error correction model and the panel differenced (General Method of Moment) Arellano-Bond estimator, the study finds out budget deficit, real GDP and exchange rate are statistically significant determinants of inflation in both methods of estimation.

Objectives of The Study

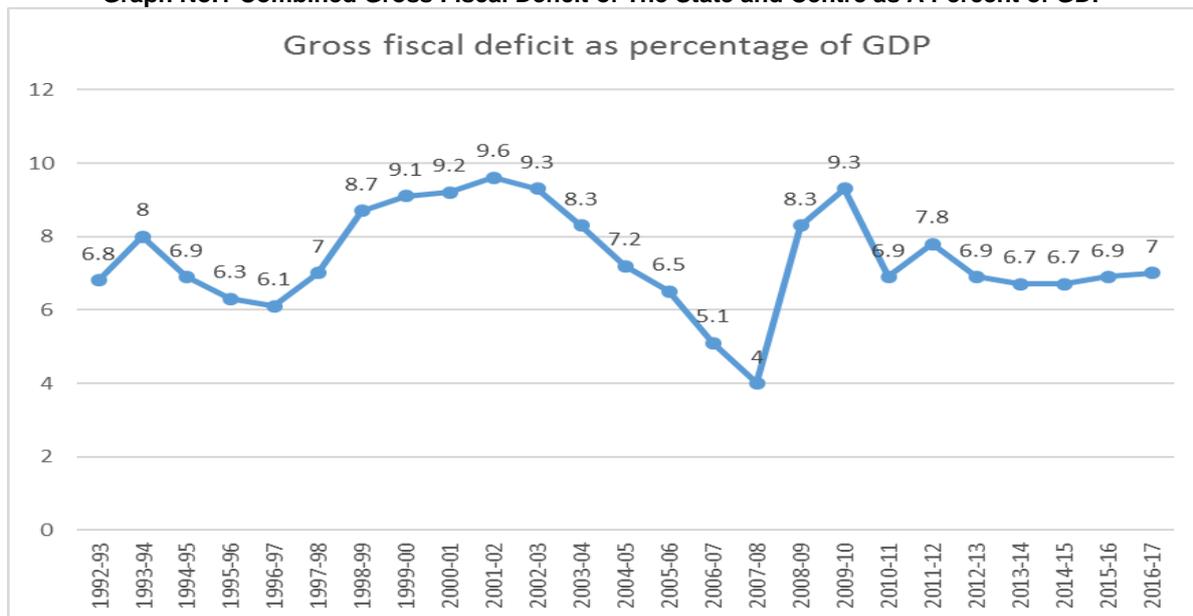
1. To study the trend and compound growth of fiscal deficits.
2. To examine the granger causality between deficits and growth.
3. To analyse the interaction between growth and fiscal deficit.

Variables and Model Used In The Study

The fiscal deficits and growth pattern of the Indian economy is studied for a time period of 25 years from 1992-93 to 2016-17. It is a secondary database of post liberalization period i.e., 1991 onwards to analyze the sustainability of the economic growth given the fiscal imbalance. The source of data collection is the RBI (Reserve Bank of India) website. Fiscal deficits figures are studied as a percent of GDP and national income (NNPFC) at constant is studied in percentage. A combination of econometric model has been applied to study the above mentioned objectives. The research models used are Semi Logarithmic Regression Model and Granger's causality test. Also graphs are used to study the trend.

Analysis: Trend of Fiscal Deficits

Graph No.1 Combined Gross Fiscal Deficit of The State and Centre as A Percent of GDP



The above graph shows the fiscal deficits of our economy over the period of 25 years from 1992-93 to 2016-17. Before the reforms in 1990 fiscal deficits stood at 9.1% but between 1991-92 and 1996-97 the consolidated fiscal deficit declined by three per cent of GDP mainly cause of prudence of the government's efforts in balancing fiscal deficits. The contrary seems to have occurred in the latter half of the decade, with a widening fiscal deficit contributing to a slowdown in the economic growth. The rising trend continued in post 2000 period till 2004 and the deficits averaged out to 9.1 percent. In 2004, the government introduced the FRBM act with an objective to cut down fiscal deficits gradual and steadily each year till it reaches 3%. The efforts of the government in this respect were remarkable as we touched 4 percent in 2007-08 according to the FRBM act and were very close to the targeted 3% in 2008 but due to global crisis of 2008 they surged and again became a concern for the policy makers. Post 2011 they are steadily brought down to around 6% but the deviation is a lot compared to the 3 percent target of the government.

To understand fiscal position in the past two decades an econometric model is used. The figures are analyzed using semi logarithmic regression model. It is as under:

$$Y_t = \beta_0 + \beta_1 X_t + U_t \quad (Y_t = \text{Log of Fiscal deficits, } X_t = \text{Time})$$

Analysis No. 1 Dependent Variable- Log (Fiscal Deficits)

	β	Std. Error	t	Sig.	R ²
Intercept	4.650	.046	100.639	.000	.896
Time	.049	.004	12.070	.000	

The table shows that the power of the model is 89.6 percent. It means that the model is able to explain 89.6% of the variations in Fiscal position in the past decades. The slope coefficient of time is positive and significant which indicates that the deficits have been increasing with passing years. The compound growth rate is 11.19 percent. This situation demands fiscal prudence and balance.

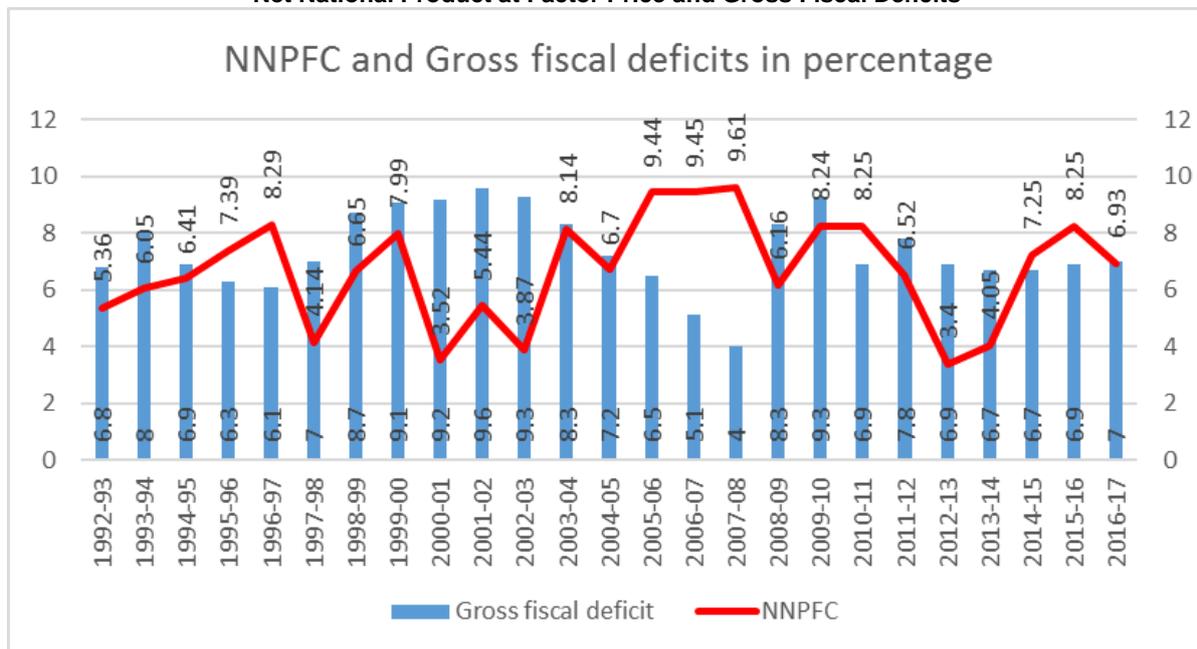
The consolidated fiscal deficits worsened gradually, to an extent due to the phasing in of decisions on the Fifth Pay Commission. Referring to other policy measures such as farm loan waiver and release of pay arrears under the Pay Commission recommendations adversely affected the fiscal position. Even the fiscal stimulus packages were announced by the government after global subprime crisis to support growth and to combat global economic crisis worsened the imbalances.

Granger causality test for analyzing relationship between NNPF and fiscal deficits reveal that relationship between deficits and growth is unidirectional and that fiscal deficit granger causes growth. To further analyze the trend and impact of fiscal deficits on growth we are using graphs and a simple regression model where growth is dependent on fiscal deficits.

A look at the trend and pattern over more than two decades (1992-93 to 2016-17), which spans the post-reform period, helps us understand the relationship between fiscal expansion and growth in the Indian economy.

Graph No. 2

Net National Product at Factor Price and Gross Fiscal Deficits



The graph above provides a comprehensive view of fiscal trends post liberalization, the year in which India faced its economic crisis. There was a steady improvement in finances till 1997 along growth rate also showed an improvement. Then deficits started rising and conversely the growth showed decline in same period.

Containing fiscal deficit has been one of the key structural adjustments undertaken by the Indian government. Economic reforms helped reduce the fiscal deficit, and the combined fiscal deficit fell to 6.1 percent of GDP in 1997.

Table no. 1

NNPFC at Constant Prices and Combined Fiscal Deficit of the State and Centre

Year	NNPFC	Fiscal Deficits
1992-93	5.36	6.8
1993-94	6.05	8
1994-95	6.41	6.9
1995-96	7.39	6.3
1996-97	8.29	6.1
1997-98	4.14	7
1998-99	6.65	8.7
1999-00	7.99	9.1
2000-01	3.52	9.2
2001-02	5.44	9.6
2002-03	3.87	9.3
2003-04	8.14	8.3
2004-05	6.70	7.2
2005-06	9.44	6.5

2006-07	9.45	5.1
2007-08	9.61	4
2008-09	6.16	8.3
2009-10	8.24	9.3
2010-11	8.25	6.9
2011-12	6.52	7.6
2012-13	3.40	7.4
2013-14	4.05	6.9
2014-15	7.25	6.7
2015-16	8.25	6.9
2016-17	6.93	7.0

Source: Reserve bank of India (Fiscal deficits are as percent of GDPMP whereas NNPFC are as percent change over previous year.)

The FRBM Act required the Government of India to bring down its revenue deficit by 0.5% of GDP each year until it touched zero, and to reduce its fiscal deficit by 0.3% each year till it reaches 3.0% of GDP. The targets laid out by the government's FRBM Act and state-level fiscal responsibility legislations were achieved in 2008, a year before its schedule. The combined fiscal deficit came down to 4 percent of GDP in 2008.

A simple regression model is applied to analyze the interrelation between economic growth and fiscal deficits. Economic growth is taken as a dependent variable where as fiscal deficit is taken as independent variables. The model is as follows:

$$Y_t = \beta_0 + \beta_1 X_t + U_t$$

Where Y_t = NNPFC at constant taken as percent change over previous year, X_t = fiscal deficit as

percent of GDP. In this regression β_0 gives the intercept and if β_1 is found statistically significant, it explains the impact of fiscal deficits over economic growth.

Analysis no 2 Dependent Variable NNPF

	β	Std. Error	t	Sig.	R ²
Intercept	11.657	2.464	4.731	.000	.222
Fiscal deficits	-.685	.311	-2.201	.042	

The results of regression show that the model is able to explain 22.2 percent variation in the economic growth. The coefficient of fiscal deficits (β_1) is negative and significant at 5 percent level of significance. It shows that there is inverse relationship between fiscal deficits and economic growth and the value of slope given by (β_1) is .685. A higher rate of fiscal deficits adversely affects the growth. Overall the fiscal deficits have been high in our country. This negative relationship could be attributed to the implementation of FRBM act. There is a sudden jump in fiscal deficit in 2009, and output has grown at a slower pace. This implies that fiscal consolidation is a matter of great concern.

Conclusion

1. As calculated in first analysis table, the compound growth rate of deficits is high. This situation demands an urgent fiscal balance. The consolidated fiscal deficits worsened to an extent due to the phasing in of decisions on the Pay Commission. Other policy measures such as farm loan waiver adversely affected the fiscal position.
2. Also the fiscal stimulus packages were announced by the government to support growth and to combat global economic crisis worsened the imbalances. The time is high for fiscal prudence and discipline.

3. Although the efforts of the government in fiscal consolidation in 2004 were remarkable as we touched 4 percent by 2007-08 according to the FRBM act and were very close to the targeted 3% in 2008 but due to global crisis of 2008 they surged.
4. Further the coefficient of fiscal deficits (β_1) is negative and significant at 5 percent level of significance. It shows that there is inverse relationship between fiscal deficits and economic growth. A higher rate of fiscal deficits adversely affects the growth.

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