

UNEARTHING INDIA'S ECONOMIC BACKBONE: THE VITAL ROLE OF AGRICULTURE AND IT'S IMPACT ON GDP GROWTH

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Abstract

This article provides a concise overview of the crucial role of agriculture in the Indian economy. India has long been an agrarian society, with agriculture contributing significantly to its GDP, employment, and food security. The sector supports a vast population, predominantly in rural areas, making it a cornerstone of the nation's economic and social fabric. The article begins by highlighting the historical significance of agriculture in India and its transition from subsistence farming to commercialized practices. It then delves into the current state of the agricultural sector, including its challenges and opportunities. The study presents a concise analysis of the growth rate of agriculture over the past two decades and conducts a comparative analysis of the sector-wise GDP growth rate in India. It explores the interconnectedness between agriculture and other sectors of the Indian economy, including industry and services. The study concludes by highlighting the role of agriculture in driving India's economic growth and the changing patterns of sectoral contributions to GDP. Agriculture remains significant, providing livelihoods and food security, but other sectors are diversifying the economy. Policymakers must support agriculture while encouraging growth in other areas for sustained and equitable development. Emphasizing modernization, productivity and sustainability in agriculture can lead to a robust and resilient economy for India.

Keywords: Agriculture, Growth Rate, Indian Economy, GDP

INTRODUCTION

Agriculture has played a significant role in India's economy throughout its history. It has been the backbone of the country's economic and social development. Agriculture was the foundation of India's ancient civilizations, such as the Indus Valley Civilization and Vedic period, enabling settled communities to thrive. In pre-modern India, agriculture formed the primary economic activity, providing livelihoods to a majority of the population. During British rule, agriculture was heavily exploited for raw materials, which impacted India's economic prospects and led to famines. In the mid-20th century, the Green Revolution boosted agricultural productivity through the introduction of high-yielding crop varieties, fertilizers, and irrigation, making India self-sufficient in food production. Even as India has modernized, agriculture continues to be a significant source of employment, employing a large percentage

of the population. Though its contribution to India's Gross Domestic Product (GDP) has declined due to industrialization and services, agriculture remains a vital sector, especially in rural areas. Agriculture contributes substantially to India's export earnings through items like rice, spices, tea, and cotton. It also ensures food security for its vast population is a crucial role played by agriculture in India's economy. Agriculture has a strong connection to cultural and social practices in India, influencing traditions and festivals. Overall, agriculture has been integral to India's economic and social fabric, shaping the nation's development and maintaining the livelihoods of millions of people.

RESEARCH METHODOLOGY

a. Research Approach:

This study adopts a qualitative research approach to analyze the data on the growth of agriculture and the sectoral contribution towards GDP of India.

b. Data Collection:

All data used in this research is secondary, sourced from reliable and publicly available databases, which include publications on Economic Survey Reports of various years, data from the Ministry of Statistics and Programme Implementation (MoSPI), Government of India, and other relevant scholarly articles.

c. Data Period:

The data used in the analysis spans a specific period to ensure consistency and comparability, from 1991 to 2021.

d. Data Analysis:

The study involves conducting descriptive statistics to provide an overview of the state of agriculture in India over the selected period. Graphs, charts, and tables have been utilized to present the data visually.

e. Data Limitations:

As this research relies solely on secondary data, it is subject to the limitations of the data sources used. There may be potential discrepancies, missing data points, or variations in data across different sources.

LITERATURE REVIEW

1. P. Neetu (2009), the name of the study is “**Contribution of Agriculture in the Development of Indian Economy**”. This study has analysed the share of agriculture sector in total gross domestic product, national income in India. It was also tried to study the role of agriculture sector in employment generation and exports. Agriculture plays a significant role in reducing inflation, increasing agricultural earnings, and creating jobs. The central government has actively contributed to the development of all facets of agriculture as a result of its recognition of the significance of agricultural production for economic growth.

By giving emphasise on agriculture sector, this study tried to analyse the contribution of Agriculture in the Development of Indian Economy.

2. L. Praburaj (2018), the name of the study is “**Role of Agriculture in the Economic Development of a Country**”. Together with industrialization and urbanisation, increases in agricultural productivity and per-capita income in rural areas result in a higher demand for industrial production. Given that increasing agricultural productivity and output tend to significantly contribute to the nation's overall economic development, it would be reasonable and desirable to place more focus on the agricultural sector's continued development. This study aims to analysed the role of agriculture in the economic development of a country.
3. S. Kalpana & S. Narayan (2012), the name of the study is “**Investigating the Impact of Agriculture and Industrial Sector on Economic Growth of India**”. By taking into account factors like gross domestic product (GDP), per-capita gross national income (PcGNI), gross domestic saving (GDS), gross domestic capital formation (GDCF), and production of both the agricultural and industrial sectors, the current study seeks to examine the contributions of both the agricultural and industrial sectors to the Indian economy. The entire analysis is based on secondary data that was gathered from the Reserve Bank of India's Handbook of Statistics on Indian Economy. First, the Phillips-Perron test was used in this investigation to determine whether the variables were stable. According to the study, agriculture is essential to both industry and the economy. Without agriculture and industry, the Indian economy cannot function or thrive. They are like the two hands of the country. Therefore, it is essential for a growing country to prioritise both agriculture and industry, especially in the early phases of economic development.
4. B. Jayson & M. C. Amanda (2021), the name of the study is “**The Importance of Agriculture in the Economy: Impacts from COVID-19**”. In addition to the impact of COVID-19 on changes in agricultural production and trade, this study analysis takes into account the significance of FAFH to the wider economy. To determine the effects on the gross domestic product (GDP), this study collect data on the actual changes to these components as well as comparable shocks to non-agricultural sectors. Then, they use a simulation model to calculate the effects. According to the findings, COVID-19-related changes in agriculture have a greater impact on the total U.S. economy than the sector's initial economic share did. But by a magnitude of 3, the effects of non-agricultural shocks still outweigh those of agriculture.

Agriculture and Its Contribution

India's agriculture sector plays a significant role in the country's economy, employment, and food security. Agriculture is a crucial sector for India's economy, contributing around 15-17% to the country's Gross Domestic Product (GDP). However, its share in GDP has been gradually decreasing over the years due to the growth of other sectors like services and manufacturing. Agriculture also remains the primary source of livelihood for a substantial portion of the Indian population. It is estimated that around 40-45% of the workforce is engaged in agriculture-

related activities, directly or indirectly. Agriculture is the backbone of India's food security. The country's large agricultural production ensures a steady supply of food to feed its vast population. However, challenges like inadequate infrastructure, land fragmentation, water scarcity, and climate change can impact food security.

Transition of Indian Agriculture

India's agriculture has undergone a significant transition from traditional subsistence farming to modern commercial agriculture. Historically, Indian agriculture was characterized by small-scale, family-based operations primarily focused on meeting the basic needs of the household. However, with the advent of technology, irrigation systems, and improved farming practices, there has been a gradual shift towards commercialization. The Green Revolution in the 1960s played a crucial role in boosting agricultural productivity through the adoption of high-yielding crop varieties, fertilizers, and pesticides. This led to increased food production and self-sufficiency, laying the foundation for commercialization. As the population grew, the demand for agricultural products surged, prompting farmers to explore more market-oriented approaches.

In recent decades, globalization, trade liberalization, and the expansion of the food processing industry further encouraged farmers to cater to commercial markets. The introduction of contract farming and agribusinesses also enabled better integration into national and international supply chains. Despite these advancements, challenges persist, such as fragmented land holdings, lack of access to credit, and uneven distribution of resources. To sustain and accelerate the transition to commercial agriculture, government policies need to focus on providing farmers with infrastructure, technology, and training to improve their productivity and market access. Emphasizing sustainable practices and empowering small farmers will be key to ensuring the growth of India's agricultural sector while addressing food security and rural development.

Challenges and Opportunities of the Agricultural Sector in India

The agriculture sector in India was facing both challenges and opportunities. The current state of agriculture in the country was characterized by a significant contribution to the economy, providing livelihoods to a large population, and meeting domestic food demands. However, there were several pressing challenges that needed attention.

Challenges included fragmented land holdings, leading to inefficient farming practices, inadequate access to credit and technology for small farmers, and over-dependence on monsoons for irrigation. The sector was also grappling with issues like soil degradation, water scarcity, and climate change, which impacted crop yields and productivity.

On the other hand, India's agriculture sector offered numerous opportunities for growth and development. The country has a vast agricultural potential, with a diverse range of crops and agro-climatic zones. Leveraging technology and innovation in farming practices, such as precision agriculture and smart irrigation systems, could enhance productivity and sustainability.

Additionally, there was potential for value addition and market diversification through agro-processing and agri-businesses. Encouraging private investments in agriculture, improving infrastructure, and strengthening supply chains could help farmers access broader markets and fetch better prices for their produce. Addressing these challenges and tapping into the opportunities could bolster India's agricultural sector, ensuring food security, rural development, and economic growth in the country

Analysis of Data

1. Growth Rate of Agriculture Over the Past Two Decades

The agricultural sector plays a crucial role in the economy of many countries. It involves the cultivation of crops, raising livestock, and other activities related to food production. This sector not only provides food for the population but also contributes significantly to the country's GDP, employment, and exports.

India is a predominantly agricultural country. It is mostly an agricultural nation due to its climate. Historically, agriculture has been the backbone of India's economy and society for thousands of years. India has vast agricultural land, climate diversity and a high labour force which helps the country to achieve a high growth rate in this sector. Approximately 70% of people in India works in the agriculture sector each year. So, the country is known as agricultural-based country. The following table shows the growth rate of agriculture in India every 5 year since 1991-

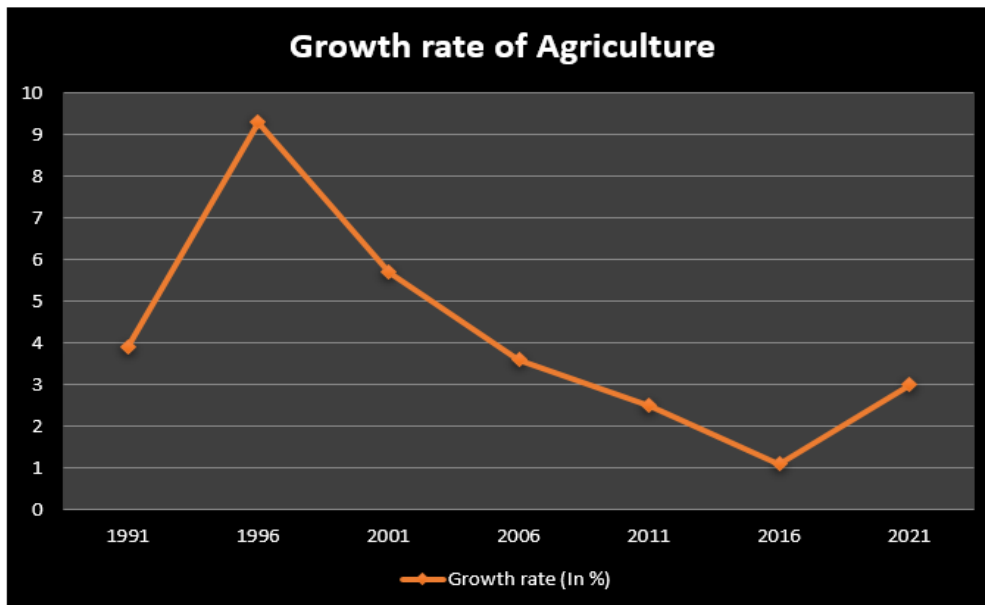
Sl. No	Year	Growth rate (In %)
1	1991	3.9
2	1996	9.3
3	2001	5.7
4	2006	3.6
5	2011	2.5
6	2016	1.1
7	2021	3

Source: Ministry of Statistics and Programme Implementation

The above table shows that from 1991 to 2021, the country has faced different growth rates in agriculture. In 1991, the agricultural growth rate of India was 3.9%, which increased to 9.3% in 1996. One of the finest years for foodgrain production was 1996-97, which helped to raise the overall growth rate of 5.4% in 2001-02 was supported by different growth rates in various sectors. The highest contribution was from the service sector, which was 6.5%, then the agriculture sector and lastly, the industrial sector. Each sector played a role in contributing to the overall economic growth during that period. The growth rate of agriculture decreased to 3.6% in 2006. At the end of 2006 or the start of the eleventh five-year plan from 2007, the average annual growth rate of 3.6% in the Gross Domestic Product from the agriculture sector and allied sector, which fell short of the target of 4.0%. In 2011, it decreased to 2.5% and became the lowest in 2016, which was 1.1%. After 2016, it started to increase and became 3% in 2021, which was comparatively lower than 1991-2000 period, but higher than 2010-2017

period. In the 2022-23 budget, it has seen that the growth rate of agriculture is 3.5% which is comparatively higher than the previous year.

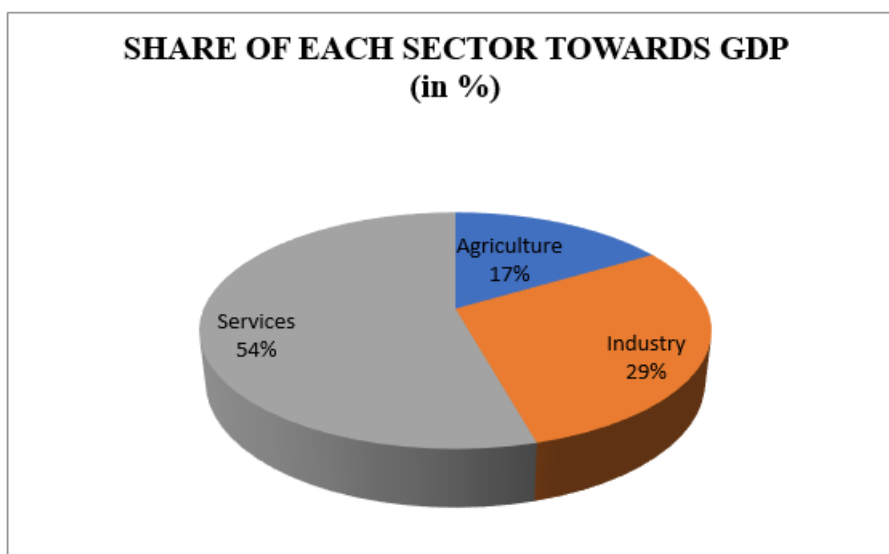
The following graph shows the growth rate of agriculture sector in India in different year-



2. Sector-Wise Gdp Growth in India – A Comparison

Let us look at the contribution of each sector towards GDP for the FY 2020-21 with the help of the following pie-chart:

GVA in 2020-21



From the above representation, we may observe that the services sector has got the highest share in contributing towards GDP of India. The industry sector is in the second position, followed by the agriculture sector. Despite the decreasing share of the agricultural sector in GDP, its importance in economic growth cannot be underestimated. Agriculture remains a critical sector for several reasons, and its role extends far beyond its direct contribution to GDP.

i) Employment Generation: Agriculture is a significant source of employment, particularly in developing countries. It provides livelihoods for millions of people, especially in rural areas where alternative job opportunities may be limited. Sustaining a robust agricultural sector can alleviate poverty and reduce urban migration pressures.

ii) Food Security: A strong agricultural sector is essential for ensuring food security. As the global population continues to grow, the demand for food will increase. A well-functioning agriculture sector can help meet this demand and stabilize food prices, reducing the risk of food crises.

iii) Raw Materials: Agriculture is the primary source of raw materials for various industries, including textiles, food processing, and pharmaceuticals. A thriving agriculture sector can ensure a stable supply of essential inputs, supporting the growth of other industries.

iv) Export Earnings: Many countries rely on agricultural exports to earn foreign exchange. This revenue can be crucial for supporting imports of essential goods, technology, and infrastructure development.

v) Rural Development: A strong agricultural sector is closely linked to rural development. It can lead to improved infrastructure, education, and healthcare facilities in rural areas, thus narrowing the urban-rural divide.

vi) Innovation and Technology: The agricultural sector has been a hotbed for innovation and technology adoption. Modern agricultural practices, including precision farming, use of drones, and advanced irrigation techniques, can boost productivity and efficiency, contributing to overall economic growth.

vii) Climate Change Adaptation: As climate change poses challenges to food production, investing in sustainable agriculture becomes imperative. The sector can play a critical role in mitigating climate change impacts through practices like agro-forestry and soil conservation.

viii) Market Linkages: Agriculture creates market linkages between rural and urban areas, fostering economic interdependence. The demand for agricultural products in urban centres drives the rural economy and encourages investment in rural infrastructure.

ix) Poverty Alleviation: The majority of the world's poor are dependent on agriculture for their livelihoods. Empowering small-scale farmers and enhancing their productivity can uplift millions out of poverty.

x) Social Stability: Agriculture's significance goes beyond economic aspects. In many societies, it is deeply ingrained in cultural traditions and social structures. A stable agriculture sector can contribute to social harmony and stability.

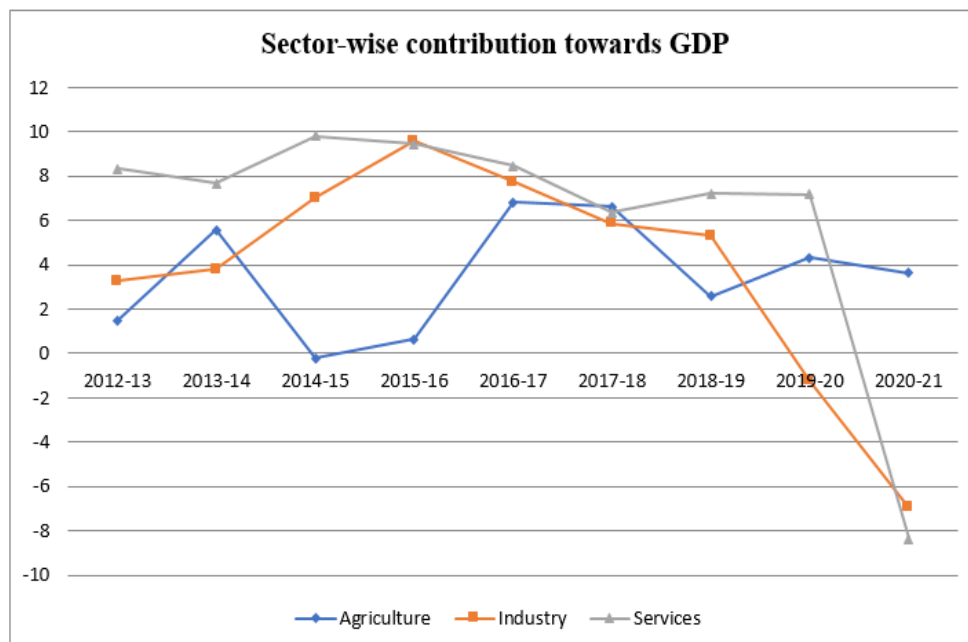
Therefore, although the share of the agricultural sector in GDP might be declining in India due to the growth of other industries, its importance in economic growth remains undeniable. Sustaining a vibrant agricultural sector is crucial for employment generation, food security, rural development, innovation, and social stability. Policymakers should recognize and support the vital role of agriculture in building resilient and sustainable economies.

Again, the following table represents the sector-wise GDP growth in India from the **FY 2012-13 to 2020-21**:

GVA (Rupees in Crore) at constant prices

Year	SECTOR		
	Agriculture	Industry	Services
2012-13	1.49	3.27	8.33
2013-14	5.57	3.79	7.66
2014-15	-0.22	7	9.81
2015-16	0.65	9.58	9.44
2016-17	6.8	7.72	8.46
2017-18	6.61	5.86	6.34
2018-19	2.56	5.31	7.2
2019-20	4.31	-1.23	7.19
2020-21	3.63	-6.96	-8.36

Source: Ministry of Statistics and Programme Implementation



Again, from the above data, we can observe that during the FY 2019-20 and 2020-21, the country's GDP had a severe downfall due to the COVID-19 pandemic. During this period, the contribution of the industry and services sector was found to be negative, but that of the

agriculture sector remained constant. This sector's steadfast contribution to the GDP during the COVID-19 pandemic highlights its profound importance and resilience in times of crisis. While many other sectors experienced negative impacts and sharp declines in their contributions to the economy, agriculture stood as a stable pillar, crucial for food security and livelihoods. This resilience can be attributed to several factors.

Firstly, as a fundamental necessity, food production and distribution remained essential services even amidst lockdowns and restrictions. Consequently, governments worldwide recognized the critical role of agriculture and took measures to support and maintain its operations.

Moreover, the decentralized nature of agricultural activities, with many small-scale farmers, allowed for relative flexibility and adaptability during challenging times. Unlike other industries that heavily rely on centralized production and complex supply chains, the agricultural sector's resilience was rooted in its local and regional networks. This made it less susceptible to the global disruptions caused by the pandemic.

Furthermore, the pandemic brought to the forefront the significance of self-sufficiency in food production, prompting many nations to reevaluate their dependence on imports and to invest in bolstering domestic agriculture. This shift in focus on local production and supply chains has the potential to lead to a more sustainable and resilient agricultural sector in the long run.

The stable contribution of agriculture to the GDP also underscored the sector's role in providing employment and livelihood opportunities, particularly in rural areas. As other industries faced layoffs and economic uncertainty, agriculture remained a vital source of income for millions of people worldwide.

In conclusion, the agriculture sector's constant contribution to the GDP during the COVID-19 pandemic demonstrated its significance not only in economic terms but also in safeguarding food security, promoting self-sufficiency, and sustaining livelihoods. Governments and policymakers must recognize the invaluable role of agriculture and continue to invest in its development and resilience to ensure a more secure and sustainable future for all.

CONCLUSION

In conclusion, this study highlights the crucial role of agriculture in driving economic growth in India while shedding light on the changing patterns of each sector's contribution to GDP growth. Agriculture continues to be a significant pillar of the economy, providing livelihoods to a large segment of the population and serving as a crucial source of food security. However, as the economy evolves, we observe a shift in the relative contributions of other sectors, such as manufacturing and services, which indicates a diversification of the Indian economy.

Despite this diversification, it is essential to recognize that agriculture remains a foundational sector that requires continued support and modernization. Policymakers must focus on implementing measures that enhance agricultural productivity, ensure sustainable practices, and address the challenges faced by farmers. Simultaneously, encouraging growth in other sectors can foster a well-rounded economy and promote overall prosperity.

Overall, the study underscores the enduring importance of agriculture in India's economic growth trajectory and emphasizes the need for a balanced and inclusive approach to achieve sustained and equitable development in the country. By acknowledging the evolving patterns of sectoral contributions and prioritizing agriculture's development, India can harness the potential of all sectors and create a path towards a more robust and resilient economy.

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