

The economics of Smallholder Tea Production: The Case of Njombe District, Tanzania

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The objective of this study was to identify the factors that determine output on smallholder tea farms in Njombe District, Tanzania. If total output is known, the estimation of yield for annual crops is easily done by dividing total output by total area. This would, however result in very poor estimates of yields in the case of tea- a perennial tree that start bearing green leaf the product for which it is cultivated three years after initial planting but reaches full mutuality after 10 years and has an economic life of another fourty years therefore. The study there fore develops the theoretical and empirical framework for analysing the determinants of output on smallholder tea farms. The analysis is based on farm level pooled cross- section and time series input-output data from 87 households in Njombe District for the 1961/1962- 1979/80 period. The theory of the family farm, a hybridization of two neo classical micro-economic theories -the theory of the firm and the theory of the consumer provided the theoretical underpinning of the study. On the basis of this theory, the farmer was assumed to maximize utility subject to an income constraint. The behavioral model derived from this theory showed that the production function for tea was only a part of a large system of equations in which output and input are jointly determined. The empirical analysis, however, concentrated on tea. First the parameters of the production function were entered subjected to econometric test. The two most important parameters from the policy point of view were the yield coefficients of various vintages of tea bushes and the farm effect coefficient measuring inter-farm variability in managerial efficiency among farms. An important finding of the study was that that managerial efficiency was not strongly correlated to scale. The use of the production function assumes that the farmer is a profit maximizer and therefore responds to price changes. The other major objective of the study was to measure the smallholder's supply responsiveness to changes in economic incentives. One important hypothesis in this respect was the one proposed by Por (1971) which is that the smallholder producers respond to changes in income derived from the crop in question rather than to changes in price per se. thus both income and prices per se. thus both income and price models were formulated to test this hypothesis. One variant of the price models sought to test the hypothesis of the reversibility or otherwise of farmers response towards declining prices as contrasted to their response toward increasing prices. In terms of the goodness of fit a consistency with theory, the result was good for all the models except the real price variant. The reasons why this was so are taken up in the discussion results. In addition to the empirical analysis done, the study describe the historical and institutional development tea production and marketing in Tanzania. Similarly, there is a descriptive analysis of the international tea economy.