INTRODUCTION

According to Hafeez et al. (2011) national saving is an important feature for achieving high growth in the economy. More saving rates bring out more investment. This will ultimately lead to industrial growth, improvement in quality of products, employment generation, stable prices and finally higher growth. Households saving play an important role in the economic development and the largest component of national savings of both developed and developing nations, due to its significant influence on the circular flow of income in the economy (Iyoha et al., 2003, Issahaku, 2011). Within the agricultural sector, growth attained will largely depend upon what the farmers do with the seasonal additional incomes generated from their farm activities (Akerele and Ambali, 2012). Rural savings could also be intended to address other forms of household expenditure which include children’s education, smoothing consumption during off-seasons and unforeseen events such as illness and other emergencies. This implies that rural savings is critical to the welfare and development of the rural people (Ogheneruemu, 2014).

According to Dejene (2003), savings in rural Ethiopia is mainly made out of the income from agricultural activities. The saving level in Ethiopia particularly in rural areas is very low and characterized as seasonal and irregular as the cash flow through sale of agricultural produce and availability of work is seasonal. This reduces their financial capacity to save or poorly respond to incentives that promote savings in the country. According to Rogg (2006) serious problem confronting poor countries including Ethiopia is the savings and investment gap. Because of this gap, these countries find it difficult to finance investments needed for growth from domestic saving. It is also common to see these countries to finance their investment in the short run partly through domestic government borrowings and/or foreign loan and grants but this would significantly increase the country’s debt burden and would not be a solution in the long run (Girma et al., 2013). Consequently, the Ethiopian government focuses on the financial sectors to effectively exploit domestic saving potential, it has planned to increase financial sector accessibility in rural areas and diversify services that are provided by financial sectors. Therefore, this study tried to analyze major determinants of savings behavior of rural households with particular reference to Boricha Woreda of Sidama Zone at household level.

*Corresponding author: Bealu Tukela
Department of Economics, College of Business and Economics, Hawassa University Ethiopia

ABSTRACT

Household savings is an important factor for the economic growth of the country. This study identified and examined different determinants of saving behavior of rural households and analyzed the pattern and distribution of savings related factors like the mode of saving, amount preferred for saving, attitude preferred for saving, type of saving, expectation for the future savings in Boricha Woreda of Sidama Zone, Southern Ethiopia. The data of 204 sample households was collected from rural households by using structured questionnaires, focus group discussion and key informant interview. For this study, Multiple Regression Model was employed to find out the determinants of saving behavior of households in the study area. The results ultimately revealed that age of household head, education, training, membership to cooperatives, farm and off-farm income, farm size, and livestock were significant and influencing positively rural households’ savings. Whereas saving behavior of rural households negatively influenced by expenditure, family size, and distance to savings associations. These factors therefore have to be considered in designing strategies aimed at improving the saving mobilization of rural households.
MATERIAL AND METHODS

The following picture. Each livelihood zone has 5, 10, and 24 zones based on the way of production, number of households zone (CLZ) and Maize Livelihood Zone were randomly selected from selected four Kebeles of which 3 Kebeles are urban Kebeles and the others are rural. It extends from the lowest point at south west of the mouth of tributary of Bilate river 1320m.a.s.l to north east 2080m.a.s.l (Bechaye, 2011). Boricha Woreda has a total population of 250,260, of whom 125,524 are men and 124,736 women. Only 4.16% of its population is urban dwellers. The major crops by coverage are maize, haricot bean, coffee, horticultural crops and teff (CSA, 2007). The study area has undertaken high extent of maize production. However, use of agro chemical, irrigation and manure for soil fertility practices and maize production is very low. In this area, cultivation of maize crop occupies much share in the crop production.

Description of the Study Area

This study was carried out in Boricha Woreda which is found in Sidama Zone within southern Ethiopia. Boricha Woreda is geographically bordered on the south, by Loka Abaya Woreda, on the west by the Wolayita Zone, on the northwest by the Oromiya region, on the northeast by Hawassa Zuria Woreda, on the east by Shebedino Woreda, and on the southeast by Dale Woreda. It has an estimated area of 588.05sq km, comprising 39 Kebeles of which 3 Kebeles are urban Kebeles and the others are rural. It extends from the lowest point at south west of the mouth of tributary of Bilate river 1320m.a.s.l to north east 2080m.a.s.l (Bechaye, 2011). Boricha Woreda has a total population of 250,260, of whom 125,524 are men and 124,736 women. Only 4.16% of its population is urban dwellers. The major crops by coverage are maize, haricot bean, coffee, horticultural crops and teff (CSA, 2007). The study area has undertaken high extent of maize production. However, use of agro chemical, irrigation and manure for soil fertility practices and maize production is very low. In this area, cultivation of maize crop occupies much share in the crop production.

Sample size determination: The following formula was used in the determination of sample size (Israel, 1992),

\[ n = \frac{N}{1 + N(e)^2} \]

Where \( n \) is the sample size needed, \( N \) is the population size of the study area (= 280576), and \( e \) is the desired level of precision (in this case, \( e = 7\% \)) with the same unit of measure as the variance and \( e^2 \) is the variance of an attribute in the population.

Then, the sample size \( n \) was calculated as follows,

\[ n = \frac{280576}{1 + 280576(0.07)^2} = 204 \]

Therefore, a total of 204 households were selected for the study. These households were selected from selected four Kebeles by using random sampling method. The population size of Woreda was obtained from Agriculture and Rural Office of Woreda.

Sampling procedures: A multi-stage stratified sampling technique was used to select sample farmers. In the second stage, Boricha Woreda was grouped into three livelihood zones based on the way of living. These livelihood zones are Agro Pastoralist Livelihood Zone (APLZ), Coffee Livelihood Zone (CLZ) and Maize Livelihood Zone (MLZ) as shown in the following picture. Each livelihood zone has 5, 10, and 24 Kebeles respectively (Bechaye, 2011). In the third stage, two Kebeles from maize Livelihood Zone, one Kebele from Agro Pastoralist Livelihood Zone and also one Kebele from Coffee Livelihood Zone were selected based on the extent of maize production, number of Kebeles in each zone and discussion with extension officers. Consequently, Koran Goni and Konsore Arki Kebeles from maize Livelihood Zone, Shelo Elancho Kebele from Agro Pastoralist Livelihood Zone and Alabo Arke Kebele from Coffee Livelihood Zone were randomly selected from respective livelihood zones. The sample size was distributed in each sample Kebele based on the probability proportional to size method.

RESULTS AND DISCUSSION

Econometric Results: This part of the paper presents econometric results of the multiple linear regression model was presented and discussed. Test of the appropriateness of the model and the explanatory variables included in the model is critical step before analysis and drawing implications. The determinants of rural household savings were analyzed using the ordinary least square regression technique. Table 1 shows the multiple regression results of savings against socioeconomic and institutional variables. The R-squared of 0.8131 implied that 81% of the variation in the level of savings of the household heads is jointly explained by the independent variables. Also, the overall significant of the model as measured by the F-statistics of 63.59, showed that the model is significant at 1 percent level. This means that the overall model has a good fit. In addition, a number of independent variables were statistically significant at various levels of significance. Age of household head was significant and had a positive effect on saving of rural households up to the mean age. Age has direct relationship with savings of younger individuals. Reasons behind positive sign may be that households of lower age group need more earnings to sustain in the critical situations of country. Mostly people are job holders or labor class in these groups that’s why they have to save more for precautionary purpose for future need (marriage, emergencies, education of children, etc.). And age squared inversely related with savings when households become elder and elder at 5 percent level of significance. This finding is consistent with findings of Rehman et al. (2010) that showed square of age is highly significant and inversely related to savings. It indicates that up to age of 40 years, rural households can increase their
savings significantly but beyond that their savings will decline due to low efficiency in old age or due to reduced potential of work in this age. It proves the presence of life cycle hypothesis in higher income group. Therefore, the higher the dependency ratio of a nation, the lower will be the saving rate. Thus, implying what is called the level of effect of the life-cycle theory. Findings of this study are matched with Gonzalez and Ozcan (2008) and Rehman et al. (2010). The same findings are given by Burney and Khan (1992) and Ahmad and Asghar (2004).

Family size is found to be negatively related to savings rural households. Due to more members of the family, their savings decline. People with large families do rarely save compared to those with small families. This implies that an increase in household size will decrease rural household savings. Other variables remaining constant, results of regression denote that a rise of one member of family diminishes their savings by an average of 391.9 Birr.

Since, education is used as a proxy for human capital, according to this study, the education level of household head was highly significant affecting positively savings of rural households at 1 percent level of significance. Remaining other variables constant, one year increases of education among rural households, increase the savings magnitude of respondents by an average of Birr 235.2. This study showed also that educated households exhibited higher levels of savings. Most of the literature and common consensus tells us that education increases the awareness of household and help them to calculate the present and future benefits and costs and decide on saving or dis saving. This is because educated farmers are likely to access information easily, and make well informed decisions with better management of farming activities and savings. Findings of Gina et.al ,2012 in Ethiopia, East Hararge Zone, Oromia Regional state showed this positive relationship between head of household education and household saving.

Similar to education level of head of household, training farmers about savings is important for households to improve their skills and practices and to have knowledge savings. Training was positively related with savings of farmers at 1 percent level. Keeping other variables constant, the average saving of those who are trained is higher by about 713.9 Birr than their counter parts. Trainings helped households to obtain information and to correct misconception concerning savings. Therefore, building the capacity of the existing farmers’ training centers and expanding their coverage as well as strengthening the field level training programs are highly demanded to improve savings of rural household.

Membership to cooperatives was found to be positively related and significantly affecting savings in the study area at 1 percent level. Holding other variables constant, the average saving of those who are members to different cooperatives is higher by about 229.9 Birr than their counter parts. Farmers’ cooperatives played an important role in organizing members to save in different organizations and in creating ways to mobilize or attract saving.

The households those were closer to the office of saving association and institution had more contacts with agents. Thus, distance to the saving center was found to be negatively related and significantly affecting saving in the study area at 1 percent level of significance. Holding other variables constant, if distance increases by one kilometer, the savings magnitude of rural household decreases by an average of Birr 38.57. Those households who were closer to saving association and institution enabled to participate in agricultural meetings, field days, demonstration and best available practices. As result, households who are closer to the saving association and institution, save more than their counterparts.

It was hypothesized that on-farm income is positively related to the magnitude of annual savings. On-farm income influences the savings magnitude by positively and significantly at one percent probability level of significance, confirming the hypothesis. Multiple linear regression model showed that Marginal propensity to save is 0.20. Meaning, a one Birr increase in on farm income, leads into by an average 0.20 cents increase in the amount of savings, holding other variables constant. Findings of this study goes in line with findings of Wener and Earnst (2003), who found income of the households positively related to the magnitude of savings.

Additionally, the findings indicated that off-farm income had a positive and significant effect on saving at one percent level of significance. Multiple linear regression model showed that Marginal propensity to save is 0.51. Meaning, a one Birr increase in off farm income, leads into by an average 0.51 cents increase in the amount of savings, holding other variables constant. Interestingly, rural households that diversify their livelihood into non-farm activities tend have higher saving than other households.

Expenditure on social-religious ceremonies: It includes wedding, death of family member, funeral (teskar), holidays, “mahber or zikir’ and religious ceremonies. Celebration of one or more of these ceremonies needs much material and financial resources which are sometimes beyond what the households could afford. Expenditure on social issues is inversely related to the savings magnitude and statistically significant at one percent level of significance. Therefore, a one Birr increase on social and religious ceremonies will decrease the amount of savings by an average of 0.75 cents, other variables are held constant.

Farm size of Land holdings, it is associated with the savings magnitude of rural households positively and significantly at one percent level of significance. Furthermore, it was found out that landholding strongly influence the rate of total saving, since the size of land holding influences income and income influences savings positively. A one hectare increase of farm size of rural households will increase the savings by an average of Birr 34.83 under the effects of other variables remaining constant. The same results were reported by Azhar, (1995) landholdings strongly influence the rate of total saving, since the size of land holding influences income and income influences savings positively. This implies that land holding has an influence on the savings magnitude in the study areas. Raising livestock affected savings significantly and positively at 1 percent level of significance. This is consistent with the hypothesis that increased number of livestock increases the level of saving. The implication of the result was that livestock are an important source of cash in rural areas to increase the savings amount. Hence, having them offer a means for a better
propensity to save. Under normal condition, savings in livestock represents the most practiced form of savings in the study area. When livestock increases by a unit of TLU, the savings magnitude of respondents increased by an average of Birr 14.74 while the effects of other variables remain constant. Similar empirical evidences were reported on household savings in Pakistan by Azhar, (1995).

CONCLUSIONS

Table 1 Multiple linear regression model results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Robust Coefficient</th>
<th>Standard Error</th>
<th>t-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>50.67297</td>
<td>121.1133</td>
<td>0.42</td>
</tr>
<tr>
<td>Age</td>
<td>26.79553</td>
<td>14.3889</td>
<td>1.86*</td>
</tr>
<tr>
<td>age2</td>
<td>-316.6757</td>
<td>136.0743</td>
<td>-2.33**</td>
</tr>
<tr>
<td>Family size</td>
<td>-391.9033</td>
<td>45.60103</td>
<td>-8.59***</td>
</tr>
<tr>
<td>Education</td>
<td>235.2135</td>
<td>18.74864</td>
<td>12.55***</td>
</tr>
<tr>
<td>Training</td>
<td>713.9078</td>
<td>175.3249</td>
<td>4.07***</td>
</tr>
<tr>
<td>Membership</td>
<td>229.9233</td>
<td>18.70842</td>
<td>12.20***</td>
</tr>
<tr>
<td>Distance</td>
<td>-38.57359</td>
<td>12.13979</td>
<td>-3.18***</td>
</tr>
<tr>
<td>Onfarm income</td>
<td>0.2030316</td>
<td>0.067825</td>
<td>2.99***</td>
</tr>
<tr>
<td>Offarm income</td>
<td>0.5191921</td>
<td>0.129009</td>
<td>4.02***</td>
</tr>
<tr>
<td>Expenditure</td>
<td>-0.759415</td>
<td>0.126337</td>
<td>-6.01***</td>
</tr>
<tr>
<td>Farm size</td>
<td>34.83426</td>
<td>1.750116</td>
<td>19.90***</td>
</tr>
<tr>
<td>Livestock</td>
<td>14.74517</td>
<td>0.221285</td>
<td>66.63***</td>
</tr>
<tr>
<td>-cons</td>
<td>4.099525</td>
<td>1.108461</td>
<td>3.70***</td>
</tr>
<tr>
<td>F(13,190)</td>
<td>63.59</td>
<td>R-squared</td>
<td>0.8131</td>
</tr>
<tr>
<td>Prob&gt;F</td>
<td>0.0000</td>
<td>Adj R-squared</td>
<td>0.8003</td>
</tr>
</tbody>
</table>

Source: Model output (2015).***, ** and * indicate level of significance at 1, 5 and 10 percent, respectively.

Acknowledgements

Sincere gratitude goes to Federal Democratic Republic of Ethiopia Education Ministry, Hawassa University, microfinance institutions and agriculture and rural development offices for providing financial support, data and information that were necessary for undertaking this study.

Reference


Teka G/Tekle Tekle. 2008. Members’ Savings Behavior and Determinants of Savings in Rural Savings and Credit Cooperatives in Alamata and OfIa Woredas of Tigray Region. MSc. Mekelle, Ethiopia.

---

How to cite this article:

*****