Determinants of Adoption and Successful use of Agricultural Water Management Technologies: Case of Ethiopia

Hagos, F., Awulachew, S. B., Erkossa, T. and Yilma, A.D.

Introduction

- Remains unclear whether such technologies lend themselves easily to adoption and how successfully such technologies are utilized by smallholder farmers.
- The objectives of this study are:
  - to assess the economics of water controls; to understand the factors that influence adoption and successful use.

Objectives

Analytical approach

- Net Present Values
- Stochastic frontier analysis - C-Douglas production function
- Estimation of MVPs
- Probit model and
- Heckman and Deaton models

Study site

Conclusions

- All water control structures are financially viable; the main issue is institutionalizing cost recovery.
- The marginal productivities of farm inputs is positive
- Adoption and successful use is influenced by socio-economic, environmental and institutional factors.

Recommendations

- increase/expand extension coverage including FTCs is necessary.
- Improved market access conditions such as improved access roads, transportation and storage facilities
- Promoting educational access can enhance the use of these technologies. Increasing the land area allotted to irrigated annuals and increased supply of seeds and accessories is required. Choice of specific technologies that increase water availability has a lot of bearing in the success of AWMTs.