



An Empirical Analysis of Effect of Per Capita Income on Government Expenditure in Gujarat State of India

Dr. S. A. Saiyed

Head, Department of Business Economics, Faculty of Commerce, The M. S. University of Baroda, Vadodara-390002, Gujarat State (India)

ABSTRACT

This paper tries to find out that how per capita income determines government expenditure in the Gujarat State of India during a period of 1990-91 to 2004-05. Cross-sectional relationship is expected between year-wise per capita income and year-wise government expenditure in the Gujarat State of India, for the study period 1990-91 to 2004-05. The relation between cross-sectional per capita income and year-wise number of government expenditure in the Gujarat State of India is estimated by a two variable regression model analysis. Cross-sectional analysis of data showed significant causal relationship between year-wise number of per capita income and government expenditure. Increase in per capita income in Gujarat State of India has increased government expenditure.

Keywords: Empirical Analysis, Causal Relationship, Per Capita Income, Government expenditure.

1. INTRODUCTION

Relationship between Per Capita Income and Government Expenditure has become very important in the days of Globalisation and Liberalization. Government expenditure is an important instrument of economic development and also of the administrative capacity of the Government. There has been lively debate among economic thinkers and writers in India as well as World as a whole about the direct relationship between level of economic development and volume of Government expenditure. In India till recently public finance studies were confined only to studies of budgets. But these days study of economic development and Government Expenditure behaviour and its impact and contribution to the economic development has become more prevalent.

Since independence the main Concentration of the Government has been on Economic Development and increase in National Income and Per Capita Income to improve the standard of living of the people of the country. Increase in National Income will enable the Government to spend more on development and non-development expenditure.

Recently all the macro economic variables have undergone vast changes after Globalisation and Liberalization. The whole picture of the financial position in India and states like Gujarat state have significantly changed.

Until recently in whole India and its states, the specialists in the field of public finance were confined to the study of effects of budgeting trends, and the development of normative theories focusing at explaining how the behaviors of revenue and expenditure are determined. But the irony of fate is that there has been a general tendency among the economists to think and write only on the problems of All-India scaling and ignore the importance of the study of regional development. It is true that Macro studies (All-India) are essential but it is more true to study the economic changes of the country on Micro level so as to remove the problem of regional disparities in the economy.

Gujarat state was formed on 1st May 1960, when Bombay state was divided into two separate states, namely Gujarat and Maharashtra. Gujarat has enterprising population, it has progressed well and has almost fourth rank in economic development among the all states of India. Today it is prosperous state with 6.03 crores of population according to population census 2011, spread over 1,96,000 sq kms. Though Gujarat state has less than 5% of National population, it has 6.5% of National product and 11% of National Industrial Output (1997). Gujarat economy has very high Per Capita Income as compared to all India average Per Capita Income. This is because State Gross Domestic Product in Gujarat is higher like Punjab and Haryana as compared to other states in India. This higher State Gross Domestic Product in Gujarat has enabled the Government of Gujarat to spend more on development and non-development projects. Thus increase in State Gross Domestic Product in Gujarat has increased State Per Capita Income which has increased Government Expenditure in Gujarat. To know the effect of increase in Per Capita Income, it becomes necessary to do empirical analysis, this study is undertaken. The present study is undertaken to examine the effects of Per Capita Income on Government Expenditure in Gujarat State during 1990-91 to 2004-05.

The remainings of the paper is organised into nine sections including earlier introduction. Section two presents theoretical foundation of the study, Section three describes the objective of study, Section four is about hypothesis, and Section five describes methodology and model specification. Section six, is about sources of data, Section seven, reviews literatures. The empirical findings are reported in Section eight, Section nine presents conclusion.

2. THEORETICAL FOUNDATION

According to traditional economic theories National Income and Per Capita Income determine the welfare and standard of living of the people. Higher the National Income higher the Government Expenditure to increase public utilities.

The classical theory states that government is merely an agent for the people and has to spend the people's money directly and sparingly. This approach was based on assumption of non-interference by the Government and therefore increase in National Income and Per Capita Income increases Government expenditure.

Even Wagner the eminent economist in his Wagner's Law (1883) also states that causality runs from growth in community output to Government expenditure. It means that increase in Per Capita Income and Government Expenditure are directly related.

In conclusion, one may say that increase in Per Capita Income increases Government expenditure, which states that the State can incur its expenditure only after increase in Per Capital Income in such a manner as to achieve maximum benefit for the whole economy. The phenomenon of Empirical Analysis of Effects of Per Capita Income on Government expenditure has been subject for researchers to find out what causes expansion of Government expenditure.

3. OBJECTIVE OF THE STUDY

The main objective of this paper is to empirically analyse the effects of Gujarat State Per Capita Income on Government Expenditure in Gujarat state, during the period of 1990-91 to 2004-05.

4. HYPOTHESIS OF THE STUDY

The present paper aims at examining empirical analysis of effects of State Per Capita Income in Gujarat on Government Expenditure in Gujarat State During 1990-91 to 2004-05 for which may have the following hypothesis:

1. Increase in State Per Capita income in Gujarat has increased Government expenditure in Gujarat State.

5. METHODOLOGY OF ANALYSIS

In this paper, empirical analysis is undertaken with a view to establish cross-sectional relationship between State per capita income and Government Expenditure in Gujarat State of India for the study period 1990-91 to 2004-05. This has been carried out with the help of year-wise secondary data.

For this purpose, the statistical regression models analysis have been adopted. This paper has been designed so as to examine the hypotheses as mentioned earlier in this study.

Here, statistical regression is employed as a tool for the analysis of relationship between the variables which we are predominantly concerned with. The increase in State Per Capita Income in Gujarat (SPCIG) is independent variables in this model which is the year-wise total number of State Per Capita Income (SPCIG) (in Rs. Crores) over fourteen years in India. On the other hand, the dependent variables are the year-wise number of Government Expenditure in Gujarat State(GEXPG).

In this study, we have estimated a Two Variables Model and fitted double natural logarithmic (log) equations for State Per Capita Income in Gujarat(SPCIG) and Government Expenditure in Gujarat State(GEXPG) below with the corresponding statistical values of students t-statistics, R²,R₂, F-value ,D-W Statistics and the regression coefficients.

6. SOURCES OF DATA

The sources of data are exclusively built on secondary survey. The required statistical information (secondary data) would be collected from various sources, and has been used for analysis purpose, and those are from the following sources:

- (1) Gujarat Government Budgets
- (2) Reserve Bank of India (RBI), Annual Reports.
- (3) Economic and Financial statistics Review (Reserve Bank of India)
- (4) Indian Economic Survey (Fiscal and Real Sector), the Ministry of Finance, "Government of India" New Delhi. And also data collected from other reliable sources.

7. REVIEW OF LITERATURE

Many studies have been carried out in India and abroad which are of greater significance. Among a few significant studies on Government expenditure and economic development, mention may be of following works:

Indira examines that Gujarat has a relatively high per capita income, a diversified economy and workforce and developed financial and capital markets. On the other hand, the state lags behind in terms of the quality of employment and several dimensions of human development. This research seeks to delineate the profile of Gujarat's development with a view to understanding the mixed results and inferring the likely directions of future development.

Ravindra Dholakia stated that the development strategy in Gujarat has been very clear since its inception in 1960 in according a high priority to industrialization. The impact of economic liberalisation on the state economy should, therefore, be examined in terms of the performance of industrialization in the state.

Mathur,Niti and Kashyap provides a statistical profile of pre-and post-green revolution agriculture in Gujarat. Changes in cropping pattern has been shifting in favour of non-traditional non-food crops. Gujarat needs investment in infrastructure and strategies for sustainable resource use to improve productivity in agriculture.

Parthasarathy found that the basic philosophy of participatory irrigation management programmes in Gujarat as in other states has been to transform irrigators from beneficiaries to partners in the planning and development of irrigation. An analysis of the experience of the programme shows that farmers' involvement in water management has indeed led to a better and smoother resolution of irrigation-related conflicts. However, the other expectation that the programme would reduce state expenditure has not materialized as yet. Water users' associations will have to be more efficient in making allocative and investment decisions. For this a clarification of legal rights is imperative.

Joshi examines that Gujarat is not a homogeneous society or culture as it is often understood to be. There are three subcultures each with a different ethos within the broader framework of Gujarat culture: the Mahajan culture of the central belt; the semi-feudal culture of Saurashtra and the tribal culture in various parts of the state. Each has contributed differently to the development of the state.

Though this is not an exhaustive survey of the literature that has gone into this area, we feel that it does provide analytical framework for enabling us to undertake the present study.

8 RESULTS AND DISCUSSION

By fitting the double natural logarithmic (Log) relationship to the cross-sectional data (14 x 9) matrix State Per capita Income in Gujarat State (SPCIG) categories for the study years 1990-91 to 2004-05 and having taken these as independent variables and Government Expenditure in Gujarat (GEXPG) year-wise total number as dependent variable, we have obtained the following results.

Model: $\Delta \log (\text{GEXPG}) = \alpha + \Delta \log (\text{SPCIG}) + \beta \Delta \log ((\text{GEXPG})-1) + \mu$

In this model

GEXPG= Government Expenditure in Gujarat

SPCIG = State per capita Income in Gujarat State

α =Constant Term

β =Coefficient

μ = Error Term

TABLE: 1

Dependent Variable: : $\Delta \log (\text{GEXPG})$				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.33E-05	4.43E-06	2.989839	0.0152
$\Delta \log (\text{SPCIG})$	-0.000156	1.59E-05	-9.786959	0.0000
$\Delta \log ((\text{GEXPG})-1)$	0.999864	2.41E-05	41557.62	0.0000
R-squared	1.000000	Mean dependent var		0.194711
Adjusted R-squared	1.000000	S.D. dependent var		0.442445
S.E. of regression	1.40E-05	Akaike info criterion		-19.30949
Sum squared resid	1.75E-09	Schwarz criterion		-19.18826
Log likelihood	118.8569	F-statistic		5.53E+09
Durbin-Watson stat	2.993043	Prob(F-statistic)		0.000000

Source: Author's own Calculation

$$DLOG(\text{TEXP}) = 1.325 - 0.000155 * DLOG(\text{PCI}) + 0.9998 * DLOG((\text{TEXP})-1)$$

In the above Two Variables regression result, it is evident that among independent variables, year-wise State Per Capita Income in Gujarat(SPCIG) is significant with positive impact on Government Expenditure in Gujarat(GEXPG). The high values of R² and F-test suggest significant effect of the independent variables SPCIG on dependent Variable GEXPG. The R² value shows that the increase in State Per Capita Income in Gujarat increases 100% increase in Government Expenditure in Gujarat. D-W statistics is very high and it is 2.99 which indicates complete absence of auto-correlation among residuals. This analysis reveals that when independent variables State Per Capita Income in Gujarat has significant effect in the determination of Year wise Government Expenditure in Gujarat. Thus this Report of our analysis supports our Hypothesis that Increase in State Per capita Income in Gujarat increases Government Expenditure in Gujarat.

9. CONCLUDING REMARKS

Our Two Variables Model depicts that when Independent variable State Per Capita Income in Gujarat and Dependent Variable Government Expenditure in Gujarat are Positively and Strongly related. Increase State Per Capita Income in Gujarat increases Government Expenditure in Gujarat. Thus there is causal relationship between State Per Capita Income in Gujarat and Government Expenditure in Gujarat State. This analysis supports our Hypothesis stated in the paper.

REFERENCES

- Hirway, Indira ((2000) "Dynamic Development in Gujarat: Some Issues", The economic and Political Weekly, august 26, September 2, 2000 Vol. 35(35 and 36), pp. 3106-3120. | Dhokakia, Ravendra (2000): "Liberalization in Gujarat: Review of Recent Experience", The Economic and Political Weekly, August 26, September 2, 2000 Vol. 35(35 and 36), pp. 3121 -3124. | Mathur, Niti and S.p. Kayshap (2000): " Agriculture in Gujarat; Problems and Prospects", The Economic and Political Weekly, August 26, September 2, 2000 Vol. 35(35 and 36), pp. 3137 - 3146. | Parthasarathy, p. (2000): "Participatory Irrigation Management in Gujarat: Institutional and Financial Issues", The Economic and political weekly, August 26, September 2, 2000 vol. 35(35 and 36), pp. 3147 - 3154. | Josh, V., (2000), "Cultural context of development" Economic and political (weekly august 26 - September 2, pp.3165-3171, Gujarat, India |