The Progressivity and Responsiveness of Indian Taxation System: 1950-51 To 2009-10

Dr. Rajni

ABSTRACT

Taxation, in its various forms, affects the ability and willingness of an individual to work, save and invest. These effects vary, depending on the base of the tax, the rate structure of the tax and the level of the tax burden. Taxation system of a country has major influences on its economic growth. The dynamism of the tax system is all the more relevant for the developing economy where the structure and rates of taxes have to be constantly reviewed. This paper aims to estimate buoyancy coefficients of various taxes comprising tax structure of the Central Government in India.. This paper also examines and assesses the trends in tax revenue during the period under study. A time series of the data for the period 1950-51 to 2009-10 reveals that indirect taxes occupied dominant position in the total tax revenue mobilized by the Central government, however, a trend towards increase in the share of direct taxes can be witnessed during the reform period. The paper concludes hat improving the tax system of India requires stricter tax compliance and a well diversified tax structure.

Keywords: TTaxation, Buoyancy, Direct Taxes, Indirect Taxes, Trends in Tax Revenue
JEL Classification: H20, H24, and H25

INTRODUCTION

Taxes are imposed by Government for utilizing the resources thus collected for common good of the people. Philosophy behind such taxation is that society should itself pay for its development. Taxation, however, should not be such as to burden an individual beyond his capacity to pay, making it oppressive. That would be against the aim for establishing a welfare society. Ideal taxation system should ensure that its burden is equally distributed amongst payers on the basis of capacity for payment. This equity is established by making persons similarly situated to pay equal amount of tax (horizontal equity) and at the same time ensuring that those who are better placed economically share a greater burden of tax (vertical equity).

According to Kalidas (quoted by Subramaniam, 1979, p.155), the greatest Sanskrit poet of ancient India, "Just as the sun extracts water from the reservoirs and gives it back in the form of showers, so does the ruler extracts tax from his subjects and give it back to them in the form of prosperity".

Apart from its traditional functions (defence, and maintenance of law and order), a modern Government undertakes welfare and developmental activities and makes provision for public goods to satisfy collective needs of the people. It has also to pay for its own administration. It needs financial resources for these purposes and taxation is one method of transferring money from private to public hands. Taxation is necessary because what the Government gives it must first take away.

So the revenue can be raised by way of taxation while the spending of revenue is the outcome of a proper and sound policy of public investment. The spending of money by the Government instead by the people usually increases the social welfare to a maximum extent. In this context, taxation is an essential tool of public finance.

As stated by World Bank (1991, p.1), "The dominant motivation of taxation in developing countries is to finance public administration and the public provision of economic and social services. Secondary motivations are the redistribution of income and the correction of market imperfections. Although some level of taxation is necessary to achieve these goals, taxation always has costs - both direct costs of administration and indirect costs associated with the misallocation of resources and with consequences for the distribution of income. The appropriate level of taxation depends on a country's desired role for the state, the efficiency and equity of its public spending, and the efficiency and equity of its tax structure and administration".

Taxes have been broadly categorized into direct and indirect taxes. Mill (1965, p.825) made a distinction between direct and indirect taxes as, "A direct tax is one which is demanded from the very person who, it is intended or desired, should pay it. Indirect taxes are those which are demanded from one person in the expectation and intention that he shall indemnify himself at the expense of another"

Direct taxes affect only a small section of the population

* *Associate Professor & Head, Global Institute of Management and Emerging Technologies, Amritsar (Punjab). E-mail: rajniuppal1@rediffmail.com*

which is affluent, while the tentacles of most of the indirect taxes affect the entire population, rich or poor, who use the goods or services. Thus the poor have also to share the indirect tax, except that on luxury goods out of the reach of the poor, equally with the affluent members of society. This negates the principle of equity which stipulates that those who are better placed should bear a greater burden to tax. Even the indirect taxes may affect the poor although he may not consume it. For example, increase in indirect tax on petroleum product increase the cost of production or availability of other goods and services of common use which are needed by even the poorer sector of the people. Nevertheless, Central Government has been dependent on the soft option of increasing tax revenue mostly through indirect taxes which do not directly affect the people, but do so indirectly in the shape of increased cost of goods and services. In other words, this is an attempt to placate ordinary people who constitute the vote bank for the political parties, so that they do not directly feel the pinch of indirect tax which they do not have to pay directly to the Government, being unaware of its spiraling effect on prices of goods and services which they use and on which they really pay tax in the shape of enhanced cost for them. It is high time that a fresh look is taken at this method of increased dependence on indirect tax, which has perhaps reached the oppressive level for the poor.

OBJECTIVES OF THE STUDY

1. To evaluate the level and composition of Central Government Tax Revenue in India for the years 1950-51 to 2009-10.

2. To investigate the progressivity of Indian taxation system along with the measurement of its responsiveness for the years 1950-51 to 2009-10.

SOURCE OF DATA AND PERIOD OF STUDY

The present study relates to the period from financial year 1950-51 to the financial year 2009-10. The study has been based primarily on the secondary sources of data. The relevant database for the present study has been collected from following publications of Government of India namely:

❖ Reports of the Comptroller and Auditor General of India on direct taxes for various years.

❖ Indian Public Finance Statistics.

❖ Data published by Indian Tax Foundation.

❖ Finance Acts of various years.

❖ Economic Surveys (various issues).

❖ Annual budget speeches of Finance Ministers for various years.

❖ Income-tax Act, 1961 as amended from time to time.

❖ Reports on currency and finance published by Reserve Bank of India.

❖ National Accounts Statistics as Reported by Central Statistical Organisation (C.S.O.)

METHODOLOGY

A distinction is generally drawn between two types of response coefficients- tax elasticity and tax buoyancy. Tax elasticity or built in flexibility coefficient is the coefficient obtained by relating the tax yields (obtained by deducting the receipts accruing due to the discretionary changes in tax rates, imposition of new taxes, expanding tax bases etc. from the total tax revenue) to some measure of national income over a specified period. It quantifies what would have happened to the tax revenues, had no tax law changes would have been attempted over a period of time.

On the other hand, the buoyancy coefficient is obtained by relating total tax revenue (including the part which is due to discretionary changes in tax rates, tax base and imposing new taxes etc.) to some measure of national income over a specified period. It thus measures what has actually happened and represents full account of responsiveness. Tax buoyancy is termed as a dynamic concept because it measures responsiveness of tax yield including all types of autonomous and discretionary changes, to national income.

In the present study, tax buoyancy approach has been preferred due to three reasons. First, this approach measures responsiveness of total tax revenue to national income. Second, the decomposition of tax revenue data is not available. Third, even when such data are available in some Government reports, such decomposed figures are at best only estimates. Therefore in the present study, tax buoyancy coefficients have been estimated, by fitting function of the type:

$T_t = \alpha\ Y_t$

Which, in log form, becomes

$\text{Log } T_t = \text{Log} \quad + \quad \text{Log } Y_t$

Where T_t is tax revenue (including discretionary changes) for period t.

is constant.

Y_t is GDP at market price for period t.

Tax buoyancy coefficient =

If $\quad < 1$, tax revenue is termed as less buoyant;

If $\quad > 1$, tax revenue is termed as more buoyant;

't' values are also worked out to test the significance of buoyancy coefficient.

EMPIRICAL STUDIES

Several studies have been carried out earlier for analyzing

the Indian taxation system including direct and indirect taxes. A few of them have been outlined below:

Kaldor (1956) was invited by Government of India in 1955 to review personal and business tax in the Indian tax system with a view to augmenting resources for the Second Five Year Plan. Prof. Kaldor recommended the "broadening of the tax base through the introduction of an annual tax on wealth; the taxation of capital gains; a general gift-tax; and a personal expenditure tax." For reducing the scope of tax evasion, he suggested the introduction of the institution of a comprehensive tax return for all direct taxes and the introduction of a comprehensive reporting system on all properties transferred and other transactions of a capital nature. He also recommended breaking of vicious circle of charging more and more on less & less.

Raj (1990) studied the role of tax structure in the Indian economy, growth rate and rate structure of the personal income tax. Study also examined the tax administration. Period opted for the study was 1951-52 to 1988-89. Study concluded that rationalization of tax structure is must to promote the objectives of economic growth, equity and built in revenue raising capacity of personal income taxation and other direct taxes. It was suggested to make efforts for reducing litigation and to impart greater certainty in the administration of income tax. It was also observed in the study that it is not possible to tax a large number of taxpayers with small income as the cost of administration will go up if such income earners are brought under the tax net. It was also suggested to make tax law simpler, easier to understand for tax payers and less difficult to administrator.

Tax Reforms Committee (1991) studied different aspects of the tax system in India and in its report gave elaborate recommendations for enforcement. The committee recommended for reducing the tax rates and broadening the tax base though elimination of most of the tax incentives except for cost of earning. The committee stressed on the need to simplify the tax system, modernize the tax department through computerisation and improve the tax enforcement. This study was very important in the history of taxation in India because the tax reforms in nineties in India followed the recommendations of the Tax Reforms Committee.

Mookherjee and Das-Gupta (1995) traced the causes of the poor and declining revenue performance of the income tax in India and suggested measures for improvement based on a review of international experience. The authors emphasized that continuation with current administrative and enforcement practices cannot lead to dramatic improvements in the performance of the income tax in India. Consequently, reform of income tax administration must be more thoroughgoing to increase the contribution of income tax to revenue

significantly. Study pointed out the improvement in information system and organizational restructuring as main areas of reform. It was also suggested to close off loopholes exploited by large-scale tax evaders regarding appeals, penalties and prosecution activities.

Haughton (1998) studied the various methods to calculate tax buoyancy. He opined that most elegant approach was to calculate tax buoyancy by regressing the log of the tax revenue on the log of the base i.e. Gross Domestic Product (GDP). He also suggested that use of this approach should be used only if data for every year is available. He also pointed out various other methods to calculate tax buoyancy.

Singh and Srinivasan (2004) while discussing the India's policy reforms including fiscal policy opined that promoting growth may require giving up of some indirect taxes and raising revenue from other existing taxes or imposition of new taxes. Study revealed that improved tax administration and enforcement remains one of the most critical area for Government reform. Tax reform is an essential step towards increasing Government revenue as well as reducing microeconomic distortions.

Gupta (2009) evaluated the trends in personal income taxation in India during the period ranging from 1980-81 to 2007-08 and the impact of tax reforms on personal income tax revenue. Buoyancy estimates for the study period were also presented by the author. Investigations revealed that buoyancy of personal income taxation has improved during the period under study. Author was of the view that improvements in the performance of personal income taxation can be attributed to reform in tax structure which has resulted in better compliance of taxes.

TRENDS IN TAX REVENUE IN INDIA FROM 1950-51 TO 2009-10

Hinrichs, (1966, p. 106) pointed out that the stage of development of the economy and the economic conditions prevailing in the country account for its tax structure. In the early stage of development of an economy, direct taxes like tax on land or agricultural output occupy a predominant position. But as the traditional society disappears and a modern one emerges characterized by the growth of industry and trade, indirect taxes become more important as a source of revenue to the Government. As the economy reaches an advanced stage, reliance on modern direct taxes increases and their share in the total revenue increases. Thus the tax structure development starts with direct taxes and gives place for indirect taxes to occupy a dominant position and later the direct taxes re-emerge as the major source of revenue. Looking at tax revenue history in broad perspective, one may be more than halfway justified in saying that the structural

movement has been from taxation on (i) agriculture, to (ii) foreign trade, to (iii) consumption, to (iv) net income, individual and business.

Table - I portrays the tax revenue to the Central Government from 1950-51 to 2009-10. it reveals that indirect taxes occupied dominant position in the beginning but a trend towards decrease in the share of indirect taxes can be seen during the reform period i.e. after the financial year 1990-91. A principle of tax reforms is that the share of direct taxation in overall tax revenue should rise. Within direct taxation, reliance has to be shifted from corporate to income taxes. Since corporate profits are taxed at the level of personal income anyway, the rationale for separate corporate taxes is rather week. Within

the sphere of income taxation, the rate and exemption structure needs to be rationalized. Tax reform theory advocates taxation of full income. One cannot pick and choose the types of income one would like to tax. The principle has, of course, been grossly violated in the Indian case with several categories of income exempt from income taxation.

The given table reveals the increase in share of direct taxes and decrease in share of indirect taxes. However, within the sphere of direct taxes, corporation tax is most important source of revenue for the Central Government. Also, service tax, which was imposed with effect from financial year 1997-98, is gradually becoming a significant source of Central Government's revenue.

TABLE-I
LEVEL AND COMPOSITION OF TAX REVENUE OF GOVERNMENT OF INDIA:
1950-51 TO 2009-10

(Rs. in crores)

Years	Gross Direct Taxes				Gross Indirect Taxes					Total Tax Revenue
	Personnel Income Tax	Corporation Tax	Other Direct Taxes	Total Direct Taxes	Excise Duties	Custom Duty	Service Tax	Other Indirect Taxes	Total Indirect Taxes	
1950-51	132 (32.59)	40 (9.88)	4 (0.99)	176 (43.46)	68 (16.79)	157 (38.77)	- -	4 (0.99)	229 (56.54)	405 (100)
1960-61	168 (18.77)	111 (12.40)	13 (1.45)	292 (32.63)	414 (46.26)	170 (18.99)	-	19 (2.12)	603 (67.37)	895 (100)
1970-71	473 (14.75)	371 (11.57)	25 (0.78)	869 (27.11)	1759 (54.87)	524 (16.34)	-	54 (1.68)	2337 (72.89)	3206 (100)
1980-81	1440 (10.93)	1377 (10.45)	180 (1.37)	2997 (22.74)	6500 (49.32)	3409 (25.87)	-	273 (2.07)	10182 (77.26)	13179 (100)
1990-91	5377 (9.34)	5335 (9.27)	318 (0.55)	11030 (19.16)	24514 (42.58)	20644 (35.85)	-	1389 (2.41)	46547 (80.84)	57577 (100)
1991-92	6705 (9.97)	7867 (11.70)	635 (0.94)	15207 (22.61)	27071 (40.24)	23427 (34.83)	-	1562 (2.32)	52059 (77.39)	67266 (100)
1992-93	7896 (10.59)	8899 (11.93)	1337 (1.79)	18132 (24.32)	30832 (41.35)	23776 (31.89)	-	1826 (2.45)	56434 (75.68)	74566 (100)
1993-94	9123 (12.05)	10060 (13.29)	1115 (1.47)	20298 (26.82)	31697 (41.88)	22193 (29.32)	-	1502 (1.98)	55392 (73.18)	75690 (100)
1994-95	12029 (13.03)	13822 (14.98)	1120 (1.21)	26971 (29.22)	37347 (40.46)	26789 (29.02)	-	1192 (1.29)	65328 (70.78)	92299 (100)
1995-96	15592 (14.02)	16487 (14.82)	1485 (1.34)	33564 (30.18)	40187 (36.13)	35757 (32.15)	-	1717 (1.54)	77661 (69.82)	111225 (100)
1996-97	18234 (14.16)	18567 (14.42)	2094 (1.63)	38895 (30.21)	45008 (34.95)	42851 (33.28)	-	2012 (1.56)	89871 (69.79)	128766 (100)
1997-98	17101 (12.28)	20016 (14.38)	11163 (8.02)	48280 (34.68)	47962 (34.45)	40193 (28.87)	1586 (1.14)	1205 (0.87)	90946 (65.32	139226 (100)

Contd.

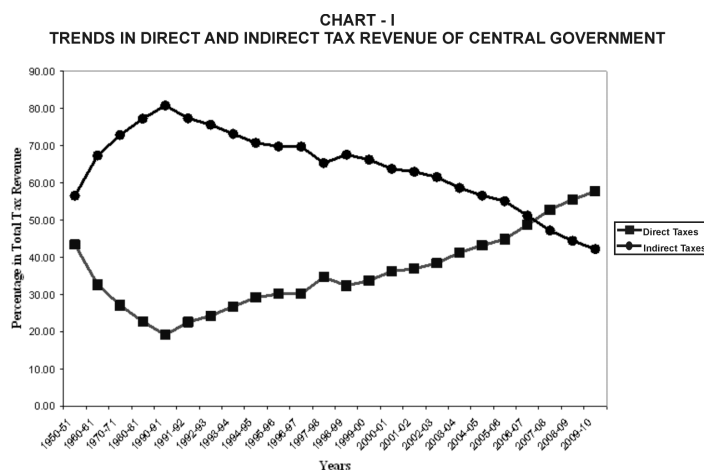| Years	Gross Direct Taxes				Gross Indirect Taxes					Total Tax Revenue
	Personnel Income Tax	Corporation Tax	Other Direct Taxes	Total Direct Taxes	Excise Duties	Custom Duty	Service Tax	Other Indirect Taxes	Total Indirect Taxes	
1998-99	20240 (14.07)	24529 (17.06)	1831 (1.27)	46600 (32.41)	53246 (37.03)	40668 (28.28)	1957 (1.36)	1331 (0.93)	97202 (67.59)	143802 (100)
1999-00	25655 (14.94)	30692 (17.87)	1612 (0.94)	57959 (33.75)	61902 (36.04)	48420 (28.19)	2128 (1.24)	1342 (0.78)	113792 (66.25)	171751 (100)
2000-01	31764 (16.84)	35696 (18.93)	845 (0.45)	68305 (36.22)	68526 (36.22)	47542 (25.21)	2613 (1.39)	1618 (0.86)	120299 (63.73)	188604 (100)
2001-02	32004 (17.11)	36609 (19.57)	585 (0.31)	69198 (36.99)	72306 (38.65)	40096 (21.43)	3302 (1.77)	2159 (1.15)	117863 (63.01)	187061 (100)
2002-03	36,866 (17.05)	46172 (21.35)	50 (0.02)	83088 (38.42)	82310 (38.06)	44852 (20.74)	4122 (1.91)	1894 (0.88)	133178 (61.58)	216266 (100)
2003-04	41387 (16.27)	63562 (24.99)	140 (0.06)	105089 (41.32)	90774 (35.69)	48629 (19.12)	7891 (3.10)	1965 (0.77)	149259 (58.68)	254348 (100)
2004-05	49268 (16.10)	82680 (27.02)	233 (0.08)	132181 (43.19)	99125 (32.39)	57610 (18.83)	14150 (4.62)	2415 (0.79)	173300 (56.63)	306021 (100)
2005-06	55985 (15.21)	101277 (27.52)	7954 (2.16)	165216 (44.89)	112000 (30.43)	64215 (17.45)	23000 (6.25)	3585 (0.97)	202800 (55.11)	368016 (100)
2006-07	75079 (15.92)	144318 (30.59)	10784 (2.29)	230181 (48.80)	117613 (24.93)	86327 (18.30)	37598 (7.97)	0 (0.00)	241538 (51.20)	471719 (100)
2007-08	102655 (17.36)	192911 (32.63)	16647 (2.82)	312213 (52.81)	123611 (20.91)	104119 (17.61)	51301 (8.68)	0 (0.00)	279031 (44.45)	591244 (100)
2008-09*	124014 (20.34)	213812 (35.07)	387 (0.06)	338213 (55.55)	108740 (17.83)	99848 (16.38)	60866 (9.98)	0 (0.00)	269454 (44.45)	609705 (100)
2009-10**	112850 (17.60)	256725 (40.05)	425 (0.07)	370000 (57.75)	106477 (16.61)	98000 (15.29)	65000 (10.14)	0 (0.00)	269477 (42.25)	641079 (100)

Note: Figures in parenthesis represent percentage to total tax revenue.

    * Provisional; ** Budgetary Estimates.

Source:

i. Government of India, Comptroller and Auditor General of India, reports for various years on direct taxes.

ii. Government of India, Indian Public Finance Statistics.

iii. Reserve Bank of India, Reports on Currency and Finance.

iv. Indian Tax Statistics published by Indian Tax Foundation.

v. Economic Survey, 2009-10.

vi. National Accounts Statistics as Reported by Central Statistical Organisation (C.S.O.)

Chart - I depicts the trends in direct and indirect tax revenue. Given chart reveals that although direct taxes occupied dominant position in the tax structure of Central Government,

CHART - I
TRENDS IN DIRECT AND INDIRECT TAX REVENUE OF CENTRAL GOVERNMENT

yet a trend towards increase in the share of direct taxes and decrease in the share of indirect taxes is clearly visible during the reform period.

Level of taxation in a country is traditionally judged in terms of the ratio which taxes bear to some measure of national income. This ratio is called tax-GDP ratio and the change in

it is determined by variations in both the numerator (tax revenue) and the denominator (national income).

Table - II presents relative share of various taxes in percent of Gross Domestic Product (GDP). The given table reveals growing importance of direct taxes especially the corporation tax.

TABLE-II
TRENDS IN TAX REVENUE OF GOVERNMENT OF INDIA: 1950-51 TO 2009-10
(IN PERCENTAGE OF GROSS DOMESTIC PRODUCT)

Years	Gross Direct Taxes				Gross Indirect Taxes					Total Tax Revenue	GDP*
	Personnel Income Tax	Corporation Tax	Other Direct Taxes	Total Direct Taxes	Excise Duties	Custom Duty	Service Tax	Other Indirect Taxes	Total Indirect Taxes		
1950-51	1.41	0.43	0.04	1.88	0.73	1.68	N.A.	0.04	2.45	4.32	9366
1960-61	1.04	0.69	0.08	1.80	2.56	1.05	N.A.	0.12	3.72	5.52	16201
1970-71	1.10	0.86	0.06	2.01	4.08	1.21	N.A.	0.13	5.41	7.43	43163
1980-81	1.06	1.01	0.13	2.20	4.78	2.51	N.A.	0.20	7.49	9.69	136013
1990-91	1.00	1.00	0.06	2.06	4.58	3.85	N.A.	0.26	8.69	10.75	535534
1991-92	1.09	1.28	0.10	2.47	4.39	3.80	N.A.	0.25	8.44	10.91	616799
1992-93	1.12	1.26	0.19	2.57	4.37	3.37	N.A.	0.26	8.00	10.57	705328
1993-94	1.14	1.26	0.14	2.53	3.96	2.77	N.A.	0.19	6.92	9.45	801032
1994-95	1.27	1.46	0.12	2.85	3.95	2.83	N.A.	0.13	6.91	9.76	945615
1995-96	1.42	1.50	0.14	3.06	3.66	3.25	N.A.	0.16	7.07	10.12	1098576
1996-97	1.33	1.36	0.15	2.84	3.29	3.13	N.A.	0.15	6.57	9.41	1368208
1997-98	1.12	1.31	0.73	3.17	3.15	2.64	0.10	0.08	5.97	9.14	1522547
1998-99	1.16	1.41	0.11	2.68	3.06	2.34	0.11	0.08	5.58	8.26	1740935
1999-00	1.33	1.59	0.08	3.00	3.21	2.51	0.11	0.07	5.90	8.90	1929641
2000-01	1.52	1.71	0.04	3.27	3.28	2.28	0.13	0.08	5.76	9.03	2087988
2001-02	1.40	1.60	0.03	3.02	3.16	1.75	0.14	0.09	5.14	8.16	2291090
2002-03	1.50	1.88	0.00	3.39	3.36	1.83	0.17	0.08	5.43	8.82	2451038
2003-04	1.50	2.30	0.01	3.81	3.29	1.76	0.29	0.07	5.41	9.21	2760200
2004-05	1.58	2.65	0.01	4.23	3.18	1.85	0.45	0.08	5.55	9.80	3121400
2005-06	1.59	2.87	0.23	4.68	3.17	1.82	0.65	0.10	5.74	10.42	3531451
2006-07	1.82	3.50	0.26	5.58	2.85	2.09	0.91	0.00	5.85	11.43	4125725
2007-08	2.07	3.90	0.34	6.31	2.50	2.10	1.04	0.00	5.64	11.95	4947857
2008-09	2.22	3.84	0.01	6.07	1.95	1.79	1.09	0.00	4.83	10.94	5574449
2009-10	1.83	4.16	0.01	6.00	1.73	1.59	1.05	0.00	4.37	10.40	6164178

* GDP has been taken at market price.

Since tax-GDP ratio indicates the percentage of national income that is compulsorily transferred from private pockets to public exchequer, and hence the relative share of Government in disposition of national income, it signifies the economic role of a Government in the national economy. The ratio, however, does not reflect the importance of Government sector as a final purchaser of goods and services because a part of tax revenue is returned to the private sector in the form of transfer payments like pensions and scholarships.

Chart - II presents contribution of personal income tax, corporation tax, excise duties, custom duty, and service tax to the Gross Domestic Product (GDP) at market price. It can be inferred from the given chart that tax-GDP ratio of personal income tax and corporation tax increased during the period under study and there was a decrease in the tax-GDP

ratio of indirect taxes. It is generally expected that with economic growth and the extension of the scope and range of the organized sector, the share of direct taxes in the total would go up. However, this should happen without a fall in the overall tax ratio.

RESPONSIVENESS OF INDIAN TAXATION SYSTEM

As GDP rises, do tax revenues rise at the same pace? To answer this question it is useful to measure the buoyancy of a tax. Buoyancy coefficient with respect to GDP reflects the responsiveness of tax revenue with respect to GDP. The relationship shows the change in tax revenue to change in Gross Domestic Product. If buoyancy coefficient is equal to one, it shows that growth rate of tax is equal to growth rate of GDP. Buoyancy coefficient of less than one shows that growth rate of tax is less than growth rate of GDP whereas, if buoyancy coefficient is more than one, it shows that growth rate of tax is more than growth rate of GDP.

A good tax system is characterized by the high responsiveness of tax revenue to changes in national income. Total tax revenue is dependent upon three factors comprising of tax rate, tax base, and national income. Out of these three, the functional relationship between tax revenue and national income i.e. GDP is used to determine the responsiveness of taxation. In this case tax revenue is taken as dependent variable while GDP is taken as independent variable. The tax buoyancy is defined as actual changes in tax yield, with respect to changes in GDP.
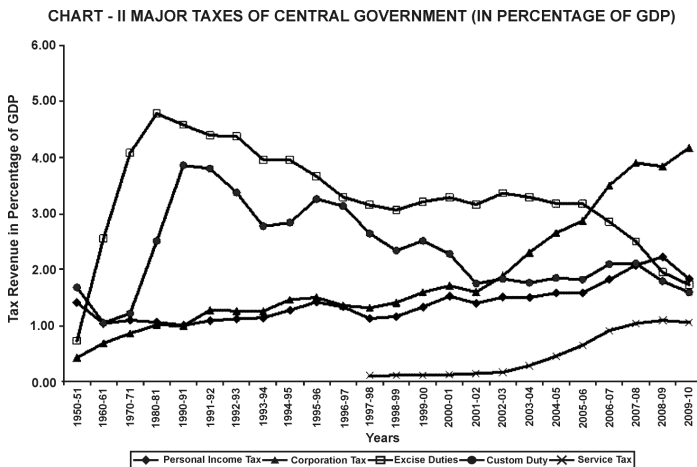

CHART - II MAJOR TAXES OF CENTRAL GOVERNMENT (IN PERCENTAGE OF GDP)

TABLE-III
LOG COEFFICIENTS OF TAX REVENUE

Years	Gross Direct Taxes				Gross Indirect Taxes					Total Tax Revenue	GDP*
	Personnel Income Tax	Corporation Tax	Other Direct Taxes	Total Direct Taxes	Excise Duties	Custom Duty	Service Tax	Other Indirect Taxes	Total Indirect Taxes		
1950-51	2.12	1.60	0.60	2.25	1.83	2.20	0.00	0.60	2.36	2.61	3.97
1960-61	2.23	2.05	1.11	2.47	2.62	2.23	0.00	1.28	2.78	2.95	4.21
1970-71	2.67	2.57	1.40	2.94	3.25	2.72	0.00	1.73	3.37	3.51	4.64
1980-81	3.16	3.14	2.26	3.48	3.81	3.53	0.00	2.44	4.01	4.12	5.13
1990-91	3.73	3.73	2.50	4.04	4.39	4.31	0.00	3.14	4.67	4.76	5.73
1991-92	3.83	3.90	2.80	4.18	4.43	4.37	0.00	3.19	4.72	4.83	5.79
1992-93	3.90	3.95	3.13	4.26	4.49	4.38	0.00	3.26	4.75	4.87	5.85
1993-94	3.96	4.00	3.05	4.31	4.50	4.35	0.00	3.18	4.74	4.88	5.90
1994-95	4.08	4.14	3.05	4.43	4.57	4.43	0.00	3.08	4.82	4.97	5.98

Contd.

Years	Gross Direct Taxes				Gross Indirect Taxes					Total Tax Revenue	GDP*
	Personnel Income Tax	Corporation Tax	Other Direct Taxes	Total Direct Taxes	Excise Duties	Custom Duty	Service Tax	Other Indirect Taxes	Total Indirect Taxes		
1995-96	4.19	4.22	3.17	4.53	4.60	4.55	0.00	3.23	4.89	5.05	6.04
1996-97	4.26	4.27	3.32	4.59	4.65	4.63	0.00	3.30	4.95	5.11	6.14
1997-98	4.23	4.30	4.05	4.68	4.68	4.60	3.20	3.08	4.96	5.14	6.18
1998-99	4.31	4.39	3.26	4.67	4.73	4.61	3.29	3.12	4.99	5.16	6.24
1999-00	4.41	4.49	3.21	4.76	4.79	4.69	3.33	3.13	5.06	5.23	6.29
2000-01	4.50	4.55	2.93	4.83	4.84	4.68	3.42	3.21	5.08	5.28	6.32
2001-02	4.51	4.56	2.77	4.84	4.86	4.60	3.52	3.33	5.07	5.27	6.36
2002-03	4.57	4.66	1.70	4.92	4.92	4.65	3.62	3.28	5.12	5.33	6.39
2003-04	4.62	4.80	2.15	5.02	4.96	4.69	3.90	3.29	5.17	5.41	6.44
2004-05	4.69	4.92	2.37	5.12	5.00	4.76	4.15	3.38	5.24	5.49	6.49
2005-06	4.75	5.01	3.90	5.22	5.05	4.81	4.36	3.55	5.31	5.57	6.55
2006-07	4.88	5.16	4.03	5.36	5.07	4.94	4.58	0.00	5.38	5.67	6.62
2007-08	5.01	5.29	4.22	5.49	5.09	5.02	4.71	0.00	5.45	5.77	6.69
2008-09	5.09	5.33	2.59	5.53	5.04	5.00	4.78	0.00	5.43	5.79	6.75
2009-10	5.05	5.41	2.63	5.57	5.03	4.99	4.81	0.00	5.43	5.81	6.79

Source: Computed from Table I & II.

To calculate the buoyancy estimates, log of tax revenue was regressed on the log of GDP. Table - III depicts the log coefficient of various tax revenues and that of GDP.

TABLE - IV
BUOYANCY OF VARIOUS TAXES OF
CENTRAL GOVERNMENT

Variable Studied	Explanatory Variable	R²	'F' Statistics	Intercept ( )		't' Statistics
Personal Income Tax	GDP at Factor Cost	.992	2.601*	-2.324	1.077	51.00*
Corporation Tax	GDP at Factor Cost	.987	1.735*	-3.514	1.288	41.65*
Other Direct Taxes	GDP at Factor Cost	.516	23.483*	-2.381	.860	4.84*
Total Direct Taxes	GDP at Factor Cost	.989	2.062*	-2.537	1.174	45.40*
Excise Duties	GDP at Factor Cost	.958	502.16*	-1.785	1.046	22.40*
Custom Duty	GDP at Factor Cost	.471	19.56*	-.658	.971	4.42*
Service Tax	GDP at Factor Cost	.543	26.115*	-9.786	1.997	5.11*

Contd.

Variable Studied	Explanatory Variable	R²	'F' Statistics	Intercept ( )		't' Statistics
Other Indirect	GDP at Factor Cost	.009	.207**	1.420	.165	.455**
Total Indirect Taxes	GDP at Factor Cost	.982	1.176*	-1.562	1.054	34.28*
Total Tax Revenue	GDP at Factor Cost	.995	4.277*	-1.643	1.101	65.40*

Source: Estimated by using SPSS software version 16.0.
Significant at 1% level of significance.
** **Insignificant.**

Note: 1. indicates buoyancy coefficient.

2. R² value indicates the variations in respective tax revenue explained by the explanatory variable.

3. 'F' statistics indicates the significance level of whole model.

4. 't' statistics indicate the significance level of individual variables.

Table - IV presents the buoyancy estimates of various taxes comprising the tax structure of Central Government. The given table indicates that out of personal income tax, corporation tax, excise duty, custom duties, and service tax, buoyancy coefficient during the period under study was highest for service tax followed by corporation tax and personal income tax. High growth in service sector is the major reason for higher buoyancy coefficient of service tax. Increase in basic exemption limit and restructuring of tax rates has resulted in enhanced performance of personal income tax. However measures should be taken to further enhance the buoyancy of direct taxes as they are directly related to level of income.

CONCLUSION

There have been major changes in Indian taxation system since 1950-51 with significant level of development during this time period. There have been significant attempts to improve the administration and enforcement of various taxes as well, although the progress in actual implementation has not been commensurate. An in-depth analysis of present paper reveals that Indian taxation system had been heavily dominated by indirect taxes especially excise duties and custom duty, however, a trend in increase in the share of direct taxes and decrease in share of indirect taxes can be seen after the financial year 1990-91. Also, direct taxes were found to be more buoyant than indirect taxes. This paper suggests that emphasis should be shifted from indirect taxes to direct taxes because these are directly related to ability to pay and are also justified on equity grounds. To further enhance the responsiveness of various taxes comprising tax structure of the country, strict tax compliance should be enforced and tax structure of India should be sufficiently diversified.

REFERENCES

❖ Government of India, Comptroller and Auditor General: Report on Union

❖ Government Revenue Receipts: Direct Taxes (various issues), New Delhi.

❖ Government of India, Economic Survey (various issues), New Delhi.

❖ Government of India, Finance Act (various Years), New Delhi.

❖ Government of India, Income Tax Act, 1961, New Delhi.

❖ Government of India, Indian Public Finance Statistics (various issues), New Delhi.

❖ Government of India, National Accounts Statistics prepared by Central

❖ Statistical Organisation (Various years), New Delhi.

❖ Government of India, Speeches of Union Finance Ministers, Introducing the Budget (Various years), New Delhi.

❖ Gupta, Ankita 2009. The Trends and Responsiveness of Personal Income Tax in India, Conference held on 9-12 August 2009 on Public Policy, Indian Institute of Management, Banglore.

❖ Haughton, Jonathan (1998), "Estimating tax Buoyancy, Elasticity and Stability", Harvard Institute of International Development and Suffolk University , African Economic Policy Paper No. 11, Washington, DC, http:/www.dec.org/pdf-docs/PNACM681.pdf/.

❖ Hinrichs, H.H. (1966), A General Theory of Tax Structure Change During Economic Development, Harvard Law School International Tax Programme, Cambridge.

❖ Indian Tax Foundation (2001), Indian Tax Statistics: 1950-2001, Research Wing of the Indian Tax Foundation, Delhi.

❖ Kaldor, Nicholas (1956), Indian Tax Reform, Report of a Survey, Ministry of Finance, Government of India, New Delhi.

❖ Mookherjee, Dilip and Das-Gupta, Arindam (1995), "Reforming Indian Income Tax Enforcement", September, IRIS-India Working Paper No.3. http://www.iris.umd.edu/ publications Raj, Sukhwant (1990), Personal Income Tax in India, M. Phil. Dissertation, Punjab School of Economics, Guru Nanak Dev University, Amritsar.

❖ Raj, Sukhwant (1990), Personal Income Tax in India, M. Phil. Dissertation,

❖ Punjab School of Economics, Guru Nanak Dev University, Amritsar.

❖ Reserve Bank of India, Reports on Currency and Finance (various issues), http//www.rbi.org.in.

❖ Singh, Nirvikar and Srinivasan, T.N. (2004), "Fiscal Policy in India:

❖ Lessons and Priorities", Working Paper No. 207, Stanford Centre for International Development, Stanford, http://credpr.stanford.edu/pdf/scid207.pdf.

❖ Subramaniam, V.K. (1979), The Indian Financial System, Abhinav Publications, New Delhi.

❖ World Bank (1991), Lessons of Tax Reform, A World Bank Publication, Washington, D.C.