



Economic Analysis and Constraints of Irrigation by Dry Season Rice Farmers in Ikwo Local Government Area of Ebonyi State, Nigeria

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Abstract: Imperfect markets or absence of markets for irrigation in developing countries such as Nigeria, particularly Ikwo Local Government Area of Ebonyi State has undermined the level of agricultural activities going on in the area especially during the dry season. Hence, estimating the economic value that farmers place on incremental changes in demand for irrigation has become vital in the process of deciding the economic viability of new irrigation projects. The study adopted both random and purposive sampling techniques in collecting primary data from 125 rice farmers with the aid of structured questionnaire guided by interview schedule in Ikwo Local Government Area of Ebonyi State, Nigeria. The findings indicated: socio-economic, geographic, and productive factors greatly influenced the farmer's willingness to pay for irrigation. The rice farmers are willing to pay for irrigation with an average of US \$19 per 2.5 ha yr⁻¹. The 85.9% of the total variation observed in willingness to pay for irrigation was sufficiently explained by the independent variables included in the regression model. Educational qualification, farming experience, farm size, distance of farm to the nearest market, access to credit, attitude towards payment for the maintenance of supply irrigation and proximity to water sources were positively correlated with willingness of rice farmers to pay for irrigation. The weak irrigation policy, lack of access to credit, water source, non-inclusion of farmers in irrigation scheme among others as the constraints to rice farmers' willingness to pay for irrigation. The study therefore recommends that rice farmers should be encouraged to form cooperative society so as to access credit for establishment of small irrigation scheme for dry season rice production, government should develop workable and feasible water scheme since the farmers are willing to pay for its sustainability.

Keywords: Economic value, Demand, Dry season farming, Irrigation, Willingness to pay
