

## Chapter 3

# **The Growth of Public Expenditure in India**

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In the previous chapter we dealt with the positive theories of public expenditure. In this chapter, it is proposed to review the qualitative and quantitative growth of expenditure of the government since 1950-51 to 2000-01. It would document the empirical evidence with respect to the growth of changing composition of public expenditure: and then test the validity of the positive theories advanced by Wagner and Peacock-Wiseman to explain the growth of public expenditure.

All the head of expenditure is the combined revenue and capital expenditure of the centre, states and Union Territories and have been proposed to be analyzed at both current and constant prices. Comparison of per capita expenditure has also been undertaken.

The growth of expenditure has been analysed with the help of some measure of growth. These are – (i) compound growth rate of expenditure with respect to time and (ii) the elasticity of expenditure with respect to national income.

In the past governments restricted themselves to the problems of maintenance of law and order and external defence. This was due to the mistaken belief of the maxim of Adam Smith. But J.M. Keynes's '*General Theory*' provides a theoretical basis for the recent developments in public expenditure programmes assumed by the government. The tendency of a persistent and continuous increase in public expenditure in countries all over the world was widely observed in the 19<sup>th</sup> century. The emergence and extension of public sector or organization have become unavoidable on account of the severe shortcomings of the private sectors which were witnessed during the period of depression in the thirties and therefore, the restricted concept of state has given

place to the modern concept of welfare state. The main objective of this welfare state is to promote the economic and social well-being of the people as a result of which new functions are being performed by the state involving huge increase in public expenditure. It should be pointed out that much of the increase in public expenditure was due to the increasing participation of the governments in economic activities.

### **3.1 Growth of Public Expenditure in India**

**In money terms:** Public expenditure in India has been showing a remarkable growth and expansion during 1950-51 to 2000-01. As a result of this, the size of public expenditure has tended to increase and the public sector has acquired a considerable command over the flow of the resources of the economy. It is seen from the table 3.1 that there has been a striking increase in total government expenditure in money terms. The total government expenditure increased from Rs. 967.38 crores in 1950-51 to Rs. 548993.10 crores in 2000-01 in money terms or at current prices. National income in money terms increased from Rs 9142 crores in 1950-51 to Rs. 1765238 crores in 2000-01. Thus government expenditure recorded a percentage increase of 56650.50 and national income recorded a percentage increase of 19209 during the period of 1950-51 to 2000-01. In other words, while the total government expenditure increased by 567.5 times, national income increased far less rapidly by about 193 times during the period under study.

The growth of government expenditure and national income have been deflated by population growth and price change. Let us first remove the influence of population growth and find out the extent of such growth in per head of population.

In money terms, the total government expenditure per head of population increased from Rs. 26.95 in 1950-51 to Rs. 5451.77 in 2000-01. While national income per head of population in money terms increased from Rs. 254.65 in 1950-51 to Rs. 17529.67 in 2000-01. Thus government expenditure per head of population in money terms increased by 20129.2 per cent (202 times) during the

**Table 3.1**  
**Total Government Expenditure and National Income at Current and Constant Prices**  
**(1950-51 to 2000-01)**

Financial Year	Total Government Expenditure		Per Capita Government Expenditure		National Income		Per Capita National Income		Government Expenditure As % of National Income
	At Current Prices (in Crores)	At Constant Prices (in Crores)	At Current Prices (in Rs.)	At Constant Prices (in Rs.)	At Current Prices (in Crores)	At Constant Prices (in Crores)	At Current Prices (in Rs.)	At Constant Prices (in Rs.)	
1950-51	967.38	14006.69	26.95	390.16	9142.00	132367.00	254.65	3687.10	10.58
1951-52	1041.14	14648.91	28.52	401.34	9634.00	135551.00	263.95	3713.73	10.81
1952-53	950.99	13990.72	25.56	376.09	9474.00	139379.00	254.68	3746.75	10.04
1953-54	990.86	14196.39	26.14	374.57	10341.00	148159.00	272.85	3909.21	9.58
1954-55	1226.58	19642.61	31.78	508.88	9628.00	154184.00	249.43	3994.40	12.74
1955-56	1383.55	22361.12	35.20	568.99	9776.00	158001.00	248.75	4020.38	14.15
1956-57	1660.51	23659.79	41.41	590.02	11706.00	166793.00	291.92	4159.43	14.19
1957-58	2039.56	28025.48	49.87	685.22	11928.00	163902.00	291.64	4007.38	17.10
1958-59	2069.71	27465.87	49.51	657.08	13299.00	176483.00	318.16	4222.08	15.56
1959-60	2233.03	28818.22	52.42	676.48	13916.00	179592.00	326.67	4215.77	16.05
1960-61	3120.18	39450.66	71.89	909.00	15204.00	192235.00	350.32	4429.38	20.52
1961-62	3410.13	42202.28	76.80	950.50	15960.00	197514.00	359.46	4448.51	21.37
1962-63	4104.13	48417.36	90.40	1066.46	17029.00	200895.00	375.09	4425.00	24.10
1963-64	4972.16	53812.39	107.16	1159.75	19491.00	210946.00	420.06	4546.25	25.51
1964-65	5185.81	51517.14	109.41	1086.86	22814.00	226640.00	481.31	4781.43	22.73
1965-66	6439.93	58630.69	132.78	1208.88	23752.00	216244.00	489.73	4458.64	27.11
1966-67	7245.85	58527.51	146.38	1182.37	26918.00	217427.00	543.80	4392.46	26.92
1967-68	7126.88	52852.29	143.98	1067.72	31745.00	235418.00	641.31	4755.92	22.45
1968-69	7155.53	51648.88	138.14	997.08	33421.00	241234.00	645.19	4657.03	21.41
1969-70	7665.26	53691.24	144.90	1014.96	36742.00	257359.00	694.56	4865.01	20.86

Financial Year	Government Expenditure		Per Capita Government Expenditure		National Income		Per Capita National Income		GE as % National Income
	At Current Prices (in Crores)	At Constant Prices (in Crores)	At Current Prices (in Rs.)	At Constant Prices (in Rs.)	At Current Prices (in Crores)	At Constant Prices (in Crores)	At Current Prices (in Rs.)	At Constant Prices (in Rs.)	
1970-71	16735.54	116212.97	309.34	2148.11	38968.00	270597.00	720.30	5001.79	42.95
1971-72	10397.51	68474.67	187.68	1236.00	41340.00	272252.00	746.21	4914.30	25.15
1972-73	12098.13	71978.17	213.37	1269.46	45392.00	270061.00	800.56	4762.98	26.65
1973-74	12890.07	65276.16	222.24	1125.45	55896.00	283061.00	963.72	4880.36	23.06
1974-75	15171.56	66410.82	255.84	1119.91	65432.00	286417.00	1103.41	4829.97	23.19
1975-76	18555.03	84336.72	305.68	1389.40	69005.00	313643.00	1136.82	5167.10	26.89
1976-77	21482.86	91542.18	346.50	1476.49	74242.00	316358.00	1197.45	5102.55	28.94
1977-78	23265.68	93102.88	366.97	1468.50	85151.00	340751.00	1343.08	5374.62	27.32
1978-79	27727.52	109496.52	427.89	1689.76	91094.00	359732.00	1405.77	5551.42	30.44
1979-80	31800.61	109017.95	478.92	1641.84	98631.00	338124.00	1485.41	5092.23	32.24
1980-81	35379.41	108746.96	521.05	1601.58	118233.00	363417.00	1741.28	5352.24	29.92
1981-82	40546.30	113442.76	585.93	1639.35	137388.00	384392.00	1985.38	5554.80	29.51
1982-83	48014.94	124462.99	678.18	1757.95	151716.00	393274.00	2142.88	5554.72	31.65
1983-84	55693.98	132344.38	770.32	1830.49	178121.00	423265.00	2463.64	5854.29	31.27
1984-85	66733.98	147745.37	903.03	1999.26	198794.00	440119.00	2690.04	5955.60	33.57
1985-86	76415.35	158485.89	1012.12	2099.15	221401.00	459187.00	2932.46	6081.95	34.51
1986-87	91580.83	177590.08	1187.82	2303.37	246064.00	477158.00	3191.49	6188.82	37.22
1987-88	101754.4	179658.74	1291.30	2279.93	279400.00	493312.00	3545.69	6260.30	36.42
1988-89	116139	189535.70	1442.72	2354.48	334302.00	545572.00	4152.82	6777.29	34.74
1989-90 <sup>RE</sup>	140031.9	211472.63	1703.55	2572.66	385729.00	582518.00	4692.57	7086.59	36.30
1990-91	155141.5	211684.73	1849.12	2523.06	450145.00	614206.00	5365.26	7320.69	34.46
1991-92	176995.9	212341.34	2067.71	2480.62	514607.00	617372.00	6011.76	7212.29	34.39
1992-93	198489.6	219153.92	2276.26	2513.23	587064.00	648182.00	6732.39	7433.28	33.81
1993-94	225842.2	225842.16	2534.70	2534.70	685912.00	685912.00	7698.23	7698.23	32.93
1994-95	258862.5	235858.81	2850.91	2597.56	805981.00	734358.00	8876.44	8087.64	32.12

Financial Year	Total Government Expenditure		Per Capita Government Expenditure		National Income		Per Capita National Income		Government Expenditure As % of National Income
	At Current Prices (in Crores)	At Constant Prices (in Crores)	At Current Prices (in Rs.)	At Constant Prices (in Rs.)	At Current Prices (in Crores)	At Constant Prices (in Crores)	At Current Prices (in Rs.)	At Constant Prices (in Rs.)	
1995-96	293103.5	245163.11	3161.85	2644.69	941861.00	787809.00	10160.31	8498.48	31.12
1996-97	325614.8	253620.98	3452.97	2689.51	1093961.00	852085.00	11600.86	9035.90	29.76
1997-98	372972.8	271240.09	3889.18	2828.36	1224787.00	890712.00	12771.50	9287.92	30.45
1998-99	445980.3	295043.74	4574.16	3026.09	1434456.00	948982.00	14712.37	9733.15	31.09
1999-00 <sup>QE</sup>	517056.1	328780.25	5217.52	3317.66	1590301.00	1011224.00	16047.44	10204.08	32.51
2000-01 <sup>RE</sup>	548993.1	330744.42	5451.77	3284.45	1765238.00	1063479.00	17529.67	10560.86	31.10

Source: Source: (i) Indian Economic Statistics, Public Finance, December-1988, GOI, Ministry Of Finance, Economic Division

(ii) Hand Book of Statistics on Indian Economy- 2001, Reserve Bank of India, (for income data)

(iii) Indian Public Finance Statistics- 1990, 1996 and 2002-2003, Ministry of Finance, Department of Economic Affairs.

(iv) Data relating to 1950-51 to 1979-80 has been collected from Kumar, V (1986)

period from 1950-51 to 2000-01 and national income increased by only 6783.82 per cent (about 68 times) during the same period.

If we measure total expenditure of the Centre, States and Union Territories as a proportion of national income, it will be found that whereas this proportion was about 10.58 per cent in 1950-51, it increased to about 31.10 per cent in 2000-01 which shows an upward trend with some fluctuations during the period under study.

Development expenditure has been the dominant component of public expenditure which increased from Rs. 353.69 crores in 1950-51 to Rs. 236096.04 crores in 2000-01 in money terms and thus recorded a percentage increase of 66652.25 during the period. On the other hand, non-developmental expenditure in money terms increased from Rs. 516.31 crores in 1950-51 to Rs. 3000363.94 crores and thus recorded a percentage increase of 58075.11 during the period from 1950-51 to 2000-01 (table 6.1).

**In real terms:** The figures of expenditure and national income mentioned above are at current prices. The per capita figures would be meaningless, if we do not take into account the price changes. But even if the figures be deflated at a constant price (1993-94 prices) the increase would appear to be really remarkable even in real terms. The value of rupee has gone down during the period. The economic history of India makes us realize that the rise in money terms is due largely to the rise in prices. Prices increased by nearly 24 times between 1950-51 and 2000-01. Hence, increase in government expenditure and national income must be attributed partly to the rise in prices. The influence of price change on the growth of government expenditure and national income has been removed by deflating the available figures in terms of changes in the wholesale price-index.

The table 3.1 shows that whereas government expenditure in money terms increased from Rs. 967.38 crores in 1950-51 to Rs. 548993.10 crores in 2000-01 (56650.50 per cent increase), at constant prices (1993-94 prices) it

increased from Rs. 14006.69 crores in 1950-51 to Rs. 330744.42 crores in 2000-01 showing a percentage increase of 2261.33 during the period. Whereas, national income over the period increased from Rs. 9142 crores in 1950-51 to Rs. 1765238 crores in 2000-01 (19209.10 per cent) in money terms. However, in real terms it increased from Rs. 132367 crores in 1950-51 to Rs. 1063479 crores in 2000-01, showing a percentage increase of only 703.43 during the same period.

The government expenditure per head of population in money terms increased from Rs. 26.95 in 1950-51 to Rs 5451.77 in 2000-01, recorded a percentage increase of 20129.20, whereas in real term it recorded a percentage increase of 741.82 only from Rs. 390.16 in 19050-51 to Rs. 3284.45 in 2000-01. Thus the growth in real terms in comparison with the money terms is very slow.

Development expenditure records a growth rate of 66652.25 per cent between 1950-51 to 2000-01 in money terms. If the price effect is eliminated, the developmental expenditure grows by only 2677.49 per cent during the same period. Similarly non-developmental expenditure records growth rate of 58075.11 per cent in money terms during the period from 1950-51 to 2000-01. In real terms however, it records a growth rate of 2898.11 per cent during the same period.

Therefore, government expenditure grows faster than national income both in current prices and constant prices (1993-94 prices) during the period under study and hence evidence of increasing State activities i.e. Wagner's Law is provided by these empirical observations. The State's role in the economic sphere is also expanding as it is evident from the expansion of expenditure on developmental services.

### **Compound Growth Rate:**

In money terms, the compound rate of growth of total expenditure has been 13.23 per cent per annum (table 3.2). The developmental expenditure records a higher growth rate of 13.6 per cent per annum in money terms, whereas the non-developmental expenditure has been growing at a lower rate of 13.80 per cent per annum at current prices. In real terms the developmental

expenditure shows a rate of growth of 6.7 per cent per annum. But non-developmental expenditure shows a rate of growth of 6.4 per cent per annum. Social and Community services show a rate of growth of 14.9 per cent at current prices per annum, and 7.98 per cent per annum at constant prices during the period under study. These figures are higher than that of economic services. The expenditure on economic services shows a growth rate of 12.78 per cent per annum at current prices and 5.96 per cent per annum at constant prices during the period. The relative significance of developmental expenditure is reflected in its rate of growth of 6.7 per cent against the rate of growth of 6.4 per cent in case of non-developmental expenditure.

**Table 3.2**  
**Growth of Expenditure (1950-51 to 2000-01)**

Head of Expenditure	Compound Growth Rate		Income Elasticity of Expenditure	
	Current Prices	Constant Prices	Current Prices	Constant Prices
Total Expenditure	13.23	6.39	1.17	1.50
Development Expenditure	13.60	6.74	1.19	1.53
A. Social & Community Services	14.93	7.98	1.21	2.65
B. Economic Services	12.78	5.96	1.05	1.31
Non Developmental Expenditure	13.8	6.40	1.06	1.12

Source: Computed on the basis of table 5,7, 9 of Statistical Appendix

### **Income Elasticity of Public Expenditure:**

In money terms income elasticity of total expenditure in India is 1.17. The elasticity of non-developmental expenditure ( $e=1.06$ ) is less than that of developmental expenditure ( $e=1.19$ ). The Expenditure on social and community services ( $e=1.21$ ) in India is more responsive to income change. The expenditure on economic services in India is relatively less responsive to income change ( $e=1.05$ )

Same conclusion can be drawn if we eliminate the price effect. The relatively higher income elasticity of social and community services validates

Wagner's Law. In real terms, elasticity of total public expenditure is 1.50. It is 2.65 for developmental expenditure. Social and community services show greater responsiveness ( $e=2.65$ ) as compared to economic services ( $e=1.31$ )

Thus, compound growth rates and elasticities confirm the validity of Wagner's Law in respect of increasing state activities in India.

### **3.2 Growth of Government Expenditure less War-Related Defence Expenditure**

The increase in government expenditure may be entirely due to military and other war-related government expenditure if the government expenditure, even after the removal of "permanent influences" during the war shows a peak.

There are two expenditures which are of direct result of war. These are – (a) defence expenditure; and (b) debt services and other war related expenditures. Now let us eliminate these expenditures and observe whether the trend of government expenditure shows the same pattern as in normal times. However, there is a problem in doing so. The problem is whether we should remove entire defence expenditure or we should remove that part of defence expenditure which is incurred to finance the prosecution of war, since even during the peace time a normal amount of money would be spent on defence. But a problem arises as to how to distinguish between defence and non-defence types of government expenditure during the war time. To solve this problem we have assumed that the per capita defence expenditure in the absence of war would have remained the same. A close observation of the growth of defence expenditure in India tells us that the per capita expenditure on defence in real terms remained more or less same during the peace times (before 1961-62). For the purpose of estimating war-related defence expenditure, the year after 1961-62 i.e. from 1962-63 to 2000-01 are considered as the years of war. Since during these periods there were direct or indirect wars with the neighboring countries as well as against terrorism.

**Table 3.3**  
**Total Government Expenditure less War-Related Defence**  
**Expenditure at Constant Prices (1950-51 to 2000-01)**

Financial Year	Government Expenditure less War-related Expenditure	Per Capita Government Expenditure less War-Related Expenditure	Financial Year	Government Expenditure less War-related Expenditure	Per Capita Government Expenditure less War-Related Expenditure
1950-51	14006.69	390.16	1976-77	86022.96	1387.47
1951-52	14648.91	401.34	1977-78	88085.92	1389.37
1952-53	13990.72	376.09	1978-79	103816.28	1602.10
1953-54	14196.39	374.57	1979-80	103580.98	1559.95
1954-55	19642.61	508.88	1980-81	102775.62	1513.63
1955-56	22361.12	568.99	1981-82	106455.00	1538.37
1956-57	23659.79	590.02	1982-83	116610.43	1647.04
1957-58	28025.48	685.22	1983-84	123649.36	1710.23
1958-59	27465.87	657.08	1984-85	138383.32	1872.58
1959-60	28818.22	676.48	1985-86	147392.72	1952.22
1960-61	39450.66	909.00	1986-87	162651.86	2109.62
1961-62	42202.28	950.50	1987-88	163247.41	2071.67
1962-63	46780.87	1030.42	1988-89	172166.16	2138.71
1963-64	49021.17	1056.49	1989-90	194318.44	2363.97
1964-65	47640.66	1005.08	1990-91	197943.58	2359.28
1965-66	54799.97	1129.90	1991-92	200185.60	2338.62
1966-67	55499.93	1121.21	1992-93	207336.85	2377.72
1967-68	50077.76	989.68	1993-94	211758.05	2376.63
1968-69	48703.05	940.21	1994-95	222587.75	2451.41
1969-70	50587.73	956.29	1995-96	230773.70	2489.47
1970-71	112597.11	2081.28	1996-97	238853.01	2532.91
1971-72	63254.94	1141.79	1997-98	253937.41	2647.94
1972-73	67085.38	1183.16	1998-99 <sup>P</sup>	277141.26	2842.47
1973-74	61816.28	1065.80	1999-2000 <sup>QE</sup>	307480.98	3102.73
1974-75	62329.76	1051.09	2000-01 <sup>RE</sup>	309620.27	3074.68
1975-76	78432.04	1292.13			

Source : Computed on the basis of table 5 and 6 of the Statistical Appendix

Another war-related expenditure is the debt services. The removal of this influence on the total expenditure is very difficult. In India, debt services not account for the debt incurred for war purposes only. They include interest on ordinary and unfunded debt and on other obligations as also appropriations for

reduction or avoidance of debt. Even the entire debt does not represent the debt incurred for financing wars; it includes debt incurred for financing wars and the prevention of famines etc. Therefore, it would be more justified in not removing this influence at all to observe the pattern of growth of government expenditure.

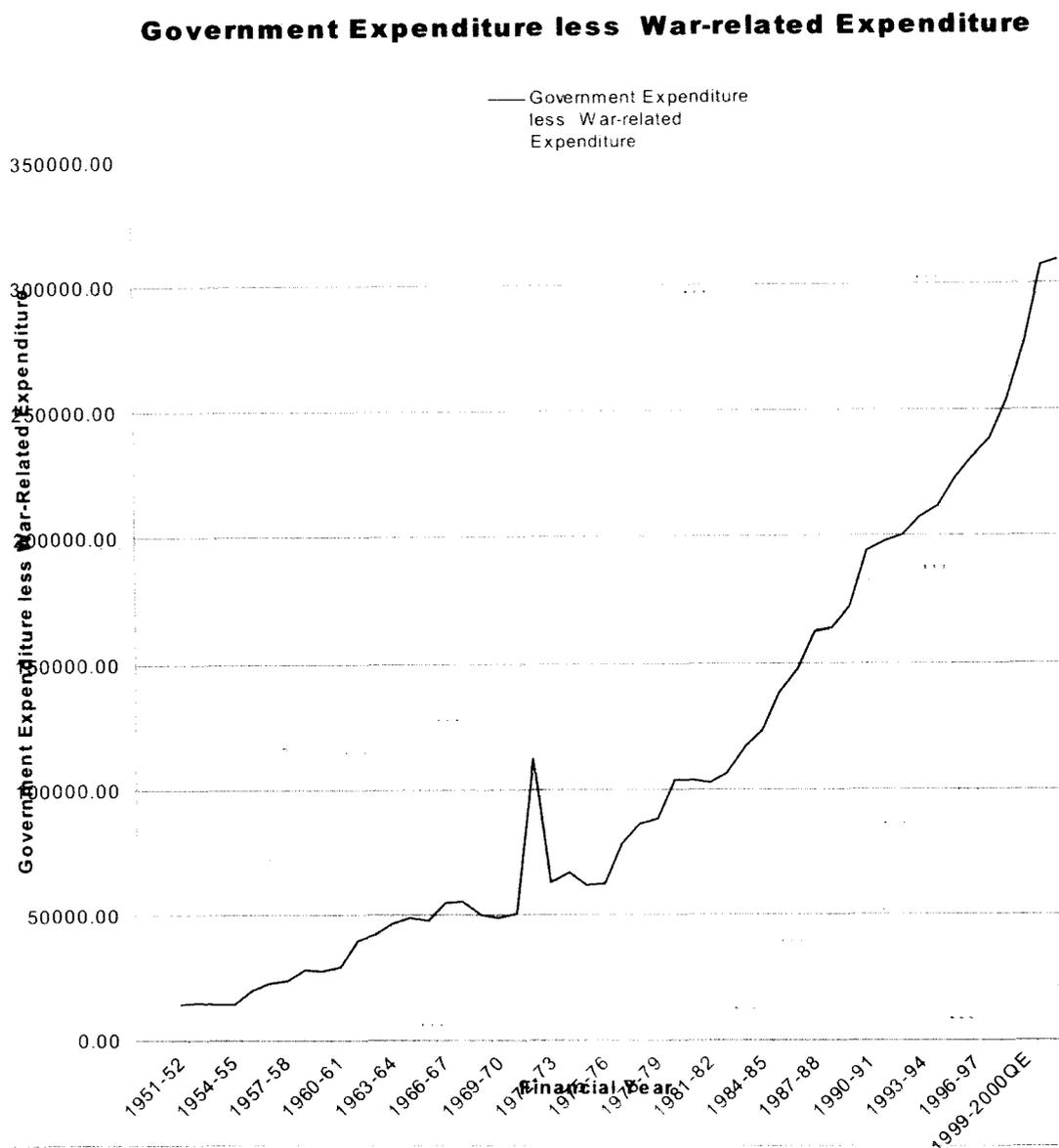
Table 3.3 shows the growth pattern of government expenditure after removing war-related defence expenditure. Here peak of total government expenditure is not due to war-related expenditure. The upward trend in total government expenditure did not disappear in the post-war/social upheaval times and it did not come to the pre-war/social upheaval level.

### **Wagner's Law and Peacock-Wiseman Hypothesis-**

The ratio of government expenditure to national income has shown an increasing trend. It has increased from 10.58 per cent in 1950-51 to 31.10 per cent in 2000-01. The increase in national income at constant prices was 703.43 per cent during the period under study; while total government expenditure registered an increase of 2261.38 per cent at constant prices during the same period. The per capita national income at constant prices increased by 186.43 per cent from 1950-51 to 2000-01, whereas per capita total public expenditure at constant prices increased by 741.83 per cent during the same period. It is therefore, evident that the rate of growth of expenditure (both total and per capita terms at constant prices) was faster than that of national income. The compound rate of growth of the above variables also supports the above conclusion.

National income at constant prices increased by 4.17 per cent per annum during the period under study. On the other hand, total expenditure at constant prices increased by 6.40 per cent per annum during the same period. The per capita national income at constant prices increased by about 2.08 per cent per annum during 1950-51 to 2000-01, whereas per capita government expenditure at constant prices during the same period has increased by about 4.27 per cent per annum. Thus, the behavior of government expenditure for the last 50-years of planned development supports the Wagner's contention that the growth of

government expenditure would be faster than that of national income. The Dis-aggregative components of total expenditure (functional classification) shows that



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the rate of increase of all the functional heads were faster than that of national income at current as well as constant prices. The expenditure on social and community services at constant prices increased by 7.98 per cent per annum, on economic services at constant prices increased by 5.69 per cent per annum, developmental expenditure at constant prices increased by 6.74 per cent per annum and non-developmental expenditure at constant prices increased by 6.4 per cent per annum, whereas the national income at constant prices grew at the

rate of 4.17 per cent per annum during the period under study. Thus public expenditure has been growing at a faster rate than that of national income.

In money terms income elasticity of total expenditure in India is 1.17. The elasticity of non-developmental expenditure ( $e=1.06$ ) is less than that of developmental expenditure ( $e=1.19$ ). The Expenditure on social and community services ( $e=1.21$ ) in India is more responsive to income change. The expenditure on economic services in India is relatively less responsive to income change ( $e=1.05$ )

Same conclusion can be drawn if we eliminate the price effect. The relatively higher income elasticity of social and community services validates Wagner's Law. In real terms, elasticity of total public expenditure is 1.50. It is 2.65 for developmental expenditure. Social and community services show greater responsiveness ( $e=2.65$ ) as compared to economic services ( $e=1.31$ )

Thus, compound growth rates and elasticities confirm the validity of Wagner's Law in respect of increasing state activities in India.

So far as displacement effect hypothesis of Peacock-Wiseman is concerned, there is no direct relevance in India. The hypothesis of Peacock-Wiseman is concerned with social upheavals like war and depression which create a displacement effect escalating both public expenditure and revenue. But our study is concerned with combined public expenditure of Centre, States, and Union Territories. Defence services are taken care of by the Central Government. The State Governments are not directly concerned with war or defence of the country. Thus as regards to the war of 1962, 1965, 1971 and 1999, the State Governments did not have any direct financial liabilities.

The displacement effect in public expenditure follows the increase in desirable level of public expenditure. This, however, is not clearly visible in case of public expenditure in India. In per capita terms, total expenditure at constant prices increased after 1961-62, and the increase was continued to be observed during the years of war of 1962-63, 1965-66, 1970-71 and 1999-2000. But the

peak of total expenditure during the years of war is not due to war-related expenditure. The peak of government expenditure did not disappear after the removal of war-related defence expenditure and the total government expenditure did not come to the pre-war level.

We can also indirectly test the displacement effect by testing concentration process and inspection effect. The concentration process is particularly relevance to federal States. Each major social upheavals leads to the government assuming a larger proportion of the total national economic activity. In other wards, there is a concentration effect. The concentration effect also refers to the apparent tendency for the Central Government economic activity to grow faster than that of State and local level governments. As such, there is no clear indication as to the working of concentration process during the years of war.

The inadequacy of the revenue as compared with the required public expenditure (due to social upheavals/war) creates an inspection effect. The government and the people review the revenue position and the need to find a solution of the important problems that have come up and agree to the required adjustments to finance the increased expenditure. They attain a new level of tax tolerance. They are now ready to tolerate a greater burden of taxation and as a result the general level of expenditure and revenue goes up. The achievement of full-fledged statehood since independence and the spirit of nation-building and self-reliance has created a favorable environment for inspection effect for pushing up the rates of existing taxes in India. The changing attitudes towards the role of the government and public expenditure in the furtherance of social and economic changes have brought a significant upward shift in the growth of public expenditure in India.

All these factors contributed significantly towards bringing about growth and also change in the pattern of public expenditure. The working of demonstration effect is very strong and this leads the public expenditure to catch up with other relatively developed countries. The wider the gap between the more developed and less developed countries, the greater is the upward thrust on public expenditure in a backward country. The short-term attempts to alleviate

social and economic problems have an even greater stimulating effect on the growth of public expenditure in India. These factors tend to alter the growth and pattern of public expenditure with greater emphasis on social and community services.

**Note :**

Compound Growth Rate has been computed by using following fomula:

$$E_n = E_0(1+r/100)^n$$

where,  $E_n$ = Expenditure in the nth year  
 $E_0$ = Expenditure in the base year  
 $r$ = Rate of Growth of expenditure  
 $n$ = Number of years.

Therefore,

$$r = \{(E_n/E_0)^{1/n} - 1\} \times 100$$

Elasticity is defined as a ratio of percentage change in expenditure to percentage change in NNP. This has been calculated using the log-linear relationship:  $\log E = \text{Log} \alpha + \beta \log Y$

Estimate of  $\beta$  gives the elasticity of expenditure with respect to income