



Farm and Non-Farm Livelihood of Farmers in Ethiopia: Nexus Between Livelihood Assets and Livelihood Strategies

Executive Summary

Understanding of the factors influencing farm and non-farm livelihoods is a vital process towards designing sustainable livelihood policies and interventions for rural people. Due to the subsistence nature and poor productivity of the agriculture sector in Ethiopia, smallholder farmers have been strained to diversify their livelihoods to non-farm activities as a coping strategy. This study aims at identifying determinant factors for farm and non-farm engagements in Yayu and Hurumu districts of Illu Ababora zone of SW Ethiopia. The study identified that augmented production factors particularly farm physical capital and land ownership along with access to credit and labor support system have been found to increase the probability and intensity of farm engagement significantly and concurrently reducing non-farm engagements both in male and female headed households. Incidence of wild animal attacks as well as disease and pest infestation have been found to put more burdens to smallholder farmers and influencing engagement in non-farm activities negatively. Moreover, higher household consumption expenditure was found to be one of the determinant factors that led rural households to diversify their livelihoods to non-farming activities. Farm physical capital and investment on yield enhancing inputs, mainly improved seeds, has significantly increased engagement of female headed households in farming more than their male counterparts. The findings, on the one hand, implied that engagement in farming is highly dependent on availability and efficient use of scarce farm production factors, and the presence of external farm challenges. On the other hand, non-farm engagement has been taken as a livelihood diversification strategy for the poor and the landless during adverse conditions. These call for sustainable, integrated and holistic approaches to improve the future productivity of smallholder agriculture and enhance their capacity to enable them involve in better paying non-farm activities.

Introduction

Sustainable livelihood is ensured when it can cope with and recover from stress and shocks, able to maintain its capabilities and assets, and provide livelihood opportunities for the next generation (Chambers & Conway, 1992). The agriculture sector of Ethiopia is still unable to provide a sufficient means of survival for the majority of people. Rapid population growth is a great challenge to the economy's ability to provide proper services and causes for fragmentation of land holdings, reducing productivity and causing massive underemployment (Teshome, 2014). Livelihoods of smallholder farmers in Ethiopia depend mainly on small scale farming where 64.5% of them possess less than a hectare of land (Gebreselassie, 2006; Kariuki, 2011). These groups are enforced to diversify their income to non-farm sectors to avert the risk of agricultural production in Ethiopia, (Nagler & Naudé, 2017). However, limited opportunities and insufficient income from non-farm activities have made the rural poor more vulnerable. Thus identifying the factors that influence farm and non-farm engagement is an important step for identifying appropriate livelihood policies in the country.

Approach

This brief is based on a gender disaggregated household survey of 334 households conducted in Yayu and Hurumu districts of Illu Ababora zone of SW Ethiopia in 2016. Survey questionnaire was employed to collect quantitative data. In addition, focus group discussions and key informant interviews were employed to gather further information. The study estimates the determinants of farm and non-farm engagement predicted by various independent variables mainly including ownership and access to production factors. Farm engagement is measured by how much a household depends on farming and thus the percentage of income derived from farming from the total income. In this case, 100% engagement means that a household entirely engage in farming, and thus the entire household income is derived from farming. Similarly, non-farm engagement is measured by how much a household depends on non-farm livelihoods. Gender disaggregated Tobit model supported by the findings of focus group discussions and key informant interviews were employed for the analysis.

Results

The findings of the survey and focus group discussions indicated that farming is a major livelihood option for the sampled rural households contributing for 97.5% of the total income. The main farm commodities in terms of their contribution for income of rural households include coffee, khat, cereals & pulses, eucalyptus tree sale, livestock and products. The study found also that non-farm activities mainly: petty trade, firewood/charcoal sale, formal and informal employment, local brewery, pension are common and alternative livelihood options particularly for poorer households with limited production factors such as land and capital. The findings of the survey indicated that there are a number of factors that determine engagement of rural households in farm and non-farm livelihoods. The following are some of the main issues identified:

Farm Physical Capital

The findings show that farm physical capital is a determinant factor to enhance the engagement of rural households in farming. The results show that farm engagement increased by 2.2 % for every one percent increase in farm physical capital, and thereby reducing non-farm engagement by 1.8%. The results also indicated that physical capital is one of the major bottlenecks particularly for female headed households restricting their engagement in farming. This implies that physical capital ownership is one of the vital determinant factors that encourage households (especially female headed households) to engage more in farming.

Yield enhancing Agricultural Inputs (Improved seeds)

The findings show that access to improved seeds (including seeds of staple crops and vegetables) is one of the determinant factors influencing engagement in farming. This is true particularly for female headed households. Female headed households are constrained by financial resources limiting the amount of investment made on yield enhancing agricultural inputs, and thereby reducing their engagement in farming. Every 100 Ethiopian Birr investment on improved seeds leads female headed households to engage 3% more in farming than their male counterparts; whereas their engagement on non-farm activities fall by 2% compared to male headed households for same amount of investment made on improved seeds.

Agricultural Land

Land is one of the scarce resources rural households have and it is one of the reasons for landless and for farmers possessing smaller plots of land to diversify their livelihoods to non-farm activities. Per capita land ownership has been fragmented with respect to increase in family size and it has become one of the determinant factors that directly influence engagement in farming and amount of production. Coffee land has a higher market value than any other non-coffee land that rural households possess. The probability of engagement of rural households in farming increases by 2.45% on average for every additional hectare of coffee farm land a household owns whereas engagement in non-farm activities reduced by 3.4 % for an additional hectare of coffee land ownership.

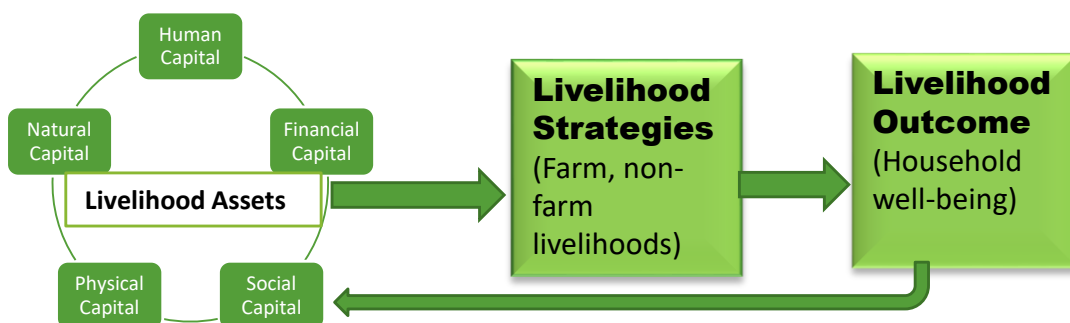


Fig.1: Linkages between livelihood assets, livelihood strategies and outcomes (Source: Modified from Sustainable livelihood framework (DFID, 1999))

Access to credit

Credit is a source of capital that boosts the capacity of rural households to purchase yield enhancing agricultural inputs and has remained to be a shortcoming for poorer households in intensifying the farming sector. Households with access to credit engaged in farming by additional 4.4% while reducing engagement in non-farm livelihoods by 3.8 %.

Household Expenditures

If not planned foresighted and properly, farming does not provide a regular source of income to the immediate demand of cash for households with increased expenditures. Therefore, additional engagement in non-farm activities to supplement income (due to increasing expenditures) has been found to negatively influence the engagement of households in farming. The results show that a unit increase in household expenditures has increased the engagement in non-farm activities by 2% but at the same time reduced farm engagement by 1.78 %. Bivariate correlation test result also shows that there is no significant relationship between non-farm income and expenditure but there is a significant and positive correlation between farm income and household expenditure. In households where farm income is higher, they are able to cover an increased unit of expenditure. In households where farm income would be less (mainly poorer households), they would not be able to pay for an increased expenditure from farm income alone and thus, households supplement their total income by engaging in non-farm activities.

Incidence of wild animal attacks, pests and diseases

Pests and diseases as well as wild animals such as monkeys, porcupines, warthogs and buffalos have been found to influence engagement of households in farm and non-farm livelihoods. Wild animals, pests and diseases have been the main challenges of farming in Yayu Biosphere Reserve as they are damaging their crops on field. As a result, farmers are forced to spend much time and energy in patrolling their farm areas, and thereby enhancing their engagement in farming.

The result shows that every incidence of pests and diseases infestation has increased engagement of rural households in farming by 3.36%. In addition, wild animal attacks has been a significant determinant factor in reducing the engagement of rural households in non-farm livelihoods by 2.75%, on average. The findings also indicated that incidence of diseases and pests has a severe impact particularly for female headed households. This is because female headed households are constrained with time to increase their engagement on their field during the incidence of such problems compared to male headed households. Female headed households are also endowed with limited labor and financial resources to employ guards to patrol and protect their fields from wild animal attacks and also for properly managing their fields to circumvent the infestation of crop diseases and pests.

Local labor support systems

Rural households have a local labor support system, namely: *Debo*, *Wenfel* and *Jiga*. The findings show that the extent of farm engagement of both male and female headed households increased by 0.34% for every additional support obtained from local labor support systems. Similarly, increased engagement of female headed households in household activities has reduced their engagement in non-farm activities significantly by 0.18% compared to male headed households. Thus, household burdens on female headed households is found to deter their engagement in alternative/supplementary non-farm income generating activities. Women also engage actively in every agricultural activity except land plowing, which is in general regarded as men's job. The findings from focus group discussions have also indicated that production and marketing of garden horticultural crops is exclusively regarded as women's job. Although higher engagement in household activities restrain female headed households from engaging in non-farm activities compared to male headed households, it does not deter them from engaging in farm activities (the main livelihood option in the area).

Policy Recommendations

1. Agricultural inputs such as access to credit and yield enhancing agricultural technologies have been the bottleneck to enhance farm production and productivity. Strategies need to be designed to improve the service delivery and availability of agricultural technologies to farmers on time and in affordable prices.
2. Subsistence production system and poor productivity has kept small holder farmers to be in a poverty trap. There is a need for sustainable and holistic approaches to improve the future productivity of small holder agriculture by integrating different sectors and actors working in agriculture, environment and natural resources.
3. Women play a key role both in agricultural production and marketing. Increment in agricultural activities and engagement in household activities has restricted their involvement on alternative income generating activities. Strategies and interventions should be in place to lessen their multiple burdens and enhance their productive roles.
4. Land ownership per household has been fragmented time to time due to increasing family size, and it is one of the reasons for shortage of land and low agricultural production. Thus, there should be interventions to enhance production per unit of land and bring attitudinal changes on superstitious cultural beliefs of bearing children.
5. The study area is located in Yayu biosphere reserve where wild animals often intrude into farmers' fields and damage their crops. Farmers have long been concerned with the issue and they explained that it is one of the reasons not to utilize the irrigation potential of the area and produce year round (as patrolling fields require a lot of energy and commitment). Therefore there needs to be effective wild life management strategies and compensation schemes.
6. Non-farm activities in the area are regarded as low paying jobs in general. Therefore, there needs to be some interventions in building the capacity of rural households. This helps to supplement better their income and equip them with the necessary skills so that they would able to involve in other better paying non-farm activities.

References/Further Reading

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