

## Nature and Pattern of Government Expenditure and its Impact on Economic Growth of Tamil Nadu

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### Abstract

*Aggregate demand in Keynesian economics is considered as a prominent factor in determining economic growth and development. Keynes projected effective demand and consumption expenditures influence economic development to a large extent. It may be postulated that expenditure and economic development are closely associated. More output and employment opportunity may be generated by increasing the level of expenditure. More consumption expenditure will positively influence growth and development. This study reveals that there is a strong association between government expenditure and gross state domestic product and also there is a strong association between expenditure on education.*

**Key words:** Gross Domestic product, government expenditure, the ratio between government and GSDP, economic growth and development and education expenditure.

### Introduction

According to Keynes growth and development of an economy may be accelerated by increasing government and private expenditure, investments, consumptions, savings, rate of interest and so on. Effective demand is the major factor which influences the effect of investment multiplier and growth rate of income whereas the classical economists emphasised the Says Law of Market. After the "Great Depression" public expenditure is considered as an important factor in determining economic development. The major development indicators like income, output and employment are determined by public expenditure. Therefore, the authors in this paper made an attempt to examine the association between government expenditures and Gross State Domestic product in Tamilnadu.

### Objectives and Research Methodology

The authors made an attempt to examine the impact of Government expenditure on economic growth of Tamilnadu in terms of Gross State Domestic Product and also examine the association between education expenditure and gross domestic product in Tamilnadu. The study is historical and descriptive in nature. Secondary data from various sources of government publications organized to use to justify the objectives of the paper. Statistical tools such as Multiple regression and t – test are used to examine the association between government expenditure and economic growth.

### Review of Literature

Gugan in his work, State finance in Tamilnadu 1960-90, stated that there is positive association between government expenditure and economic growth of Tamilnadu. However, he suggested that the highly productive expenditure should be identified so as to accelerate economic growth. C. Rangarajan and K.R. Shanmugam, (Economic overview of Tamilnadu (2023-24), in their study showed that there was positive association between government investment, government spending and economic activities.

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Their analysis also has proved that there is positive correlation between government spending and economic growth. N. Selvaraj in his work, Trends in Public spending in Tamilnadu 1980-2020, revealed that there is association between human capital expenditure especially expenditure on health and education on economic growth of Tamilnadu. However, he suggested that learning outcome should be considered.

### Theoretical Framework

Economic history reveals that increase in the level of investment results in demand and supply effect. Harrod -Domer group model has proved that increase in the level of investment increase the level of output and generate more employment opportunities which in turn generates income in an economy. Thus, increase in the level of investment positively influences the level of the supply of goods and services as well as the demand for the same. According to Schultz, in his work investment in people, there is positive association between expenditure on health and education and economic growth. Infact, post Keynesian economics conveys that consumption expenditure positively influences economic growth of a country.

### Data Analysis and Interpretation

Trends of Government expenditure in Tamilnadu from 2000-01 to

Year	GSDP	RE	CE	TE	Edu.EX.
2000-01	146796	2175244	154688	2329932	46598.64
2001-02	148861	2155697	177791	2333488	46669.76
2002-03	158155	2568770	162754	2731524	54630.48
2003-04	175371	2527094	358990	2886084	57721.68
2004-05	202374	2915487	456397	3371884	67437.68
2005-06	234837	3200867	405456	3606323	72126.46
2006-07	276917	3826497	595237	4421734	88434.68
2007-08	304989	4297501	746223	5043724	100874.48
2008-09	339212	5359026	1413283	6772309	135446.18
2009-10	379503	5937535	1335498	7273033	145460.66
2010-11	751486	7291630	1796544	9088174	181763.48
2011-12	854825	8383804	2562723	10946527	218930.54
2012-13	968530	9,70,674	2,43,285	12,13,959	24279.18
2013-14	1072678	10,98,247	2,43,677	13,41,924	26838.48
2014-15	1176500	12,88,280	2,85,828	15,74,108	31482.16
2015-16	1302639	14,09,932	2,79,024	16,88,956	33779.12
2016-17	1465051	15,31,953	5,49,245	20,81,197	41623.94
2017-18	1630209	1,67,87,363	35,67,744	2,03,55,107	407102.14
2018-19	1743144	1,97,20,060	45,81,624	2,43,01,684	486033.68
2019-20	1788074	2,10,43,472	47,50,616	2,57,94088	515881.76

Source: compiled from budget documents of Tamil Nadu from 2000-01-2020- 21

### Multiple Regression Analysis

#### Dependent Variable (Y)

- GSDP (Gross State Domestic Product) Independent Variables
- X1 – Revenue Expenditure (RE)
- X2 – Capital Expenditure (CE)
- X3 – Total Expenditure (TE)
- X4 – Education Expenditure (Edu Ex.)

A total of 12 years of complete data were used.

**Regression Equation**

$$\hat{Y} = -132409 + 0.0242X_1 + 0.0294X_2 + 0.0533X_3 + 0.0011X_4$$

**Model Output (From Statistical Computation) Model Fit**

Statistic	Value
R <sup>2</sup>	0.918
Adjusted R <sup>2</sup>	0.900
F-statistic	50.45
p-value (Model)	0.0000129

**Interpretation**

- The model explains 91.8% of the variation in GSDP.
- Adjusted R<sup>2</sup> of 0.90 indicates excellent model fit even after adjusting for number of predictors.
- **The overall model is highly statistically significant (p < 0.001).**

**Regression Coefficients**

Variable	Coefficient (β)	t-value	p-value	Significance
Intercept	-132,409	-1.80	0.104	Not significant
X1 (RE)	0.0242	0.242	0.814	Not significant
X2 (CE)	0.0294	0.216	0.834	Not significant
X3 (TE)	0.0533	1.434	0.185	Not significant
X4 (Edu Ex.)	0.0011	1.439	0.184	Not significant

**Interpretation of Results****1. Overall Model**

- The model is statistically significant (p < 0.001) → Government expenditures collectively influence GSDP strongly.
- High R<sup>2</sup> (0.918) shows government spending accounts for a large share of economic growth variations.

**2. Coefficient-Level Interpretations X1 – Revenue Expenditure (RE)**

- β = 0.0242
- p = 0.814 → not statistically significant

**RE does not show a strong direct influence on GSDP in this period.**

**X2 – Capital Expenditure (CE)**

- β = 0.0294
- p = 0.834 → not significant

**CE, although theoretically growth-inducing, did not significantly predict GSDP during the sample period.**

#### **X3 – Total Expenditure (TE)**

- $\beta = 0.0533$
- $p = 0.185 \rightarrow$  Not significant

**Even though TE has the largest positive coefficient, it is still not statistically significant.**

#### **X4 – Education Expenditure**

- $\beta = 0.0011$
- $p = 0.184 \rightarrow$  Not significant

**Education spending has a positive but statistically insignificant relationship with GSDP.**

**Why Are Individual Predictors Not Significant? The diagnostics show:**

- Extreme multicollinearity (predictors are highly correlated; condition number =  $9.41 \times 10^{17}$ )
- TE overlaps with RE and CE (since  $TE = RE + CE$ ) This causes:
- Inflated standard errors
- Reduced t-statistics
- High p-values

**Thus, the model is significant as a whole, but individual predictors are not significant due to collinearity problems.**

#### **Conclusion**

Government expenditure strongly predicts economic growth (overall model significant). However, due to multicollinearity, no single expenditure component (RE, CE, TE, Education) independently explains GSDP variation. The results indicate that government spending works in combination, not in isolation, to impact Tamil Nadu's GSDP.

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