

Challenges of agriculture economy of India

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Key Words

Agriculture, Natural resources, Biotechnology, Commodity prices

Abstract

Agriculture in India has undergone rapid transformation in the past two decades. The policies of globalization and liberalization have opened up new avenues for agricultural modernization. Due to its importance in national output and employment, agriculture was paid special attention by India's policy makers and development planners which helped this sector to play an important role in economic development of the country and in improving income and living standard of vast population dependent on agriculture.

During last one and a half decade several challenges have surfaced in Indian agriculture which are becoming more and more severe with the passage of time. The growth rate has turned lower than the growth in population dependent on agriculture implying that per capita income in agriculture is falling. This is considered a major factor for large scale rural distress and large number of suicidal deaths by farmers in various parts of the country. Infact natural resources in the country are shrinking. There are also signs of degradation of land and overexploitation of water in the country. There is urgent need to conserve water and good management of natural resources. Long term planning and dedicated efforts are needed from higher authorities. Unique outlook and branding methods along with use of biotechnology is useful to increase growth rate of agriculture.

Post WTO period has shown serious challenge to Indian agriculture as domestic prices of several commodities have turned higher than international prices. Indian agriculture work in a system in which as demand rises and prices rise, supply responds. Wage goods inflation in terms of food prices is a major policy concern in the growth process. Agriculture in India is largely rain fed and therefore, heavily relies on nature. Factors like excessive monsoon or deficient rainfall, extremely hot and dry weather, droughts have direct effect on the performance. While these risks can never be entirely eliminated, they can be reasonably addressed through pro-active and prompt responses.

Improvements in agricultural productivity and the marketing and distribution perishables yet another challenge. In the era of Globalization, the rural societies can be adopting certain strategies for safeguarding their existence, livelihood and culture. A successful implementation of structural reforms can spark stronger growth the major role is of Indian government who should take effective steps to protect and strengthen our agriculture sector.

Introduction

India is principally agricultural country. Agriculture is the only means of living for almost two-thirds of the employed class in India. It constitutes the most significant part of Indian Economy. Agriculture, along with its allied sectors, is unquestionably the largest livelihood provider in India and most key industries depend upon the sector for their inputs. Agriculture in India has undergone rapid transformation in the past two decades; the policies of globalization and liberalization have opened up new avenues for agricultural modernization. This has led to not only commercialization and diversification, but also triggered various technological and institutional innovations owing to investments in sector.

Recent economic data of India showed that, agriculture has acquired 18 percent of India's GDP, even though its share in national output has declined from more than 50 percent in the

initial years after Independence from colonial rule in 1947 to less than a quarter in the recent years. In terms of employment and livelihood still around 58 percent workforce is engaged in agriculture as their principal occupation. Due to its importance in national output and employment, agriculture was paid special attention by India's policy makers and development planners which helped this sector to play an important role in economic development of the country and in improving income and living standard of vast population dependent on agriculture.

During last one and a half decade several challenges have surfaced in Indian agriculture which are becoming more and more severe with the passage of time. These relate to growth of output, efficiency, equity and sustainability. The biggest challenge is to reverse the sharp decline in growth rate of agriculture sector experienced after mid 1990s. The growth rate has turned lower than the growth in population dependent on agriculture implying that per capita income in agriculture is falling. This is considered a major factor for large scale rural distress and large number of suicidal deaths by farmers in various parts of the country.

Another biggest challenge is to ensure sustainable use of natural resources. While the need for accelerating agricultural growth are obvious, natural resource base in the country is shrinking. There are also signs of degradation of land and overexploitation of water in the country. Post WTO period has shown serious challenge to Indian agriculture as domestic prices of several commodities have turned higher than international prices. This has made imports attractive and adversely affected exports. The situation calls for improving competitiveness of Indian agriculture which requires improvement in efficiency in agricultural production, marketing, transport etc.

There is a strong feeling in the country that intervention in food markets has benefited only agriculturally progressive regions. The rain fed and dryland agriculture regions have been ignored. There is also serious concern about viability and future of smaller size holdings which constitute majority of farmers in the country. The present state of dismal picture of agriculture in the country has resulted from several factors/reasons. The foremost is lack of clear policy on agriculture for a long time. The country did not change institutional mechanisms and regulatory framework to create environment conducive for agricultural growth and which was needed to adjust to changes in domestic and global environment. This relates particularly to participation by private sector in output markets and seed market. The second reason is neglect of infrastructure and diversion of resources to populist measures. Third reason is slowdown in technology reaching potential region and weakening of extension system for dissemination of technology. Unless drastic reforms are implemented in agriculture sector it would not be possible to revive output growth on sustainable basis and mitigate rural distress.

There is a growing concern that if the problems facing agriculture are not addressed urgently and effectively, then it would be very difficult for India to raise growth rate of its economy from present level of around 5.7 percent to more than 7 percent as aspired by the country. Corresponding to current growth rate of 1.86 percent in agriculture seen after mid 1990s, non agriculture sector is required to grow at more than 10 percent to achieve growth rate of 8 percent in total output.

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. It 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 has 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. Although the contribution in terms of share of GDP has been taken over by services and now is close to 15%. It contributed half of the share to employment, contributes to exports, is a source of raw-materials and is also a source of demand for many industries.

Wage goods inflation in terms of food prices is a major policy concern in the growth process. The question asked on the recent trend of food inflation is whether it is due to supply-demand imbalances with low agricultural growth facing the demands of a high growth economy arising from technological bottlenecks, or alternately vulnerability to trade and commodity futures or lack of institutional reform. Indian agriculture work in a system in which as demand rises and prices rise, supply responds. Alternately mixed or mongrel kind of explanations may be possible. For example, the constraints maybe institutional or policy determined in the food grains part of the economy, with the non-food grain economy is being responsive to market and non price factors mattering particularly in that part of agriculture not responding to prices.

In evaluating the impact of macroeconomic policy changes, the mix of monetary and fiscal policies has to be evaluated. A combination of both restrictive fiscal and monetary policies will restrict growth of an economy and may lead to a recession or depression with harmful impacts on all sectors. An overly expansionary fiscal policy combined with an excessively expansionary monetary policy will lead to rapid inflation and, thus, is another policy mix which is generally not followed. The other two combinations, expansionary fiscal policy coupled with restrictive monetary policy or restrictive fiscal policy coupled with expansionary monetary policy, are policy mixes which are common. Macroeconomic policy changes therefore affect the agricultural economy through their impacts on interest rates and inflation. Changing interest rates influence variable production costs, long term capital investments, cash flow, land values, and exchange rates, while inflation affects input prices, commodity prices, real interest rates and land prices.

Given the growing integration of the world economy, future domestic and foreign policy changes may play an even greater role in determining the financial performance of the agricultural industry. Therefore, it is becoming increasingly important that farmers and agribusinesses understand the linkages between the macro economy and agriculture in making sound business decisions. There is a strong feeling in the country that intervention in food markets has benefited only agriculturally progressive regions and rainfed and dryland agriculture regions have been ignored. There is also serious concern about viability and future of smaller size holdings which constitute majority of farmers in the country.

Dependency on Nature

Agriculture in India is largely rain fed and therefore, heavily relies on nature. Factors like excessive monsoon or deficient rainfall, extremely hot and dry weather. Droughts have direct effect on the performance of the Company. While these risks can never be entirely eliminated, they can be reasonably addressed through pro-active and prompt responses.

Outlook and Opportunities

World has faced economic slowdown for last four five years. Fortunately it has recovered at slower rate however, weakness are yet to be addressed. Persistent inflation, fiscal imbalances, bottlenecks to investment, and inefficiencies that require structural reforms. Without a systematic resolution to these weaknesses, growth is forecast to pick up only modestly. ADB

Economic Outlook 2014 estimates that reforms have the potential to resolve impediments to investment and could allow growth to accelerate to 5.5% in this fiscal year and further to 6% FY 2015

Growth rate of GDP (% per year)

Sub region/ Economy	2011	2012	2013	2014	2015
India	6.7	4.5	4.9	5.5	6.0

*Source: Asian Development Bank Economic Outlook 2014

Year 2013-14, saw the Indian economy grow at a subdued rate of 4.9% - weighed down by growth slowdown, rising inflation, falling currency and tight monetary policies. These factors have ensured that the economy continued to operate below its potential. In a year when other economic parameters could not meet their growth target, agriculture as perhaps the sole exception. Last year, the food grain production increased by 2.4% reaching a record of 259 million tons against a previous output of 255.36 million tons of food grains production in 2012-13

A successful implementation of structural reforms can spark stronger growth. Despite recent cyclical slowdown, India's capacity for more rapid growth over the long term is high, with a promising outlook for labor, worker skills, capital, infrastructure and productivity. But reforms are needed before the economy can achieve and sustain this faster pace. Although growth is envisaged to accelerate in the short-term, but the forecast rests on the elimination of structural bottlenecks that impede investment. Improvements in agricultural productivity and the marketing and distribution perishables are need of the hour. This includes god owns, cold storages, and APMC's reform. This will not only reduce inflation, but will also increase supplies through less wastages.

According to the Indian Council for Agricultural Research (ICAR) vision 2030 document, the demand for food and processed commodities is increasing due to growing population and rising per capita income. Projections indicate the demand for food grains to increase from 192 million tons in 2000 to 345 million tons in 2030. Hence in the next 20 years, production of food grains needs to increase at the rate of 5.5 million tons annually. The demand for high-value commodities (such as horticulture dairy, livestock and fish) is increasing faster than food grain - expected to increase by more than 100% from 2000 to 2030.

While this is a daunting and a challenging task it presents many opportunities for the entire agricultural sectors ranging from development of promising technologies and management options to raising productivity to meet growing food demand in a situation of deteriorating production environment at the lowest cost. Demand of about 232 from 229 million (in 2011 -12) in agriculture sector, and the unavailability of skilled farm labor will continue to be an area of widespread concern for our farmers.

As per the world Trade Organization (WTO) international Trade Statistics, 2012 (based on trade in 2011), global export and import of agricultural and food products is US \$1.66 trillion and US \$ 1.82 trillion respectively. India's share in this is 2.07% and 1.24% respectively. From being a net importer of food till a few decades back, India now consistently produces 250 million tones (MT) of food grains, 100 MT of rice, 90 MT of wheat, 35 million bales of cotton, and more than 18 MT of pulses, this growth is facilitated by steady investments in technology development, irrigation infrastructure, emphasis on modern agricultural practices and provision of agricultural credit and subsidy.

Even foreign direct investment (FDI) inflows in agricultural services and machinery sector during April 2000 to August 2013 stood at US \$ 1,629.19 million and US \$ 337.35 million respectively, as per the data released by department of Industrial Policy and Promotion (DIPP). The growth target for agriculture in the 12th plan is estimated to be 4% as compared to 3.6% for the 11th Plan and in order to meet the food grain requirements of the country, the agricultural productivity and its growth needs to be sustained and further improved. The government too, is determined to rejuvenate the agriculture sector. The 12th plan provides for greater focus on small and marginal farmers, improving productivity in rain fed areas and creating a more competitive environment for agricultural marketing. Agriculture continues to employ over 58.2% of the total workforce and the government has made enhanced commitments to promote progress in the sector. Over Rs. 200 Crores has been allocated in FY 2013-14 to start pilot scheme for nutri-farms to introduce new crop varieties which are rich in micro-nutrients like iron rich Bajra. Protein rich Maize and zinc -rich Wheat. Rs. 500 Crores has been allocated during the same period to start a crop diversification in the original green revolution states which are today facing acute problems of stagnation in productivity due to over exploitation of resources exemplified by depleting water resources and deteriorating soil fertility. Under this diversification of crops programme, farmers will be encouraged to replace like rice maize. On the export front, the government has made exports of most agricultural commodities free without any quantitative or Minimum Export Price (MEP) restrictions.

India has to expand its access to cost effective modern technologies particularly the agricultural biotechnology to make a major impact on the cost of production and prices to agricultural commodities. GM food crops have been safely cultivated and consumed across the world, including tomato (china), papaya (the US and China). Corn (16 countries) and squash and zucchini (the US). Similar results have been experienced by farmers in India for cotton. In March 2014, the Genetic Engineering Appraisal Committee (GEAC). A part of the environment ministry, approved field trials for 11 crops, including Maize. With the new government in place, more clarity is expected on such crops in India.

Strategies

In the era of Globalization, the rural societies can be adopting certain strategies for safeguarding their existence, livelihood and culture. The strategies include:

- Mobilization of the small farmers for regional campaigns. Building good coalition with different likeminded organizations (NGO's and Trade Unions.)
- Establishing a Mechanism, to challenge the MNC's
- Having deliberations with bankers and Industrialists in order to consult them with NGO's
- Setting goals with specified objectives so that they reach the grass root level of the rural societies.
- Planning at grass root level with full people participating in different levels
- Keeping gender balance
- Forming network among leaders in various levels with solidarity and commitment
- Creating common understanding and purpose among the people in all the sectors of the society

Globalization and Poverty

The manufacturing of technology and management of technology are two different significant areas in the country. There will be new prospects in rural India. The growth of Indian economy very much depends upon rural participation in the global race. After implementing

the new economic policy the role of villages got its own significance because of its unique outlook and branding methods. For example-food processing and packaging are the one of the area where new entrepreneurs can enter into a big way. It may be organized in a collective way with the help of co-operatives to meet the global demand. Agricultural products are of two kinds - food grains and non-food grains the food grains contribute 75% of the total agricultural production. According to the agricultural growth analysis, annual growth rate has been declined from 3.9% to 2.6% in the Pre and Posts-reform periods respectively. The growth rate of food grains during 1980-1990 was 2.9% where as it declined to 1.4% during 1996-2006. Similarly, there was a decline in growth rate of nonfood grains from 4.3% to 1.8% during me same period. Average food grains available per Indian in 1951, 470 grams per day or 167 kilos per year. Where as in 1991 it was 175 kilos. In post reform period gradually reduced 154 kilos per year or 445 grams per day. In 2005 likely pulses per head in 1951 is 61 grams, whereas in 1991 it rises 75 grams. Again in 2005 it was declines 32 grams per head.

Decline in Employment

Growth rate in agricultural employment in rural areas was 1.38% during 1983 to 1993-94 which was decline to 0.12% during the post reform period of 1993-94 to 2005-06 the growth rate of employment in agriculture in the urban areas also have shown a considerable decline with 1.54% in pre-reform period and -3.74% in post reform period.

The plan outlays in agriculture and its allied activities have been gradually declined during the plan period from 14.9% in the first plan to 5.2% by the 10th plan. This clarifies that the Govt. has withdrawn its support from the agriculture sector development. Thus the impact of globalization on our agrarian sector has worsened the plight of agricultural workers to an alarming degree. The share of agriculture in our gross domestic product (GDP) has declined from 54.56 per cent in 1951-52 to 27.87 per cent in 1999 - 2000 almost a 50 per cent reduction. But the shift of labor force from agriculture to other sectors, as projected by the followers of the World Bank-IMF model, has not taken place. For, as much as 65 per cent of our workforce is still engaged in agriculture. These limitations are severely affecting the capacity of Indian agriculture to compete in the global market. Characterized by low and stagnating yields, a very large proportion of marginal, small and semi medium holdings, a high proportion of landless labor households, and highly concentrated and food-oriented cropping system, Indian agriculture would therefore be facing serious challenges, both internally and externally.

Conclusion

Even after Sixty Five years Independence and 11 Five Year Plans completed, Indian agriculture is still at the cross roads. Indian Agriculture has been hit had during past WTO period. The share of agro foods in India's global export has declined during the post WTO period, agricultural subsidies of developed countries has been rather increased. Therefore it is very difficult for India to face global agricultural competitiveness. In this scenario, the global agricultural trade would likely become oligopolistic. The returns of various crops have declined due to increase hi cost of productions, slow growth rate of agricultural productivity, weak marketing mechanism and increase in input intensity.

Realizing the present situation and problem the Indian government should take effective steps to protect and strengthen our agriculture sector. The organizations and structural changes needed to bring about increased production in our farms cove a whole variety of measures. Some of these especially change of attitudes and production of increased inputs; have to be approached on a long terms basis. Market-demand research in the importing countries has to be strengthened and protection could be planned accordingly in terms of quantity and quality.

Long-term price trends favor fishery, livestock, and traditional products, horticultural and processed products. Hence export of these could be promoted.

Government at central and state levels could go for increased investment on infrastructure relation to post harvest management including expansion of highways and improvements in rural roads. Computerized networking of Germless centers is essential to evolve improved varieties of crops and by birds. The most important requirement is to improve the quality standard, efficiency and cost-effectiveness of our agricultural products. To copy with the challenge of WTO we have to reduce our cost of production which can be reduced by cultivation of hybrids and by adopting integrated pest management strategies. Emphasis should be laid on imparting training to the farmers on hybrid seed production and multiplication.

There is also a need for strict agro climatic regional. The areas having potential for production of different agriculture commodities should be earmarked and their production and marketing should be encouraged there. Trade liberalization in agriculture has the potential to bring rich dividends to developing countries, including India. To realize this potential, India must work towards establishing and strengthening rule-based multilateral trading system thorough WTO negotiations. Government should make efforts to reduce cost of transport for Agriculture export commodities. To enlighten the necessity of the growth in agriculture sector. Time has come to take the necessary steps and to implements innovation methods. If not, there will be a heavy shortage in food production. To increase the production we need a Record Green Revolution. Punjab became number one state in production of wheat as a result of the first Revolution. Hence only solution to control the deficit in growth of agriculture is to have a second Green Revolution. In essence, the second Green Revolution will keep the world green and save it from becoming a dreary desert. There is need to introduce rigorous measures to end corruption in check posts and reduce taxes on transport firms to reduce cost of movement. Emphasis must be given on the export of the agricultural produce, which would bring in its wake rural prosperity and large employment avenues. It is possible, if steps are taken immediately, to make agriculture more buoyant, competitive and commercial. In future, India can take very strong position at WTO.

References

- Chandan Sen Gupta, "Conceptualizing Globalization", *Economic and Political Weekly*, August 18, 2001.
- Gupta, S.P., "Economic Reforms and its impact on poor", *Economic and Political weekly* pp.1295-1313, June 3. 1995.
- Thakur, KS, "Indian Economy after Globalization", *Third concept*, June,1997.
- Jag Mohan Singh Verma, "Globalization and Economic Reforms in India", *Third concept*, April, 2001.
- Ganesh Chinta, "Rural Development in the Era of Globalization" (ed.vol) *Osmania University*, Hyderabad. 2006.
- Narasimha Rao and Anjaiah, "Impact of Globalization on India Agricultrure" in ed. Vol. *Rural Development in India A multi disciplinary Analysis*, serials publications, New Delhi. 2005.
- Chowdary, K.R, "Why India should quit WTO?" *Forum Against Imperialist Globalization*, New Delhi. 2001.
- Dr.K.Somasekhar *International Journal of Arts Commerce and Literature* Vol 1 Issue 2 February 2013
- MunishAlgha, *Agriculture Economy of India and Macro-Economic Effects: Some Empirical Results and a Research Agenda based on the Literature*, IIM Ahmedabad September 2011.
- Impact of Globalization on Indian Agriculture & Challenges - A Critical Review

- K. Somasekhar, Asst. Professor, Acharya Nagarjuna University, Guntur-522 510, A.P. India.
The demand for high-value commodities (such as horticulture, dairy, livestock and fish) is increasing faster than foodgrains. Source - ICAR-Vision 2030
Asian Development Bank-Economic Outlook 2014.
Indian Council for Agricultural Research (ICAR) vision 2030 document. Dept. of Economic & Statistics, Dept. of Agriculture & Cooperation, USDA
The Economic Survey 2012-13, Agricultural and Processed Food Products. Export Development Authority (APEDA), Press information Bureau, Ministry of Agriculture & Media Reports.
Chandan Sen Gupta, "Conceptualizing Globalization", *Economic and Political Weekly*, August 18, 2001.
15. Gupta, S.P., "Economic Reforms and its impact on poor", *Economic and Political weekly* pp. 1295-1313, June 3. 1995.
Thakur, KS, "Indian Economy after Globalization", *Third concept*, June 1997.
Jag Mohan Singh Verma, "Globalization and Economic Reforms in India", *Third concept*, April, 2001.
18. Ganesh Chinta, "Rural Development in the Era of Globalization", (ed. vo.l) *Osmania University*, Hyderabad. 2006.
19. Narsimha Rao and Anjaiah, "Impact of Globalization on India Agriculture" in ed. Vol. *Rural Development in India A Multi disciplinary Analysis*, serials publications, New Delhi. 2005.
20. Chowdhary, K.R, "Why India should quit WTO?" *Forum Against Imperialist Globalization*, New Delhi 2001.
21. www.ijacl.org
22. <http://business.mapsofindia.com/sectors/agriculture.html#sthash.LJuolAUc.dpuf>
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