

Farmers' satisfaction with the performance of the Mooi River Irrigation Scheme, KwaZulu-Natal, South Africa

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ABSTRACT

Farmer satisfaction with using an irrigation service can be used as a measure of performance of an irrigation scheme. An investigation was instituted to determine factors that significantly influence the satisfaction status of farmers at the Mooi-River Irrigation Scheme (MRIS) in KwaZulu Natal, South Africa. A multinomial Logit regression model was employed to analyse the response of the farmers. It was established that about 57% of the farmers are satisfied with using the irrigation service, 30% are not and 13% are neutral. The majority of farmers, accounting for 85%, either never went to school or had only primary level schooling and these are mostly women, who own close to 80% of the plots in the scheme. Statistically significant results show that 6 household-level factors affect the satisfaction of farmers with using an irrigation service, i.e., gender of head of household, level of education attained by the household head, training received in water management, farmers' perception of the fairness of water distribution, the number of days in a week that plottolders receive water, and the participation of farmers in the inspection of irrigation infrastructure on the scheme. This study recommends formulation of policies to train farmers in water management and to support farmer participation in scheme management.

Keywords: Farmer satisfaction, technical performance, multinomial Logit regression

INTRODUCTION

Internationally, irrigation performance has been the subject of research in the agricultural sector for more than 5 decades. However, these studies have had little impact to date, due to lack of collaborative implementation of recommendations on the part of irrigation stakeholders, among them farmers, policy-makers, and donors. Research has been done from the point of view of the various stakeholders, yet the performance of irrigation schemes, especially in the communally-owned or managed smallholder schemes, has remained low (Svendsen et al., 2009).

The performance of smallholder irrigation (SHI) schemes is affected by a complex set of factors. An understanding of these variables can contribute towards enhancing the performance of smallholder irrigation, improving the livelihoods of the rural poor and ensuring sustainability of the schemes. Key performance issues in SHI schemes range from technical, agronomic, economic and social to institutional issues. These can be explored from different stakeholders' perspectives. Several studies on smallholder irrigation performance have been carried out from the farmers' perspective outside South Africa (Naik and Kalro, 2000; Yercan, 2003; Ghosh et al., 2005; Kuscu et al., 2008; Kuscu et al., 2009). In South Africa, the focus has been on economic (Ntsonto, 2005; Yokwe, 2009) and social performance (Van Averbeké and Mohamed, 2006; Cousins, 2009).

Technical performance research studies have focused on water conveyance, delivery and use in the SHI schemes, and

implementation of the recommendations has usually ignored the input from farmers (Plusquellec, 2002; Kuscu et al., 2009), probably due to the misplaced belief that they are unable to understand and contribute to technical issues (FAO, 2001). In the wake of new approaches such as Participatory Irrigation Management (PIM) and Irrigation Management Transfer (IMT), farmers can find themselves entrusted with the responsibility to operate and maintain the schemes, but without technical information and proper management skills, the schemes deteriorate quickly, and frequently require rehabilitation only a few years after construction (FAO, 2001).

Farmer perspectives and assessments of irrigation scheme performance are thus critically important. However, several problems, such as subjective judgments and multicollinearity among the factors considered, are commonly encountered when analysing survey data and assessing the performance of SHI schemes from the farmers' point of view (Magingxa et al., 2006).

The objective of this study was to investigate the social and technical factors that significantly affect the performance of smallholder irrigation schemes and also affect farmers' satisfaction with the irrigation service offered. An irrigation service is measured as the level to which an irrigation system and all its components meet the set objectives of the irrigation scheme. In addition, the service specifies the roles of all parties, which include farmers, Water User Associations (WUAs), operators of the tertiary canal, operators of the secondary canals, operators of the main canals, and project authorities, in operating and maintaining all elements of the system (FAO, 2001).

This study uses farmers' levels of satisfaction with both technical and managerial issues within a scheme as indicative of its performance. Data obtained from farmers to assess the factors affecting the farmers' subjective judgements of the performance of schemes was analysed econometrically.

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