

## A Critical Study of Transformation of Indian Agriculture : Growth, Inclusiveness and Sustainability



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### ABSTRACT

There are three goals of agricultural development in India. These are: (a) achieving high growth by raising productivity; (b) inclusiveness by focusing on lagging regions, small farmers and women; and (c) sustainability of agriculture. In this paper, we will address two questions: (a) How far India progressed in the three goals of agriculture in recent decades? (b) What are the policies and reforms needed to transform Indian agriculture in the next decade? This paper provides 10 conclusions on the policies needed to achieve three goals of agricultural development in India. These are : (1) There is a need for change in the narrative in the new context; (2) Global trends and macro policies are equally important for Indian agriculture; (3) We have to walk on two legs both agriculture and non-agriculture. There is a need to shift from cereal based agriculture to non-cereal based crops and allied activities; (4) Doubling farm income also has to focus non-farm sector, look at different size classes and environmental considerations; (5) Remunerative prices and market reforms can enhances farmers' incomes; (6) The country has to go beyond harvest and give freedom for farmers on markets and exports; (7) Do not foreget basics like water and technology; (8) Inclusiveness is needed for board based growth and equity. Focus on small and maginal farmers, women, youth, rainfed areas, Eastern and other lagging regions, social groups like SC and ST farmers; (9) Measures have to be taken to take care of impacs of climate change and improving resilience in agriculture and sustainability; (10) Strengthening institutions and governance is crucial for achieving growth, equality and sustainability of agriculture. Key words: Agricultural growth, inclusiveness, sustainability, prices, water, technology, small farmers, nutrition and climate change.

### INTRODUCTION

In contrast to this view, it is emphasized that agricultural development is essential for improving industrialization (Kalecki,1960 and Kuznets,1968. Another view is that increase in terms of trade in agriculture would reduce profits for industry (Lewis, 1954). Against this view, it was pointed out that rise in terms of trade for agriculture would improve demand for industrialisation (Kaldor, 1957). The importance of agriculture on non-agricultural sector growth is significant (Johsnston and Mellor,1961 and Mellor,1976). Later, the importance of structure change within agriculture and the role of rural non-farm sector has also been emphasised (Mellor, 1976; Liedholm and Kilby, 1989; Ranis and Stewart, 1993).

Generally, the share of agriculture in total employment falls much more slowly than its share in GDP. As a result, labour productivity in agriculture falls behind that of non-agricultural sector. Although employment elasticity of agriculture declines over time, the absolute size of the rural labour force continues till economies attain higher levels of transformation. Labour productivity in agriculture can be increased with structural change in agriculture, development of rural non-farm sector or migration to urban areas. Many countries fail to manage this transformation at an adequate rate and face political problems with low incomes of the agricultural population (Rosegrant and Hazell, 2000).

In the case of India, agricultural sector plays a pivotal role in the economy. India achieved self-sufficiency in foodgrains particularly in rice and wheat due to green revolution. But, soon it was recognised that we have to move beyond green revolution as it has neglected rainfed areas, nutrition crops like millets, non-cereals and resource poor farmers. It has also created ecological and environmental sustainability problems. It is well known that although its contribution to gross domestic product (GDP) is now around one seventh, agriculture provides employment to 48 per cent of the Indian workforce. There are also substantial linkages between agriculture and non-agriculture sector<sup>4</sup>. In the present context, there is a need to focus much more on agriculture due to low agricultural growth (2.5% per annum in the last four years) and agrarian distress in terms of low agricultural prices and farm incomes. Farmers' suicides in some parts of India are another issue relating to agriculture. Low farm incomes led to farmers' agitations in many states of India. Agriculture sector is already facing several problems relating to sustainability, stagnant yields, water logging, soil erosion, volatility in prices, natural calamities, and small size of the farms.

## **GLOBAL FOOD AND AGRICULTURE: NEW CONTEXT AND CHALLENGES**

There have been significant changes in global food and agriculture in the last few decades. Economic growth seem to be converging across countries. This has implications for convergence of food demand, food production and agricultural policies and trade<sup>7</sup>. There are many challenges at global level such as climate change, urbanization, migration, technologies like automation, increased inequality, changes in political factors like the US policies, Brexit, and protectionism. These factors and anti-globalisation is the changing context for food systems and agriculture. There are geo-political challenges of uncertainty due to US policies. Recent anti-globalisation measures like threats to NAFTA, TPP (trans pacific partnership) and, tariffs by the US and China may have adverse impact on trade further. The US also does not respect the Paris Agreement on climate change. These actions by the US lead to shift away from multilateral and international agreements. The US started systematically undermining the WTO. It is now questioning the very basic principles on which the WTO is founded. The rules-based system that drives WTO through the dispute settlement mechanism -- so far the only arm of multilateral body that is functioning well -- is now being threatened by the US. Trade wars and anti-globalisation is going to hurt trade further.

Urbanisation and climate change are other global challenges. The urban share of global population is likely to increase from 55% in 2018 to 68% by 2050<sup>10</sup>. It will have implications for agriculture supply, demand, food markets and value chains. Climate change is real and growing threat to food and agriculture which have to change to adapt to and mitigate the impacts of climate change.

There are three goals of agricultural development. These are: (a) achieving high growth by raising productivity; (b) inclusiveness by focusing on lagging regions, small farmers and women; and (c) sustainability of agriculture. In order to achieve these goals, we have to provide medium term strategy and action plan. This paper examines policies and reforms for attaining these goals. The 10 conclusions of the paper are given below.

- ✚ Need for change in narrative in the new context: Basically, we have to change the narrative on agriculture towards more diversified high value production, better remunerative prices and farm incomes, marketing and trade reforms, high productivity with less inputs, cost effective, less chemical and pesticide based, inclusive in terms of women and youth farmers, small farmers and rain fed areas, nutrition sensitive, environmental friendly and sustainable agriculture. The five 'I's in agriculture: Incentives, Investment, infrastructure, Institutions, Information' have to be modified to achieve the goals.
- ✚ Global trends and Macro policies are equally important for Indian agriculture: There are many challenges at global level such as climate change, geo-political and urbanization. These factors and anti-globalisation is the changing context for food systems and agriculture. Agricultural economists generally restrict to the policies relating to farm sector. However, there is a need to look at macro policies and non-agriculture.
- ✚ We have to Walk on two legs (agri. and non-agri.) in the changing context: Rural areas are changing. We have to invest in agriculture for raising the livelihoods but simultaneously shift population from agriculture to non-agriculture over time. Thus, both agriculture and non-agriculture are important for raising income of farm households. Two agricultures: There are two types of agriculture's in India – one is cereal based and the other one is non-cereal based<sup>78</sup>. Government policies have been biased towards cereals particularly rice and wheat. There is a need to shift from rice, wheat-centric policies to millets based and non-cereal focused policies to promote diversification of cropping patterns.
- ✚ Doubling farm income (DFI): Estimates show that we need more than 10% per annum growth in income to achieve DFI in 2022. Government seems to be banking on agriculture (crop+livestock) sector for DFI. But, as shown above. Government should also promote much more opportunities in non-farm sector in rural areas. Also, one has to take into account heterogeneity among different classes of farmers. Similarly, environmental aspects of doubling farm incomes have to be assessed.

To conclude, agriculture is a state subject according to the Indian constitution. States have to play active role along with central government in achieving the three goals of growth, inclusiveness and sustainability. Achieving high growth is important. But, growth without inclusiveness and sustainability will not be useful. Agriculture transformation has to be viewed more holistically in terms of rural transformation and urban linkages. There is a need to give big push for Indian agriculture for transformation and achieving farmers' welfare.

## REFERENCES

1. Agarwal, B. (2010), "Rethinking agricultural production collectives" Economic and Political Weekly Vol.45 (17)
2. Agarwal, Bina (2018), "Can group farms outperform individual family farms? Empirical insights from India", World Development, Vol.108, pp.57-73
3. Aggarwal, N. , S. Jain and Sudha Narayanan (2017), "The Long Road to Transformation of Agricultural Markets in India" Economic and Political Weekly, Vol.52, No.41
4. Alagh, Y.K. (2013), "The Future of Indian Agriculture", National Book Trust, Delhi Alagh,
5. Ibid.
6. Y.K. (2017), "Planning the Agricultural Vision", Presidential Address delivered at the 77th annual conference of the Indian Society of Agricultural Economics, Barapani, Shillong. Anand, I. and A. Thampi (2016), "Recent Trends in Wealth Inequality in India", Economic and Political Weekly, Vol.51, No.50 Bathla, Seema, S.Thorat,
7. P.K. Joshi, and Binxin Yu (2017), " Where to Invest to Accelerate Agricultural Growth and Poverty Reduction", Economic and Political Weekly, Vol.52, No. 39

8. Babu, Suresh Chandra, A.Venkatachalam, N. Paul J.Won (2018) “Tracking Climate Resiliency Actions in National Strategies, A Policy and Investment Framework and Application to Myanmar”, IFPRI Discussion Paper 01743, International Food Policy Research Institute, Washington DC. Ribaue January – December 2011 Shiva Vandana. 1991.
9. The Violence of the Green Revolution. Zed Books: New York. Todaro Michael P. and Smith Stephen C.. 2011. Economic Development. Pearson Education Limited The World Bank. 2007. World Development Report. Agriculture for Development 2008. Washington DC. [Accessed 01/06/2012].
10. World Commission on Environment and Development (1987), Our Common Future, Oxford University Press, Oxford.