

Declining Share Of Agriculture Sector In Gdp: A Serious Concern

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ABSTRACT

Undoubtedly! Indian agriculture has been a way of life and continues to be the single most important livelihood of the masses. The sector occupies almost 43 percent of India's geographical area. But unfortunately, inspite of being the most important sector of the country in the terms of employment generation, its percentage share has been declining gradually in the country's GDP with the passing of years which is a cause of serious concern. Current agricultural practices are neither economically nor environmentally sustainable and India's yields for many agricultural commodities are low. The present paper analyzes the problem of declining share of agricultural sector in country's GDP, its extent and causes. The paper also suggests various ways to improve the agricultural productivity.

Key words: agriculture, sector, development, declining, yield, commodities, resource, productivity.

The agriculture sector of the country had a glorious past. At the time of Aryans and Vedic period, Indian agriculture was very much advanced. The system of agricultural production

coupled with animal keeping was very scientific. The agriculture sector of the country had attained such a level of development and maturity which the advanced countries of the world had not reached even today. Then came Britishers, they pursued a colonial Policy and created many new classes. One among them was Zamindars. Their task was to collect money from Peasants and to give it to the Britishers. The cultivators were left only with subsistence income. They had too little to live on and too much to die on. The cultivators had too little to invest in agriculture. These steps taken by the Britishers adversely affected the agricultural production.

This situation was transformed after independence and people started investing in agriculture sector. As a result of which the food grain production increased and the sector accounted for 48.1% of country's Gross Domestic Product (GDP) in 1948-49. However, two years of severe drought in 1965 and 1966 convinced India to reform its agricultural policy, and that India could not rely on foreign aid and foreign imports for food security. India adopted significant policy reforms focused on the goal of food grain self-sufficiency. This ushered in India's Green Revolution. It began with the decision to adopt superior yielding, disease resistant wheat varieties in combination with better farming knowledge to improve productivity. A National Pulse Development Programme that covered almost 13 states was also set up in 1986 with the aim to introduce the improved technologies to the farmers. A Technology Mission was introduced in 1986 to boost the oilseeds sector in Indian economy. Pulses too came under the programme. The Indian government also set up Ministry of Food Processing industries to stimulate the agriculture of Indian economy and make it more lucrative. Recently Government of India has set up Farmers Commission to completely evaluate the agriculture programme. In November 2011, India announced major reforms in organized retail. These reforms would include logistics and retail of agricultural produce. The reform announcement led to major political controversy. The reforms were placed on hold by the Indian government in December 2011. In the summer of 2012, the subsidized electricity for pumping, which has caused an alarming drop in aquifer levels, put additional strain on the country's electrical grid due to a 19 percent drop in monsoon rains, and may have helped contribute to a blackout across much of the country. In response the state of Bihar offered farmers over \$100 million in subsidized diesel to operate their pumps.

But unfortunately, inspite of all these efforts made by government of India, the contributory share of agriculture sector in country's GDP appeared declining as becomes evident from Table 1. Figures given in Table 1 show that the contributory share of primary sector (agriculture sector) in GDP has gone down from 57% in 1950-51, 52% in 1960-61, 46% in 1970-71, 40% in 1980-81, 33% in 1990-91, 30% in 1995-96, and to 29% in 1997-98 and 1998-99. The percentage share of agriculture in the GDP further declined from 19 per cent in 2004-05 to 18.3 per cent in 2005-06 and then to 17.4 per cent in 2006-07. It further dropped to 16.8 per cent in 2007-08 and 15.8 per cent in 2008-09 before reaching 14 per cent in 2011-12.

The continuously declining share of agricultural sector in the country's GDP is a cause of serious concern. The agricultural output of India lags far behind its potential. The low productivity in India is a result of several factors. India's large agricultural subsidies are hampering productivity-enhancing investment. While overregulation of agriculture has increased costs, price risks and uncertainty, governmental intervention in labour, land, and credit markets are hurting the market. Infrastructure such as rural roads, electricity, ports, food storage, retail markets and services are inadequate. Moreover, 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. Such small holdings are often over-manned, resulting in disguised unemployment and low productivity of labour. The partial failure of land reforms in many states, exacerbated by poorly maintained or non-existent land records, has resulted in sharecropping with cultivators lacking ownership rights, and consequently low productivity of labour. Adoption of modern agricultural practices and use of technology is inadequate, hampered by ignorance of such practices, high costs, illiteracy, slow progress in implementing land reforms, inadequate or inefficient finance and marketing services for farm produce and impracticality in the case of small land holdings. Irrigation facilities are inadequate, as revealed by the fact that only 52.6% of the land was irrigated in 2003–04, which result in farmers still being dependent on rainfall, specifically the Monsoon season. A good monsoon results in a robust growth for the economy as a whole, while a poor monsoon leads to a sluggish growth. Farm credit is regulated by NABARD, which is the statutory apex agent for rural development in the subcontinent. At the same time over pumping made possible by subsidized electric power is leading to an alarming drop in aquifer levels.

Even though, India has attained self sufficiency in food staples, the productivity of Indian farms for the same crop is very low when compared to farms in Brazil, the United States, France and other nations. Indian wheat farms, for example, produce about a third of wheat per hectare per year in contrast with wheat farms in France. Similarly, at 44 million hectares, India had the largest farm area under rice production in 2009; yet, the rice farm productivity in India was less than half the rice farm productivity in China. Other food staples productivity in India is similarly low, suggesting a major opportunity for growth and future agricultural prosperity potential in India. Indian total factor productivity growth remains below 2 percent per annum; in contrast, China has shown total factor productivity growths of about 6 percent per annum, even though China too has smallholding farmers. If India could adopt technologies and improve its infrastructure, several studies suggest India could eradicate hunger and malnutrition within India, and be a major source of food for the world

In order to enhance the yield of major crops there is a need to strengthen adaptive research and technology assessment capabilities of the country so that the existing wide technology transfer gaps can be bridged and for this, an appropriate network of extension service needs to be created which can stimulate and encourage both top-down and bottom-up flows of information between farmers, extension workers, and research scientists to promote the generation, adoption, and evaluation of location specific farm technologies.

Efforts should also be made towards developing hybrid varieties as well as varieties suitable for export purposes. Agronomic and soil researches in the region need to be intensified to address location specific problems as factor productivity growth is decelerating in major production regimes. Research on coarse grains, pulses and oilseeds must achieve a production breakthrough. Forest cover must be preserved to keep off climatic disturbances and to provide enough of fuel and fodder. Milk, meat and draught capacity of our animals can be improved quickly by better management practices.

The efficiency of use of fertilizer can be improved by enhancing location-specific research on efficient fertilizer practices (such as balanced use of nutrients, correct timing and placement of fertilizers, and, wherever necessary, use of micronutrient and soil amendments), improvement in soil testing services, development of improved fertilizer supply and distribution systems, and development of physical and institutional infrastructure.

The investments that are good for agricultural growth-technology and its dissemination, rural infrastructure (roads), education and irrigation - amount to a 'win-win' strategy for reducing rural poverty by also increasing the non-farm economy and raising rural wages. Creating infrastructure in less developed areas, better management of infrastructure and introduction of new technologies can further enhance resource productivity. Generation and effective assessment and diffusion of packages of appropriate technologies involving system and programme based approach, participatory mechanisms, greater congruency between productivity and sustainability through integrated pest management and integrated soil-water-irrigation-nutrient management, should be aggressively promoted to bridge the yield gaps in most field crops. Besides this, efforts must be in place to defend the gains and to make new gains particularly through the congruence of gene revolution, informatics revolution, management revolution and eco-technology. Farming system research to develop location specific technologies and strategy to make grey areas green by adopting three-pronged approach - watershed management, hybrid technology and small farm mechanisation will accelerate growth in total factor productivity. Promoting efficient fertiliser practices, improving soil-testing services, strengthening distribution channel of critical inputs specially quality seed and development of physical and institutional infrastructure will help resource-poor farmers.

Emphasis must be given to the states in which current yield levels are below the national average yield. Bihar, Orissa, Assam, West Bengal and Uttar Pradesh are the priority states accounting for 66% of rice area which need emphasis on bridging yield gaps to attain target demand and yield growth. For wheat we must focus mainly on Uttar Pradesh, Madhya Pradesh, Bihar and Rajasthan accounting for 68% of wheat area. For coarse cereals, major emphasis must be given to Rajasthan, Maharashtra, Karnataka, Madhya Pradesh, Andhra Pradesh and Uttar Pradesh. To meet the demand for pulses greater emphasis is needed in almost all the states with particular focus on Madhya Pradesh, Maharashtra, Rajasthan, Gujarat, Andhra Pradesh, Karnataka and Uttar Pradesh which have three-fourths of total pulse area. The target growth in pulse yield from these states annually must be 6 per cent; otherwise the nation will experience shortage of pulses for all times to come. The task of attaining self sufficient in pulses production looks difficult without area expansion and irrigation. In cases of oilseeds greater emphasis is needed on Andhra Pradesh, Madhya Pradesh, Rajasthan, Maharashtra, Karnataka, West Bengal and Uttar Pradesh to increase the yield by about 4 per cent. The possibilities of developing processing industry for extracting edible oils from non-oilseeds commodities, like rice bran etc, needing to be explored. The introduction of palm cultivation for oil production may release pressure on traditional oilseeds crops to meet future edible oil demand. In case of sugarcane,

research and development efforts are to be strengthened in Uttar Pradesh and Bihar to increase the yields per hectare by about 4% per annum. The demand for sugar can also be met by developing mini sugar mills so that substantial sugarcane production can be diverted from Khandasari to sugar production. This may also help release some sugarcane area to other crops. Cotton crop requires greater yield improvement emphasis on 81 per cent of the cotton area in Maharashtra, Gujarat and Andhra Pradesh.

Policy reforms are needed from now to avoid the negative developments in the years to come. These reforms may include the establishment of secure water rights to users, the decentralization and privatization of water management functions to appropriate levels, pricing reforms, markets in tradable property rights, and the introduction of appropriate water-saving technologies. The needs of other sectors for water cannot be ignored. Therefore it is necessary that an integrated water use policy is formulated and judiciously implemented.

Resource-poor farmers in the rainfed ecosystems practice less-intensive agriculture, and since their incomes depend on local agriculture, they benefit little from increased food production in irrigated areas. To help them, efforts must be increased to disseminate available dry land technologies and to generate new ones. It will be necessary to enlarge the efforts for promoting available dry land technologies, increasing the stock of this knowledge, and removing pro-irrigation biases in public investment and expenditure, as well as credit flows, for technology-based agricultural growth. Watershed development for raising yields of rainfed crops and widening of seed revolution to cover oilseeds, pulses, fruits and vegetables; farming system research to develop location specific technologies must be intensified in the rainfed areas. Strategy to make grey areas green will lead to second Green Revolution, which would demand three-pronged strategy - watershed management, hybrid technology and small farm mechanisation.

The public investment in agriculture has been declining and is one of the main reasons behind the declining productivity and low capital formation in the agriculture sector. Accelerated investments are needed to facilitate agricultural and rural development through productivity increasing varieties of crops, breeds of livestock, strains of microbes and efficient packages of technologies, particularly those for land and water management, for obviating biotic, a biotic, socio-economic and environmental constraints; Yield increasing and environmentally-friendly production and post-harvest and value-addition technologies; Reliable and timely availability of quality inputs at reasonable prices, institutional and credit supports, especially for small and resource-poor farmers, and support to land and water resources development; Effective and credible technology, procurement, assessment and transfer and extension system involving appropriate linkages and partnerships; again with an emphasis on reaching the small farmers; Improved institutional and credit support and increased rural employment opportunities, including those through creating agriculture-based rural agro-processing and agro-industries, improved rural infrastructures, including access to information, and effective markets, farm to

market roads and related infrastructure; Particular attention to the needs and participation of women farmers; and Primary education, health care, clean drinking water, safe sanitation, adequate nutrition, particularly for children (including through mid-day meal at schools) and women. Modern biotechnology tools, genetic engineering, as well as conventional breeding methods are all expected to play important roles in the generation of higher yielding, pest and stress resistant varieties of rice, wheat, maize and other cereal crops.

Sustaining global food supplies will depend on continued high levels of investments in research and technology development. It is essential that research capacity has to be increased substantially. In addition to investments in research, infrastructure investments, particularly in irrigation, transport and market infrastructure development are equally important for sustaining the productivity and profitability of food crop production. Mobilize the best of science and development efforts (including traditional knowledge and modern scientific approach) through partnerships involving national and international research institutions, NGOs, farmers' organizations and private sector in order to tackle the present and future problems of food security and production. Donors and Government must urgently increase funding for agricultural research targeted at the needs of the rural and urban poor, and every effort must be made to ensure the free flow of information, technology and germplasm so that a proper sustainable agriculture can be achieved.

Identification of need-based productive programs is very critical, which can be explored through characterisation of production environment. We have to develop demand-driven and location-specific programs to meet the requirements of different regions to meet the nutritional security of most vulnerable population in the rural areas. Improved agricultural technology, irrigation, livestock sector and literacy will be most important instruments for improving the nutritional security of the farm-households. Watershed development and water saving techniques will have far reaching implications in increasing agricultural production and raising calorie intake in the rainfed areas. Livestock sector should receive high priority with multiple objectives of diversifying agriculture, raising income and meeting the nutritional security of the poor farm households. Need based and location-specific community programs, which promise to raise nutritional security, should be identified and effectively implemented. Expansion of micro credit programmes for income-generation activities, innovative approaches to promote family planning and providing primary health services to people and livestock and education should enhance labour productivity and adoption of new technologies. Development of the post-harvest sector, co-operatives, roads, education, and research and development should be an investment priority. A congenial policy environment is needed to enable smaller holders to take the advantage of available techniques of production, which can generate more incomes and employment in villages. For this poor farmer needs the support of necessary services in the form of backward and forward linkages. Small-mechanised tools, which minimise drudgery and do not reduce employment, but only add value to the working hours are needed to enhance labour productivity. Special safety nets should be designed and implemented for them. Can agricultural co-

operatives internalise and galvanize these marginal and excluded people? Off-farm employment provided through co-operatives will go a long way in pulling them out of the state where poverty breeds poverty. Therefore, investment in the empowerment of the small landholders will pay off handsomely. Let us create rural centres of production and processing by masses through co-operatives or empowerment of Gram Panchayats to promote co-operatives. This will improve efficiency of input and output marketing and give higher income. There is need to disseminate widely post-harvest handling and agro-processing and value addition technologies not only to reduce the heavy post-harvest losses but also improve quality through proper storage, packaging, handling and transport. Panchayati Raj institutions and co-operatives can play significant role in all these directions. Giving them power over the administration, as contemplated under the 73rd and 74th Amendment of the Constitution has not been implemented seriously so far in any of the states. The frequency and intensity of disasters such as floods, droughts, cyclones and earthquakes have increased in the recent years. The devastating earthquake in Gujarat has brought untold miseries to the whole state and caused a national disaster. Special effort should be made to develop appropriate technologies for increasing preparedness to predict and to manage the disasters. Effective and reliable information and communication systems, contingency planning and national and international mobilization of technologies and resources are a must. Experiences of other countries in prevention and management of the disasters should be shared.

CONCLUSION:

The Gross Domestic Product in the country like India is experiencing a faster rate of growth in the recent years. With regards to the composition of GDP, the percentage shares of various sectors have largely changed. The percentage share of the agriculture in the total GDP has declined, on the contrary the percentage share of non-agricultural sector in the GDP is rising faster. Agriculture & Allied sectors which used to contribute 57 per cent of GDP in 1950-51 has come down to 14 per cent in 2011-12 at 2004-05 prices. This decline is a result of several factors like governmental intervention in labour, land, and credit markets; lack of Infrastructure; small size of land holdings; poorly maintained or non-existent land records; inadequate use of modern technology; illiteracy; inadequate finance and marketing services for farm produce; inadequate irrigation facilities; more importance given to non-agricultural sectors by government etc. If the above mentioned bottlenecks can be removed by adopting modern technologies and providing better infrastructure facilities, India could not only eradicate hunger within India, but can also become a major source of food for the world.

TABLES:**Table 1****Share of GDP by industry of origin****(in percentage)**

Year	Primary sector (agriculture)	Secondary sector (industry)	Tertiary sector (services)	Banking sector	Public administration	Total
1950-51	57	15	11	9	8	100
1960-61	52	19	13	8	8	100
1970-71	46	22	14	8	10	100
1980-81	40	24	17	9	10	100
1990-91	33	28	18	10	11	100
1994-95	32	24	22	11	11	100
1995-96	30	25	23	11	11	100
1996-97	31	24	23	11	11	100
1997-98 P	29	25	23	11	12	100
1998-99 Q	29	25	21	12	13	100

Source:- Compiled from the data in Economic Survey, 1999-2000.

Note:- P- Provisional and Q- Quick Estimates.

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