Research Paper

ECONOMIC GROWTH AND PUBLIC POLICY: AN EMPIRICAL STUDY ON TRIPURA, INDIA

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ABSTRACT

Economic development requires stable political environment with a high quality of good governance. Good governance mostly depends on effective implementation of various public policies of the concerned governments. On the other hand, economic growth is one of the necessary conditions of economic development. One of the prime objectives of economic development is to achieve social welfare through efficient implementation of government policies. Therefore, governance is one of the important tools to materialise these social welfare as well as basic needs of the citizen in connection with road construction, health, education and electrification according to Human Development approach.

In this connection the study examines whether public policies in different sections of the government at state level have played an important role in improving economic growth in Tripura. The study emphasises on time series data of gross state domestic product (GSDP) growth rate as a proxy variable of economic growth and public policy comprising of public expenditures on road, health, education and electricity as well as physical infrastructure like road length, health centres, schools, electricity consumers and number of police stations on public policies. The study suggests that there is positive correlation between economic growth and public policies taken by the government of Tripura.

KEYWORDS: Good governance, public policies, social welfare, economic growth

INTRODUCTION

Economic growth refers to increase country's potential gross domestic product (GDP) results in better lives for people and is necessary for a strong long-term national economy. According to the World Bank (2004), economic growth is "quantitative change or expansion in a country's economy" The effect of government spending on economic growth is still an unresolved issue theoretically as well as empirically. One of the prime objectives of economic development is to achieve social welfare through efficient application of government fund. Therefore, governance is one of the important tools to materialise these social welfare as well as basic needs of the citizen in connection with road construction, health, education and electrification according to Human Development approach.

Government spending is the most important instrument of most government policies. The governments, both at Centre and State, have been increasingly providing public expenditure through their different public policy for the improvement of social infrastructure and human development. The crucial areas of such expenditures in case of Tripura are road infrastructure, electricity, education, health, etc. On the other hand, expansion of physical infrastructure is also an important constituent of public policy. Physical infrastructure includes expansion of road length, health centre, establishment of schools, increasing number of electricity consumers, number of police stations, etc.

Rapid economic growth requires huge expenditure to be incurred in the social sectors of a nation. As the private sector is usually hesitant and unwilling to invest huge amounts because the returns from such investments are either uncertain

or long delayed, it is public expenditure which plays the crucial role in eco-nomic development. In this regard, our paper aims to assess whether the economic growth in case of Tripura, a tiny state of India is influenced by policy.

REVIEW OF LITERATURE

Several studies have been conducted to investigate the relation between government policy and economic growth in the world including India. This section provides a brief review of the existing studies on the topic.

International studies by Fedderke & Garlicky (2008), Nworji et. al. (2012) and Munnell (1990) found a strong positive relationship between infrastructure and economic growth. The study conducted by Jalilian et. al., (2007) suggests a strong causal link between regulatory quality and economic growth and confirms that the standard of regulation matters for economic performance and strongly correlated with the quality of governance. Rosen (1976) opined economists have recognised that human capital is important for economic growth.

Mekdad, Dahmani & Louaj (2014) find a strong positive correlation between public education expenditure and growth in Algeria. The study of Gangal & Gupta (2013) confirms that the existence of long run positive equilibrium relationship between public expenditure and economic growth in India where GDP also responds positively to total public expenditure.

But according to Michael & Darrat (1988), generally real economic growth in the OECD (Organisation for Economic Co-operation and Development) countries appears to have been largely unaffected by the recent growth in their public sector, with an exception for few negative economic growth effects for several countries. Bra oveanu,

(2012) also finds mixed result showing that a part of public expenditure has a negative impact on economic growth and remaining part positively correlated with economic development.

Nworji et. al. (2012) finds that some types of public spending and taxation affect growth. On the housing-community amenities, environment protection, and recreation culture-religion) and social protection do not have a significant effect on growth.

OBJECTIVE

Review of literature reveals almost symmetrical views regarding the relation between government spending and economic growth with a few exceptions. But as there is no study in Tripura, one of North-eastern states of India regarding the public policy and economic growth especially after the post liberalisation period, the objective of this paper is to find out the relation between economic growth and public policy in this state. In this study, public policy is considered to be comprised of public expenditure and physical infrastructure. Other variables included in public policy are not considered here.

HYPOTHESIS

The hypothesis on the basis of objective is set as follows:

H_0 : There is no relationship between economic growth and public policy.

H_1: Public policy positively impact economic growth in Tripura.

The Model:

As economic growth is influenced by public policy, we write:

$$y_t = \theta_0 + \theta_1 x_{1t} + \theta_2 x_{2t} + \theta_3 x_{3t} + \theta_4 x_{4t} + \theta_5 x_{5t} + \mu_t \qquad \text{.................... (1)}$$

where y_t represents GSDP at constant price for the period of last twenty two years. GSDP at constant price is used as a proxy variable of economic growth. The explanatory variables are:

(i) x_{1t} which is the ratio between expenditure on road infrastructure to development expenditure,

(ii) x_{2t} denoting the ratio between expenditure on health to development expenditure,

(iii) x_{3t} that expresses the ratio of education expenditure to development expenditure and

(iv) x_{4t} representing the ratio between electricity expenditure and development expenditure.

(v) x_{5t} represents physical infrastructure

μ_t is the error term. The parameters $_0$, $_1$, $_2$, $_3$, $_4$ and $_5$ are to be estimated through Ordinary Least Square (OLS) method. It is expected that the value of each of the parameters are greater than zero, suggesting a positive association between GSDP at constant price with different expenditures of the government on road, health, education and electricity as well as on expansion of physical infrastructure.

METHODOLOGY
Data Source and Period:

Last twenty two years time series secondary data is undertaken for study purpose, *i.e.*, post liberalization period is considered here. The study covers the period 1993-94 to 2014-15. The data are collected from Department of Economics & Statistics, Health Department, Department of

School Education, and Electricity Department etc. of Government of Tripura.

Indicating economic growth indicator (Dependent Variable):

In this regard, it is very much important to look into the trend of state domestic product of a state. As our economic growth indicator, we use GSDP at constant price as a proxy variable as well as dependent variable (Mohanty, B. K., 2011).

Indicating Government Policy indicators (Independent Variables):

Economic growth may depend on a country's level of economic development. The economic development paradigm performs an important parameter in questioning the link between expanding income and expanding human choices. A link between growth and economic development has to be created consciously through deliberate public policy – such as government expenditure on social services on education, health, electricity, transportation and communication, etc. Government, through its public policy, has a vital role to play in terms of expansion of physical infrastructure that includes expansion of road length, health centre, establishment of schools, increasing number of electricity consumers, number of police stations. One infrastructure index using these parameters is constructed in line with human development index approach. Conscious public policy is needed to translate economic growth into people's lives.

LIMITATION OF THE STUDY

In this paper, only the post liberalization period is considered. Further, public expenditure and physical infrastructure are considered as variables of public policy. Other variables included in public policy are not considered here.

RESULT AND ANALYSIS

To understand the relationship between GSDP and public expenditure, the multiple regression technique is used. The following table explains the result of the econometric model specified above.

Parameter	Coefficient Values
Constant (θ_0)	7036.7*** (2282.0)
θ_1	0.098 (6748.1)
θ_2	0.081** (2258.9)
θ_3	0.086** (6735.1)
θ_4	0.082* (44710.1)
θ_5	0.848*** (2486.7)
N	22
R Square	0.893
F- Statistics	57.81

Source: Author's own calculation

Note: ***means significant at 1% level, **means significant at 5% level, *means significant at 10% level

The table provides us with the result to predict GSDP at constant price from ratio between expenditure on road infrastructure and development expenditure, health expenditure and development expenditure ratio, ratio between education expenditure and development expenditure and electricity expenditure–development expenditure ratio and physical infrastucture. The regression analysis determines whether these independent variables contribute statistically significantly to the model.

Here, the coefficient value (θ_2) of health expenditure and development expenditure ratio is positive (0.081), it implies that for a one unit increase in health expenditure and development expenditure ratio, there is a 0.08-unit increase in GSDP, *i.e.*, there is a positive association between GSDP and health expenditure–development expenditure ratio and the coefficient value is significant at 5% level.

On the other hand, the coefficient value (θ_3) of education expenditure and development expenditure ratio is also positive (0.086), it implies that for a one unit increase in development expenditure and education expenditure ratio, we would expect a 0.086-unit increase in GSDP, *i.e.*, education expenditure and development expenditure ratio positively impact the GSDP and the coefficient value is significant at 5% level.

A positive relationship is found in between GSDP and electricity expenditure–development expenditure ratio and the coefficient value (0.082) is significant at 10% level.

The positive coefficient value implies that for a one unit increase in electricity expenditure–development expenditure ratio, there is a 0.082-unit increase in GSDP.

It is also found that there is a positive relation between GSDP in one hand and ratio in between road infrastructure expenditure & development expenditure in other hand. Here the coefficient value (θ_1) is 0.098 although the coefficient value is not found significant.

The R^2 value is 0.893, i.e, the independent variables altogether in the model can explain 89.3 percentage variations on the dependent variable.

Here the F-test is highly significant, i.e, $F_{(5, 16)} = 57.81$ and $P = 0.00$. It can be assumed that there is a linear relationship between the variables in our model. This also indicates that, overall, the model applied can statistically significantly predict the dependent variable; i.e., it is a good fit for the data.

Therefore, based on regression output from the model it is found that the independent variables are important predictors of increasing GSDP in Tripura. Hence we reject null hypothesis (H_0) and accept H_1.

CONCLUSION

In this paper, the relationship between public policy as well as expansion of physical infrastructure and economic growth in Tripura has been analyzed. According to the existing literature, there is a large amount of evidence for public spending having a significant impact on economic growth. In

the present study, similar positive relation between public expenditure on road, education, health and electricity and physical infrastructure with growth is found. Besides, out of the five independent variables four variables namely expenditure on education, health & electricity and physical infrastructure significantly influence the GSDP, the proxy variable for economic growth. Therefore, the government may provide more emphasize on their public expenditure to accelerate the state's economic growth.

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