

An Analysis of Non Tax Revenue Buoyancy in India

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ABSTRACT

The fiscal Performance has been sharp deterioration at both the level of Governments. Governments' resources are inadequate for meeting their requirements. Tax buoyancy plays a key role to make fiscal policy. This paper deals with the time series data of non tax revenue data of India for the period of 2000-01 to 2010-10. This paper is attempted to investigate the buoyancies of non tax revenue's different unit of the country. Buoyancy coefficient is an indicator to measures the total response of non-tax revenue (NTR) to change in income; the effects of change in inflation are included in the calculation of buoyancy. The buoyancy coefficient of total non-tax revenue receipts has exhibited 0.48 in this sense that the buoyancy value of non-tax revenue is less than one indicating that non-tax revenue is an insignificant source of generating revenue capacity.

Key Words: Buoyancy, Revenue, Non tax, Growth, Fiscal policy

Introduction

In the recent past, it has been suggested that public expenditure must be retained and unproductive expenditure eliminated. Several measures were explored in order to cut down public expenditure, but they turned out to be politically infeasible. Hence, it becomes obvious that additional finances must be raised to cope with the mounting expenditures. In such circumstances, the first and the foremost objective of the fiscal policy must be raised additional resources to finance government exchequer. In a federal country like India it is common for the fiscal needs of both Central and States Governments to vary. A modern Government has a variety of political, social and economic functions to carry out. With the passage of time these functions, particularly, economic activities have increased enormously, both intensively as well extensively. However, since the beginning of economic liberalization in 1990-91, the role of Central and State Governments in economic activities declined, but there has been a spectacular rise in public expenditure.

Revenue mobilization through NTR resources are the key factor for development. The NTR resources have greater emphasis on improving the efficiency and effectiveness of the revenue

administration, strengthening the institutional framework, selection of taxes and duties which are administratively feasible and lead to realistic collections, widen of tax base and progressively integrate the informal sector into main stream of the national economy. A major part of NTR is raised through the collection of user charges, which are administratively determined for the goods and services provided by the Government. Properly designed user charges can generate revenue without creating distortions in the economy. Mobilizing resources through reforms in NTR sources serves the twin purpose of having a rational non-tax structure and generating greater means to achieve economic growth. From the economic point of view, therefore, to fulfill the objectives of equity, efficiency and neutrality; especially the impact of these on the economic growth of the economy, a popular elected government often tends to adopt an economically rational structure of non-tax sources that may not be palatable politically.

NTR has certain advantages as compared to taxes. They do not have the disincentive potentials which generally go with high rates of taxes. They do not present the various administrative problems which confront the developing countries in an effective administration of taxes especially direct taxes on incomes and wealth. The payment of NTRs is necessary to facilitate the consumers of the various services provided by the Government to obtain a command over these services. Most of these NTR sources contain an element of quid-pro-quo and price and therefore, the revenues generally apply to public services which are infinitely divisible and can be sold in the market for a price.

The country where revenue mostly depend on tax and there is lot work has been done in this regard but there is need to focus on non tax revenue due to mobilisation of financial resources since the role of non tax revenue is less than one fourth of total revenue. Upender (2008) estimated tax buoyancy for the country, which was just above the unity during pre tax reform period, is less than unity during post tax reform period evincing the fact that the gross Tax is relatively inelastic. Average propensity to tax is declining with the increase in Gross Domestic Product during post tax reform period. Thus the estimates of gross tax buoyancy during pre and post tax reform periods are not stable. Kaur and Gursimran (2010) suggested that tax revenue as well non-tax revenue of the Central Government had grown at the same rate of 15 percent per annum in the pre reform period and were higher than that of post reform period. So they suggests that there is an urgent need to pay special attention to augment revenue receipts from tax as well as non-tax sources in order to tackle fiscal crisis. Bagchi (1992) pointed out that non tax revenue has accounted for a small and declining share of total revenue and has made only a negligible contribution to ameliorating the fiscal problems of State Governments. Kaur (2003) highlights the role of taxation in development finance which has proved to be very elastic and progressively important source of revenue in finance accounts. Many countries focused on tax buoyancy and they doing well for enhanced their income through tax and non tax revenue in this respect. Mawia and Nzomoi(2013) concluded on basis of ten year data of Kenya that government received an increasing share of the rising GDP as tax revenue.

The Proportion of Tax Revenue and Non-tax Revenue to Total Revenue Receipts in Central Government for the period of 2001-02 to 2010-11 is given below which shows non tax revenue is increased in recent years although it had declined in earlier periods.

Table 1.1 Proportions of Tax Revenue and Non-tax Revenue

Year	Tax Revenue as Percentage of Total Revenue	Non-tax Revenue as Percentage of Total Revenue
2001-02	66.3	33.7
2002-03	68.7	31.3
2003-04	70.9	29.1
2004-05	73.5	26.5
2005-06	77.9	23.5
2006-07	80.8	20.6
2007-08	81.1	18.9
2008-09	80.2	19.8
2009-10	77.6	22.4
2010-11	76.1	23.9

Source: Central Budget Documents.

Methodology

Buoyancy of Non-tax Revenue:

In order to assess the potential power of a revenue source to generate additional revenue, the concept of buoyancy is used. It is a measure of the degree of responsiveness to change in income. Revenue buoyancy is defined as:-

$$\text{Buoyancy} = \% \Delta \text{ Revenue} \div \% \Delta \text{ Base} \quad (1)$$

The NTRs from different sources and base (GDP) are taken to be real i.e. after adjusting for inflation. Using numbers for the revenue and GDP are actually observed. The data is converted into log and the buoyancy coefficient is calculated by using the revenue exponential regression (lin-log) model: -

$$Y_i = \beta_1 X_i^{\beta_2} e^{u_i} \quad (2)$$

The Equation (2) can be expressed alternatively as (double log function is derived),

$$\text{Log } Y_i = \text{Log } \beta_1 + \beta_2 \text{ Log } X_i + u_i \quad (3)$$

Where,

Y_i = real revenue from NTR sources, X_i = real GDP at current prices

Log = base on natural logarithm

β_1, β_2 = parameters

u_i = error term

The equation (3) can also be written as,

$$\text{Log } Y_i = \alpha + \beta_2 \text{ Log } X_i + u_i \quad (4)$$

Where,

$\alpha = \text{Log } \beta_1$ (the intercept), $\beta_2 =$ buoyancy coefficient.

The buoyancy coefficient (β_2) measures the elasticity of real GDP (X) with respect to real revenue from NTR resources (Y), that is, percentage change in Y for a given percentage changes in X.

Interpretation: If buoyancy is greater than 1, i.e. $\beta_2 > 1$ then the effort of a non-tax source is regarded as good. It means that the percentage increase in the revenue from a source is higher than the percentage increase in real GDP during the period under study. It shows that there is greater mobilization of revenue by their resources of NTR sources. If buoyancy is less than 1, i.e. $\beta_2 < 1$ then the effort is regarded as weak meaning thereby that the percentage increase in the revenue from a source is less than the percentage increase in real GDP during the period. It creates difficulty for the Government to mobilize more NTR by their resources.

Results and Discussion

NTR is defined as government revenue that is either required or voluntary or both. In the case of voluntary required payments, a further distinction is made between revenue from assets and revenue from sale of goods and services. NTR sources are having a rational structure to generate additional means of revenue. NTR of the Government of India has not been treated as one omnibus category, since these included receipts items which have little in common with each-other. Major receipt items under NTR, therefore, have been projected individually.

The items projected in seven major groups that are as follows:

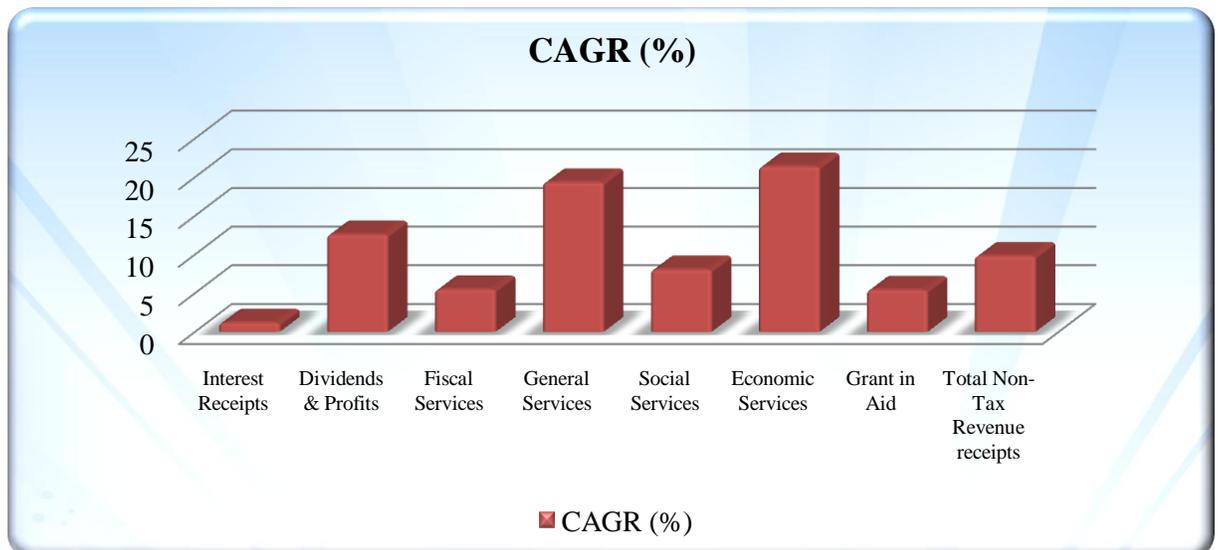
1. Interest Receipt
2. Receipts from Dividends and Profits
3. Receipts from Fiscal Services
4. Receipts from General Services
5. Receipts from Social Services
6. Receipts from Economic Services
7. Receipts from Grants-in Aid.

The table 1.2 and figure 1.1 shows that all non tax sources compound annual growth rates (CAGR) are statistically significant except interest receipts and Social Services. The CAGR of all sources are positive and highest growth is economic services.

Table 1.2 India's Non Tax Revenue Trends and Tendency for period 2001-02 to 2010-11

Non-tax Sources	CAGR (%)	t-test	p-value	R ²
Interest Receipts	1.19	0.6409	0.5394	0.04885
Dividends & Profits	12.60	15.056 6	3.74E-07	0.9659
Fiscal Services	5.49	2.6437	0.04396	0.64873
General Services	19.34	3.3134	0.01064	0.57848
Social Services	8.07	1.6834	0.13079	0.26157
Economic Services	21.37	5.0240	0.001022	0.759334
Grants-in Aid	5.43	4.0241	0.003819	0.669333
Total NTR Receipts	9.82	8.2231	3.58E-05	0.894207

Authors' self calculation

Figure 1.1 Compound Growth Rate of NTR Resources in Central Government from 2001-02 to 2010-11**Buoyancy of NTR Resources in Central Government:**

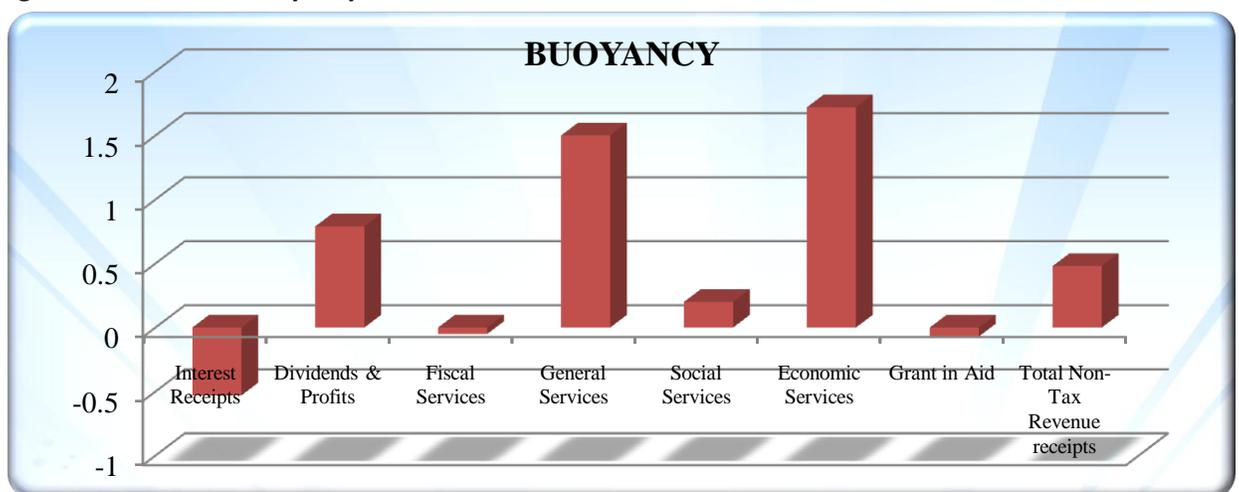
Buoyancy coefficient is an indicator to measure the total response of non-tax revenue to change in income; the effects of change in inflation are included in the calculation of buoyancy or responsiveness. The trends of buoyancy coefficient of Central Government under various major components of NTR during 2001-02 to 2010-11 are exhibited in the following table:

Table 1.3: Buoyancy of NTR Resources in Central Government (2001-02 to 2010-11)

Non-tax Sources	Buoyancy	t-test	p-value	R ²
Interest Receipts	(-)0.53	(-)2.6351	0.0478	0.6053
Dividends & Profits	0.79	8.4314	2.99E-05	0.8988
Fiscal Services	(-)0.05	(-)0.2698	0.0494	0.6036
General Services	1.50	2.2922	0.0667	0.53831
Social Services	0.20	0.3419	0.7412	0.0144
Economic Services	1.72	3.6258	0.00067	0.6217
Grants-in Aid	(-)0.07	(-)0.3987	0.0400	0.6195
Total NTR Receipts	0.48	3.9130	0.0045	0.6568

Authors' self calculation

Table 1.3 shows that the buoyancy coefficient of total NTR receipts has exhibited 0.48 in this sense that the buoyancy value of NTR is less than one indicating that NTR is an insignificant source of generating revenue capacity. There has recorded negative buoyancy coefficients in interest receipts, fiscal services and grants-in aid. Dividends and social services have registered less than one buoyancy value. General services and economic services are exhibited greater than one value. Revenue from economic services has shown the highest buoyancy of 1.72 that has more than proportionate revenue generating capacity in response to increase in GDP. This indicates that there is greater mobilization of revenue by the resources of economic services. The value of social services is not significant in real term.

Figure 1.2 Trends in Buoyancy of NTR Resources from 2001-02 to 2010-11

It can be seen that revenue from general services and economic services of the Central Government are buoyant. This indicates that these services have shown the power to generate

additional revenue capacity. Dividends and profits and social services have less than proportionate revenue generating capacity. Interest receipts, fiscal services and grants-in aid have no power to generate additional revenue. This indicates that NTR system of Central Government has a whole become less buoyant that has less than proportionate revenue generating capacity in response to increase in GDP. Therefore, weak revenue efforts have been made on the part of Central Government.

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