The Academic
International Journal of Multidisciplinary Research

An Online Peer Reviewed / Refereed Journal
Volume 3 | Issue 12 | December 2025
ISSN: 2583-973X (Online)
Website: www.theacademic.in

Public Expenditure on Agriculture and Economic Growth in India

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DOI : https://doi.org/10.5281/zenodo.18301386

ARTICLE DETAILS

Research Paper

Accepted: 31-12-2025

Published: 10-01-2026

Keywords:

Economic growth, government expenditure on agriculture, Gross Domestic Product multiplier,

ABSTRACT

A vibrant and an efficient agricultural sector would enable a country to feed its growing population, generate employment, earn foreign exchange and provide raw materials for industries. The agricultural sector has a multiplier effect on any nation's socio-economic and industrial fabric because of the multifunctional nature of agriculture. The main objective of this study was to investigate how government expenditure on agriculture has affected economic growth in India from 1991 to 2014.The log-linear growth regression model was employed where gross domestic product was the dependent variable and the explanatory variables are the factors which affect it which include government agricultural expenditure. The expenditures of the government on agriculture were divided into three functions namely governmental expenditure for agricultural co-operation and farmers welfare, governmental expenditure on Animal Husbandry, Dairying and Fisheries and Governmental agricultural expenditure on Research and Development. The regression analyses were performed using the Econometric-views (E-Views) statistical package. The regression was

carried out on time series data for the period 1991 to 2014. The data was tested for stationarity and problems of non -stationarity of data were corrected by integrating the trending series. Results from the empirical analysis provide strong evidence indicating that agriculture is an engine of economic growth. It shows that the three different variables such as governmental expenditure for agricultural co-operation and farmer's welfare, governmental expenditure on Animal Husbandry, Dairying and Fisheries and Governmental agricultural expenditure on Research and Development has a positive relationship with GDP and it is statistically significant.

Introduction

Agricultural Sector

Agriculture is considered to be the primary sector in an economy. This is the sector that makes direct use of natural resources. Until the advent of industrial revolution in the history, agricultural sector prevailed to be the dominating sector and even today it is the important sector in many of the less developed countries. There has been a paradigm shift over the past century due to the development of new technology and the world market. This has further helped in the technological improvement in agricultural techniques.

Agricultural sector is one of the major sectors that plays a pivotal role in the Indian economy. Over 70 percent of the rural household depend upon agriculture sector. Also, it contributes about 17% to the Gross Domestic Product (GDP) and provides Employment to almost 60% of the population. Agricultural Sector in India has made huge strides in developing its potential. Green Revolution is one of the examples that brought technological innovation into agriculture. Once India was in a situation to import agricultural goods to feed its people. Later since 1990, India was a net exporter of Agri food products; agricultural exports constitute fifth of the total exports of the country.

Agricultural sector is the principle source of raw materials to many industries. The industries like cotton, textile, jute, paper, sugar depends absolutely on agriculture for the supply of raw materials. There are

also many argo- based industries such as handloom, power loom, oil crushing, sericulture that prevails in the Indian economy that are partially dependent on the primary sector.

Agriculture and Public Expenditure

Public Expenditure is the expenditure incurred by public authorities such as Central, State, and local government either for the satisfaction of collective needs of the citizen or for promoting their economic and social welfare. The volume of public expenditure has been increasing in almost all countries of the world, because of the continuous expansion in the activities of the state and other public bodies on several fronts. The importance of public expenditure has also increased because its nature and volume and effects on the economic life of a country in various ways as it can affect the level of production, distribution, and general level of economic activity.

The agricultural sector has relied on government spending and investments since the inception of First Five Year Plan Period. The government expenditure is vital for the growth of agricultural sector and when there is any reduction in any government expenditure on the agricultural sector, it can adversely affect the performance of this sector, thereby it can affect the economic growth of the nation. This underscores the importance of public spending and investment to the nation. When the government expenditure under the revenue account on Agri inputs and farm support services is increased, this can lead to crowding out effect on private investment. A sustained set up in investment will benefit agriculture and this provides a composite strategy for rural development. Capital expenditure can also be channelized to rural infrastructure and irrigation, further this would improve the conditions of agricultural sector and would translate into the economic gains to the nation.

Statement of Problem

All the administrative efforts and the policy initiatives have attained mixed results in achieving the goal of improving the agricultural sector and thereby to attain economic growth. Agriculture has an instrumental role in the building of the economy as this sector makes the country self-sufficient and it is a source of livelihood for many. But still this is yet to prosper and there are many hindrances to it. Agricultural sector faces a lot of difficulties in the current era and farmers in the nation are in adverse difficulty. This paves the way for government spending and investment since the private investment in this particular sector does not meet all the agricultural requirements for the nation. Keeping in mind the plight of agricultural sector in the present era and lack of efficient initiatives that are supposedly made to strengthen the agricultural sector, proper government spending and investment has proven to be sound

solution to rectify the flaws prevalent in this particular sector which is a reason to come up with this study.

Objective

Keeping this in mind the objective that have taken for the study are:

• To assess the impact of government expenditures on agricultural sector and economic growth in India during the period 1991-92 to 2013-14

Scope of the study

The present research is to study the role of public expenditure on agricultural sector and the economic growth. By understanding various problems and challenges faced by the Indian agricultural sector, it helps us to formulate different strategies and policies for the development of this sector and further elevates economic growth. This could also motivate the people to engage more either in agriculture, allied activities or agro based industries. This would be of great help to the implementing agencies or the government to bring necessary improvements in agriculture through government spending and investment to attain economic growth. The result of the study would offer an important input to policy makers and planners for framing policies or strategies to improve the agricultural sector in the Indian economy

Significance of the study

The economic security of India is heavily dependent upon agriculture. About half of India's population either fully or partially depend upon agriculture. The economic security is heavily dependent upon agriculture. Agricultural sector is an inevitable sector in the face of Indian economy. This sector provides employment to a large mass. The food security is assured due to stability of this sector. Many allied sectors such as dairy sector, fisheries, livestock, and many agro based industries such as handloom agriculture, power ginning, etc also depend on the primary sector. Thereby, proper allocation of resources and finding is necessary in this particular sector. Government spending and investment plays a major role in improving the condition of the agricultural sector in the Indian economy. It is essential to check whether public spending gives essential space for the development of the agricultural sector, henceforth the study is essential in this scenario.

Hypothesis Testing

The study employed hypothesis testing to establish whether there is a significant difference between government expenditure and GDP growth in the agricultural sector. It aims to understand the effect of each independent variable to dependant variable. This test can be written in the following hypotheses:

• H0: There is no significant relationship between government expenditures on agricultural sector and GDP growth

• Ha: There is a significant relationship between government expenditures on the agricultural sector and GDP growth.

Scheme of the study

The study is presented in six sections. The first section deals with introduction covering objectives significance and limitation of the study. The review of literature in the light of present investigation and conceptual frameworks are given in the second section. The third section deals with methodology, results and discussion are presented in the fourth and; summary and references are presented in the fifth and sixth sections respectively.

Review of Literature

Review of earlier studies which is directly relevant to the objectives of the present study are important for better understanding of the problem investigated, conceptualizing and conducting the study in the right direction and drawing conclusions in a systematic manner. Reviews of earlier studies are presented in this section.

Studies on Public Expenditure and Economic Growth

Tulsidharan (2016) has explained the relationship between government final consumption expenditure and gross domestic product at the market price at current and constant price. The study also shows that when there is increase in the government final consumption expenditure there is a proportionate increase in economic growth in nominal terms. It is evident from the data over a period of 1950-51 to 1998-99 that the ratio of public expenditure to the GNP rose considerably in response to rise in per capita GNP.

Gangal& Gupta (2013) This study investigates the role of public expenditure in long run economic growth in India. It shows that the Gross Domestic Product (GDP) and Total Public Expenditure (TPE) are co-integrated and there is stationary linear combination among the variables. Thus, it reveals that there is a long run co- movement between selected variables. He has also showed the relationship

between Public Expenditure and Economic Growth through Granger Causality Test. The test reveals that the causality goes from public expenditure to economic growth and not the other way. It is thus evident that expansion in public expenditure will boost the economic growth. The result of Impulse Response Function reveals the same, as there is a unidirectional relationship from TPE to GDP and not the other way.

Bose (2007) examines the effects of growth on public expenditure of 30 developing countries between 1970s and 1980s particularly focusing on disaggregated government expenditure. The study has brought in different findings. It revealed that the government capital expenditure has positive and significant correlation with economic growth, while the growth effects of current expenditure is insignificant in many of these group of countries. The only outlay that remain significantly associated with growth throughout these years was government investment in education and total expenditure in education at the disaggregated level. The study has also given a strong evidence that government budget deficit can lead to adverse growth effects in the country.

Devarajan and Swaroop (1996) have studied the data from 43 developing countries over 20 years show that an increase in the share of current expenditure has positive and statistically significant growth effects. But there is also surprising result in the analysis as productive expenditure such as capital, transport, communication, health, education has resulted a negative or insignificant relationship with the economic growth. From the empirical results it is evident that in the developing country the governments are misallocating public expenditure in favour of capital expenditure but it is at the expense of current expenditure but in the case of developed countries the reverse is the case. Thus, the expenditurewhich are normally considered productive could become unproductive, if there is excessive amount of them.

Studies on Agriculture and Economic Growth

Yusuf (2014) reveals that agriculture plays a pivotal role in the economic development of the nation; but the contribution to the GDP has been warning since 90s's. He also pointed out several barriers to the agricultural sector performance and the recommendations to bring up the Nigerian economy. The agricultural output was declining, stagnant at times and even growing at negligible rate. He also stressed on the need for agriculture friendly government policies and policy orientations.

Sahoo & Sethi (2012) investigated the impact of agricultural and industrial sector on economic growth of India, by considering variables like GDP, per capita gross national income, gross domestic saving gross domestic capital formation. The study states that, the agricultural has significant positive impact on

economic growth and development during the study period. The results also showed that the impact of industrial sector as economic growth is higher than in the case of agricultural sector during that period. The regression result in case of economic development is reverse as the impact of agricultural sector is higher than in industrial sector.

Studies on Government Expenditure on Agriculture and Economic Growth

Dkhar (2018) has assumed the impact of government expenditure on agriculture and allied activities on economic growth (GSDP) in Meghalaya during the period 1984-85 to 2013-14. Regression results show that from given data, there is a positive impact on crop husbandry when public expenditure is increased, thus GSDP is also increased. But the results showed a negative impact of expenditure through forestry and irrigation. Besides that, dairying and

agriculture do not have a significant impact through the increase in public expenditure in Meghalaya during these periods.

Apata,*et,al* (2018) examined the policies under which public spending contribute to economic growth in agricultural sector. The study has hypothesis testing to test whether there is significant difference between government expenditure and GDP growth in the agricultural sector. In Malaysia, there is a significant influence on GDP growth in the agricultural sector whereas the relationship between the two variables is in the case of Nigeria. Thus, Malaysian economy can save as a lesson for economic growth in Nigeria. In Nigeria, there is a huge fund that has been allocated to developmental plan but that has been allocated to developmental plan but this led to high deficit and increases foreign debt. But in the case of Malaysia the quality of public spending is being assured. This support the fact of Keynesian hypothesis of government intervention.

Thierry, *et,al* (2017) reveals that there is a significant relationship between GDP and agricultural output and total government expenditure. The results showed that agricultural output has a positive and significant impact on economic growth. But the total government expenditure has a negative and a significant effect on economic growth in Cameroon. As 1 percent increase in total government expenditure will decrease the economic growth by - 0.246 percent. Thus, in Cameroon there is a need for more productive spending which paves way for job creation growth and higher GDP levels. But his study does not reveal any statistically significant relationship with most of the components of government expenditure and growth.

Singh *et.al* (2015) aimed at developing a series of public expenditure and investments that impact

growth of agricultural and allied sectors. Also investigated whether it is consistent with both national and regional priorities. The study shows that the level of investment and agricultural capital was positive and significant. Thus, there is a relationship between public expenditure and growth of agriculture and allied activities. There is an increase in public expenditure and investment at national level but considering state wise priority, the eastern states lag behind and those states must be given consideration as the private sector is hesitant to invest. The study further reveals that the public investment would strengthen the infrastructure and this attracts the private investments in different sectors.

Oyinbo *et.al* (2013) explored the budgetary allocation in agriculture and economic growth in Nigeria. He found that there is a positive relationship between agricultural budgetary allocation and economic growth but it is only significant in the long run and the results show that it is not significant in the short run. This is due to low budgetary allocation to the agricultural sector which is in between 25 percent and 10 percent as per the recommendations of FAO and AU respectively. Thus, there is a need for budgetary allocation in the agricultural sector to realize food security, poverty, education, employment generation and wealth creation in Nigeria.

Conclusion

There is a plethora of studies on the role of public expenditure on agriculture and economic growth that has been investigated in many developed and developing countries. The agricultural sector is an inevitable sector considering the factor, economic growth. It is evident from the majority of studies that government spending and investment on the agricultural sector has a pivotal role and has a significant impact on the economic growth of the nation.

Layout and Framework of Analysis

Theoretical Background

There are many contributions from various schools of thought such as the classical, neoclassical, Keynesian on whether the government should intervene to short run fluctuations in economic activity. The classical and neoclassical economist considers fiscal policies ineffective due to the well-known crowding-out effect. While the Keynesians say that government expenditure does not affect economic growth instead it helps in accelerating the growth of the economy.

Musgrave Theory of Public Expenditure Growth Musgrave (1997) argued that what matters most for government spending is how effective it is. If the so-called “productive” category of government

spending is not effective, it can have a negative impact on growth.

This theory was propounded by Musgrave as he found changes in the income elasticity of demand for public services in three ranges of per capita income. He posits that at low levels of per capita income, demand for public services tends to be very low, this is so because according to him such income is devoted to satisfying primary needs and that when per capita income starts to rise above these levels of low income, the demand for services supplied by the public sector such as health, education, transport and agriculture starts to rise, thereby forcing government to increase expenditure on them. He observes that at the high levels of per capita income, typical of developed economics, the rate of public sector growth tends to fall as the more basic wants are being satisfied.

The Wagner's Law/ Theory of Increasing State Activities Wagner's law (1885-1917) postulates that: (i) the extension of the functions of the states leads to an increase in public expenditure on administration and regulation of the economy; (ii) the development of modern industrial society would give rise to increasing political pressure for social progress and call for increased allowance for social consideration in the conduct of industry (iii) the rise in public expenditure will be more than proportional increase in the national income and will thus result in a relative expansion of the public sector.

The Keynesian Theory The Keynesian school of thought suggested that government spending can contribute positively to sectorial growth (like the agricultural sector) in the economy. Thus, an increase in government consumption is likely to lead to an increase in employment, profitability and investment through multiplier effects on aggregate demand. Consequently, government expenditure increases the aggregate demand which brings about an increased output depending on expenditure multipliers. Keynes regards public expenditures as an exogenous factor which can be utilized as a policy instruments to promote growth.

Methodology

Secondary data was taken for the study. All the data was taken from various sources such as Agriculture Statistics at a glance, RBI Handbook, MosPI. In this study the annual time series data was used covering the period from 1991 to 2014. The variables that has been considered are Gross Domestic Product, Government Agriculture expenditure on Cooperation and Farmers, Welfare, Government agricultural Expenditure on Animal Husbandry, Dairying and Fisheries, Government Public Expenditure on Research and Education, Government Expenditure on Non- Agricultural Activities, Investment Expenditure and Consumption Expenditure.

Model Specification:

The log linear regression model is as follows

Log GDP= A0+A1 Log ACFW+A2 Log AHDF+A3 Log RD + A4 Log I+ A5 Log C + *u*

Where Log GDP is the logarithm for Gross Domestic Product (GDP), A0 is a constant and A1, A2 , A3, A4, A5 are parameters to be estimated. Log ACFW, Log AHDF, Log RD, Log I, Log C are the logarithms for Government Agriculture expenditure on Cooperation and Farmers, Welfare, Government agricultural Expenditure on Animal Husbandry, Dairying and Fisheries, Government Public Expenditure on Research and Education, Investment Expenditure and Consumption Expenditure respectively and the letter *u* represents error term. The analysis will be performed using Econometric Views (E-views) statistical package.

Variables used in the model

Gross Domestic Product (GDP) is the total of all expenditure on final goods and services produced during a period of time particularly during a financial year. Government agricultural expenditure is the amount of money that has been allocated to the agricultural sector by the government. Agricultural expenditure is composed of Expenditure on Cooperation and Farmers Welfare,Government agricultural Expenditure on Animal Husbandry, Dairying and Fisheries, Government Agricultural Expenditure on Research and Education. The overall impact of government agricultural expenditure on GDP is expected to be positive since it is an injection to the circular flow of income. However, literature shows that the relationship is mixed. It can be positive, negative or constant.

Investment expenditure(I) is the expenditure on Capital goods that is gross fixed capital formation. It is defined as the acquisition of produced assets (including purchases of second hand assets), including the production of such assets by producers for their own use, minus disposals. Investment expenditure will thereby positively be related to GDP.

Consumption expenditure (C) is the flow of goods and services purchased by the consumers for consumption uses. If individuals are increasing their level of consumption spending at each level of disposable income, their level of aggregate expenditure increases. Therefore, consumption expenditure is expected to be positively related to GDP

The error term (u) is used to capture errors and misses in the relationship. The error term is justified on omissions of the influences of innumerable chance events and measurable Errors. A constant (A0) is also

included as this ensures that the model will be unbiased in nature.

This chapter dealt with the theories such asMusgrave Theory of Public ExpenditureGrowth, Wagner's law and The Keynesian Theory that emphasis on the importance of public expenditure and model specification and the variables that has been employed.

Analysis

Empirical results

To determine how government expenditure on agriculture has affected economic growth in India from 1991 to 2014the log-linear growth regression model was employed where gross domestic product was the dependent variable and the explanatory variables are the factors which affect it which include government agricultural expenditure. The stationarity and cointegration the series was also been tested. The expenditures of government on agriculture were divided into three functions namely governmental expenditure for agricultural cooperation and farmers welfare, governmental expenditure on Animal Husbandry, Dairying and Fisheries and Governmental agricultural expenditure on Research and Development.

Unit Root Test

Augmented Dickey Fuller Test (ADF) was used to test the Stationarity of the time series. If the absolute value of the ADF is less than the absolute critical value, the test accepts the null hypothesis that the variable is not stationary. If the calculated ADF test statistic is greater than critical t- values, reject the null hypothesis. The Unit Root tests were conducted on the 7 variables which are shown on the table 1 below.

Table 4.1: Unit Root Test

VARIABLE	ADF TEST STAT	DW	ORDER OF INTG	DECISION
GDP	-5.097*	2.02	I(2)	STATIONARY
C	-4.92*	1.64	I(2)	STATIONARY

I	-4.329*	1.92	I(1)	STATIONARY

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RD	-4.878*	1.81	I(1)	STATIONARY
ACFW	-3.496***	2.02	I(1)	STATIONARY
AHDF	-5.223**	1.99	I(1)	STATIONARY

Source: Compiled from Secondary Data

The Unit Root tests showed that all variables are required to be differenced in order to become stationary since the absolute calculated ADF tests statistics were less than critical t - values. After taking the first difference Investment Expenditure, Agricultural Expenditure on Research and Development, Government Agriculture expenditure on Cooperation and Farmers, Welfare, Government agricultural Expenditure on Animal Husbandry, Dairying and Fisheries become stationary. However, Gross domestic Product and consumption expenditure are required second differencing to become stationary. Gross domestic Product, Consumption Expenditure, Investment Expenditure and Government Agricultural Expenditure on Research and Development becomes stationary at 99% level of confidence. Government agricultural Expenditure on Animal Husbandry, Dairying and Fisheries becomes stationary at 95% level of confidence whereas Government Agriculture expenditure on Cooperation and Farmers Welfare is stationary at 90% level of confidence. This means that all the mean, Variance and auto covariance at various lags remain the same no matter at what point we measure them.

Johansen Co- Integration Test

The series for all the variables in the model used were tested for co-integration using the trace tests and maximum eigenvalue testes. Although the trace test indicates that there are 4 cointegrating variables and the maximum eigenvalue tests also indicates 4 cointegrating variables on this table below and both indicates that the GDP and explanatory variables are cointegrated at 95% level of confidence.

Table 4.2 Co-Integration Test

Unrestricted Cointegration Rank Test (Trace)	

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.947043	201.4124	95.75366	0.0000
At most 1 *	0.938645	136.7703	69.81889	0.0000
At most 2 *	0.809192	75.36667	47.85613	0.0000
At most 3 *	0.655891	38.92391	29.79707	0.0034
At most 4	0.456349	15.45435	15.49471	0.0507
At most 5	0.088828	2.046515	3.841466	0.1526
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.947043	64.64210	40.07757	0.0000
At most 1 *	0.938645	61.40358	33.87687	0.0000
At most 2 *	0.809192	36.44277	27.58434	0.0028

At most 3 * 0.655891 23.46955 21.13162 0.0230

At most 4 0.456349 13.40784 14.26460 0.0679

At most 5 0.088828 2.046515 3.841466 0.1526

Source: Compiled from Secondary Data

Estimation

The table 4.3 shows the result of estimates in which GDP was set as the dependent variable and the rest of the variables were defined as the explanatory variables. Both R^2 and adjusted R^2show significant outcomes at 99%. The adjusted $R^2$of 0.999729 implies that about 99% of the variation in GDP is explained by the various explanatory variables. The Durbin Watson statistic of 1.877464 is close to the optimum level of 2 and shows that there is no autocorrelation between GDP and the explanatory variables. The functional form of the equation is expected to be near optimal on the basis of the results.

The result show that there is a positive relationship between real GDP and Governmental expenditure on Animal husbandry, Dairying and Fisheries. The co-efficient of 0.017675 means that for every one increase in Governmental expenditure on Animal husbandry, Dairying and Fisheries, The GDP increases by 0.01% on average using this data. The p values for Governmental expenditure on Animal husbandry, Dairying and Fisheries shows that it is significant at all levels.

The variable for governmental expenditure for agricultural cooperation and farmers welfare was found to be positively related to economic growth. And statistically significant at 95% confidence level. A positive relationship between GDP and Government agriculture expenditure on Research and Development was obtained. The co-efficient of 0.017302 means that for every one percent increase in Government agriculture expenditure on Research and Development, the GDP increases by 0.017% on an average. The variable is significant in explaining real GDP since the absolute value of t-value exceeds 2. The variable is said to be statistically significant since the test statistics lies in the rejection region.

Investment expenditure also shows a positive relationship with the GDP. It has co efficient of 0.231248 meaning that a one percent increase in investment expenditure increases GDP by 0.23% on an average. Investment has proved to be a statically significant variable with a t statistic of 6.418578 which is greater than 2. This suggests that investment is essential in trying to increase GDP.

Consumption Expenditure turned out to be positively related to GDP. When there is one percent increase

in consumption expenditure the GDP increases on an average about 0.78%. This variable was also found to be statistically significant since the t- statistic is greater than 2.

Table 4.3 Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG_C	0.781105	0.029401	26.56769	0.0000
LOG_I	0.231248	0.036028	6.418578	0.0000
LOG_RD	0.017302	0.017634	6.981180	0.0003
LOGACFW	0.009774	0.010319	8.947171	0.0008
LOGAHDF	0.017675	0.018730	4.943686	0.0000
C	0.220317	0.176319	1.249533	0.0004
R-squared	0.999791	Mean dependent		14.87675

		var	
Adjusted R-squared	0.999729	S.D. dependent var	0.848642
S.E. of regression	0.013971	Sum squared residual	0.003318
Durbin-Watson stat	1.877464	Long-run variance	0.000118

Source: Compiled from Secondary Data

Based on the results of the study, it can be concluded that government expenditure on functions of agriculture affect economic growth significantly. It shows that the three different variables such as governmental expenditure for agricultural co-operation and farmers welfare, governmental expenditure on Animal Husbandry, Dairying and Fisheries and Governmental agricultural expenditure on Research and Development has a positive relationship with GDP and it is statistically significant.

Summary of Findings and Conclusion

For any country developed or developing, finance is an essential need. A government should need to gather resources in a proper way and should utilize resources and assets responsively, productively and successfully. Public expenditure is alluded to as an outpouring of assets from government to different areas of the economy. It is one of the main instruments for a government to control the economy. It is one of the main instruments for a government to control the economy in order to bring economic growth which further promotes the living standard of the people by providing better infrastructure, good health, education an improvement in agricultural output and food security. Public expenditure in agriculture is important for the transformation of agricultural sector and thereby improves the economy. The low agricultural output gives a negative effect on the economy as a whole as it affects the food production and raw material industries. Therefore, in an economy where majority of the population depends on agriculture as a livelihood, public expenditure on agriculture is one of the important instruments for promoting overall economic development and for the alleviation of poverty.

The main thrust of this was to assess the impact of government expenditure on three functions of agriculture on economic growth in India. It was to find out whether increase in expenditure on function

of agriculture by government increases or decreases by GDP. Results from empirical analysis provide strong evidence indicating that agriculture is an engine of economic growth. Based on the results of the study, it can be concluded that government expenditure on functions of agriculture affect economic growth significantly. It shows that the three different variables such as governmental expenditure for agricultural cooperation and farmers welfare, governmental expenditure on Animal Husbandry, Dairying and Fisheries and Governmental agricultural expenditure on Research and Development has a positive relationship with GDP and it is statistically significant.

Suggestions

1 Reward local government units for good fiduciary management by increasing fiscal transfer.

2 Set up formal mechanism to coordinate rural development issues

3. Prioritize agricultural expenditure during key times in the production cycle

4. Carry out a public expenditure tracking survey to quantify waste and leakage

5. The repayment of loans should be enforced so that farmers will be obliged to use resources productively, thereby reduce the burden on the budget of the government.

6. There must be increase in the technical know-how of farmers inorder to increase the productivity.

7. Agricultural research should be improved to set up research policy which is user determined.

The economic implication of this analysis is very important. We find a positive relationship between public expenditure and economic growth. An increase in public expenditure encourages economic growth. Therefore, the government should increase their public expenditure to encourage economic growth.

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