

Indian Agriculture Since Independence

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Abstract: The Indian economy has undergone structural changes over time with variation in the share of agriculture in the GDP. The importance of agriculture has not diminished for two major reasons. First, the country achieved self-sufficiency in food production at the macro level but still has a food deficit. Second, the dependence of the rural workforce on agriculture for employment has not declined in proportion to the sectoral contribution to GDP. This paper is an attempt to describe the Green Revolution and Economic Reforms of 1991 as two major events that have brought about a change in Indian Agriculture and its contribution to the GDP. For this, the analysis section is divided into 4 major phases covering the after and before of these two events. It also presents various government reforms and measures that were implemented. Further, this paper also analyses the situation of Indian agriculture during COVID 19 and the new agriculture policy, 2020.

Keywords: Agriculture, GDP, COVID-19, green revolution, economic reforms.

1. Introduction

Since independence in 1947, agriculture has played a vital role in the Indian economy. From employing the majority of its population, providing a source for rural income, inclusive growth, food security, source of revenue to the government to earners of foreign exchange, its contribution to the economy is multifaceted. It provides a forward linkage effect (agriculture providing food and raw materials to non-agricultural production), a backward linkage effect (agriculture consuming industrial products such as insecticide or tractors) and inter-sectoral transfers (agriculture contributes taxes and cheap labor to other sectors). Agriculture productivity depends upon several factors such as availability and quality of various inputs, access to agriculture credit, prices of produce, storage, and marketing infrastructure among others.

Over the years, the pivotal role that the agricultural sector has played in the past is diminishing and is being replaced by other sectors. This can be attested by the fact that the contribution of agriculture to the nation's GDP has decreased from 54% of GDP in the 1950s to 20% of the GDP in 2020. Despite the dynamic changes it has undergone over the past 7 decades since independence, it continues to be an important sector in context to the Indian economy.

The two major events that brought about a change in the agriculture sector were the Green Revolution (1965) which had a lasting impact for over 3 decades and the Economic reforms (1991) which saw a decline in this sector.

Green revolution: The government along with geneticist MS Swaminathan launched the green revolution. It was formulated with the motive to apply science and technology for increasing the yield per hectare. The programmes under the new strategy are:

- the high yielding varieties programme
- multiple cropping programme
- integrated development of dry areas
- plant protection measures
- increased use of fertilizers
- new irrigation concept

New Economic Policy: This New Economic Policy focused on liberalization, privatization, and its outcome was globalization. The financial crisis that happened in the year 1991 acted as a catalyst for economic reforms. The two measures under this policy were,

- Stabilization measures: these were short term measures to control inflation and the correct balance of payments
- Structural reform measures: were aimed at improving the efficiency of the economy and increasing international competitiveness by removing rigidity in various segments.

The effects of these two events on the agriculture sector are discussed in detail in this paper. This sector in the present has also gained relative importance and growth compared to the last few years due to the global COVID-19 pandemic and the new agricultural reforms of 2020 which will be discussed further.

2. Research Statement

The scope of this paper is to define the history of agriculture in India and some recent trends due to the pandemic and the new agriculture reforms. This will be essentially described by taking the green revolution and economic reforms as two turning points and then describing the sector's state before and after these two events. For this, the paper has been divided into 4 chronological phases starting from 1947.

3. Literature Review

For the purpose of this secondary research paper, the following papers have been reviewed.

Agricultural development in India since independence [9], evaluates the performance and progress of Indian Agriculture since Independence. Further, analysis of sources of agricultural growth and determinants of agricultural production is being

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done. Moreover, this paper presented the different agricultural policies introduced by the government from 1950-51 to 2015-16.

Agriculture [1], a secondary source of data, covers the background, trends, and history of the agricultural sector for starters. It also includes the recent trends, challenges, and initiatives in the agricultural sector. It identifies five distinct phases of growth:

- Phase I: Pre-green revolution Period (1950-51 to 1967-68)
- Phase II: Early green revolution period (1968-69 to 1985-86)
- Phase III: Period of wider dissemination (1986-87 to 1996-97)
- Phase IV: Post-Reform Period (1997-98 to 2005-06)
- Phase V: Period of Recovery (2006-07 to 2009-10)

Indian Agriculture contributes to green shoots of the Indian Economy with a Growth Rate of 3.4 Percent Despite COVID-19 Pandemic [3], a sort of an extract from the economic survey talks about the recent Agricultural reforms and reasons for agricultural growth during the pandemic.

Several other papers like “Impact of Agricultural Inputs on Agricultural GDP in Indian Economy”, “Agri share in GDP hit 20% after 17 years”, “Agricultural Production and Economic Growth in India”, “Co-integration and casual relationship Between Agriculture sector and GDP”, “Agricultural Sector: Status, Challenges and its Role in Indian Economy”, “Importance Of Agriculture In Indian Economy” and “State of agriculture in India”, were also reviewed for more intricate details stated in the project.

All these papers highlight different timelines and there is a wide variation in each of the papers while considering phases. Some papers consider 4 phases while some have 5 phases with rigid time frames making them less inclusive of certain facts. We have tried to avoid the time frame and attempted to describe the history of agriculture in India in a narrative that is more inclusive and revolves around the two pivotal events stated above. Further, we have also listed current trends with regards to the Covid19 pandemic and new agriculture policy.

4. Analysis

A. Pre Green Revolution (post-independence)

This period was characterized by a steep decline in growth in GDP agriculture, with decadal growth rates found to plummet sharply from 2.78 percent to 1.06 percent between the period 1950-51 and 1967-68. It witnessed various agrarian reforms, institutional changes, the development of major irrigation projects, and strengthening of the cooperative credit institutions by the government. Despite these institutional changes and development programmes introduced during this phase, India remained dependent upon foreign countries for food to feed the rising population. A few major reforms that were introduced during this period were as follows -

- 1) During the British raj, the land was concentrated in the hands of few, for this, a committee, under the Chairmanship of J. C. Kumarappan, was appointed,

which provided a report recommending comprehensive agrarian reform measures which include land reform. The Land Reforms of independent India had four components,

- The Abolition of the Intermediaries
- Tenancy Reforms
- Fixing Ceilings on Landholdings
- Consolidation of Landholdings

The most important contribution was the abolition of intermediaries and giving land titles to the actual cultivators. This boosted productivity and the farmers made the best possible use of their land, thereby increasing agricultural production.

- 2) To encourage the adoption of better technology in agriculture, an incentive price policy was adopted in 1964 and the Agricultural Price Commission was set up to make decisions on fixation of support prices of agricultural crops. This was called the minimum support price(MSPs).

MSPs are the prices at which the government purchases food grains from farmers. MSPs are fixed by the central government in order to ensure remunerative prices to farmers. MSPs are declared prior to each sowing season so that farmers are aware of the minimum price the government will offer for their produce. High MSPs of crops provide incentives to farmers to adopt modern technologies and farming practices, and to increase the overall productivity of their crops.

The programme had a few issues like low awareness about MSPs among farmers, long distances to the procurement centers, increasing cost of transportation for farmers, irregular hours of the procurement centers, lack of coverage storage godowns and inadequate storage capacity, delays in the payment of MSPs to farmers.

- 3) The Community Development Programme, decentralized planning, and the Intensive Area Development Programmes were also initiated for regenerating Indian agriculture that had stagnated during the British period.

B. Green Revolution Phase

The green revolution was kick-started from the year 1966 and the effects of the adoption of superior technology and institutional reforms were found to manifest from 1968-69 onwards. The early green revolution period saw a visible reversal of growth in agricultural GDP. The decadal growth rate reached near 3 percent by the decade ending with 1985-86.

During this period the policymakers focused on research, extension, input supply, credit, marketing, price support, and spread of technology. This adoption of a new agricultural strategy relied on high-yielding varieties of crops, focus on multiple cropping, package approach, modern farm practices, and spread of proper irrigation facilities. The HYV seeds could yield more than double the existing level which enabled the nation to become self-sufficient in food grains.

As a result, in 1966 India imported 18000 tonnes of HYV seeds which were distributed in the highly irrigated areas of Punjab, Haryana, and Western UP. Total foodgrains harvest

increased from 74 million tonnes in 1966-67 to 105 mt in 1971-72. Output growth increased food grain supplies leading to a decline in food grain prices. Since the majority population employed in this sector is rural, rural poverty declined in this phase from 64% in 1967 to 56% in 1973.

C. Pre Economic Reform

There was a considerable increase in subsidies and support to the agriculture sector by the government during this period, which witnessed the process of diversification which led to fast growth in non-food grains output like milk, fishery, poultry, vegetables, fruits, etc., which in turn accelerated growth in agricultural GDP during the 1980s. An investment made by farmers on their agricultural infrastructure showed an increase whereas the public sector spending in agriculture for infrastructure development started showing a decline.

D. Economic Reform and Post

These reforms started after the initiation of the economic reform process in 1991. These involved deregulations, reduced government participation in economic activities, and liberalization. It was anticipated that economic liberalization would ensure a favorable shift in trade for agriculture in India, enabling cultivators to obtain surplus from cultivation and would help them improve the land, increase agricultural productivity and growth rate of the whole agricultural sector but that was not the case.

Various economic reforms after 1991 were based on a straightforward rejection to transform the institutional framework of Indian agriculture. Although no direct reforms for agriculture were taken, the sector was affected indirectly by the devaluation of exchange rate, liberalization of external trade, and deprotection to industry. The domestic market was opened to international trade after 1991 which raised new challenges among policymakers.

Moreover, there was a decline in capital formation in agriculture, expenditure on irrigation and extension services in rural areas was not sufficient. Inadequacy of cheap institutional credit resulted in a slowdown of agricultural growth and increased livelihood insecurity for farmers.

Due to this, a New Agricultural Policy was launched by the Indian Government in July 2000 which aimed to achieve an output growth rate of 4 percent per annum in the agriculture sector on the basis of efficient use of resources in a sustainable manner. It aimed to strengthen rural infrastructure along with increasing employment opportunities in rural areas which will, in turn, improve the standard of living and discourage the migration of the rural population. The challenges that economic liberalization brought with it, this policy addressed them by fulfilling the needs of the domestic and foreign markets.

E. 21st Century Agriculture

Agricultural growth was fairly volatile, ranging from 5.8% in 2005-06 to 0.4% in 2009-10. There was an unambiguous turnaround during the 11th five-year plan period (2007-12) after which growth rate plunged to 8.6% in 2010-11 but declined to -0.2% in 2014-15 and 0.8% in 2015-16. Total production of food grains also increased from 51 million tonnes

in 1950-51 to 252 million tonnes in 2015-16.

F. Recent Trends During COVID-19 and New Agricultural Policy, 2020

From January to June 2020, when the first wave of COVID-19 hit India, agriculture turned out to be a shining light and it was estimated that GVA for agriculture achieved a positive growth of 3.4 percent at constant prices. Agriculture was the only sector that managed to achieve positive growth at constant prices in 2020-21. The share of agriculture in the gross domestic product (GDP) reached almost 20 percent for the very first time in the last 17 years, making it the sole bright spot in GDP performance during 2020-21. The continuous supply of agricultural commodities, especially staples ensure food security in the nation. This increase in production also boosted the allocation of food grains under the National Food Security Act (NFSA) that increased by 56 percent in 2020-21, when compared to 2019-20. The government allocated 943.53 lakh tonnes of food grains to states / Union territories till December 2020.

5. Conclusion

To sum up, the real agricultural revolution was initiated by the Government to assist the poor and marginal farmers in order to substantially increase their farm yields and thus to further augment his meagre incomes.

The Green revolution directed under the aegis of Mr. M S Swaminathan was a truly path-breaking initiative that laid the strong foundations on which rests our national food security program.

This was further & significantly amplified at regular intervals through state interventions in the form of major economic reforms in the 90s, price stabilization & support measures through MSP, reducing the prevalent inefficiencies in the system through the new agriculture policy, 2020.

India's agricultural sector is still very important to the Indian economy, although its share of the economy has decreased over the past 50 years. This sector played an inevitable role during the distress times of the pandemic by ensuring food security to the poorest households. Reforms to land distribution, water management, and food distribution systems will further enhance productivity and help India meet its ever growing demand for food.

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