

CONTRIBUTION OF AGRICULTURAL SECTOR AND ITS REFLECTION ON GDP IN INDIA

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ABSTRACT

This paper aims to analyse the relationship between the contribution of agricultural sector and the total GDP in India. Agricultural sector in India is expected to generate better momentum in next few years due to increased investment in agricultural infrastructure. Increased agricultural output and productivity tend to contribute substantially to the overall economic prosperity of a nation which is predominantly agricultural and over-populated. Still agriculture in India is the backbone of the country and is regarded as the largest sector of the country's economic activity. The regression result shows that one percent increase in agricultural GDP which leads to increases 1.79 per cent of total GDP. The R^2 value is 0.95. It shows the present contributory position of Indian Agricultural sector. Above the all without Agricultural and Allied Activities no one can survive in the earth. In this relation Agricultural GDP has positive impact on not only in India's GDP but also for the people who involved in industrial and service sector activities.

Key words: Gross Domestic Product, Contribution, Momentum, Infrastructure, Productivity, Economic Prosperity.

INTRODUCTION

Agricultural sector in India is expected to generate better momentum in next few years due to increased investment in agricultural infrastructure. Increased agricultural output and productivity tend to contribute substantially to the overall economic prosperity of a nation which is predominantly agricultural and over-populated. Still agriculture in India is the backbone of the country and is regarded as the largest sector of the country's economic activity. Though the declining share of agriculture in the aggregate economy, it assumes a pivotal role in the rural economy in India. Even the contributory share of agriculture and allied activities in Gross Domestic Product in India has declined from 55.4 per cent in 1950-51 to 14 per cent in 2018-19. Which provides livelihood to 60 per cent of the total population both directly and indirectly.

There has been structural change in India economy during the past few decades. Relatively the share of agriculture and allied sector is lower than industrial and service sectors, which is the base for sustainable economic development and general price level. Indian agriculture has registered impressive growth over last few decades especially in foodgrains production. The foodgrain production has increased from 51 million tonnes in 1950-51 to 285.01 million tonnes during 2017-18 highest ever since independence. The growth of Foodgrains production has helped Indian agriculture mark its presence at global level.

The growth of Foodgrains and other agriculture and allied sector production induces the growth in GDP as well as the export volume of our economy. India stands in the remarkable position in the production of foodgrains as well as other crops and fisheries. This article examines the relationship between the contribution of agricultural sector and the total GDP in India.

OBJECTIVES OF THE STUDY

1. To study the Agricultural GDP in India between 2008-09 and 2018-19.

2. To analyse the relationship between Agricultural GDP and the Gross Domestic Product (GDP) in India during the study period.

REVIEW OF LITERATURE

Urmi Pattanayak¹ and Minati Mallick (2017) observed from their study despite increasing contribution of services sector to India's economic growth helping the country to grow at a rate of 7.1 per cent annually, the fact that agriculture is still continuing to be the backbone of the economy is hardly exaggerated. The main objective of this study is to examine how agricultural production contributes to the economic growth in India during 1991-2012. The log linear regression growth model is used where gross domestic product is the dependent variable and the explanatory variables are the five major crops i.e. cereals, tobacco, tea, coffee and sugarcane. The regression analysis is performed using E-views-7. It is found that production of tea, cereals and tobacco are positively affecting the GDP growth in India whereas the coffee and sugarcane production is having inverse relationship with economic growth though not insignificant.

Tamma Koti Reddy and Madhubanti Dutta (2018) have analyzed the impact of Agricultural inputs on Agricultural Gross Domestic Product in Indian Economy using A Simple Regression Analysis for the period 1980-1981 to 2015-2016. Agricultural GDP is taken as the dependent variable and independent variables are fertilizers, net irrigated area, pesticides, electricity, rainfall and usage of HYV seeds. The study reveals that the variables like fertilizers and net irrigated area are not statistically significant, which means they do not have a significant impact on agricultural GDP during the time period 1980-1981 to 2015-2016.

METHODOLOGY

The data have been collected from the Handbook of statistics on Indian Economy published by Reserve Bank of India. Besides the RBI data, the required data have been collected from the various secondary sources. Total Gross Domestic Product at constant prices and Agricultural and Allied Activities GDP at constant prices have been analyzed in this study for the period of 2008-09 to 2018-2019.

To examine the relationship between Agricultural GDP and the GDP in India, the following Log Linear Regression model has been used.

$$Y = \alpha + \beta X + u ,$$

Where

Ln= Log Y= GDP, X= Agricultural GDP and U= error term

CONTRIBUTION OF AGRICULTURE SECTOR IN GROSS DOMESTIC PRODUCT (GDP) IN INDIA

Agriculture and allied activities GDP in Gross Domestic Product (GDP) have presented in Table 1.1.

Table 1.1
Agriculture and Allied Activities GDP and Gross Domestic Product
(GDP) in India
(Rs in Crores)

Year	Agricultural GDP	Gross Domestic product (GDP)	Ratio Share of Agriculture GDP and Gross Domestic product (GDP)
2008-09	1309079	7093403	0.1845
2009-10	1297556	7651079	0.1695
2010-11	1411634	8301235	0.1700
2011-12	1501947	8736329	0.1719
2012-13	1524288	9213017	0.1654
2013-14	1609198	9801370	0.1641
2014-15	1605715	10527674	0.1525
2015-16	1616146	11369493	0.1421
2016-17	1726004	12308193	0.1402
2017-18	1828329	13175160	0.1387

2018-19	1872339	13981426	0.1339
Average total	1572930	10196216	0.1542

Source: RBI Bulletin and Statistical Handbook of India 2018-19.

Table 1.1 reveals the contribution of agricultural sector in the GDP in India. Despite it highlights the ratio share of agricultural sector in the GDP in India. Agricultural GDP consists of fluctuation during the study period. On the other hand GDP in India has been increasing from 2008-09 to 2018-19. The average Agricultural GDP is Rs. 1571930 Crores and GDP in India is Rs. 10196216 Crores. The Ratio share of Agricultural GDP to total GDP in India has been declining from 0.1845 in 2008-09 to 0.1339 in 2018-19. An average Ratio share is 0.1542 during the study Period.

AGRICULTURAL GDP AND GROSS DOMESTIC PRODUCT (GDP) IN INDIA

Relationship of the Agricultural GDP on Gross Domestic Product (GDP) in India have presented in Table 1.2.

Table 1.2
Log Linear Regression Analysis of the Agricultural GDP
and Gross Domestic Product (GDP) in India

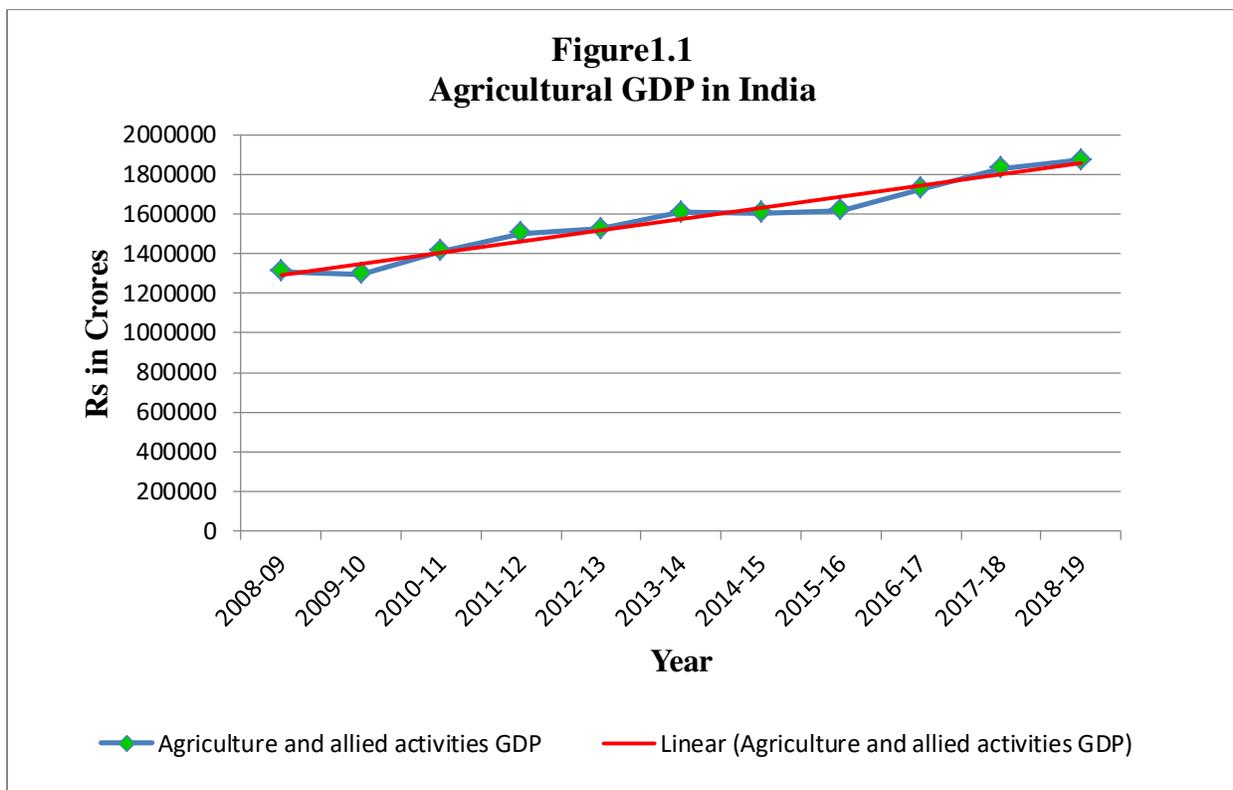
Variables	Coefficients and t value
Constant	-9.503*** (-5.27)
LN Agricultural GDP	1.796*** (14.21)
R ²	0.95
Standard error of Dependent variable	0.048
No. of Observations	11

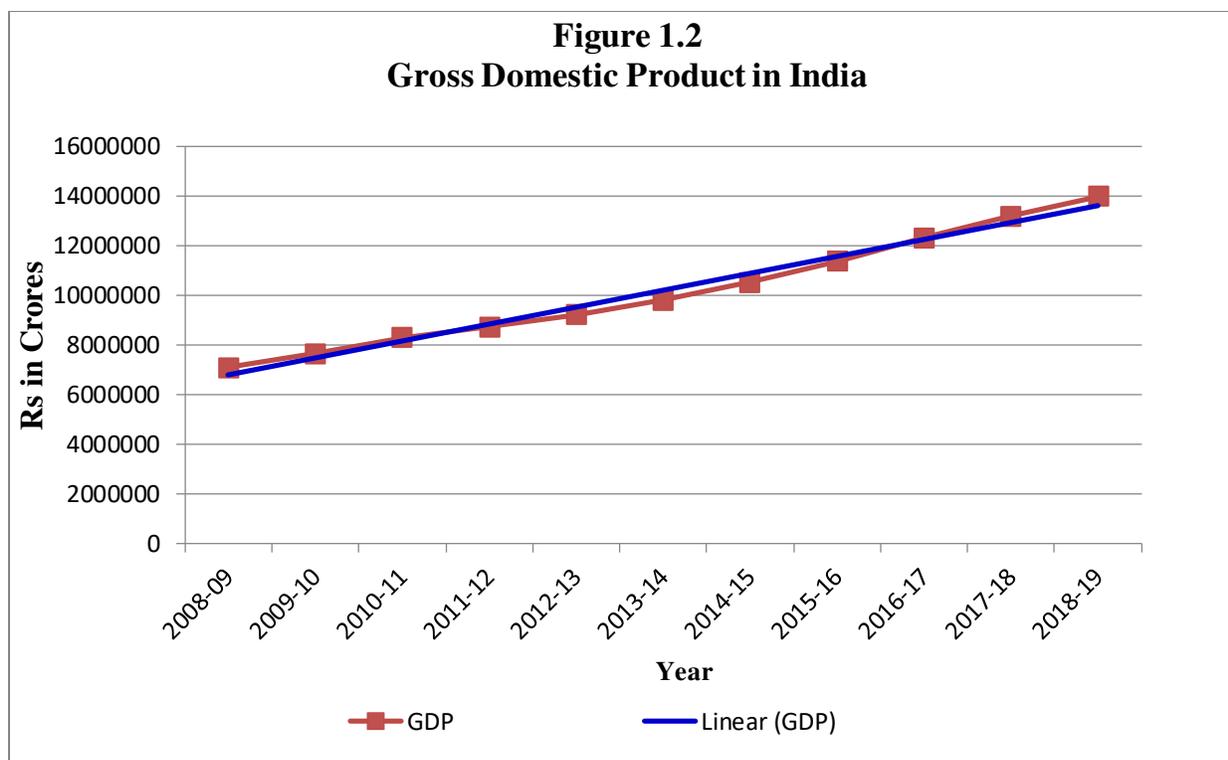
Note: 1. Figures in bracket indicates t values

2. * Indicates 5 percent level of significance

Source: Collected from Handbook of Statistics on Indian States, published by RBI and computed.

Table 1.2 highlights the log linear regression analysis of Agricultural GDP on the total (GDP) in India. The regression result shows that the contribution of agriculture and allied activities GDP to the total GDP was significant at 5 per cent level. One percent increase in agricultural GDP which leads to increases 1.79 per cent of total GDP. The R^2 value is 0.95.





FINDINGS

- ❖ It is found that Agricultural GDP consists of fluctuation during the study period. On the other hand GDP in India has been increasing from 2008-09 to 2018-19.
- ❖ It is revealed from the study that the average Agricultural GDP is Rs. 1571930 Crores and GDP in India is Rs. 10196216 Crores.
- ❖ It is observed that the Ratio share of Agricultural GDP to total GDP in India has been declining from 0.1845 in 2008-09 to 0.1339 in 2018-19. An average Ratio share is 0.1542 during the study Period.
- ❖ It also found that the regression result shows that the contribution of agriculture and allied activities GDP to the total GDP was significant at 5 per cent level. One percent increase in agricultural GDP which leads to increases 1.79 per cent of total GDP. The R^2 value is 0.95.

SUGGESTIONS

The following suggestions may enhance the Agricultural and Allied Activities as well as GDP in India

- Cultivation of short duration crop varieties.
- Introduce high yielding varieties seeds further more.
- Cultivate the climate resilient food and non food crop varieties.
- Adoption of efficient water management methods.
- Implementation of modern techniques especially in Farm activities.
- Increase the vertical and horizontal productivity of the crops.
- Making easy availability of Agricultural inputs.
- Cultivate horticulture crops.
- Cultivate the vegetables as interim crop and also the main crops.
- Giving importance to fish production and export processing units.
- Increasing the live stock and poultry farming.
- Government must ensure the utilization of waste land for Agricultural and Allied Activities
- Government should facilitate the credit and subsidies during the need time of Agricultural and Allied Activities.
- More Research and Development (R&D) centers, Agricultural Colleges and Universities must be established as much as possible.

CONCLUSION

Agricultural sector makes the greatest contribution to Indian Economy since independence. It has been observed that the contribution from agricultural sector has been declining compared to previous decades. At present agricultural sector contributes approximately about 14 percent. But still this sector is the biggest contributor in generating employment to farmers and the rural mass. Thus, there is a need to adopt new technology and farming methods followed by other countries. There must be a 'Big Push' in terms of investment, farming methods, construction of dams and adoption of water

management techniques in order to enhance the production and productivity and further to elevate the image of Indian economy.

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