Book Review

***Economic Liberalisation and Indian Agriculture: A District-level Study*, G.S. Bhalla and Gurmail Singh, Sage Publications India Private Limited, New Delhi, 2012, Pp.xxx + 361**

The introduction of HYV seed-fertiliser-water technology during the mid-sixties has totally changed the landscape of Indian agriculture. It has not only increased the production and productivity of various crops but also increased the cropping intensity and helped to change the cropping pattern from low value to high value crops. While benefiting the farmers directly, the new agricultural technology has also helped to reduce the rural poverty and increase the wage rates for agricultural labourers on a sustainable basis. However, it is often argued that the benefits of this new technology have not spread uniformly across various regions and states in the country. Is this true? A large number of studies have analysed the impact of new agricultural technology on various parameters over the years. But not many studies have analysed the regional dimension of it using more disaggregated district level data, especially after the introduction of economic reforms in India. This book under review has made a mammoth attempt to fill this gap utilising district level data covering all the major states of India. Though this book is completely new in terms of analysis and presentation, it is in a way an extended version of three earlier studies conducted by G.S. Bhalla with well known scholars like Y.K. Alagh and D.S.Tyagi covering period from 1962-65 to 1990-93. This version of the book extends the period of analysis till 2005-08, wherein the period from 1990-93 to 2005-08 has been considered as the period of economic reforms. With four broad objectives, the study essentially aims to analyse the pattern and growth of agricultural output, growth in productivity of agricultural workers, association between the growth of agricultural output with the use of modern inputs and the degree of regional disparities in the levels and growth of agricultural output at the state, regional and district level. The book has five chapters besides a very large part of appendices which have district-wise data on different parameters for five set of periods namely 1962-65, 1970-73, 1980-83, 1990-93 and 2005-08.

The present book is an extended version of the earlier works and therefore the first chapter provides a brief account on the earlier three books highlighting the methodology followed for the classification of districts based on the value of productivity including the important findings of those studies. What ways this book is different from the three earlier works in terms of defining the districts based on the value of productivity and the methodology followed for estimating the value of output are clearly highlighted in this chapter. While this chapter is expected to be useful to all those readers who have not got the opportunity to read the earlier works, it also informs the readers about the additional contribution of this book. One of the main objectives of the book is to study the changing pattern of Indian agriculture especially in terms of cropped area, cropping pattern, use of various inputs and value of output at the state level during 1962-65 to 1970-73, 1970-73 to 1980-83, 1980-83 to 1990-93 and 1990-93 to 2005-08 . Therefore, the second chapter has made an attempt to analyse the spatial pattern of changes in Indian agriculture. The important finding that emerges out from this analysis is that the post-reform period from 1990-93 to 2005-08 is characterized by a serious retrogression both in respect of levels and growth rates of yields and output in most states and regions. The authors attribute this to decline in public investment in irrigation and water management and in scientific research. While the reasons highlighted for retrogression in growth of yields and output are partly true, a huge increase in cost of cultivation that resulted in reduction of profitability during the period of economic reforms could be one of the main reasons for this which has not been highlighted as the reason for the retrogression. Can the farmers produce more output when the profitability from crops cultivation is very low or negative? It is well known that the Indian states are geographically large consisting of several non-homogeneous agro-economic sub-regions with wide variations in inputs use and output growth. Therefore, it is always better to study the regional patterns and levels of growth in agricultural output by taking district as a unit of analysis. Keeping this in view, the third chapter of the book delves with the district-wise analysis on the use of inputs, yield levels, etc. Multiple regression analysis has also been carried out to find out the determinants of agricultural production utilising region-wise data of various districts. The analysis clearly reveals that inter-regional disparities continue to be very prevalent in various parameters considered for the study. It shows that all the districts belonging to the states of Kerala and Punjab were in the high productivity range of above Rs. 10,600/ha. It is also found that none of the districts that come under Punjab, Kerala, Haryana, West Bengal and Tamil Nadu belonged to the low-productivity category during 2005-08. But, on the other hand, about two fifths to three fourths of the districts belonging to Maharashtra, Madhya Pradesh, Rajasthan and Bihar are found to have been caught in a low-equilibrium trap. Both the tabular and regression analysis presented in this chapter seem to suggest that these inter-districts disparities are largely due to differences in the intensity of use of modern inputs such as fertilizer, tractors as well as in the availability of infrastructure like irrigation, road and markets. While the inferences drawn from the district level analysis seem to be plausible, some of the variables included in the regression analysis seem to be closely correlated.

The chapter on spatial pattern of growth of agricultural output compares the district-level growth rates registered during the post-reform period (1990-93 to 2005-08) with the pre-reform period (1980-83 to 1990-93). In addition to this, attempt has also been made in this chapter to analyse the association between growth rates of output and the intensity in the use of modern farm inputs. The spatial distribution of districts based on their growth rates over various periods presented in the various maps highlights the tremendous improvement in the regional coverage of growth over the period 1980-83 to 1990-93 and then a slowdown during 1990-93 to 2005-08. As per the analysis presented in this chapter, the output levels were very low (Rs. 6700/ha) in about 95 districts during 2005-08, which is about 34 percent of the total districts considered for the analysis. But there are no clear-cut answers available in this book for this low level of output in about one third of the districts considered for the analysis. More disaggregated study beyond district level needs to be carried out to find out the main reasons for this low output and also to suggest ways and means for improving their output levels. Besides improving the overall agricultural productivity, there is a need to increase the agricultural workers' productivity as it determines the living standard of the working population in agriculture. The fifth chapter provides a detailed account on the changes in agricultural labour productivity using state and district level data. The analysis presented in this chapter shows that the growth rate in agricultural workers' productivity during the post-reform period has decelerated. This is not something unexpected because when the overall output growth decelerates, as has been noted earlier, the productivity of agricultural workers would naturally go down because it is the ratio of total agricultural output to total number of workers. Taking clue from the regression analysis, the authors believe that by expanding the area under cultivation through intensification of land use, improving education and skill levels of the rural labour force, development of rural infrastructure and agricultural markets, the agricultural workers' productivity can be improved. Clearly the results presented in the book show that the growth rates of agricultural output have registered a notable deceleration during post reform period (1990-93 to 2005-08) as compared with the pre-reform period (1980-83 to 1990-93). This deceleration is not only noticed at the all-India level but also observed at the state and district levels.

Overall, the book reads well and covers the entire gamut of agriculture that too with district level disaggregated data. This book will be useful to the researchers and teachers who are working in the area of production side of agricultural economics.

Prof. A. Narayanamoorthy, Managing Editor