

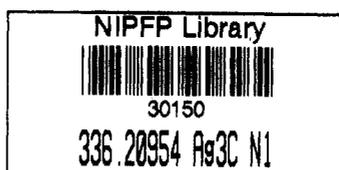


COMPOSITION AND GROWTH OF MAJOR UNION TAXES

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Abstract

The share of customs duties has substantially increased and that of all other Union taxes declined during the reference period. A substantial increase in the share of customs duties has come about due to significant hikes in the customs tariff rates during the period under consideration. This may have serious repercussions for international trade and efficiency in production. The buoyancy of each of the non-corporate income tax, corporate income tax and Union excise duties is found to be less than one. The low buoyancy of the former could be attributed to sharp tax cuts in the high marginal tax rates under the personal income tax. However, the low buoyancy of the latter two taxes is a matter of concern. For an healthy growth of the economy, rate structure of customs duties need be rationalised and buoyancy of both the corporate tax and Union excise duties need be improved through better tax administration.

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I. Introduction

The objective of this study is to throw some light on the level of taxation, growth of individual taxes and the change in composition of major Union taxes during the last one and a half decades. The study covers the period from 1975-76 to 1990-91. The taxes covered are corporation income tax, income tax other than corporation income tax (hereinafter, referred to as non-corporate income tax), gift tax, wealth tax, customs duties and Union excise duties.

The outline of the study is as follows. Section II gives the scheme of analysis. Section III describes the data. Section IV contains a discussion on the level of taxation. Section V reports on growth rates and buoyancy of individual Union taxes. Section VI analyses the composition of major Union taxes. Section VII brings together the concluding remarks.

II. The Scheme of Analysis

The level of taxation is analysed in terms of trend of rise or fall in the ratio of total tax revenue of the Union government to gross domestic production (GDP) at factor cost at current prices. In addition, the level of taxes on income is observed also in terms of the ratio of income tax revenue to non-agricultural gross domestic product (NAGDP).

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The growth of individual taxes is analysed in terms of growth rates of tax revenues as well as in terms of buoyancy¹ of tax revenues with respect to national income (GDP or NAGDP). The buoyancy of a tax reveals relative growth in tax revenue *vis-a-vis* growth in national income.

The change in composition of different taxes is studied in terms of changes in the shares of individual taxes in total tax revenue of the Union government as well as in terms of share of commodity taxes (i.e., customs and excise) *vis-a-vis* the share of taxes on income (i.e., corporate and non-corporate income taxes).

III. The Data

The figures of revenue collection from different Union taxes and of national income (GDP and NAGDP) are compiled for each of the years from 1975-76 through 1990-91 and reported in Table 1.

IV. Level of Taxation

The tax to GDP ratios with regard to Union taxes are reported in Table 2 and the tax to NAGDP ratios of taxes on income are given in Table 3. From Table 2, it may be noted that the level of taxation has gone up during the period from 1975-76 to 1990-91. The tax to GDP ratio of the Union government has increased from 10.68 per cent in 1975-76 to 13.07 per cent in 1989-90 (column 8). This rise in the level of taxation is attributable mainly to the exploitation of potential of customs duties in raising the tax revenue. The ratio of customs revenue to GDP has more than doubled during the period under consideration whereas, in regard to other taxes, the tax to GDP ratio has either declined or remained almost unchanged (columns 2 to 7). While the tax to GDP ratio of non-corporate income tax, gift tax and wealth

1. It is defined as the ratio of proportional change in tax revenue to the proportional change in national income.

tax declined over time, the ratio can be said to have remained almost unchanged in the cases of corporate income tax and Union excise duties. Further, it is important to note that the tax to NAGDP ratio in regard to taxes on income (both corporate and non-corporate) has also declined with erratic variations in some of the years (Table 3). Another interesting fact is that, during the period from 1975-76 to 1990-91, the revenue collection from customs duties increased to more than 14 times the revenue in the year 1975-76 while the value of imports increased to less than 9 times the import value in the year 1975-76. This suggests that the substantial increase in revenue from customs duties is attributable to the hikes in customs tariff rates during the reference period. Thus, the increase in the level of taxation has been brought about mainly at the cost of international trade. This is worrisome, as the underlined tariff structure of customs duties may result in excessive protection of domestic industry and hence, inefficiency in production.

V. Growth Rates and Buoyancy of Individual Taxes

Growth rates of individual taxes are obtained for the period from 1975-76 to 1990-91 by estimating semi-log linear equations by using Ordinary Least Squares method. These are reported in Table 4. The estimates of buoyancy of different taxes are obtained by estimating double-log linear equations by Ordinary Least Squares method. Presence of serial correlation is identified by Durbin-watson statistics. An equation with serial correlation has been re-estimated by using Cochrane-Orcutt iterative method that adjusts for serial correlation. The estimates of buoyancy are reported in Table 5. The estimated equations along with relative statistics are given in the Appendix.

From Table 4, it may be noted that the revenue from customs duties grew at the rate of 20.64 per cent while the growth rate of revenue from other taxes did not exceed 13.58 per cent. As against this, GDP and NAGDP grew at the rates of 13.74 and

14.76 per cent respectively. This reveals the fact that the growth of revenues from different Union taxes excepting customs duties has been slow as compared to the growth of GDP or NAGDP. This implies that the buoyancy of customs duties would be greater than one. In fact, it is found to be 1.45. The buoyancy of other taxes is not found to exceed one (column 2 in Table 5). The buoyancy of taxes on income with respect to NAGDP is also found to be less than one. The estimates of buoyancy of corporate and non-corporate income taxes are found to be 0.90 and 0.96 respectively (column 3 in Table 5). The low buoyancy of personal income tax could be attributed to substantial cuts in the high marginal tax rates during the reference period. However, the low buoyancy of corporate income tax and Union excise duties seems to be a matter of concern.

VI. Composition of Major Union Taxes

From Table 1, it will be noted that the revenue from Union excise duties has been highest and that from gift tax has been lowest among the taxes examined. Revenue from non-corporate income tax has been lower than that from corporation income tax until 1980-81 and in the subsequent years revenue from the former exceeds the revenue from the latter. Revenue from commodity taxes (i.e., customs duties and Union excise duties) has been greater than that from taxes on income (corporate and non-corporate) throughout the period. The former accounted for about 69 per cent of the tax revenue of the Union government in 1975-76, and their share has increased over time to about 77 per cent in 1990-91 despite the decline in the share of Union excise duties that has been more than compensated by the rise in the share of customs duties (columns 6 and 7 in Table 6). The contribution of taxes on income to the total tax revenue of the Union government has declined from around 28 per cent in 1975-76 to around 20 per cent in 1990-91. Both the corporate and non-corporate income taxes have contributed towards this decline (columns 2 and 3 in Table 6). In the overall, the share of customs duties has increased and that of all other taxes declined, over time. It has been so, because the

growth of revenue from customs duties has been faster to the growth of revenue from other taxes. The rise in the share of customs duties is attributable partly to the slow growth of tax revenue from other taxes and partly to the substantial hikes in the customs tariff rates during the reference period. As has been revealed in the earlier discussion, the revenue from all Union taxes excepting customs duties grew at a slow rate as compared to the rate of growth of GDP or NAGDP. The rise in the share of customs duties, to the extent it is attributable to the substantial hikes in the customs tariff rates and to the slow growth of corporate income tax and Union excise duties, should, perhaps, be checked for an healthy growth of the economy.

VII. Concluding Remarks

The share of customs duties has substantially increased and that of all other Union taxes declined during the reference period. The decline in the share of non-corporate income tax is understandable as there has been substantial cuts in the high marginal tax rates. Whereas the decline in the shares of corporate income tax and Union excise duties is a matter of concern as the buoyancy of these taxes is found to be less than one. Buoyancy of these taxes can, perhaps, be substantially improved through better tax administration.

At least a part of the rise in the share of customs duties is due to substantial hikes in the customs tariff rates during the reference period which should be a cause of worry as it can have serious repercussions for international trade and efficiency in production. This needs to be checked for an healthy growth of the economy.

TABLE 1

Revenue collection from different Taxes

(Rs. crores)

Financial Year	Corporation tax (CIT)	Income tax other than CIT	Wealth tax	Gift tax	Customs duties	Union excise duties	Total tax revenue	Gross domestic product at factor cost	Non agricultural GDP at factor cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1975-76	861.70	1241.36	53.73	5.11	1419.40	3844.78	7608.78	71201.00	42362.00
1976-77	984.23	1209.50	60.44	5.67	1553.70	4221.45	8270.84	76536.00	47073.00
1977-78	1220.77	1002.02	48.46	5.55	1824.10	4447.51	8858.38	87351.00	52467.00
1978-79	1251.47	1177.39	55.41	5.85	2448.74	5341.95	10525.10	93880.00	58029.00
1979-80	1391.90	1340.31	64.47	6.83	2924.16	6011.09	11973.65	102442.00	65354.00
1980-81	1377.45	1439.93	67.43	6.51	3409.28	6500.02	13149.00	122226.00	75577.00
1981-82	1969.69	1475.50	78.12	7.74	4300.36	7420.74	15816.00	142876.00	90191.00
1982-83	2184.51	1569.51	90.37	7.71	5119.41	8058.50	17696.00	159395.00	103244.00
1983-84	2492.73	1699.13	93.31	8.84	5583.44	10221.75	20722.00	185991.00	118493.00
1984-85	2555.89	1927.75	107.58	10.86	7040.52	11150.84	23471.00	207869.00	135875.00
1985-86	2865.08	2511.29	153.44	11.66	9526.00	12956.00	28671.00	234159.00	156879.00
1986-87	3159.96	2878.97	174.15	9.26	11475.00	14470.00	32974.00	260442.00	177927.00
1987-88	3432.92	3192.43	100.58	8.23	13702.00	16426.00	37666.00	294408.00	201950.00
1988-89	4407.21	4241.24	122.48	6.74	15805.00	18841.00	44474.00	348896.00	234138.00
1989-90	4728.92	5004.00	179.00	7.94	18036.00	22406.00	51636.00	395143.00	265140.90
1990-91	6350.00	5560.00	190.00	2.00	20800.00	24500.00	58916.00	514619.00	345309.30

- Notes: 1. GDP in 1990-91 is estimated from gross national product on the assumption that net income from abroad in 1990-91 equals that in the year 1989-90
2. NAGDP in 1990-91 is estimated on the assumption that the ratio of NAGDP to GDP in 1990-91 equals that in the year 1989-90.
3. *: Revised estimate.

TABLE 2

**Tax Revenue as a Percentage of
Gross Domestic Product (GDP)**

Financial Years	Corporatio income tax (CIT)	Income tax other than CIT	Gift tax	Health tax	Customs duties	Union excise duties	Total tax revenue
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1975-76	1.21	1.74	0.00007	0.08	1.99	5.40	10.69
1976-77	1.29	1.58	0.00007	0.08	2.03	5.52	10.81
1977-78	1.40	1.15	0.00006	0.06	2.09	5.09	10.14
1978-79	1.33	1.25	0.00006	0.06	2.61	5.69	11.21
1979-80	1.36	1.31	0.00007	0.06	2.85	5.87	11.69
1980-81	1.13	1.18	0.00005	0.06	2.79	5.32	10.76
1981-82	1.38	1.03	0.00005	0.05	3.01	5.19	11.07
1982-83	1.37	0.98	0.00005	0.06	3.21	5.06	11.10
1983-84	1.34	0.91	0.00005	0.05	3.00	5.50	11.14
1984-85	1.23	0.93	0.00005	0.05	3.39	5.36	11.29
1985-86	1.22	1.07	0.00005	0.07	4.07	5.53	12.24
1986-87	1.21	1.11	0.00004	0.07	4.41	5.56	12.66
1987-88	1.17	1.08	0.00003	0.03	4.65	5.58	12.79
1988-89	1.26	1.22	0.00002	0.04	4.53	5.40	12.75
1989-90	1.20	1.27	0.00002	0.05	4.56	5.67	13.07
1990-91	1.23	1.08	0.00000	0.04	4.04	4.76	11.45

Source: Table 1.

TABLE 3

**Tax Revenue as a
Percentage of NAGDP**

Financial Years	Corporation income tax (CIT)	Income tax other than CIT
(1)	(2)	(3)
1975-76	2.0341	2.9304
1976-77	2.0909	2.5694
1977-78	2.3267	1.9098
1978-79	2.1566	2.0290
1979-80	2.1298	2.0508
1980-81	1.8226	1.9052
1981-82	2.1839	1.6360
1982-83	2.1159	1.5202
1983-84	2.1037	1.4339
1984-85	1.8811	1.4188
1985-86	1.8263	1.6008
1986-87	1.7760	1.6181
1987-88	1.6999	1.5808
1988-89	1.8823	1.8114
1989-90	1.7835	1.8873
1990-91	1.8389	1.6102

NAGDP: Non-agricultural gross
domestic product

Source: Table 1

TABLE 4

**Growth Rates of Income and
Union Taxes**

Tax/income	Growth rate (Per cent)
(1)	(2)
Corporation income tax	13.14
Income tax other than corporation income tax	11.63
Wealth tax	9.35
Gift tax	0.25
Customs duties	20.64
Excise duties	13.58
Total tax revenue	15.19
Gross domestic product (GDP)	13.74
Non-agricultural GDP	14.76

Note: The estimates are based on the data relating to the period from 1975-76 to 1990-91.

TABLE 5

Estimates of Buoyancy of Different Taxes

Tax	Buoyancy with respect to	
	Gross domestic product (GDP)	Non-agricultural gross domestic product (NAGDP)
(1)	(2)	(3)
Corporation income tax	0.9594	0.8979
Income tax other than Corporation income tax	0.9807	0.9603
Wealth tax	0.6923	
Union excise duties	0.9833	
Customs duties	1.4453	

Notes: 1. The estimates are based on the assumption of constant buoyancy at all income levels.

2. The estimates are based on the data relating to the period from 1975-76 to 1990-91.

TABLE 6

**Revenue from Different Taxes as a Percentage of Total
Tax Revenue**

Financial Corporation Years	Income tax	Income tax	Gift tax	Wealth tax	Customs duties	Union excise duties
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1975-76	11.33	16.31	0.07	0.71	18.65	50.53
1976-77	11.90	14.62	0.07	0.73	18.79	51.04
1977-78	13.78	11.31	0.06	0.55	20.59	50.21
1978-79	11.89	11.19	0.06	0.53	23.27	50.75
1979-80	11.62	11.19	0.06	0.54	24.42	50.20
1980-81	10.48	10.95	0.05	0.51	25.93	49.43
1981-82	12.45	9.33	0.05	0.49	27.19	46.92
1982-83	12.34	8.87	0.04	0.51	28.93	45.54
1983-84	12.03	8.20	0.04	0.45	26.94	49.33
1984-85	10.89	8.21	0.05	0.46	30.00	47.51
1985-86	9.99	8.76	0.04	0.54	33.23	45.19
1986-87	9.58	8.73	0.03	0.53	34.80	43.88
1987-88	9.11	8.48	0.02	0.27	36.38	43.61
1988-89	9.91	9.54	0.02	0.28	35.54	42.36
1989-90	9.16	9.69	0.02	0.35	34.93	43.39
1990-91	10.78	9.44	0.00	0.32	35.30	41.58

Source: Table 1.



Estimates of Buoyancy Equations of Different Taxes
(1975-76 to 1990-91)

Dependent Variable	Constant term	Coefficient of		R	Test of significance of R (F-Statistic)	DW Statistic
		LGDP	LNAGDP			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
(i) LCIT	-3.877 (12.33)	0.959 (36.85)		0.99	1358.00	2.00
(ii) LCIT	-2.740 (9.14)		0.8979 (34.86)	0.99	1214.90	1.78
(iii)* LPIT	-4.287 (1.408)	0.981 (0.113)		0.97	195.61	1.90
(IV)* LPIT	-3.6376 (1.446)		0.9603 (0.119)	0.97	231.61	1.87
(V) LWT	-3.819 (4.38)	0.692 (9.58)		0.86	91.87	1.75
(V) LED	-2.717 (10.14)	0.983 (44.31)		0.99	1963.10	1.84
(VI) LCD	-8.812 (15.57)	1.4453 (30.84)		0.98	950.99	0.93

- Notes: 1. PIT = Personal income tax ; LPIT = log (PIT)
 CIT = Corporate income tax ; LCIT = log (CIT)
 WT = Wealth tax ; LWT = log (WT)
 ED = Excise duty ; LED = log (ED)
 CD = Customs duty ; LCD = log (CD)
 GDP = Gross domestic product at factor cost and at current prices
 NAGDP = Non-agricultural GDP
 LGDP = log (GDP); LNAGDP = log (NAGDP)
2. * The equation is estimated by using Cochrane-Orcutt iterative method that adjusts for serial correlation of first order.
3. In the case of an equation estimated by Cochrane - Orcutt method, the figures in parenthesis give asymptotic standard errors and otherwise t-statistics.

