

The Food and Nutritional Effects of Smallholders' Participation in Milk Value Chain in Ethiopia

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Abstract : Smallholder farmers' participation in agricultural value chain identified as a pathway to get out of poverty trap in Ethiopia. The smallholder dairy activities have a huge potential in poverty reduction through enhancing income, achieving food and nutritional security in the country. However, much less is known about the effects of smallholder's participation in milk value chain on household food security and nutrition. This paper therefore, aims at evaluating the effects of smallholders' participation in milk value chain on household food security taking in to account the four pillars of food security measurements (availability, access, utilization and stability). Using a semi-structured interview, a cross sectional farm household data collected from a randomly selected sample of 333 households (170 in Amhara and 163 in Oromia regions). Binary logit and propensity score matching(PSM) models are employed to examine the mechanisms through which smallholder's participation in the milk value chain affects household food security where crop production, per capita calorie intakes, diet diversity score, and food insecurity access scale are used to measure food availability, access, utilization and stability respectively. Our findings reveal from 333 households, only 34.5% of smallholder farmers are participated in the milk value chain. Limited access to inputs and services, limited access to inputs markets and high transaction costs are key constraints for smallholders' limited access to the milk value chain. To estimate the true average participation effects of milk value chain for participated households, the outcome variables (food security) of farm households who participated in milk value chain are compared with the outcome variables if the farm households had not participated. The PSM analysis reveals smallholder's participation in milk value chain has a significant positive effect on household income, food security and nutrition. Smallholder farmers who are participated in milk chain are better by 15 quintals crops production and 73 percent of per capita calorie intakes in food availability and access respectively than smallholder farmers who are not participated in the market. Similarly, the participated households are better in dietary quality by 112 percents than non-participated households. Finally, smallholders' who are participated in milk value chain are better in reducing household vulnerability to food insecurity by an average of 130 percent than non participated households. The results also shows income earned from milk value chain participation contributed to reduce capital's constraints of the participated households' by higher farm income and total household income by 5164 ETB and 14265 ETB respectively. This study therefore, confirms the potential role of smallholders' participation in food value chain to get out of poverty trap through improving rural household income, food security and nutrition. Therefore, identified the determinants of smallholder participation in milk value chain and the participation effects on food security in the study areas are worth considering as a positive knock for policymakers and development agents to tackle the poverty trap in the study area in particular and in the country in general.

Keywords : effects, food security and nutrition, milk, participation, smallholders, value chain

Conference Title : ICGFS 2016 : International Conference on Global Food Security

Conference Location : Miami, United States

Conference Dates : March 24-25, 2016