

Revenue Impact of Goods and Services Tax on Tamil Nadu Government

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Abstract

In Indian Constitution, more revenue mobilising resources allotted to the Central Government and less revenue mobilising resources allotted to the State Government. It creates fiscal imbalances namely Vertical and Horizontal imbalance. States are facing strains to match their revenue with increasing economic responsibilities. Finance Commission set up at different time interval try to compensate these imbalances by means of fiscal transfers. States have taken continuous steps to overcome these problems. Tamil Nadu is also no exception. Value Added Tax was the prime sources of revenue as it contributed more than 60 per cent of States Own Tax Revenue. But it was also not free from negative impact. Double Taxation and Cascading effect were the major problems in the Value Added Tax. In order to eradicate these problems, Goods and Services Tax had been implemented from July 1, 2017. Hence, it is expected that Goods and Services Tax system had done better than the Value Added Tax. This can be assessed by means of comparing the performance of two tax systems. In this study, a period of 10 years from 2012-'13 to 2021-'22 has been taken to compare the revenue performance of Goods and Services Tax against Value Added Tax system. The Compound Annual Growth Rate of pre and post Goods and Services Tax had been calculated to compare the relative importance of Goods and Services Tax by using the formula $CAGR = [(Antilog(b)) - 1] \times 100$. Tax buoyancy has been estimated $LN(VAT)_t = \beta_0 + \beta_1 LN.G_t + \beta_2 (GST_t, LN.G_t)$. It is identified the growth rate of Goods and Services Tax was 16.66%. The revenue impact of Goods and Services Tax has improved slowly during the period of analysis.

Keywords: *Fiscal imbalance, Vertical imbalance, Horizontal imbalance, Fiscal transfers, Double Taxation and Cascading effect.*

Introduction

Financial mismatch is a major problem in the finances of State Governments. States are facing more fiscal strains in Indian federation. This financial mismatch compels the State Governments to depend mostly on Central transfers. Tamil Nadu is also no exception. Revenue Receipts of Tamil Nadu comprises of Tax Revenue (80%) and Non-Tax Revenue (20%). Indirect taxes are the prime sources of revenue as it contributes nearly 80 per cent of State's Own Tax Revenue. So indirect taxes are very important to augment the revenue of the Government. Apart from this positivity, indirect taxes are also not free from certain negative impacts. One such impact is the cascading effect. Several reforms have been introduced from time to time to eliminate these negative impacts. One such reform was the introduction of Value Added Tax. In Tamil Nadu it came into effect from 1st January 2007. It was considered as an important reform in terms of indirect taxes. But it also failed to remove cascading effect. Goods and Services Tax has been implemented during 1st July 2017 with a view of replacing the multiple tax structures and the removal of cascading effect. So it is expected that the implementation of Goods and Services Tax increases the revenue and tax buoyancy of Tamil Nadu Government. An attempt is made here to analyze the impact of Goods and services Tax on the revenue of Tamil Nadu Government.

Review of literature

Udai Lal Paliwal, Nitin Kishore Saxena and Ashutosh Pandey¹ (2019) analysed the impact of Goods and Services Tax on Tax Revenue in India. Semi logarithmic ANCOVA regression model used to measure tax buoyancy. It was found that after the introduction of GST in India tax revenue become less responsive to the changes in GDP.

Sacchidananda Mukherjee & R. Kavitha Rao² (2019) made an analysis on fiscal implications of GST introduction in India. In this study, expected revenue from GST for states has been calculated by using the following formula:

$$ERUPt = \text{Revenue subsumed under GST for 2015-16} * [1 + (14/100)]^t$$

Where, ERUPt = Estimated Revenue under Protection;

t = 2 for 2017-18, t = 3 for 2018-19.

In this study, it was identified that in many states the trend of GST is not stable and particularly in Maharashtra and Gujarat it is falling.

Roshini, Suman Kumari Nayak, Laxmipreya Behera and Upasana Mohapatra³ (2020) analysed the impact of Goods and Services Tax (GST) on Tamil Nadu Economy with Special Reference to Agriculture and Allied Sectors. The implementation of GST will give positive impacts on sectors like automobiles, entertainment, FMCG, cement, real estate also slightly

¹ Udai Lal Paliwal, Nitin Kishore Saxena and Ashutosh Pandey (2019), "Impact of Goods and Services Tax on Tax Revenue in India" International Journal of Economics and Business Administration, Volume: VII, Issue: 4, pp: 514-523.

² Sacchidananda Mukherjee & R. Kavitha Rao (2019), "Fiscal implications of GST introduction in India, National Institute of Public Finance and Policy, New Delhi, pp: 1-46.

³ Roshini, Suman Kumari Nayak, Laxmipreya Behera and Upasana Mohapatra (2020), "Impact of Goods and Services Tax (GST) on Tamil Nadu Economy with Special Reference to Agriculture and Allied Sectors" International Journal of Agriculture Innovations and Research Volume 6, Issue 3, ISSN (Online) 2319-1473.

positive impact on metal can be seen. It was observed that GST will expect to remain neutral for pharmaceutical sector.

The studies on tax revenue of India are numerous. But the study on the impact of Goods and Services Tax on the revenue of Tamil Nadu Government is a missing element. This research gap has been identified through the review of earlier studies.

Statement of the problem

Value Added Tax was considered as a major reform in the indirect tax system. But Value Added Tax system also fails to eliminate cascading effect and tax evasion. Therefore Government introduced Goods and Services Tax on 1st July 2017. The main aim of Goods and Services Tax is to eliminate cascading effect and tax evasion. Minimisation of tax evasion helps to augment more tax revenue and removal of cascading effect. Therefore, it was expected that the tax performance of States in India in general and Tamil Nadu in particular had improved due to the introduction of Goods and Services Tax. This has aroused an academic interest in the minds of everyone as to know whether Goods and Services Tax system had done better than its predecessor Value Added Tax system which it replaced. This can be done by means of comparing the revenue performance of the two tax systems.

Objectives of the study

The general objective of the study is to know the revenue impact of Goods and Services Tax in Tamil Nadu. The specific objectives are:

1. To calculate the share of Tax Revenue and State's Own Tax Revenue in GSDP of Tamil Nadu.
2. To compare the influence of Value Added Tax and Goods and Services Tax in States' Own Tax Revenue of Tamil Nadu.
3. To compare the growth rate of Value Added Tax and Goods and Services Tax from 2012-'13 to 2021-'22.
4. To calculate Goods and Services Tax Buoyancy in Tamil Nadu.

Reference period:

The present study covers a period of 10 years from 2012-2013 to 2021-2022. A period of 5 years pre and post Goods and Service Tax system is convincingly adequate to compare the revenue performance of Value Added Tax and Goods and Services Tax.

Nature and sources of data:

The data used in the present study are secondary in nature. The needed data to assess the tax performance of Goods and Services Tax has been obtained from various sources. Gross State Domestic Product were obtained from National Accounts Statistics of Central Statistical Office. The data related to Value Added Tax, Goods and Services Tax, States'

Own Tax Revenue were compiled from the different publication of State Finances: Reserve Bank of India and Budget Memorandum of Tami Nadu.

Methodology

Tax Revenue and State's Own Tax Revenue as per cent of Gross State Domestic Product has been calculated to know the influence of Goods and Services Tax in Tamil Nadu. The percentage of Value Added Tax revenue in State's Own Tax Revenue of Tamil Nadu during 2012-'13 to 2016-'17 and the percentage of Goods and Services Tax in State's Own Tax Revenue from 2017-'18 to 2021-'22 had been calculated to identify the relative revenue significance of Goods and Services Tax.

The Compound Annual Growth Rate of pre and post Goods and Services Tax had been calculated to compare the relative importance of Goods and Services Tax by using the following formula.

$$\text{CAGR} = [(\text{Antilog}(b)) - 1] \times 100$$

Where, CAGR = Compound Annual Growth Rate

'b' = Regression co-efficient.

The regression co-efficient 'b' has been separately calculated through regression analysis. The dependent variable is natural logarithm of Value Added Tax and Goods and Services Tax and the independent variable is time.

The Value Added Tax Revenue during pre and post Goods and Services Tax regime were compared by using the following equations:

$$\text{LN}(\text{VAT})_t = \beta_0 + \beta_1 \text{LN}.G_t + \beta_2 (\text{GST}_t.\text{LN}.G_t) \text{ ----- (1)}$$

$$(\text{VAT}/G)_t = \beta_0 + \beta_1 \text{GST}_t \text{ ----- (2)}$$

In this equation, LN prefixed to a variable namely, its natural logarithm, Value Added Tax pre and post Goods and Services Tax is abbreviated as VAT_t , and GSDP_t is abbreviated as G_t and t is an annual time period subscript ranging from 2012-'13 to 2021-'22. GST_t is a dummy variable taking the value of one for years in which the Goods and Services Tax prevailed and zero for years in which the Goods and Services Tax did not get implemented. An increased co-efficient (β_2) of the Goods and Services Tax dummy in the equation is consistent with higher secular revenue productivity of the Goods and Services Tax compared to the earlier Value Added Tax.

Similarly State's Own Tax Revenue was estimated by using the following equations:

$$\text{LNSORR}_t = \beta_0 + \beta_1 \text{LNG}_t + \beta_2 (\text{GST}_t.\text{LNG}_t) \text{ ----- (3)}$$

$$(\text{SORR}/G)_t = \beta_0 + \beta_1 \text{GST}_t \text{ ----- (4)}$$

In this equation, SORR denotes State's Own Revenue Receipts. A fifth equation was estimated to check if, even if there was no revenue increase, the Goods and Services Tax at least contributed a larger share of State Revenue.

$$[\text{VAT/SORR}]_t = \beta_0 + \beta_1 \text{GST}_t \text{-----} (5)$$

Tax Revenue and State's Own Tax Revenue

Tamil Nadu Government obtains Tax Revenue through two components namely State's Own Taxes and Share from Central Taxes. In the Indian Constitution certain taxes are levied and collected by the states themselves. These taxes are termed as States' Own Tax Revenue. According to Reserve Bank of India⁴ "States' Own Tax Revenue has three components namely taxes on income, taxes on property and capital transactions and taxes on Commodities and Services". Tax Revenue as percent of Gross State Domestic Product and States Own Tax Revenue as percent of Gross State Domestic Product of Tamil Nadu Government during the reference period has been presented (Table 1).

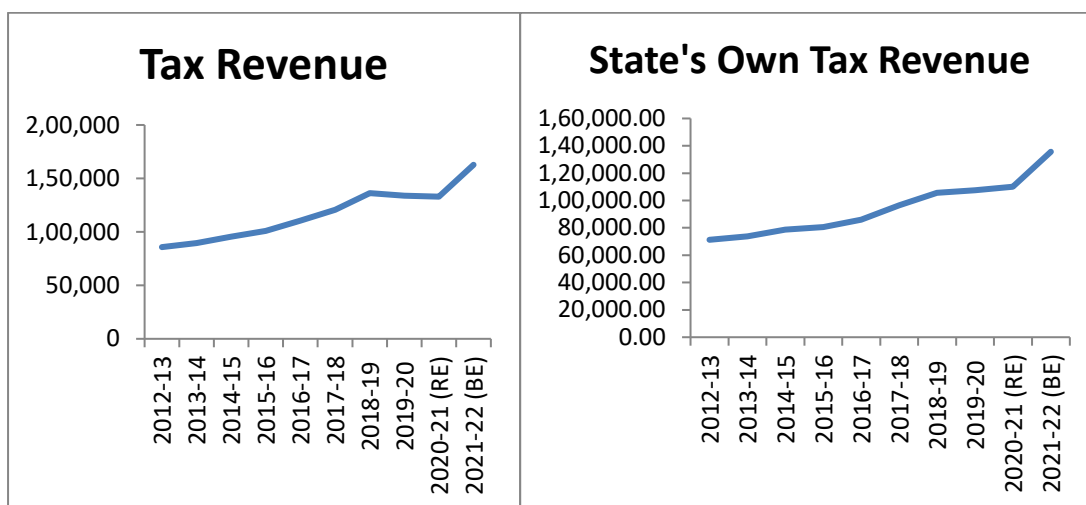
Table 1–Share of Tax Revenue and State's Own Tax Revenue in GSDP of Tamil Nadu Government

Year	GSDP (in crores)	Tax Revenue		State's Own Tax Revenue	
		Amount (in crores)	Share (%)	Amount (in crores)	Share (%)
2012-13	8,54,825	85,774	10.03	71,254.28	8.34
2013-14	9,68,530	89,571	9.25	73,718.11	7.61
2014-15	10,72,678	95,481	8.90	78,656.54	7.33
2015-16	11,76,500	1,00,830	8.57	80476.089	6.84
2016-17	13,02,639	1,10,479	8.48	85,941.41	6.60
2017-18	14,65,051	1,20,836	8.25	96,472.17	6.58
2018-19	16,30,208	1,36,172	8.35	1,05,534.16	6.47
2019-20	17,91,985	1,33,855	7.47	107462.286	6.00
2020-21 (RE)	19,87,311	1,33,008	6.69	109968.972	5.53
2021-22 (BE)	21,20,319	1,62,790	7.68	135641.784	6.40

Source: Author's calculation based on data obtained from State Finances, RBI, Budget Memorandum of Tamil Nadu and CSO.

⁴ State Finances – A study of Budgets of 2019-20, Reserve Bank of India, September 2019, p: 205.

Figure 1–Tax Revenue and State’s Own Tax Revenue of Tamil Nadu Government



Source: Table 1

Tax Revenue of Tamil Nadu Government increased from Rs. 85,774 crores in 2012-'13 to Rs. 1,62,790 crores in 2021-'21 (BE). The percent of Tax Revenue in Gross State Domestic Product fluctuated from 10.03 per cent to 8.19 per cent during the study period (Figure 1). The States Own Tax Revenue of Tamil Nadu Government pushed from Rs.71254 crores in 2012-'13 to Rs.135641 crores in 2021-'22 (BE). But the share of States Own Tax Revenue in Gross State Domestic Product deteriorated from 8.34 per cent to 6.83 per cent in the period of study. It reveals that no reduction of Tax Revenue after the implementation of Goods and Services Tax in Tamil Nadu.

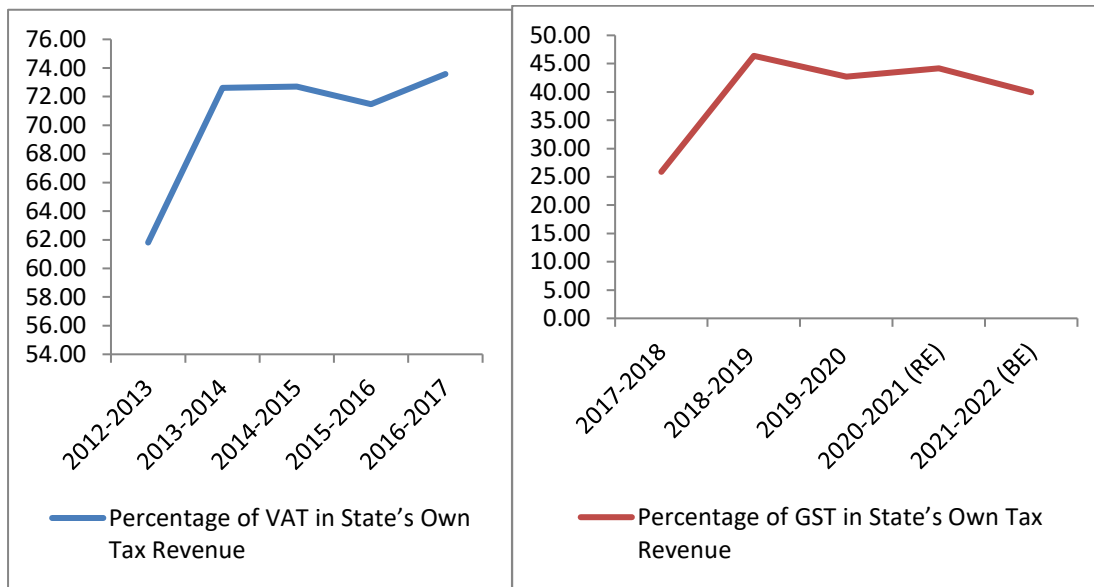
Share of Value Added Tax and Goods And Services Tax in State’s Own Tax Revenue:

State’s Own Tax Revenue is an important factor in the determination of revenue of a State government. The influence of Value Added Tax and Goods and Services Tax in State’s Own Tax Revenue of Tamil Nadu (Table 2).

Table 2–Influence of Value Added Tax and Goods And Services Tax in State’s Own Tax Revenue of Tamil Nadu

Year	Percent of VAT in State’s Own Tax Revenue	Year	Percent of GST in State’s Own Tax Revenue (in per cent)
2012-2013	61.81	2017-2018	25.89
2013-2014	72.62	2018-2019	46.38
2014-2015	72.71	2019-2020	42.68
2015-2016	71.48	2020-2021 (RE)	44.16
2016-2017	73.58	2021-2022 (BE)	39.93

Source: Author’s calculation based on data obtained from State Finances, RBI and Budget Memorandum of Tamil Nadu.

Figure 2–VAT and GST in State’s Own Tax Revenue

Source: Table 2

During the pre-GST regime, the per cent of Value Added Tax in the State’s own sources fluctuated between 61.81 per cent in the year 2012-’13 and 73.58 per cent during 2016-’17 (Figure 2). But during the post-GST regime, the share of GST in State’s own sources, ranged between 25.89% in 2017-’18 and 39.93% in 2021-’22(BE). The share of GST in States’ Own Tax Revenue is lower than the share of VAT. But the share of Goods and Services Tax in State’s Own Tax Revenue is continuously increasing.

Growth Rate of Value Added Tax and Goods And Services Tax

Growth rate is essential to identify whether the rate of increase in the revenue of Value Added Tax has improved or not. Since Compound Annual Growth rate is better than the Simple Annual growth rate, the compound annual growth rate of Sales Tax and Value Added Tax during the 5 years of pre Value Added Tax regime and post Value Added Tax regime has been calculated and compared (Table 3).

Table 3–Growth Rate of VAT and GST- A Comparison

YEAR	VAT(in crores)	YEAR	GST(in crores)
2012-13	44,041.13	2017-18	24,972.23
2013-14	53,532.17	2018-19	48,948.56
2014-15	57,190.80	2019-20	45,865.53
2015-16	57,522.03	2020-21 (RE)	48,563.38
2016-17	63,233.58	2021-22 (BE)	54,167.30
Growth Rate = 8.28 %		Growth Rate = 16.66 %	

Source: Author’s calculation based on data obtained from State Finances, RBI and Budget Memorandum of Tamil Nadu.

In absolute terms the revenue of Value Added Tax and Goods and Services Tax had increased continuously during the reference period. Comparison in absolute terms will not serve the academic purposes. Hence, compound annual growth rate had been calculated and a comparison was made. It was 8.28 per cent during pre GST regime. It increased to 16.66 per cent after the implementation of Goods and Services Tax. Thus, it is clear that there is an improvement in the revenue of Goods and Services Tax compared to the revenue of Value Added Tax.

GSDP and VAT Buoyancy

The revenue of Value Added Tax and Goods and Service Tax was influenced by Gross Domestic Product. In order to verify this, multiple regression had been used. The natural logarithm of Value Added Tax had taken as dependent variable and the natural logarithm of Gross State Domestic product and the slope dummy variable [VAT.LN(GSDP)] had taken as independent variables (Table 4).

Table 4–GSDP and VAT Buoyancy

YEAR	VAT	LN (VAT) Y	GSDP	LN (GSDP) X ₁	[GST.LN(GSDP)] X ₂
2012-13	44,041	10.6929	8,54,825	13.6587	0
2013-14	53,532	10.8880	9,68,530	13.7835	0
2014-15	57,191	10.9541	10,72,678	13.8857	0
2015-16	57,522	10.9599	11,76,500	13.9781	0
2016-17	63,234	11.0546	13,02,639	14.0799	0
2017-18	24,972	10.1255	14,65,051	14.1974	14.1974
2018-19	48,949	10.7985	16,30,208	14.3042	14.3042
2019-20	45,866	10.7335	17,91,985	14.3988	14.3988
2020-21 (RE)	48,563	10.7906	19,87,311	14.5023	14.5023
2021-22 (BE)	54,167	10.8998	19,87,326	14.5023	14.5023

Source: Author's calculation based on data obtained from State Finances, RBI and Budget Memorandum of Tamil Nadu.

The regression equation is as follows:

$$\text{LN VAT}_t = -6.34 + 1.24 \text{ LN Gt} - 0.06 (\text{GST}_t \cdot \text{LNG}_t)$$

It is inferred that the buoyancy of Goods and Services is 1.24. It means that one unit increase in the Gross Domestic Product leads to 1.24 unit increases in the revenue of Value Added Tax/Goods and Services Tax and one unit increase in the slope dummy variable ($\text{GST}_t \cdot \text{LNG}_t$) leads to 0.06 unit decreases in the revenue of Value Added Tax/Goods and Services Tax. Since the co-efficient value of Gross State Domestic Product (1.24) is greater than the slope dummy variable (-0.06), the revenue of Value Added Tax/Goods and Services Tax are much influenced by Gross State Domestic Product.

GST Dummy Buoyancy in the ratio of Value Added Tax to GSDP

In order to know the influence of Goods and Services Tax implementation in the revenue of Tamil Nadu Government, another regression equation had calculated. Here, the ratio of Value Added Tax to Gross State Domestic product was considered as dependent variable and the Goods and Services Tax dummy variable was considered as independent variable (Table 5).

Table 5–GST Dummy Buoyancy in the ratio of VAT/GSDP

YEAR	VAT	GSDP	[VAT/GSDP] Y	GST X
2012-13	44,041	8,54,825	0.0515	0
2013-14	53,532	9,68,530	0.0553	0
2014-15	57,191	10,72,678	0.0533	0
2015-16	57,522	11,76,500	0.0489	0
2016-17	63,234	13,02,639	0.0485	0
2017-18	24,972	14,65,051	0.0170	1
2018-19	48,949	16,30,208	0.0300	1
2019-20	45,866	17,91,985	0.0256	1
2020-21 (RE)	48,563	19,87,311	0.0244	1
2021-22 (BE)	54,167	19,87,311	0.0273	1

Source: Author's calculation based on data obtained from State Finances, RBI and Budget Memorandum of Tamil Nadu.

The regression equation of the data is mentioned below:

$$(VAT/Gt) = 0.05 - 0.03 (GSTt)$$

It means that the implementation of Goods and Services Tax had a negative influence on the share of Value Added Tax and Gross State Domestic Product. One unit increase in the Goods and Services Tax dummy variable leads to 0.03 unit decrease in the ratio of Value Added Tax to Gross State Domestic Product.

Thus, it is understood that the implementation of Goods and Services Tax did not increase the share in Gross State Domestic Product during the reference period.

Gross State Domestic Product and Buoyancy of State's Own Tax Revenue

State's Own Tax Revenue also influenced by Gross State Domestic Product and Goods and Services Tax implementation. The regression equation worked by taking natural logarithm of State's Own Tax Revenue as dependent variable and by considering natural logarithm of Gross State Domestic Product and Slope of dummy variable as independent variables. The equation helps to calculate and to identify the influence of Goods and Services Tax on Gross State Domestic Product in State's Own Tax Revenue (Table 6).

The regression equation is as follows:

$$\text{LN SOTR}_t = 3.48 + 0.56 \text{ LNG}_t + 0.005 (\text{GST}_t \cdot \text{LNG}_t)$$

The Gross State Domestic Product as well as the implementation of Goods and Services Tax had positive influence on State's Own Tax Revenue. It also emphasizes that one unit increase in the Gross State Domestic Product leads to 0.56 unit increase in the State's Own Tax Revenue and one unit increase in the slope dummy variable ($\text{GST}_t \cdot \text{LNG}_t$) leads to 0.005 unit increase in the State's Own Tax Revenue.

Since the co-efficient value of Gross State Domestic Product (0.56) is greater than that of the slope dummy variable (0.005), the State's Own Tax Revenue receipts are more influenced by Gross State Domestic Product than Goods and Services Tax.

Table 6—GSDP and Buoyancy of State's Own Tax Revenue

YEAR	SOTR	LN (SOTR) Y	LN (GSDP) X ₁	[GST.LN(GSDP)] X ₂
2012-13	71254.28	11.1740	13.6587	0
2013-14	73718.11	11.2080	13.7835	0
2014-15	78656.54	11.2728	13.8857	0
2015-16	80476.09	11.2957	13.9781	0
2016-17	85941.41	11.3614	14.0799	0
2017-18	96472.17	11.4770	14.1974	14.1974
2018-19	105534.16	11.5668	14.3042	14.3042
2019-20	107462.29	11.5849	14.3988	14.3988
2020-21 (RE)	109968.97	11.6080	14.5023	14.5023
2021-22 (BE)	135641.78	11.8178	14.5023	14.5023

Source: Author's calculation based on data obtained from State Finances, RBI and Budget Memorandum of Tamil Nadu.

GST Dummy Buoyancy in the ratio of State's Own Tax Revenue to Gross State Domestic Product

In order to know the influence of Goods and Services Tax in the ratio of State's Own Tax Revenue to Gross State Domestic Product, a regression equation had been worked out by considering the share of State's Own Tax Revenue in Gross State Domestic Product as dependent variable and Value Added Tax dummy as independent variable (Table 7).

Table 7–GST Dummy Buoyancy in the ratio of State’s Own Tax Revenue to GSDP

YEAR	SOTR	GSDP	[SORR/GSDP] (Y)	GST (X)
2012-13	71254.28	8,54,825	0.0834	0
2013-14	73718.11	9,68,530	0.0761	0
2014-15	78656.54	10,72,678	0.0733	0
2015-16	80476.09	11,76,500	0.0684	0
2016-17	85941.41	13,02,639	0.0660	0
2017-18	96472.17	14,65,051	0.0658	1
2018-19	105534.16	16,30,208	0.0647	1
2019-20	107462.29	17,91,985	0.0600	1
2020-21 (RE)	109968.97	19,87,311	0.0553	1
2021-22 (BE)	135641.78	19,87,311	0.0683	1

Source: Author’s calculation based on data obtained from State Finances, RBI and Budget Memorandum of Tamil Nadu.

The regression equation is as follows

$$(\text{SORR}/\text{G})_t = 0.07 - 0.01 \text{ GST}_t$$

The Goods and Services Tax implementation had a negative influence on the share of State’s Own Tax Revenue to Gross State Domestic Product. One unit increase in the Goods and Services Tax dummy variable leads to 0.01 unit decrease in the ratio of State’s Own Tax Revenue to Gross State Domestic Product.

GST Dummy Buoyancy in the ratio of VAT to State’s Own Tax Revenue

To check even if there was no revenue increase, the Goods and Services Tax at least would have contributed a larger share of State revenue, a regression equation considering the ratio of Value Added Tax to State’s Own Tax Revenue as dependent variable and Value Added Tax dummy variable as independent variable was worked out (Table 8).

Table 8–GST Dummy Buoyancy in the ratio of Vat To State’s Own Tax Revenue

YEAR	VAT	SOTR	[VAT/SORR] (Y)	GST (X)
2012-13	44,041	71254.28	0.6181	0
2013-14	53,532	73718.11	0.7262	0
2014-15	57,191	78656.54	0.7271	0
2015-16	57,522	80476.09	0.7148	0
2016-17	63,234	85941.41	0.7358	0
2017-18	24,972	96472.17	0.2589	1
2018-19	48,949	105534.16	0.4638	1
2019-20	45,866	107462.29	0.4268	1
2020-21 (RE)	48,563	109968.97	0.4416	1
2021-22 (BE)	54,167	135641.78	0.3993	1

Source: Author’s calculation based on data obtained from State Finances, RBI and Budget Memorandum of Tamil Nadu.

The regression equation is as follows

$$(\text{VAT/SORR})_t = 0.70 - 0.31 \text{ GST}_t$$

The Goods and Services Tax implementation had a negative influence in the ratio of Sales Tax to State's Own Tax Revenue. It also denotes that one unit increase in Goods and Services Tax dummy variable leads to decrease 0.31 unit in the ratio of Value Added Tax to State's Own Tax Revenue.

Thus, the implementation of Goods and Services Tax decreases the share in State's Own Tax Revenue.

Findings

The following findings are arrived from the present study on the revenue impact of Goods and Services Tax in Tamil Nadu.

- Tax Revenue, States Own Tax Revenue and the share of Goods and Services Tax in States' Own Tax Revenue of Tamil Nadu is continuously increasing after the implementation of Goods and Services Tax.
- The Compound Annual Growth Rate of GST (16.66 per cent) is higher than that of VAT (8.28 per cent). Thus, it is clear that there is an improvement in the revenue of Goods and Services Tax compared to the revenue of Value Added Tax.
- Since the co-efficient value of Gross State Domestic Product (1.24) is greater than the slope dummy variable (-0.06), the revenue of Value Added Tax/Goods and Services Tax are much influenced by Gross State Domestic Product.
- One unit increase in the Goods and Services Tax dummy variable leads to 0.03 unit decrease in the ratio of Value Added Tax to Gross State Domestic Product.
- Since the co-efficient value of Gross State Domestic Product (0.56) is greater than that of the slope dummy variable (0.005), the State's Own Tax Revenue receipts are more influenced by Gross State Domestic Product than Goods and Services Tax.
- One unit increase in the Goods and Services Tax dummy variable leads to 0.01 unit decrease in the ratio of State's Own Tax Revenue to Gross State Domestic Product.
- One unit increase in Goods and Services Tax dummy variable leads to decrease 0.31 unit in the ratio of Value Added Tax to State's Own Tax Revenue.

Conclusion

As far as Tamil Nadu is concerned, the Compound Annual Growth Rate of Goods and Services Tax was higher than the Growth rate of Value Added Tax. Moreover, there is a positive influence of Goods and Services Tax in the States Own Tax Revenue. Hence, the revenue impact of Goods and Services Tax in Tamil Nadu has improved slowly during the period of analysis.

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