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AN ANALYTICAL STUDY OF THE ROLE OF TAX REVENUE TO CONTROL FISCAL DEFICIT IN INDIA

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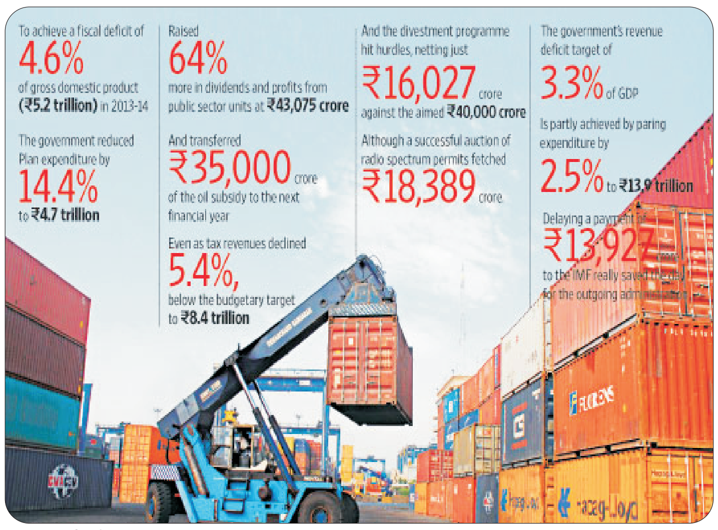
ABSTRACT

A small fiscal deficit-to-GDP ratio is acceptable, but it has risen sharply over past few years when global recession hit the Indian economy. The overall tax revenue collection in the past two decades has increased. And it played an important role in reduction of fiscal deficit of central government. The growth rate of Indian economy is also an important factor in generating revenue or in controlling fiscal deficit. Recently, government has expressed more faith on tax revenue to control fiscal deficit .In this context, an attempt is made in the paper to know the role of tax revenue collection to control fiscal deficit of central government in the past two decade.

KEYWORDS : *central Government, Tax revenue collection, fiscal deficit, growth rate.*



INTRODUCTION :

In public finance, there are two important tools of fiscal policy that has been used to regulate economy. These are the revenue enhancement and control over public expenditure. Taxation has longer been used as an instrument of enhancing resources in India. There are many factors which affect the volume of fiscal deficit. The most significant factor is tax revenue collection. Except recession years, the tax revenue collection has been improved. And tax revenue is also an important source of fiscal consolidation.

As a tool of fiscal policy, tax policy plays an important role in reduction of fiscal deficit as well as in promoting economic development. It generates the revenue needed to finance government's developmental expenditure. However, economic growth also plays an important role in revenue generation. A country following high growth trajectory may increase their gross tax revenue collection, which may further be financed to control fiscal deficit. The fiscal consolidation in Indian economy from 2003-04 to 2007-08 was revenue led (economic survey, 2013-14). In budget 2015-16 we again find that government look towards fiscal consolidation, not the side of monetary policy, but on the side of fiscal policy. Government proposed as combination of both, reduction in aggregate plan expenditure and raise in the tax revenue through reduction in the base rate of corporate tax as well as marginal increase in service tax from 12 to 14 per cent (budget documents, 2015-16). Thus, Growth of the economy, revenue enhancement and fiscal deficit are interlinked to each other. In this context an attempt is made in the paper to know the role of tax revenue to control fiscal deficit of central government, while the growth rate remains side by side.

This study is based on secondary data and it comprises the following sections –

Tax-GDP ratio and Growth Rate of GDP,
Growth Rate and Fiscal Deficit,
Tax-GDP Ratio and Fiscal Deficit, and
Growth rate, Fiscal Deficit and Tax-GDP Ratio

REVIEW OF LITERATURE

Indicating issues before Thirteenth Finance Commission (M. Govinda Raoand others, 2008) has observed a successful fiscal consolidation strategy at centre and state level till 2007-08, after implementation of FRBM act. Their observation is based on the performance of fiscal parameters like gross tax revenue, non-tax revenue, revenue expenditure, capital expenditure, revenue deficit, fiscal deficit, etc, from 2001-02 to 2007-08. They have also emphasized to the quality of deficits relevant in the measurement of fiscal consolidation, such as the ratio of revenue deficit to fiscal deficit, which shows the extent to which borrowed funds are used to finance current spending. By the analysis of budget 2013-14 (Pinaki Chakraborty & Lekha Chakraborty, 2013) observes that, since last two year Reserve Bank of India adopted tight monetary policy because of unsustainable inflation, high current account deficit, that results macroeconomic imbalance in the economy. So the maintenance of growth and fiscal consolidation totally fall on the side of fiscal policy. We know that fiscal policy have two ways to control deficits (fiscal deficit), one contraction in public expenditure and, second, increase revenue. And they argued that entitlement-based spending like the right to education, right to employment, Sarva Shiksha Abhiyan, National Rural Employment Guarantee Act(NERGA), National Rural Health Mission, Pradhan Mantri Gram Sadak Yojana and impending right to food legislation were increasing expenditure budget. And they highlighted the peak public expenditure as 14.95% in 2000-01, 14.53% in 2011-12, and 14.28% in 2012-13 of GDP. So the scope of contraction in public expenditure is limited. Thus, this paper concludes that revenue mobilization is a pre-requisite for government.

In the paper "Fiscal Policy in India: Trends and Trajectory" by (Suprio De, 2012), examines the trajectory of India's fiscal policy with focus on its historical trends, fiscal discipline frameworks, fiscal response to global financial crisis and in the last fiscal consolidation path followed by Indian economy. In this paper he recapitulated as, in the starting of Indian planning from 1950 to 1980s; found that in this period India's development strategy was a conservative fiscal policy. In the same period deficits were kept under control. The tax was geared to transfer resources from private sector to fund large public sector driven industrialization process and also cover social welfare schemes. Since 1980s government starts sector wise reform and public debt starts increasing. So India's external debt and social sector expenditure became unsustainable. This results into financial crises of 1991, which led to economic liberalization. The deficit and debt situation again threatened to go out of control in early 2000s. Thereafter fiscal discipline was instituted. After 2000, India's fiscal policy started following fiscal consolidation path. There is another study by (Mala Lalvani, 2009). According this study the structure of expenditure allocations in the 2009-10 budget was inadequate for a "fiscal stimulus". And she argues that there is a need of "Second Generation Fiscal Rules". For fiscal contraction her argument was to control the expenditure on social services that was largely revenue expenditure. The argument of Mala Lalvani, in today's perspective, will be big challenge for government because government expenditure has already reduced at 14.28% of GDP in 2012-13. In a paper, based on policy simulation model

(Sudipto Mundle and others, 2011) has been argued that it is possible to have such consolidation while at the same time maintaining high growth rates of around 8% or more. This empirical study argues that once a country achieve high growth rate of 8%, then government will have a space for substantial capital expenditure, which translates to a significant public investment program. This leads in turn to high overall investment directly and indirectly, via the net 'crowding in' effect on private investment. High GDP growth follows through various stages of the Keynes-Kahn multiplier also. The (Kelkar Committee report, 2012) has propose a strong case for fiscal discipline since "high fiscal deficits tend to heighten inflation, reduce room for monetary policy stimulus, increase the risk of external sector imbalances and dampen private investment, growth and employment." It means, if India wants to get back on the high-growth trajectory, must ensure, low inflation, low interest rates, and comfortable foreign exchange reserves, and it should control over fiscal deficits. In a special article, "Is India's Central Debt Sustainable? Revisiting Old Debate" (T T Ram and others, 2004) have concluded that India's debt will be sustainable in upcoming years only when it will achieve 6.1 percent growth rate annually.

In an empirical study, (V. Brahmanandam, 2013) analyze the buoyancy of central taxes for the time period of 2001-02 to 2010-11, and he drawn the following results-

The revenue of the direct taxes increased at a higher rate when compared to indirect tax revenues of the centre.

Direct taxes are more buoyant and indirect taxes are less buoyant (except service tax).

The service tax which is a new indirect tax is more buoyant.

Indicating fiscal consolidation, (EPW RESEARCH FOUNDATION, 2012) argued that there little corrective measures were taken in the budget 2012-13. And there is high fiscal deficit and current account deficit which may be very challenging for government as well as for RBI. According to Anil Agarwal India has the potential to produce $400-500 billion worth of oil and gas, gold, silver, iron ore, copper, coal, calcium and others. It is bound to generate substantial revenues for the government, which will be helpful for fiscal consolidation and infrastructure development of India (Anil Agarwal, 2014). Actually this article is written with reference to iron ore mining ban in Goa, and author gives an alternative to government to increase their revenue.

Thus, by reviewing the above papers it is evident that the revenue enhancement has received a greater attention in compared to expenditure management. Some papers highlighted that reduction in public expenditure is not an easy task, so the boll goes on the side of revenue enhancement. The economic survey of 2013-14 has also revealed that the recovery in Indian economy in pre FRBM period became possible due to revenue mobilization.

METHODOLOGY USED:

Referred period: This study covers the time period of 1991-92 to 2013-14.

Data source: The study is based on secondary data. It is taken from 'Handbook of Statistics on the Indian Economy, RBI' and various issues of Economic Survey, government of India.

Data analysis and tools used: The collected data have been processed both manually and with the help of computer software system. Microsoft EXCEL has been used for the analysis of data. The regression analysis has also been used. The relationship between fiscal deficit and tax revenue will be negative because as the %age of tax revenue increases the percentage of fiscal deficit will be decrease. So the methodology will be as-

$$Y1?\phi(X1)\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where Y1: fiscal deficit as % of GDP &
X1: tax revenue as % of GDP
So the regression equation will be as-

$$Y1 ?\beta -\beta 1X1+Ui \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Where, Y1 is a dependent variable,
X1 is an independent variable
β1 is a regression coefficient and β is a constant
Ui is error terms.

Analysis

I.Tax-GDP ratio and Growth Rate

There are several tax reform committees appointed after 1991 reform to increase tax revenue. Most of them had given some key driving recommendation to wide tax base and increase tax collection. How much it changes scenario, we can see by table 1.

Table-1: Trend of tax- GDP ratio and Growth Rate

Year	Tax/GDP	G.R.	Year	Tax/GDP	G. R.
1990-91	10.11	5.1	2002-03	8.8	4.1
1991-92	10.29	1.4	2003-04	9.23	8
1992-93	9.92	5.4	2004-05	9.41	7
1993-94	8.75	5.9	2005-06	9.92	9.5
1994-95	9.09	6.4	2006-07	11.03	9.5
1995-96	9.33	7.3	2007-08	11.9	9.7
1996-97	9.41	8.1	2008-09	10.84	6.5
1997-98	9.12	4.5	2009-10	9.67	8.4
1998-99	8.21	6.7	2010-11	9.48	9.3
1999-00	8.8	7.6	2011-12	9.9	6.2
2000-01	8.97	4	2012-13	10.22	4.5
2001-02	8.21	5.7	2013-14	10.17	4.7

Source: Handbook of Statistics on the Indian Economy', RBI

Where, G. R. - growth rate of GDP Tax/GDP: Tax Revenue as% of GDP

The gross tax to GDP ratio which increased to an all time high of 12 percent in 2007-08, has steadily declined to 10.9 percent in 2008-09 and 10.61 per cent in 2012-13(B. E.) due to moderation in growth and reduction in tax/duty rates. While the fact is that the tax-GDP ratio ranges from eight to twelve percent since 1990, often governed by growth rate of GDP. Central government's gross tax revenue/GDP ratio has fallen by almost 2 percentage points to 8.21 per cent in 2001-2002(it's lowest) from 10.61 per cent in 2012-2013 (B.E.).

II.Growth Rate and Fiscal Deficit

According to neoclassical view, a fiscal deficit will have a detrimental effect on growth if the reduction in government saving or an increase in government dissaving, which is equivalent to revenue deficit, that cannot be fully offset by a rise in private saving. This, apart from putting pressure on the interest rate, will adversely affect growth (Rangarajan, C. & Srivastava, D. K., 2005). It is also pointed out by Kelkar committee (2012), that high fiscal deficit obstacles economic growth. And high growth rate controls fiscal deficit because high growth rate helps for more revenue collection. So control over fiscal deficit becomes more important. Here, I have described the relationship between growth rate and fiscal deficit with the context of India, based on dataset.

In the context of Indian economy figure shows that when there was low growth rate 1.4 % (in 1991-92) with a high fiscal deficit 4.71 % in the same period. Again in 2001-02 growth rate was 5.6% against fiscal deficit 6.19 %. And in 2007-08 we see that the growth rate was 9.7 % and fiscal deficit was 2.55 % (Handbook of Statistics on the Indian Economy, RBI). In 2012-13 fiscal deficit was 5.1 % and growth rate was 5%. That shows as the growth rate decline, fiscal deficit automatically increased. That also shows negative relationship between both. The correlation coefficient between growth rate and fiscal deficit is -47. This does not clear only one way relationships between both variables

Table-2: Economic Growth Rate & Fiscal Deficit of Central Government (1990-91 to2013-14)

Year	G. R.	FD/GDP	Year	Growth rate	FD/GDP
1990-91	5.1	6.6	2002-03	4.1	5.91
1991-92	1.4	4.71	2003-04	8	4.48
1992-93	5.4	4.77	2004-05	7	3.88
1993-94	5.9	6.38	2005-06	9.5	3.97
1994-95	6.4	4.73	2006-07	9.5	3.32
1995-96	7.3	4.22	2007-08	9.7	2.55
1996-97	8.1	4.08	2008-09	6.5	6.04
1997-98	4.5	4.79	2009-10	8.4	6.4
1998-99	6.7	5.11	2010-11	9.3	4.9
1999-00	7.6	5.36	2011-12	6.2	5.7
2000-01	4	5.65	2012-13	4.5	4.85
2001-02	5.7	6.19	2013-14	4.7	4.62

Source: Handbook of Statistics on the Indian Economy', RBI

Where, G. R. - growth rate of GDP
FD/GDP- fiscal deficit as % of GDP (central government)

Thus , by table the perception of neo-classical economist appears partially true because in some year high fiscal deficit don't attribute to low growth rate, for example in the year 2009-10 when growth rate increase by 2% in compare to last year(s2008-09), fiscal deficit doesn't decrease in the same year.

Tax-GDP Ratio and Fiscal Deficit

In this section I have estimated the percentage change in fiscal deficit due to percentage change in tax revenue (both as % of GDP) by regression analysis. The relationship between fiscal deficit and tax revenue will be negative because as the %age of tax revenue increases the percentage of fiscal deficit will be decrease. So the methodology will be as-

$$Y1 ? \phi(X1) \ldots\ldots\ldots\ldots\ldots\ldots \text{(1)}$$

Where Y1: fiscal deficit as % of GDP &
X1: tax revenue as % of GDP

So the regression equation will be as-

$$Y1 ? \beta - \beta 1X1+Ui \ldots\ldots\ldots\ldots\ldots\ldots \text{(2)}$$

Table- 3: Regression and correlation Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients
	B		Beta
1. (Constant)	10.065	.25	-.507
2. Correlation coefficient between Tax-to- GDP ratio and Fiscal Deficit	-.518		
3. Correlation coefficient between Tax-to- GDP ratio and Growth rate	.287		
4. Correlation coefficient between Growth rate and Fiscal Deficit	-.470		

Dependent Variable: y1 independent variable: x1

From table we find β1=-.50, that means due to one unit increase in tax revenue, control fiscal deficit decrease by .45 units. So here the regulation of fiscal deficit by tax revenue is control only .50 units, the reason for remaining .50 unit may be others like high growth rate, low trade deficit, etc. for this study the value of R-square is .25 that revels that there is need to add more independent variable, tax revenue only explains 25% as a explanatory variable.

The correlation coefficient between tax-to-GDP ratio and fiscal deficit is -.518, which is a negative degree of moderate correlation between both variables. This value is helpful in understanding economic behavior of both variables. And it is also helpful in identifying such factors which can stabilize a disturbed economic situation. Similarly, the correlation coefficient between Tax-to- GDP ratio and Growth rate is .287, which reveals that there is lower degree of positive correlation. This lower degree of positive correlation indicates that there may be two way relationships between tax-to- GDP ratio and

Growth rate, because there is no much frequency of variables to go in the same direction. In the same way the correlation coefficient between Growth rate and Fiscal Deficit is -.470, which shows lower moderate degree of negative correlation. Which indicates that, to some extent fiscal deficit is affected by growth rate also.

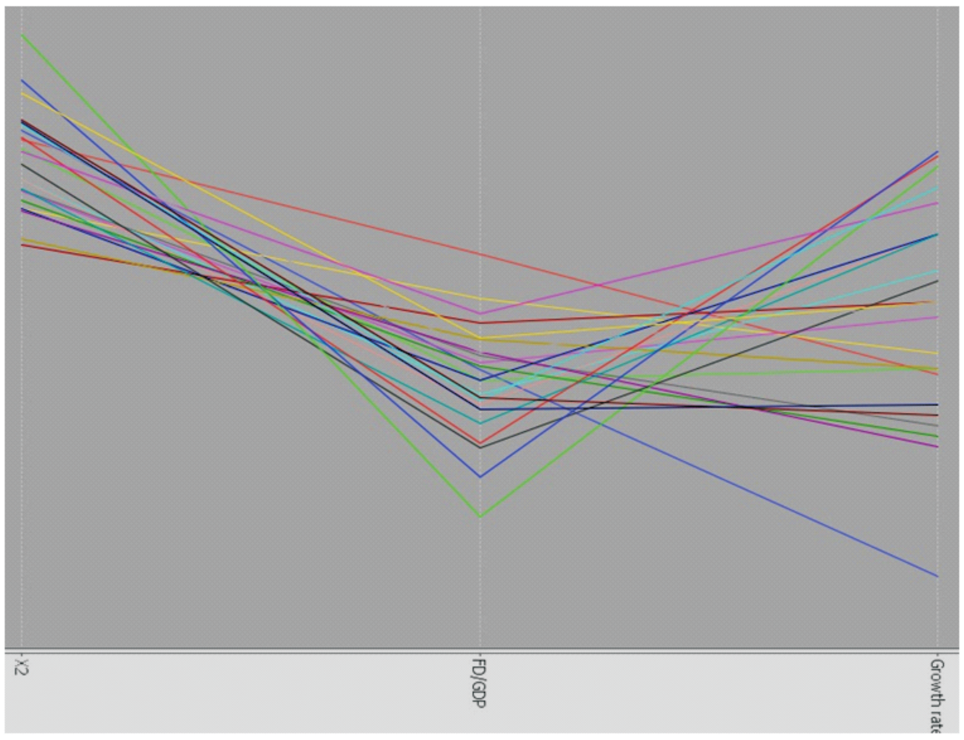
Growth rate, Fiscal Deficit and Tax-GDP Ratio

Keynesian theory postulates that fiscal deficit promote economic growth. According to Keynesian view government expenditure increase aggregate demand and by increasing aggregate demand, there will be more production of goods and services through more investment in infrastructure. This finally increases the employment opportunities and economic growth. But the dataset does not fully support to above theory, it has a mix results. From the coordinates plot (figure-1), it can be observe that in most of the years, whenever fiscal deficit has declined, the growth rate and tax to GDP ratio has became high.

Likewise high fiscal deficit through borrowings involve huge interest payments and raise the debt burden. These increasing debt burdens affects adversely to economic growth, because of a large part of public expenditure goes to interest payments and reduce investible resources for investment on infrastructure sector.

Thus it would be right to observe that in reducing the fiscal deficit of Indian economy, taxation has made significant contribution. And rising tax collection has promoted more investment that shows continuous positive and high growth rate in Indian GDP.

Figure: 1 Parallel coordinates plot of Tax-to-GDP ratio, Fiscal Deficit-to-GDP ratio and Growth rate



X2 – Tax-to-GDP ratio, FD/GDO- Fiscal Deficit-to-GDP ratio, Growth rate

FINDINGS

I.Here, we assumed tax-GDP ratio as independent variable and fiscal deficit as dependent variable. And for this relationship the value of regression coefficient is -.50 that revels that one per cent increase in tax-GDP ratio contributes .50 per cent reduction in fiscal deficit.

II.The relationship between tax-GDP ratio and growth rate is positive, that is high growth ensures high tax-GDP ratio, and India's performance from this point of view is remain better, specially from 2003-04 to 2007-08. So Indian economy have to ensure high growth trajectory. That will be helpful for fiscal health of economy.

III.There are two way relationships between growth rate and fiscal deficit that is high growth rate results low fiscal deficit as from 2003-04 to 2007-08. And high fiscal deficit results low growth after 2007-08, as it is also pointed out by Kelkar committee.

IV.There is inverse relationship between tax-GDP ratio and fiscal deficit, which ensure that tax-GDP ratio is playing an important role in controlling fiscal deficit.

V.Tax revenue collection has remained an important source of mobilization of resources for Indian economy during the study period.

CONCLUSION

It would be right to say that taxation establishes a correlation with the growth rate and fiscal deficit. At the same time growth rate establishes a correlation with fiscal deficit. By the overall observation it can be say that for a developing country like India, taxation has played the most important role for keeping deficits under control. Thus, by high tax-GDP ratio fiscal deficit can be control, but this is not the only instrument for controlling fiscal deficit, it will affect growth rate adversely, because high tax promotes tax evasion and lack of desire towards investment. Though, high tax-GDP ratio revealed low fiscal deficit in the above analysis. Government has alternatives to enhance tax revenue, such as- increase tax base, incorporation of Goods and Services Tax (GST), General Anti Avoidance Rule (GAAR), etc. These provisions can push growth and expand the tax base and contribute significantly higher revenue.

Thus, it can be concluded, that the high tax revenue collection was remain a necessary and pre-requisite for achieving the goal of fiscal stability and sustainability.

REFERENCES

Articles

1.Brahmanandam, V. (2013). 'Buoyancy of Central Taxes – An Analysis.' Southern Economist, vol-52 june1, p-04.

2.Chakraborty, P. & Chakraborty, L. (2013). Fiscal Consolidation, Macro Fundamentals and Growth in Budget 2013-14. Economic and Political Weekly, vol-XLVIII, No 13, p-10.

3.EPW Research Foundation. (2012). Fiscal Consolidation Left Behind, economic and political weekly, vol XLVII, no 13, p-13.

4.Lalvani M. (2009). Persistence of Fiscal Irresponsibility: Looking Deeper into Provisions of the FRBM Act. Economic and Political Weekly, vol-XLIV, NO 37, p-57.

5.Rangarajan, C. & Srivastava, D. K. (2005). Fiscal Deficits and Government Debt Implications for Growth and Stabilization. Economic and Political Weekly, Vol - XL No. 27, p-2920.

Reports

6.Government of India. (2013). Economic Survey 2012-13. Oxford University press: New Delhi.

7.Reserve Bank of India. (2014). State Finance A Study of Budgets of 2014-15. Sanjay Kumar Hansda, Mumbai.
Websites
8.http://www. indiabudget.nic.in
9.http://www.thehindubusinessline.com/opinion/why-is-india-a-miningaverse-nation/article 5606388.ece
10.http://www.rbi.org.in
11.http://www.finmin.nic.in/reports/Kelkar_Committee_Report.pdf,
12.http://www.businessline.in(january,23 2014)
13.http://www.nipfp.org.in/working_paper/wp_2008_55.pdf
14.http://finmin.nic.in/reports/2.pdf for fiscal challenge
15.http://finmin.nic.in/workingpaper/FPI_trends_Trajectory.pdf

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