

Efficiency and Imperfections of Rental Markets of Tilling Machinery: A Study in the Brahmaputra Valley in Eastern India

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Abstract

Rental markets of tilling machinery have emerged as important factor markets in rural India enabling even small and marginal farmers to mechanize their tilling operations. It is, however, pertinent to examine if outcomes of these markets are vitiated by imperfections. Apart from the usual sources of inefficiency, one specific form of imperfection in these markets can arise from the fact that the suppliers are mostly user-suppliers rather than independent suppliers. Since tilling machinery are leased out only when these are not required in the owners' farms, the hiring-users may not have access to such capital goods at the most opportune times. To examine if this apprehended market imperfection has manifested in reality, a sample survey of farms was carried out in 2013-14 covering the Brahmaputra Valley, an agriculturally important area in Northeast India. The sample of 232 farm households surveyed was drawn through a three stage sampling design. First, three districts from upper, central and lower Brahmaputra Valley were selected to make the survey geographically representative. In the next stage three villages from each of the selected districts were selected. In the Final stage 12% of farm households from each selected village were selected at random as ultimate sampling units. Analytical tools used include Fisher's t-test, Tobit model and Log-linear regression. Analysis of survey inputs revealed little impact of market power distorting the rental rates. The owner-users on the average achieved somewhat better farming outcome than the hiring-users, but the observed difference is statistically not significant (p values are in excess of 0.177 for each indicator of farming outcome). It is hence concluded that the rental markets of tilling machinery in the Brahmaputra Valley are functioning without serious imperfections.

Keywords: Farm capital goods, Imperfection, Rental market

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