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Impact of the productive safety net program on farmers' investments in sustainable land management in the Central Rift Valley of Ethiopia

Zenebe Adimassu [a,*], Aad Kessler [b]

[a] International Water Management Institute (IWMI), PO Box: 5689, Addis Ababa, Ethiopia
[b] Wageningen University and Research Center, Soil Physics and Land Management (SLM) Group, Droevendaalsesteeg 4, 6708PB Wageningen, The Netherlands

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ABSTRACT

This study assesses the impact of the Productive Safety Net Program (PSNP) on farmers' investments in sustainable land management (SLM) practices in the Central Rift Valley (CRV) of Ethiopia. Primary data were collected using a structured and pre-tested questionnaire for a sample of 159 households (82 PSNP participants and 77 non-participants) in four kebeles (the lowest administrative unit in Ethiopia) of two weredas (districts). Using a cross-sectional household survey, propensity score matching (PSM) was used to assess the impact of PSNP on households' investments in soil erosion control and soil fertility management. The PSM results show that the *control* group of households (non-participants in PSNP) invested more in soil erosion control measures as compared to the *treated* group of households (participants in PSNP). On the contrary, however, the *treated* group of households significantly invested more in soil fertility management practices (e.g. inorganic fertilizer and compost) as compared to the *control* group of households. The negative impact of PSNP on households' investments in soil erosion control in the treated group of farmers is related to their high labor investment in public works, which is not the case for the non-participants in PSNP. This implies that PSNP should pay more attention to capacity building and awareness raising, which requires a restructuring of the program that would benefit long-term and more sustainable impact on reducing food insecurity and enhancing natural resources in the CRV of Ethiopia.

1. Introduction

Ethiopia's economy is highly dependent on agriculture and related activities. Agriculture alone contributes 42% to the total gross domestic product (GDP), provides livelihood to about 80% of the population, constitutes more than 80% of the nation's total exports, and provides most of the foreign exchange earnings to the economy (CSA (Central Statistical Agency), 2008). However, in spite of its great significance in the Ethiopian economy, the agriculture sector until recently has been dismal (Porter, 2010; Sharp et al., 2006; Delacote, 2007; Jayne et al., 2001). Factors contributing to the poor performance of the agricultural sector include, among others; frequent drought, extreme fluctuations of rainfall, low levels of agricultural

* Corresponding author.
E-mail addresses: zenebeteferi@yahoo.com, z.adimassu@cgiar.org (Z. Adimassu).

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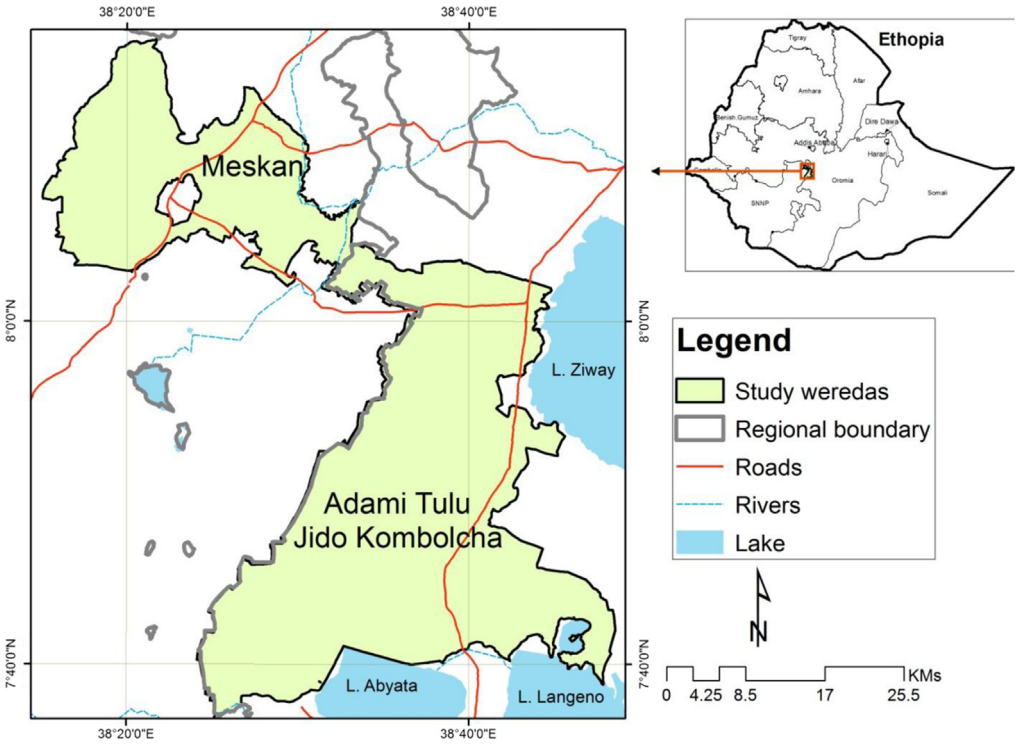

Fig. 1. Adami Tulu Jido-kombolcha (ATJK) and Meskan weredas in the Central Rift Valley of Ethiopia.

technology generation and utilization, population growth and land degradation in the form of soil erosion, loss of soil fertility, salinization and moisture stress (Shiferaw and Holden, 2000).

The collapse of agriculture to feed the growing population, together with the depletion of the natural resource base, have made Ethiopia food insecure and hence dependent on food aid for the last four decades (Clay et al., 1999; Gilligan and Hoddinott, 2007; Gilligan et al., 2008; Little, 2008). However, the past decades of large-scale food aid deliveries have done little efforts to integrate natural resource management issues into their aid program (Devereux and Guenther, 2007; Devereux et al., 2006). Recognizing this, the government of Ethiopia together with an association of donors, initiated a new social protection program known as the Productive Safety Net Program (PSNP) in 2005 (Andersson et al., 2011; Wiseman et al., 2010).

The prime aims of the PSNP are to reduce household vulnerability, improve community resilience to shocks and stresses, and to break the cycle of dependence on food aid through two main components – public works (PW) and direct support (Andersson et al., 2011; Wiseman et al., 2010). The aim of the PW component of PSNP is to mitigate the impact of climatic and food insecurity risks on chronically food-insecure households by creating employment opportunities to 'able-bodied' laborers. It is the most important element of the PSNP and creates a labor market for unskilled labor, primarily by involving them in labor-intensive, community-based activities like construction of sustainable land management (SLM) practices, feeder roads, social infrastructures (e.g. primary schools and health posts), water supply projects, and small scale irrigation schemes (Sabates-Wheeler and Devereux, 2010). Direct support is a small portion of PSNP and delivers assistance to members of the community who cannot participate in PW but who are food insecure and require assistance (Andersson et al., 2011).

The transfer of food and cash to food insecure households is expected to be used partly to meet immediate consumption needs, but also to be partly invested in farming and enterprise activities (Andersson et al., 2011; Uraguchi, 2011). Abebaw et al. (2010) show that when PSNP is integrated with other food security programs, it has a positive and significant impact on food calorie intake. Moreover, it is also found that cash and food received under the PSNP improved children's nutrition and schooling (Hoddinott et al., 2009; Porter, 2010). However, studies by Gilligan et al. (2008) and Andersson et al. (2011) show that under PSNP asset accumulation such as livestock holding was not faster than in other cases.

Based on such studies, it is also expected that the program will contribute to farmers' investments in SLM activities and other more long-term activities. However, information on the impact of PSNP on farmers' investments in SLM practices is limited. Due to the character of the PSNP, one can assume both positive and negative effects of the program on SLM. On the one hand, given the fact that people are given aid (cash or grain), one would expect a positive effect on the time and labor invested in SLM practices on private plots. On the other hand, it is also possible that time and labor are invested in public work at the expense of investments in SLM practices on private land. This study therefore investigated both the positive and the negative impacts, with the main research question being: what is the impact of the PSNP on farmers' investments in