

Efficiency of Rice Producing States in Production and Cost: A Stochastic Frontier Analysis

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This paper examines the technical inefficiency and cost inefficiency of rice production for 12 major rice producing states of India for the period 1996-2010, using cost of cultivation data provided by the Ministry of Agriculture. It has used stochastic frontier analysis of true "fixed effect Green type of model". Its finding is that the southern states perform better in terms of both technical efficiency and cost efficiency. Eastern states show positive trends of both technical and cost inefficiencies. There has been positive growth rate of fertilizer use and significantly negative trend of human labour and bullock labour use per hectare of rice production for the southern states. But in eastern states there has been a decline in the growth rate of use of human labour, bullock labour as well as fertilizer per hectare of land.

I Introduction

Rice is one of the most important food crops of India in terms of area, production and consumer preference. Its production crossed the mark of 100 million tonnes in 2011-2012, accounting for 22.81 per cent of global production. The average share of rice production in India ranged from 18 per cent to 25 per cent of the world production for the period 2001-2010. In 2001-2002 India produced 23.23 per cent of the world production, whereas in 2002-2003 the share came down to 18 per cent. It increased to 22.25 per cent in 2011-2012. Although India has a large share in global rice production, productivity at 3.1 tonne per hectare is lower than in top rice producers. Per hectare productivity is 6.5 tonne in China, 5.2 million tonne in Vietnam, 4.9 million tonne in Indonesia and 4.2 million tonne in Bangladesh. (See Appendix Table A.1)

India is the second largest producer and consumer of rice in the world. It is a significant diet of the Indian population. In 2009-2010 it was estimated to be equal to 74.7 kg per person in rural areas while 56.4 kg per person in urban areas. Although the percentage of rice consumption in cereal consumption is falling over time, still it constitutes about 50 per cent. Despite it, due to population increase there will be need for demand of rice. According to the UN population

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