A STUDY OF ELASTICITY OF PLAN AND NON-PLAN EXPENDITURE OF GOVERNMENT OF MAHARASHTRA

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Abstract:

Planning process in India initiates the Plan and non-plan expenditure categories of the total expenditure. Plan expenditure is related with the expenditure in the existing or current plan while Non-plan expenditure is a generic term which includes all the expenditures of the government other than expenditure in current plan. To study the pattern of expenditure, it is necessary to study the plan and non-plan expenditures. Pattern can be studied with the help of elasticity of expenditure. If elasticity of expenditure is greater than one then state is responsive in its expenditure programme to the growth of the economy which is considered as the Wagnerian hypothesis. The objective of the paper is to study the elasticity of plan and non-plan expenditure to Net State Domestic Product and to study the elasticity of per capita plan and non- plan expenditure to Per capita income of the state of Maharashtra. For the study, the secondary data is collected through RBI and State government publications. The Wagner's law of increasing state activity in plan and non- plan expenditure is tested. The results are showing non-presence of Wagner's law in plan and non- plan expenditure. However, non-plan expenditure is reaching nearer to one. Yet both type of expenditures are showing less than one growth which rejects the Wagnerian hypothesis in the state of Maharashtra for plan and non-plan expenditures.

Key Words: -Plan expenditure, Non-plan expenditure, Wagner's Law, Growth rate, Per capita income, Net State Domestic Product Elasticity of expenditure.

1. Introduction: - Plan and no-plan expenditures are related with planning process in India. Plan expenditure is related with the expenditure in the existing or current plan while Non-plan expenditure is a generic term which includes all the expenditures of the government other than expenditure in current plan. To study the pattern of expenditure, it is necessary to study the plan and non-plan expenditures. Pattern can be studied with the help of elasticity of expenditure. If elasticity of expenditure is greater than one then state is responsive in its expenditure programme to the growth of the economy which is considered as the Wagnerian hypothesis.Maharashtra is a leading state in Indian federation as far as efforts of development are concerned. Maharashtra state is considered to be a disciplined state in financial management of the resources. Here, we have to test whether the state is having responsive expenditure programme to the growth of the economy or not. In the classification of public expenditure broadly we are using plan and non-plan expenditure, capital and revenue expenditure and developmental and non-developmental expenditure. Out of this in the present paper we can study the pattern of plan and non- plan expenditure of the government of Maharashtra. Elasticity of plan and non- plan expenditure is studied for thirty years data from 1975 to 2005. If the elasticity of expenditure to NSDP is higher than one then growth in expenditure is higher than growth in NSDP.

 2. Objectives of study: -

I. To study the elasticity of plan and non- plan expenditure to Net State Domestic Product.

II. To study the elasticity of per capita plan and non- plan expenditure to Per capita income of the state.

3. Hypothesis of the Study: - Hypotheses of the study are as follows;

I. Elasticity of plan and non- plan expenditure to NSDP are more than one.

II. Elasticity of per capita plan and non- plan expenditure to per capita income of the state are more than one.

4. Scope of the Study: - The study is restricted to the plan and non- plan expenditure of government of Maharashtra only. No consideration of expenditure of central government. At the same time, there is no consideration of private expenditures or the expenditures of public sector undertakings. The study will take into account the period from 1975 to 2005.

5. Data Collection and Methodology of study: - Data for study collected through secondary sources only which includes budget documents of the state of Maharashtra. Data also collected from Reserve Bank of India bulletin and state finances: a study of the budgets of the state governments. Economic surveys of Maharashtra were also helpful in providing data on NSDP and Per capita income of the state. Here we use regression method to arrive at the results of elasticity of expenditure to NSDP and per capita income of the state.

Log linear model: - The log linear models are being used for to see elasticity of each category of expenditure with Net State Domestic Product of the state. This gives us how much increase in particular category of expenditure occurs because of an increase in NSDP of the state. The model is as follows;

Log PE= A+ Log NSDP+ w1   ------------------------------------Equation-I

Like this log of each category of expenditure is computed using NSDP and per capita income of the state as the independent variable.
Since, we are using data for thirty years it difficult to compute results manually so we use 'R' software which is available on internet freely.

6. Review of literature: - Empirical study of the state expenditure policy and its impact on the other variables, relationship with national income and other variables was studied by the German economists Adolph Wagner. This law of the Wagner is explanatory rather than prescriptive in character. According to Wiseman and Peacock, "Its aim is to establish generalizations about government expenditure, not from postulates about the logic of choice, but rather by direct

inference from historical evidence." Adolph has based his law of increasing state activities on historical facts. Adolph Wagner arguing that government expenditure must increase at an even faster rate than output. According to Wagner,   income elasticity of the public expenditure is greater than unity. It means that rate of increase of government expenditure is greater than the rate of increase of the economy. Arthur Mann tries to test this law but has got contradictory results. Here we test this law for plan and non- plan expenditures of the government of Maharashtra.

5.8.3- Elasticity of expenditure category to NSDP and PCI: - To test the Wagner's law, we can take elasticity of individual category of expenditure of Maharashtra state with that of NSDP and elasticity of individual per capita category of expenditure with that of per capita income of the state. Elasticity of plan expenditure to NSDP is 0.75 and elasticity of per capita plan expenditure to per capita income of the state is 0.70 indicating very less growth of plan expenditure to the growth of the economy. Elasticity of non-plan expenditure to NSDP is 0.99 and that of per capita non-plan expenditure's elasticity with per capita income is 0.98 indicating a less than unity elasticity but it is very close to one. Compare to elasticity of plan expenditure, elasticity of non-plan expenditure is very high. In the expenditure categories one can expect a higher responsiveness of plan expenditure to NSDP. But non-plan expenditure is showing more response to change in income of the state.

Table no 1 - Elasticity of expenditure to NSDP and Elasticity of per capita expenditure to PCI

Category of expenditure	Non-plan exp	Plan exp	PCPE	PCNPE
Intercept	-1.91	-0.4	-0.50	-1.90
Coefficient	0.99	0.75	0.70	0.98
SE I	0.18	0.42	0.40	0.18
SE C	0.01	0.03	0.04	0.02
t-I	-10.17	-0.94	-1.24	-10.59
t-C	57.81	19.38	15.54	49
R^2	0.99	0.93	0.89	0.98

R^{-2}	0.99	0.93	0.89	0.98

All intercepts and coefficients are significant at 0.1% level of significance except Cap Exp which is significant at 5%., SE I- Standard error of Intercept, SE C- SE of Coefficient, t-I & t-C stands for t values of intercept and coefficient, R^2 & R^{-2} are Multiple and adjusted R^2. Author's computation based on tables in statistical appendix.

8. Conclusion: - We are interested in checking whether the state of Maharashtra is responsive in expenditure programme compare to the growth of the economy or not. Here, elasticity of plan expenditure and per capita plan expenditure to NSDP and PCI is less than one which indicates that plan expenditure programme of the state is less responsive to the growth of the economy. While non-plan expenditure is nearer to the unity but yet less than one so it is also less responsive to the growth of the economy.

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Statistical Appendix

Table No.2-Plan and per capita plan expenditure, total expenditure, per capita expenditure, NSDP and per capita income of Maharashtra.

Year	TPE	PCPE	TNPE	PCNPE	TE(L)	PCE(Rs)	NSDP(Cr)	PCSI(Rs)
1975-76	30947	55.913	104904	189.535	135851	245.448	7676.8	1387
1976-77	47765	84.481	102150	180.671	149915	265.152	8573.6	1516.4
1977-78	54965	95.119	110892	191.90	165857	287.02	9624.8	1665.6
1978-79	64290	108.85	143776	243.42	208066	352.275	10658	1804.5
1979-80	67614	112.01	161326	267.245	228940	379.251	12145.7	2012
1980-81	73791	118.51	187487	301.117	261278	419.63	15113.3	2427.3
1981-82	91470	143.87	217316	341.81	308786	485.68	16965.8	2668.5
1982-83	114121	175.65	244397	376.155	358518	551.8	18277.4	2813.1
1983-84	139368	209.85	285029	429.182	424397	639.035	21151.6	3184.9
1984-85	157483	232.17	348826	514.252	506309	746.419	22628	3335.9
1985-86	139028	200.98	434120	627.552	573148	828.528	26467	3826
1986-87	190016	267	451169	633.963	641185	900.965	28431	3995
1987-	21500	295.29	477887	656.33	692892	951.624	33770	4638

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1988-89	247352	331.86	562811	755.106	810163	1086.97	40472	5430
1989-90	274149	359.23	699558	916.671	973707	1275.9	50139	6570
1990-91	293196	375.16	784030	1003.22	1077226	1378.38	58137	7439
1991-92	303104	379.62	902052	1129.76	1205156	1509.38	65808	8242
1992-93	371155	455.83	1030201	1265.22	1401356	1721.05	82076	10080
1993-94	392539	474.05	1205773	1456.16	1698312	2050.98	101767	12290
1994-95	665889	789.47	1336744	1584.84	2002633	2374.31	116507	13813
1995-96	639858	744.71	1497788	1743.22	2137646	2487.92	140730	16379
1996-97	712843	801.6	1787652	2010.24	2500495	2811.84	158682	17844
1997-98	734630	809.69	2032884	2240.6	2767514	3050.29	195168	21511
1998-99	630141	681.11	2401578	2595.81	3031719	3276.92	214557	23191
1999-00	578757	613.18	3245424	3438.45	3824361	4051.82	247830	26257
2000-01	693403	721.04	3527416	3668.03	4220819	4389.08	252283	26234
2001-	47254	482.56	377541	3855.3	4247958	4337.95	274113	27992

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2002-03	516735	520.01	4205003	4231.65	4721738	4751.66	300476	30238
2003-04	754843	748.62	4632975	4594.79	5387818	5343.41	341424	33861
2004-05	922951	899.86	6163481	6009.31	7086432	6909.18	387390	37770

TPE- Total plan expenditure, PCPE- Per capita plan expenditure, TNPE- Total Non plan expenditure, PCNPE- Per capita non-plan expenditure. TE(L)- Total expenditure in Lac, PCE- per capita expenditure, NSDP- Net state domestic product, PCSI- Per capita state income.

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