

Technological Change and Functional Income Distribution Effects in Indian Agriculture : An Econometric Analysis

S. Bisaliah

1. INTRODUCTION

With the introduction of new production technology^{1,2} into the wheat farming sector in Indian agriculture, a considerable increase in output per acre (about 40 per cent in the Ferozepur district of Punjab) has been recorded. This 'new found' growth in Indian agriculture has given rise to two important basic issues in the area of development economics. What are the sources of this 'new found' growth in output? What are the effects of this new production technology on employment and income distribution? These questions are consistent with shifting emphasis from the narrower considerations of economic growth to the broader issues of economic development such as unemployment, poverty and income distribution. The present study focuses its attention on evaluating the functional income distribution effects of new technology³.

Technical change may give rise to different dimensions of income distribution problems.

First, new technology is highly selective in its adoption to particular ecological zones. There is a technical dichotomy — the division of agricultural regions into those that are suitable for the improved production system and those that are not. So primary productivity gains accrue to farmers in a particular region. Studies by Sen (1969), Chowdhury (1970), and Santana (1970) have dealt with the implications of new technology for inter-regional income distribution. Second technical change may cause inter-farm income disparities among various size groups of farmers within a region where the new production technology is adopted. Studies by Kahlon (1970), Singh and Sandhu (1971), and Srivastava, Crown and Heady (1971) have evaluated these effects. Third, technical change affects the functional income distribution, that is factor share⁴. The present study is concerned with evaluating the effects of new technology on functional income distribution.

The specific objectives of the study are to: