



ROLE OF AGRICULTURE SECTOR IN INDIAN ECONOMY

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Abstract

Agriculture is the backbone of Indian economy and it accounts for almost 14% of India's gross domestic product (GDP). Agriculture is an important sector, which determines growth and sustainability and plays a vital role in the development of India, with over 60 percent of the country's population deriving their subsistence from it. Most of the rural population in India depends on agricultural practices for employment and livelihood. Indian economy in agriculture has shown a steady growth in the last two decades. The economy is also experiencing regular changes in its demographics, lifestyle, and domestic consumption. The agriculture industry in India is growing at a great pace and is expected to grow many folds in the near future. Agriculture Sector of Indian Economy is one of the most significant part of India. Agriculture is the only means of living for almost two-thirds of the employed class in India. As being stated by the economic data of financial year 2013-14, agriculture has acquired 18 percent of India's GDP. The agriculture sector of India has occupied almost 43 percent of India's geographical area. Agriculture is still the only largest contributor to India's GDP even after a decline in the same in the agriculture share of India. Agriculture also plays a significant role in the growth of socio-economic sector in India. In the earlier times, India was largely dependent upon food imports but the successive stories of the agriculture sector of Indian economy have made it self-sufficing in grain production. The country also has substantial reserves for the same. India depends heavily on the agriculture sector, especially on the food production unit after the 1960 crisis in food sector. Since then, India has put a lot of effort to be self-sufficient in the food production and this endeavor of India has led to the Green Revolution. The Green Revolution came into existence with the aim to improve the agriculture in India. Agriculture has always been India's most important economic sector. Agriculture sector plays a strategic role in the process of economic development of a country. It has already made a significant contribution to the economic prosperity of a advance country and its role in the economic development of under developed country is of vital for future development. In other words, where per capita real income is low emphasis is being laid on agriculture and primary industries. It is also an important factor containing inflation, raising agricultural wages and for employment generation. Realizing the importance of agricultural production for economic development, the central government has played an active role in all aspect of agriculture development. This paper has analyzed 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.

Introduction

Agriculture is the dominant sector of Indian economy, which determines the growth and sustainability. About 65% of the population still relies on agriculture for employment and livelihood. Indian agriculture however, has milestones. The green revolution transformed India from a food deficient stage to a surplus food market. In a span of 3 decades, India became a net exporter of food grains. Remarkable results were achieved in the fields of dairying and oil seeds through white and yellow revolutions. The sector could not however maintain its growth momentum in the post green revolution years, the strategic growth in agriculture and the accelerated growth in industry reversed the structure of national GDP in Indian economy.¹ Despite these major structural transformations, the agriculture sector continues to accommodate the major share of the workforce. The sector is prone to output fluctuations even after establishing better input facilities and technology like irrigation, High yielding seeds, changes in cropping pattern etc. Today the attention has been shifting to high-value crops from traditional crops. The Indian government also set up Ministry of Food Processing Industries to stimulate the agriculture sector of Indian economy and make it more lucrative. India's agriculture sector highly depends upon the monsoon season as heavy rainfall during the time leads to a rich harvest. But the entire year's agriculture cannot possibly depend upon only one season. Taking into account this fact, a second Green Revolution is likely to be formed to overcome the such restrictions. An increase in the growth rate and irrigation area, improved water management, improving the soil quality, and diversifying into high value outputs, fruits, vegetables, herbs, flowers, medicinal plants, and bio-diesel are also on the list of the services to be taken by the Green Revolution to improve the agriculture in India. Despite the focus on industrialization, agriculture remains a dominant sector of the Indian economy both in terms of contribution to gross domestic product (GDP) as well as a source of employment to millions across the country.² Agriculture plays a vital role in the Indian economy. Over 70 per cent of the rural households depend on agriculture as their principal means of livelihood. Agriculture, along with fisheries and forestry, accounts for one-third of the nation's GDP and is its single largest contributor. The total Share of Agriculture & Allied Sectors (Including agriculture, livestock, and forestry and fishery sub sectors) in terms of percentage of GDP is 13.9 percent during 2013-14 at 2004-05 prices. All these measures taken by the Green Revolution led to an alarming rise in the wheat and



rice production of India's agriculture. Considering the quantum leap witnessed by the wheat and rice production unit of India's agriculture, a National Pulse Development Programme that covered almost 13 states, was set up in 1986 with the aim to introduce the improved technologies to the farmers. A Technology Mission was introduced in 1986 right after the success of National Pulse Development Programme to boost the oilseeds sector in Indian economy. Pulses too came under this programme. A new seed policy was planned to provide entree to superior quality seeds and plant material for fruits, vegetables, oilseeds, pulses, and flowers.³

Methodology

The study relies on secondary data compiled from various published sources viz. The Directorate of Economics and Statistics (DES), Ministry of Agriculture; National Accounts Statistics, Central Statistical Organization, Government of India; Ministry of Statistics and Programme Implementation Government of India; research papers and journals etc.

Challenges and Reforms in the Agriculture Sector

The Economic Survey 2014-15 was released today in the Parliament by Arun Jaitely. It has highlighted various challenges and reforms in the agriculture sector. According to the survey, GDP declined to 15.2% during the Eleventh Plan and then further decreased to 13.9% in 2013-14. There also has been decrease in the number of cultivators from 127.3 million (Census 2001) to 118.7 million (Census 2011). According to the Economic Survey, growth rates of productivity in agriculture sector are far below global standards; productivity levels of rice and wheat have declined after the green revolution of the 1980s. Another issue is soil degradation due to declining fertilizer-use efficiency. Also, the food subsidy has increased substantially in the past few years. Food subsidy was Rs. 92,000 crore in 2013-14. With 60 per cent of the total foodgrains and oilseeds produced being grown in the kharif season, and with just about 35 per cent of arable area being irrigated, Indian agriculture is still dependent on rainfall.⁴ The second long-range forecast for the current year by the IMD for monsoon season indicates that the monsoon rainfall is likely to be 93 per cent of the LPA (model error \pm 4 per cent), with 71 per cent probability of subnormal/deficit rainfall and 70 per cent occurrence of EL Nino. The government has put in place contingency measures in about 500 districts. Currently, India is in an anomalous situation of being largely self-sufficient with large stocks of foodgrains on the one hand and registering high food inflation. On domestic and international marketing, the plethora of government interventions that were used to build a marketing set up have actually served as barriers to trade. Removing market distortions will create greater competition in markets, promote efficiency and growth and facilitate the creation of a national agricultural market. For establishing a national common market, the Economic Survey has recommended the following reforms; Examine the APMC Act, EC Act, Land Tenancy Act, and any such legally created structures whose provisions are restrictive and create barriers to free trade; Rigorously pursue alternate marketing initiatives, like direct marketing and contract farming; Examine inclusion of agriculture related taxes under the General Goods and Services Tax (GST); Establish stable trade policy based on tariff interventions instead of non-tariff trade barriers; Develop and initiate competition in the agro-processing sector. Incentivize the private sector to scale up investments; In this scenario of bumper production and stocks, a paradigm shift in the role of the government in all aspects of food grain production and distribution is necessary.

Agricultural exports constitute a fifth of the total exports of the country. In view of the predominant position of the Agricultural Sector, collection and maintenance of Agricultural Statistics assume great importance. The country is also the largest producer, consumer and exporter of spices and spice products in the world and overall in farm and agriculture outputs, it is ranked second. From canned, dairy, processed, frozen food to fisheries, meat, poultry, and food grains, the Indian agro industry has plenty of areas to choose for business. The Department of Agriculture and Cooperation under the Ministry of Agriculture is the nodal organisation re-sponsible for the development of the agriculture sector in India. Under it, several other bodies such as the National Dairy Development Board (NDDB) work for the development of other allied agricultural sectors.⁵

Importance of Agriculture in Indian Economy

The contribution of agriculture during the first two decades towards the gross domestic product ranged between 48 and 60%. In the year 2001-2002, this contribution declined to only about 26%. Agriculture plays vital role in generating employment: In India at least two-thirds of the working population earn their living through agricultural works. In India other sectors have failed generate much of employment opportunity the growing working populations. Agriculture makes provision for food for the ever increasing population: Due to the excessive pressure of population labour surplus economies like India and rapid increase in the demand for food, food production increases at a fast rate. The existing levels of food consumption in these countries are very low and with a little increase in the capita income, the demand for food rise steeply (in other words it can be stated that the income elasticity of demand for food is very high in developing countries). Therefore, unless agriculture is



able to continuously increase its marketed surplus of food grains, a crisis is likely to emerge. Many developing countries are passing through this phase and in a bid to meet the increasing food requirements agriculture has been developed. There is general agreement on the necessity of capital formation. Since agriculture happens to be the largest industry in developing countries like India, it can and must play an important role in pushing up the rate of capital formation. If it fails to do so, the whole process of economic development will suffer a setback. Transfer of labor and capital from farm to non-farm activities. Taxation of agriculture should be in such a way that the burden on agriculture is greater than the government services provided to agriculture. Therefore, generation of surplus from agriculture will ultimately depend on increasing the agricultural productivity considerably.

Agriculture supplies raw materials to various agro-based industries like sugar, jute, cotton textile and vanaspati industries. Food processing industries are similarly dependent on agriculture. Therefore the development of these industries entirely is dependent on agriculture. Increase in rural purchasing power is very necessary for industrial development as two-thirds of Indian population live in villages. After the green revolution the purchasing power of the large farmers increased due to their enhanced income and negligible tax burden. Indian agriculture plays a vital role in internal and external trade of the country. Internal trade in food-grains and other agricultural products helps in the expansion of the service sector. Right from the First Five Year Plan agriculture is considered as the prime revenue collecting sector for both the central and state budgets. However, the governments earn huge revenue from agriculture and its allied activities like cattle rearing, animal husbandry, poultry farming, fishing etc. Indian railways along with the state transport system also earn a handsome revenue as freight charges for agricultural products, both semi-finished and finished ones. A large number of skilled and unskilled labourers are required for the construction works and in other fields. This labour is supplied by Indian agriculture. Indian agriculture has a cost advantage in several agricultural commodities in the export sector because of low labour costs and self-sufficiency in input supply.

Share in National Income

Although the share of agriculture in the total national income has been gradually decreasing on account of the development of the secondary and tertiary sectors, it still contributed about 13.39% of national income in 2013-14. (In 1950-51, it was 59%). In India, agriculture is the main source of employment. Even in 2004-05, more than 56% of the total labour force of India is engaged in agriculture and depend on it for their livelihood (1950-51: 69.5%). It becomes evident from this fact that other sectors of the economy could not generate enough employment for the growing population.⁶

Provision of Foodgrains

In a developing country like India where a very large proportion of income is spent on food and the population is increasing rapidly, the demand for foodgrains has been increasing at a fast rate. Agriculture in India has played an important role in meeting almost the entire food needs of the people. The production of foodgrains in India has increased from 51 million tons in 1950-51 to 208.3 million tons in 2005-06, i.e. by a little more than 4 times since 1950-51. This has enabled the country to overcome the problems of foodgrain shortages. The country is almost self-sufficient in foodgrains and it no longer depends on import of foodgrains.

Supply of Raw Materials to Industrial Sector

Agriculture plays an important role in industrial development. Many industries like cotton industry, jute industries, sugar industries, food processing industries, etc. depend on agriculture for their raw material requirements. Moreover, workers engaged in various industries depend on agriculture for their food requirements.

Market for Industrial Product

Agriculture provides markets for a large number of industrial products. Since about two-thirds of India lives in rural areas, there is a large rural purchasing power which has created a large demand for all types of industrial products. Green revolution has considerably increased the purchasing power of the large farmers substantially in the recent years. Thus for the demand for various products like soaps, detergents, clothes, cycles, scooters, radios, television, torches, lead batteries, etc. has witnessed a marked increase. Likewise, the demand for a variety of agricultural inputs like chemical fertilizer, tractors, pumps, pesticides etc. has increased sharply. This has stimulated the development of industries producing these inputs.⁷

Earners of Foreign Exchange

Agriculture plays an important role in Indian economy as an earner of foreign exchange through exports of agricultural commodities like tea, cotton, coffee, jute, fruits, vegetables, spices, tobacco, sugar, oil, cashew kernels, etc. In the past, export of agricultural products accounted for about 70% of the export earnings of the country. However, with economic



development and consequent diversification of our exports, the share of agriculture in total exports has come down to about 10% in 2005-06. All these exports bring valuable foreign exchange to pay for the increased imports of machinery and raw materials required in the non- agricultural sector.

Significance for Trade and Transport

Agriculture helps in the development of tertiary (or service) sector. For example various means of transport like roadways and railways get bulk of their business from the movement of agricultural commodities and raw materials. A significant part of internal trade constitutes mainly of agricultural products.

Source of Revenue for the Government

Through the direct contribution of agricultural taxes to the central and state governments is not significant, they get a significant part of their total revenue in terms of land revenue, irrigation charges, taxes imposed on the commodities purchased by the cultivators etc. central government also earns revenue from export duties on agricultural production. Freight charges imposed by Indian Railways for carrying agricultural product generate huge revenue to the central exchequer. On over all view, India has always been benefited by agriculture. Though the future of India is industrialization, the contribution of agriculture would always prove to be vital for making India a powerful and stable economy in the future.⁷

Market Size

There are multiple factors that have predominantly worked in tandem leading to the growth of the Indian agriculture sector in recent years. These include growth in income and consumption, growth in food processing sector and increase in agricultural exports. Also, increasing private participation in Indian agriculture, growing organic farming and usage of information technology are the trends that are being witnessed by the agriculture industry. As per the 4th Advance Estimates of Production of food grains for 2013-14, total food grain production is estimated to be 264.77 million tons (MT). With an annual output of 130 MT, India is the largest producer of the milk in the world. It also has the largest milk-producing animal population of over 118 million. However, milk yields per animal are among the lowest in the world. India is the biggest producer of pulses in the world at 19 MT and their biggest importer 3.5 MT. India is the second largest producer of sugar in the world and the government has aimed to increase the exports from 1.3 MT in 2013 to an average of 2 MT in 2014 and 2015. Spice exports from India are expected to reach US\$ 3 billion by 2016-17, on the back of creative marketing strategies, innovative packaging, strength in quality and a strong distribution network. The Indian spices market is pegged at Rs 40,000 crore annually, of which the branded segment accounts for 15 per cent. In 2013-14 India achieved a record food grain production of 264 MT, beating the previous year's (2012-13) 257 MT, according to data provided by Department of Economics and Statistics (DES). Also, agricultural profitability has increased over the last decade with record increases in MSPs (minimum support prices) for agricultural produce for all covered crops. The procurement target for rice during Kharif Marketing Season (KMS) 2014-15 has been finalized as 30.05 MT.⁸

Investments

Prompted by the Indian government's initiatives, there has been various investments in the Indian agricultural sector. The Indian agricultural services and the agricultural machinery sectors have cumulatively attracted foreign direct investment (FDI) equity inflows to the tune of US\$ 2,153.61 million in the period April 2000-December 2014, according to the Department of Industrial Policy and Promotion. Some of the major investments and developments in agriculture in the recent past are as IVRCL Ltd's irrigation and water divisions have won orders worth Rs 1,255.67 crore. The company is based out of Hyderabad. The Oman India Joint Investment Fund (OIJIF), a joint venture (JV) between State Bank of India (SBI) and State General Reserve Fund (SGRF), has invested Rs 95 crore (in GSP Crop Science, a Gujarat-based agrochemicals company. Israel based world's seventh largest agrochemicals firm ADAMA Agrochemicals plans to invest at least US 50 million in India over the next three years. Tafe Motors and Tractors Ltd has invested around US 140 million dollar by way of equity in the US-based AGCO Corporation, a worldwide manufacturer and distributor of agricultural equipment. Canada is keen to partner with India in the agriculture and processing sectors, particularly in pulses and canola.⁹

Impact of the Agreement on Indian Agriculture

Indian agriculture enjoys the advantage of cheap labour. Therefore, despite the lower productivity, a comparison with world prices of agricultural commodities would reveal that domestic prices in India are considerably less with the exceptions of a few commodities (notably oilseeds). Hence, imports to India would not be attractive in the case of rice, tea, sunflower oil and cotton. On the whole, large scale import of agricultural commodities as a result of trade liberalisation is ruled out. Even the exports of those food grains which are cheaper in the domestic market, but are sensitive from the point of view of consumption by the economically weaker sections are not likely to rise to unacceptable levels because of high inland transportation cost and inadequate export infrastructure in India. Because of increasing price of domestic agricultural



commodities following improved export prospects, farmers would get benefits which in turn would encourage investment in the resource scarce agricultural sector. With the decrease in production subsidies as well as export subsidies, the international prices of agricultural commodities will rise and this will help in making our exports more competitive in world market. Both the pattern of production and price expectations will increasingly be influenced by the demands and trends in world markets. On the one hand, the price incentive could be the best incentive and could give a strong boost to investment in agriculture as well as adoption of modern technologies and thereby to the raising of agricultural production and productivity. On the other hand, the rise in domestic prices would put pressure on the public distribution system and accentuate the problem of food subsidy & freedom to export agricultural products without restrictions will also need shedding the long-nurtured inhibition against their imports. The freeing of trade in agriculture under the AoA is likely to bring about significant increases in trade in agriculture and give unprecedented opportunities to the developing countries to benefit from increased agricultural exports. But this would depend on the developed countries' willingness to reduce domestic and export subsidies and provide market access to agricultural exports from the developing countries. On the other hand, trade liberalisation is also likely to pose serious challenges for the developing countries. The challenges lie first in becoming globally competitive in agricultural exports and secondly, in enabling the sharing of the benefits of trade liberalisation not by a small minority of rich farmers but by the majority of small and marginal farmers and agricultural workers in India.¹⁰

Government Initiatives

Recognizing the importance of Agriculture Sector, the Government during the budget 2014-15 took a number of steps for sustainable development of Agriculture. These steps include enhanced institutional credit to farmers; promotion of scientific warehousing infrastructure including cold storages and cold chains in the country for increasing shelf life of agricultural produce; Improved access to irrigation through Pradhan Mantri Krishi Sichayee Yojana; provision of Price Stabilisation Fund to mitigate price volatility in agricultural produce; Mission mode scheme for Soil Health Card; Setting up of Agri-tech Infrastructure fund for making farming competitive and profitable; provide institutional finance to joint farming groups of "Bhoomi Heen Kisan" through NABARD; development of indigenous cattle breeds and promoting inland fisheries and other non-farm activities to supplement the income of farmers. Central Government recognizes and discharges its responsibility to assist State Governments in overall development of Agriculture sector. Effective policy measures are in position to improve agricultural production and productivity and address problems of farmers. State Governments are also impressed upon to allocate adequate funds for development of agriculture sector in State plan, as well as initiate other measures required for achieving targeted agricultural growth rate and address problem of farmers. The Department of Agriculture & Cooperation under Ministry of Agriculture has entered into MOUs/Agreements with 52 countries including United State of America. In addition, Department of Agriculture Research & Education (DARE) and Department of Animal Husbandry, Dairying & Fisheries (DAHD&F) under Ministry of Agriculture have also entered into MOUs/Agreements with other countries taking the total number of countries to 63. Agreements with these countries provide better agricultural facilities due to cooperation in areas such as Research and Development, Capacity Building, Germ-Plasm Exchange, Post-Harvest Management, Value Addition/ Food Processing, Plant Protection, Animal Husbandry, Dairy & Fisheries and also help in enhancing bilateral trade.¹¹ The Government of India realises the importance of agriculture to the development of this nation and hence has adopted several initiatives and programmes for this sector's continuous growth. Notable among them are Rashtriya Krishi Vikas Yojana (RKVY); National Food Security Mission (NFSM); National Horticulture Mission (NHM); Gramin Bhandaran Yojana; Integrated Scheme of Oilseeds, Pulses, Oil palm, and Maize (ISOPOM), etc.

Some of the recent major government initiatives in the sector are as follows:

The National Dairy Development Board (NDDB) has announced 42 dairy projects with a financial outlay of Rs 221 crore in order to boost milk output in the country and increase per animal production of milk. The Government of India has planned to invest Rs 50,000 crore to revive four fertilizer plants and set up two new plants to produce farm nutrients. The Ministry of Food Processing Industries has taken some new initiatives to develop the food processing sector which will also help to enhance the incomes of farmers and export of agro and processed foods among others. Israel has increased its cooperation with Indian agriculture, helping farmers multiply their income with better practices, yields and choosing the right crops or vegetables in a success story that is boosting bilateral ties that have strengthened under the Government of Mr Narendra Modi, Prime Minister of India. The Government of Telangana has allocated Rs 4,250 crore for the first phase of farm loan waiver scheme. The scheme is expected to benefit 3.6 million farmers who had taken loans of Rs 100,000 below before March 31, 2014.

Challenges and Opportunities in Indian Agriculture Affecting Development

Indian agriculture is presently at the cross-roads & facing both immense opportunities with unprecedented challenges in 20th Century. These challenges are includes subsidies and investment, over-exploitation of natural resource, financial global crisis, agricultural diversification. Slow agricultural growth due to present agricultural practices which are neither environmentally



sustainable nor economically and low yields for many agricultural commodities. Poor irrigation infrastructure and lack of good extension services are among the responsible factors.¹² Farmers' access to markets is hampered by poor roads, basic market infrastructure, and excessive regulations are hampering farmer's access to markets. India has very poor rural roads affecting timely supply of inputs and timely transfer of outputs from Indian farms, crop failures in some parts of the country because of lack of water while in other parts because of regional floods, poor seed quality and inefficient farming practices in certain parts of India, lack of cold storage and harvest spoilage causing over 30% of farmer's produce going to waste, lack of organized retail and competing buyers thereby limiting Indian farmer's ability to sell the surplus and commercial crops. The Indian farmer receives just 10 to 23 percent of the price the Indian consumer pays for exactly the same produce, the difference going to losses, inefficiencies and middlemen traders. Indian retail system is highly inefficient. Movement of agricultural produce within India is heavily and overly regulated, with inter-state and even inter-district restrictions on marketing and movement of agricultural goods. The average size of land holdings is very small (less than 2 hectares) and is subject to fragmentation due to land ceiling acts, and in some cases, family disputes.¹³

Conclusion

The Indian agriculture sector is expected to grow with better momentum in the next few years owing to increase in investment in agricultural infrastructure such as irrigation facilities, warehousing and cold storage. Factors such as reduced transaction costs, time, better port gate management and fiscal incentives will also contribute to this upward trend. Furthermore, the increased use of genetically modified crops is also expected to better the yield of the Indian farmers. The subsequent development of the Indian agriculture sector through FDIs is predicted to have a significant positive impact on the 700-million strong rural populations, living in about 600,000 small villages of India. Rapid investments in technology development, irrigation infrastructure, emphasis on modern agricultural practices and provision of agricultural credit and subsidies are the major factors contributed to agriculture growth. FDI in Indian agriculture sector increase employment opportunities. FDI remains permanent in the host country because of the development in the infrastructures of the host country. Therefore, there exist the long run relationship between level of GDP and foreign capital stock.

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