

## ABSTRACT

The key to higher economic development of an agrarian economy like that of India lies in the success of its agricultural sector. Orissa, a less developed state of Indian union, which has a predominantly agrarian economy, is no exception to it. The development of agriculture is, however, primarily dependent upon adequate and uniform availability of basic infrastructure and the concomitant application of modern farm practices. Any attempt to attain higher productivity and increasing growth in agriculture would be self-defeating, unless enough attention is given to provide requisite infrastructure in adequate quantity in all the regions.

Given the above backdrop, the present study examines the effect of infrastructure and modern farm practices on agricultural productivity in the agrarian economy of Orissa. In addition, the study also measures the degree of disparity that exists across the districts or regions of Orissa in the distribution of infrastructure and modern farm practices. The study is based upon cross-sectional data collected from various published sources. The major econometric tools used for the study are Principal Component Analysis (PCA) and regression analysis.

It is evident from the present study that infrastructure tends to be skewed towards a few districts or regions of the state. As a result, agricultural productivity and growth are found to be largely uneven across the regions. It is, further, proved that the major factors that contribute the most to higher agricultural productivity in Orissa are irrigation and rural literacy under infrastructure, and fertilizer, HYV area, and machinery under modern farm practices. It is, thus, urgently required to undertake necessary measures so that the above major components are provided uniformly and adequately across different regions of the state.

**Key Words:** Agricultural Productivity; Infrastructure; Modern Farm Practices; and Principal Component Analysis.