

Regional Imbalances in Levels of Agricultural Development – A Study

***Dr.Ashok V Kurli, Associate Professor of Geography, Government First Grade College, Ranebennur.**

Abstract

This paper attempts to study how national and the regional level and the availability of agricultural infrastructure is fostering **Regional imbalance**. For the overall development of a country like India, growth of agriculture sector is a prerequisite. As the development of this sector not only helps the large section of population dependant on it, but also affects the other sectors through forward and backward linkages. There are very few studies conducted to measure inter-district disparities in agriculture sector. Most of the studies conducted earlier, have taken state as a unit for measuring disparities. The Price policy for agricultural commodities reflects an important element of overall agricultural development National Agricultural Insurance Scheme (NAIS) like Pmfby (Pradhan Mantri Fasal Bima Yojana) is scheme for protecting financial loss due to crop failure. The scheme would cover all farmers. The Scheme is in line with One Nation – One Scheme theme. It incorporates the best features of all previous schemes and at the same time, all previous shortcomings/weaknesses have been removed.

Strengthening / Promoting Agricultural Information System: To promote e-Governance in Agriculture at the Centre and to provide support to States/UTs. Focus on low productivity and high potential districts including cultivation of food grain crops in rain fed areas. Implementation of cropping system centric interventions in a Mission mode approach through active engagement of all the stakeholders at various levels. Agro-climatic zone wise planning and cluster approach for crop productivity enhancement. In India where some of the states are larger than many nations, there is need to conduct the study at disaggregate level. These studies will help in identifying the factors responsible for disparities at regional level and thereof will help in developing policies accordingly. The present study is an attempt to analyse inter-district disparities in development of agriculture sector in the state of Rajasthan. Shown in studies conducted earlier, inter-district disparities in agriculture sector in the state have widened. Widening inter-district disparities in the state is not only resulting in its low growth, but also increasing dissatisfaction among the farmers of the less developed regions. The main objective of the present study is to account for the reasons of disparities at state and district level and to suggest the policy measures to achieve the target of ‘Inclusive Growth’.

Key words: Regional imbalance, Inclusive Growth, developed regions, agricultural development

Introduction

Agricultural development is a must for the economic development of a country. “Agricultural progress is essential to provide food for growing non-agricultural labour force, raw materials for industrial production and saving and tax revenue to support development of the rest of the economy, to earn foreign exchange and to provide a growing market for domestic manufactures.”

The agriculture sector is the backbone of an economy which provides the basic ingredients to mankind and now raw material for industrialisation. Agriculture provides employment opportunities for rural people on a large scale.

“Increase in agricultural production and the rise in the per-capita income of the rural community, together with the industrialisation and urbanisation, lead to an increased demand in industrial production.” In this way, agricultural sector helps promote economic growth by securing as a supplement to industrial sector.

Agrarian distress has begun after reforms started in 1991, when focus shifted to the manufacturing and service sectors, which grew much faster. It was only a decade later that some reforms were undertaken in the sector. Liberalising the milk order, and permitting futures trading in commodities is a good sign for agriculture reforms.

Commodities like wheat had seen farmers getting more price than MSP (minimum support price), as many private and multinational players entered the market and there was competition

National Agriculture Market (NAM) is a pan-India electronic trading portal which networks the existing APMC Mandis to create a unified national market for agricultural commodities. NAM is a win-win solution for all the stakeholders that is Farmers, Traders, Buyers, and Processors & Exporters in Supply Chain. NAM is a network for connecting formers and traders.

Agriculture Sector is a crucial for human energy. It is the main Input to the biotic for any activity in the planet. Currently the level of agriculture production and overall availability of foodgrains is satisfactory.

Food grains Stock in Central Pool for current period October - 2013 is 369.63 (Fig.in lakh MT)Agriculture is a state subject. Centrally Sponsored and Central Sector Schemes are being implemented for enhancement of agricultural productivity and production for livelihood to the people of India.

Agriculture is the principal source of livelihood for more than 58% of the population of this country. Agriculture provides the bulk of wage goods required by non-agriculture sectors and most of the raw materials for the industries sector.

The combined efforts of Central Government, State Governments and the farming community have succeeded in achieving record production of 244.78 million tonnes of food grains during 2010-11 and India's food grain production increases marginally to 252.23 million tonnes in 2013-16 crop year. This record production has been achieved through effective transfer of latest crop production technologies to farmers under various crop development schemes being implemented by the Department of Agriculture & Cooperation backed by remunerative prices for various crops through enhanced minimum support prices.

The Government targets record 270.1 million tonnes of foodgrain production in 2013. During the 11th Five Year Plan, Ministry Of Agriculture will focus on sustaining the current momentum by stabilizing food grain production to ensure food security. For sustaining higher levels of production, it is necessary to target new areas of foodgrain production, while promoting conservation agriculture in the high production areas, to maintain current levels of productivity. New technologies are needed to break yield barriers, utilize inputs more efficiently and diversify to more sustainable and higher value cropping patterns.

Objective:

This paper intends to explore and analyze the engendered causes for hampered growth among Indian states in the **level of agricultural development** and also subsequent regional **imbalance** .

Growth and Productivity in India.

Agriculture is the key sector in the Indian economy and it plays a very important role in the process of economic development of a country. It has been playing a significant role in the economic development of developed as well as under-developed countries of the world. Agricultural development has helped to a greater extent in the process of economic development, especially in developed nation. Similarly, various under-developed countries of the world now engaged in the process of economic development with the help of agriculture sector. Moreover, agricultural production can be raised more rapidly with lesser amount of capital investment in it. Productivity can be increased even without addition of capital.

The increasing agricultural productivity will make substantial contributions to the general economic development of the country. The significance of agriculture in India arises after the independence by knowing the fact that the development in agriculture is an essential condition for the development of the national economy. So, first five year plan of India was focused on the agricultural development and one of the main objectives of first five year plan was to develop the agriculture sector. Various initiatives taken by government of India to improve the agriculture production and their result shown as food grains production increased from 51 million tonnes in 1950-51 to 176.22 million tonnes in 1990-91. Since the 1960s,

government provided active support to farmers in the form of subsidies seed, fertilizer, and water, as well as through grain market support prices to shape by heavily invested in specific commodities. Here we will confine ourselves in analyzing the trend and pattern of Agriculture in India. It is seen that with the growth of the secondary and tertiary sectors in the post-independence period in India, the participation level of agricultural worker has been declining day by day; share of agriculture in GDP has also been showing a declining trend, but the productivity of food grains has been increasing and trade of agricultural commodities has also improved.

The Government of India should take the following important steps to save the agricultural sector and also the people dependent on agriculture: i) Credit should be created to farmer at the reasonable rates from which the financial requirement of farmer fulfilled easily at the time of cropping of crops. ii) Better and quality seeds should be provided by the government and provision of quality seeds should be included in the PDS. iii) Better irrigation facilities are a need especially in hill regions of India. iv) In India, majority of population depends on agriculture sector. This pressure leads to sub division and fragmentation of land holdings. There is a need to reduce this pressure on this sector. v) There is a need to consolidate all the fragmented land into a good size land with the help of cooperative farming and consolidation of holding which gives profitable returns. vi) Agricultural marketing system should be improved that the cultivators can sell their products at reasonable prices and can also purchase their necessary inputs from government arranged input shops. There is also a need to improve the agriculture marketing especially in the hill regions of India. vii) Agricultural education should be provided to the farmer related to land management, agriculture and natural resources from which it helps the farmer as increased production, conservation of soil and other natural resources etc. viii) Storage centers and Godowns centers should be established at district levels so that these centers improve marketing efficiency for various farm produce and influence the farming communities to maximize the production of various high value crops. ix) Forecasting and early warning system should be build up to make them farmers oriented. It helps in appropriate training of farmers in operating agriculture practices to reduce losses in disasters and another climate- related risk.

Regional disparities in Indian Agriculture

Agriculture forms the backbone of the Indian economy. This sector provides employment to around 65% of the total work force in the country and it contributes a sizable share in Indian GDP which is very essential for economic development of the country. But India is characterized by wide regional variation in agro-climatic condition. Agricultural output in different region is varied due to varied agroclimatic factors, physical resource endowment and also varying level of investment in rural infrastructure and technological innovations. Moreover, the disproportionate distributions of public and private investment in favour of agriculturally developed states are found to be responsible for wide disparity in agricultural performances in India which, in turn, is considered to be responsible for wide disparity in the per capita net state domestic

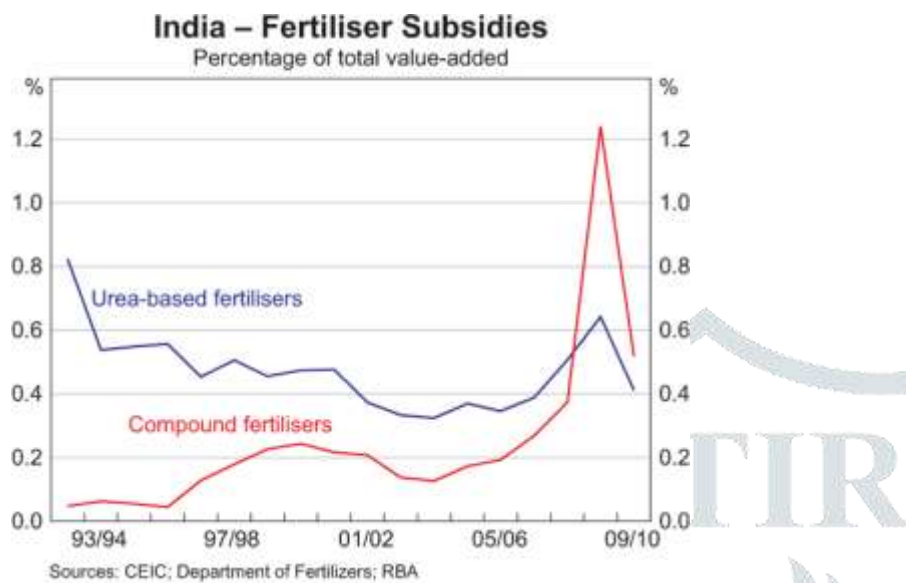
product across states in India. The regional variation in agricultural infrastructure and the use of agricultural inputs in India is quite high. The regional agriculture disparity remained a serious problem in India. Reduction of regional imbalance is one of the key challenges of Agricultural Development in India. Indian agriculture has witnessed tremendous changes during the last 4 decades following the adoption of green revolution technology during late 1960's; the green revolution technology was initially adopted on a large scale in the region well endowed with irrigation. As this technology possessed vast potential for increase in productivity, it led to impressive growth in agriculture output in the region where it was adopted. Because the spread of green revolution technology was highly skewed in favour of certain regions and states, this led to a high growth in agricultural output in selected regions while the other regions suffered from stagnancy or poor growth in agriculture output. Many development and growth theories have proved that regional disparities and imbalances are inherent in the progress of development due to the existence of regional disparities in economic development in vast developing countries like India, is a common phenomenon. Regional disparities may vary from period to period, region to region and sector to sector. So many scholars' measure regional disparities in different countries, states, regions and sectors and argued that "Since agriculture is the main source of income of the rural population, imbalance in its growth in different regions has led to the imbalances in the income and levels of living". A number of studies have been conducted at the world level, India level, and district level. It is an accepted fact that in even developed regions / states / districts there are backward pockets and that at no level there exist perfect equality. Therefore, it is true that perfect regional balancing of economic development is neither feasible nor economically desirable. There are very few studies analyzing disparities in the agricultural sector, which is based on Indian Economy. The pattern of development is very different, in different states, but after Globalization, Liberalization and Privatization in 1991 the inter-state disparities got reduced in general. In general, the most important causes of regional disparities in agriculture in a country like, India are the following:

The Food Procurement and Distribution System

In addition to policies on land distribution, the Government has significant influence on the agricultural sector through other policy instruments, including subsidies for inputs, minimum price support arrangements and government procurement of food.

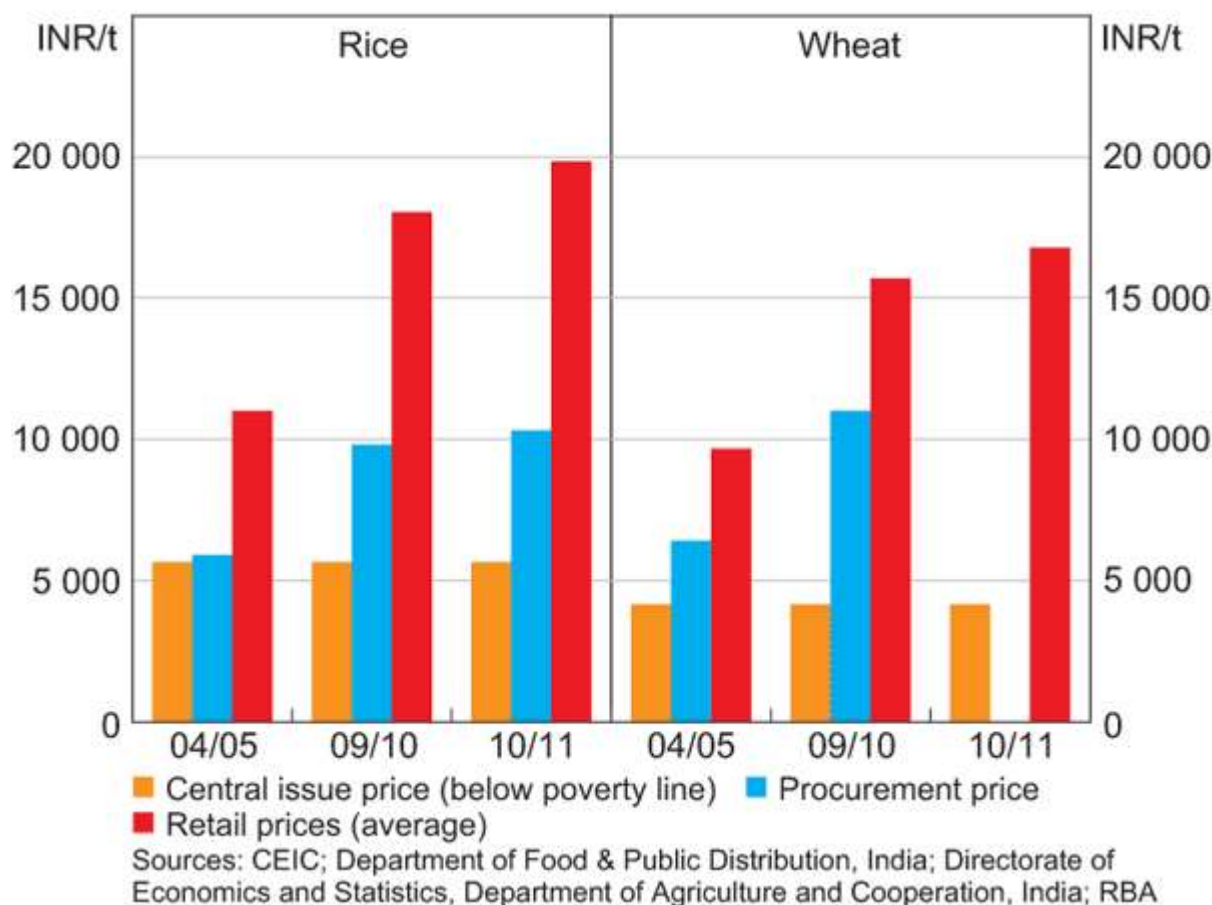
One-third of input subsidies are paid in the form of fertiliser subsidies, which are equivalent to 1 per cent of GDP. Under this subsidy scheme, the Government quotes a maximum retail price for various types of fertilisers and reimburses the seller the difference between the retail price and the 'market' price. The market price for domestically produced fertilisers takes into account transportation, storage, labour and energy costs. The subsidy for imported fertiliser is the difference between the import price and the maximum retail price. Urea fertilisers are a major input into agricultural production and its price has been fixed since 2003 despite large fluctuations in the cost of inputs. While India is able to produce enough urea fertiliser to meet domestic

needs, it relies on imports to satisfy its demand for compound fertilisers, so that the increase in global fertiliser prices during 2007 and 2008 saw a large outlay in the subsidies paid for compound fertilisers (Graph 7). There are also substantial subsidies for electricity. Many farms use unmetered power and pay a subsidised lump-sum based on the power ratings of pump-sets used for irrigation purposes.



To help alleviate poverty and to shield Indian consumers from global food price fluctuations, the Government subsidises food purchases for many consumers. The Government procures agricultural goods from producers, who must sell a share of their output to the Government at minimum support prices (MSPs), which are typically below market prices (Graph 8). Procured food is sold through the Targeted Public Distribution System (TPDS), which consists of about half a million ‘fair price shops’. In order to purchase food through this system, households apply for ration cards, which indicate whether they are assessed to be Above Poverty Line (APL) or Below Poverty Line (BPL). In 2005, 81 per cent of rural households and 67 per cent of urban households held ration cards. The type of ration card a household holds determines the prices they pay (the central issue price) and the amount of food they can purchase through the TPDS. According to the most recent estimates, about one-third of the production of rice and wheat was released for consumption under the TPDS in the 2009/10 Indian financial year.

India – Grain Prices



While the MSP program covers 26 crops, in practice, the program is used to subsidise farmers when market prices fall to very low levels for most of those crops. With market prices generally higher than MSPs for most agricultural commodities, MSPs are typically only used by the Government to procure rice and wheat. The Government also uses its stock of grains to buy or sell produce to ensure retail market prices remain broadly stable.

Although government programs have sought to make food more affordable to poorer households, India's lack of cold-storage facilities and cold-chain transportation have resulted in large quantities of food being wasted. For instance, almost all cold storage is used for potatoes for five months of each year, resulting in only around 10 per cent of remaining fruit and vegetable produce being stored in a refrigerated environment, which means that a significant amount of produce deteriorates and is unfit to consume. Some estimates suggest that between 25 and 40 per cent of fruit and vegetable output is wasted during the storage and transportation stages of distribution. Electricity supply is another major factor, with rolling brown-and black-outs contributing to a loss of food in cold-storage facilities.

Transport infrastructure is also limited, resulting in further food damage and loss during transit. Most highways in India are narrow and congested, and about 40 per cent of India's villages have no access to all-weather roads. Most of the cold-chain transportation network is used to distribute milk, with only around

20 per cent of the network available for the distribution of other food produce. As a result, fruit and vegetables are typically transported in open-top trucks.

Conclusion

To mitigate the regional gap in agricultural productivity, the policy prescription would be more and more investment in the lagged region, extension of public and private credit in remote rural areas. Development of research focusing the development of dry land area, development of technology requiring less water, less fertilizer and cheap farming and finally implementation of watershed development approach are necessary for a more balanced and sustainable agricultural development in the country. There is an acute need to pay special attention to the needs of eastern states and other rain-fed regions. India's agricultural sector is still very important to the Indian economy, although its share of the economy has decreased over the past 50 years. India has made significant advances in agricultural production in recent decades, including the introduction of high-yield seed varieties, increased use of fertilisers and improved water management systems. Reforms to land distribution, water management and food distribution systems will further enhance productivity and help India meet its growing demand for food.

References

1. "Aeryon Announces Version 5 of the Aeryon Scout System | Aeryon Labs Inc". Aeryon.com. 6 July 2011. Retrieved 13 May 2012.
2. Annamoradnejad, R.; Annamoradnejad, I.; Safarrad, T.; Habibi, J. (2013-04-20). "Using Web Mining in the Analysis of Housing Prices: A Case study of Tehran". 2013 5th International Conference on Web Research (ICWR): 55–60. doi:10.1109/ICWR.2013.8765250. ISBN 978-1-7281-1431-6. S2CID 198146435.
3. Winther, Rasmus G. (2013). C. Kendig (ed.). "Mapping Kinds in GIS and Cartography" (PDF). Natural Kinds and Classification in Scientific Practice.
4. "Making maps compatible with GPS". Government of Ireland 1999. Archived from the original on 21 July 2011. Retrieved 15 April 2008.
5. Chang, K. T. (2008). Introduction to Geographical Information Systems. New York: McGraw Hill. p. 184.
6. Longley, P. A.; Goodchild, M. F.; McGuire, D. J.; Rhind, D. W. (2005). "Analysis of errors of derived slope and aspect related to DEM data properties". Geographic Information Systems and Science. West Sussex, England: John Wiley and Sons: 328.

7. Chang, K. T. (1989). "A comparison of techniques for calculating gradient and aspect from a gridded digital elevation model". *International Journal of Geographical Information Science*. 3 (4): 323–334. doi:10.1080/02693798908941519.
8. Jones, K.H. (1998). "A comparison of algorithms used to compute hill slope as a property of the DEM". *Computers and Geosciences*. 24 (4): 315–323. Bibcode:1998CG....24..315J. doi:10.1016/S0098-3004(98)00032-6.
9. Zhou, Q.; Liu, X. (2003). "Analysis of errors of derived slope and aspect related to DEM data properties". *Computers and Geosciences*. 30: 269–378.
10. Hunter G. J.; Goodchild M. F. (1997). "Modeling the uncertainty of slope and aspect estimates derived from spatial databases" (PDF). *Geographical Analysis*. 29 (1): 35–49. doi:10.1111/j.1538-4632.1997.tb00944.x.
11. O. S2CID 44035634.

