Determinants of rural household saving: The case of North Shewa Zone, Oromia Regional, Ethiopia

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Abstract---This study examined factors that affect saving behavior of rural households in North Shewa Zone, Oromia Regional Sate. It employed descriptive statistics and to analyze the data collected from a sample of 400 rural households in the study area. The result showed that about 83.4 percent of sampled households involved in saving of which 23.75 percent use formal financial institutions and the remaining other alternative saving options. The findings implied the need for designing strategies that could improve the saving behavior, mobilization and of saving by rural households. Moreover, the need for government involvement in building the capacity of rural households in terms of education and information systems with regards to savings as well as encouraging financial institutions to implement door- to-door service provisions so as to enhance saving behavior of households are desirable.

Keywords---saving culture, livelihoods, annual expenditure, financial institutions, livestock ownership.

Introduction

Long-term economic growth requires capital investment in infrastructure, education and technology, business expansion, and so forth – and the main

domestic source of funds for capital investment is household saving. Development economics recognized for several decades the importance of the mobilization of domestic saving for economic growth in developing countries. Thus, the positive relationship between saving/investment and economic growth has long been an established fact in economics (Schmidt-Hebbel*et al.*, 1996; Bisat*et al.*, 1997; and Sinha, 1999). Saving is among important variables for economic growth of any country. Saving is about income that is not consumed by immediately buying goods and services (Prinsloo, 2000; Manyama, 2007). Saving constitutes the basis for capital formation, investment and growth of a country (Nga, 2007; Nwachukwu and Odigie, 2009). In developing countries, economic fluctuations and climate risk lead to important income variations and leave the households vulnerable to severe hardship. Moreover, their social coverage is restricted and the credit and insurance markets are not well developed. Thus, these countries often face saving allocation problems and have difficulties to develop productive investments. Though Ethiopia is recording sustained economic growth for the last many years, the country is still categorized among the least developed countries. According to MoFED 2010/11, the GDP growth rate is 11.4%, Poverty head count index is 29.6% and inflation rate was 18.1%.

Ethiopia's financial sector is fairly underdeveloped. There are few indigenous banks that have been established with different proclamations and regulations. Moreover, often these banks are urban based and give loan to these engaged in trade and industry. Though the loan size is not adequate and charge high interest rate, microfinance institutions are grappling to widen their outreach to rural areas which comprises majority of the country`s population. Thus, saving is a way to smooth consumption and to withstand adverse shocks. The average gross saving rate as percentage of GDP of the country is 21% (MoFED , 2012). Hence, a better understanding of households saving behavior is important. Most saving researches done so far in developing countries in particular in Ethiopia are at macro level. Since macro works are based on macroeconomic data, they couldn`t consider consumer heterogeneity and diversity of saving behavior (Touhami *et al.* 2009).

According to Deaton (2005) and 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. In Ethiopia, the issue of saving is more relate to income. As annual report of Ethiopian economy (2000) 89% of the population lives under poverty lines earning $ 2 per day. With this amount of income, many cannot be expect to save from the great majority of population particularly relate to primordial cultural traits reflected in the extravagant expenditure during holidays and occasions such as weddings and funerals with their own negative contribution to savings those made saving absent in the societies. In Ethiopia, it is getting 5% additional income annually from interest (pass book of private bank, 2003).

Moreover, if one deposits his money at home he cannot only harms himself but also the community. Saving or deposit money in home harms oneself and societies in different ways. Money deposit in home harm oneself or individual primarily because of money deposited in home will not garnets an interest, these leads to lack of development and others one is it can be affect easily by thefts and frauds. And also it can simply stoles by thefts and there is no room of custody. As well as a time become long the money deposit will be physically destroy and become useless. At the part of society money deposit in home will harm the society also in different ways. For instance, the money deposit maybe face to obsolesce and there is no interest earning, the community not able to maximize their profit. Since it is simply stored in the home it cannot help other people for further business activities this may result to affect the development of society. In addition to this money deposit in home reduced the government revenue from this persons can directly affects the society. Saving in the bank means contributing to the socio- economic development of one country. One cannot also save by keeping money in a pocket or in the house the reasons that it hold the money and buy something and hence will not be able to have patience and courage to save. So carrying money is quite risk. One reason why we save money in a bank can be to secure piece of it and to invest such dreams can be realized with the initial amount saved plus loan from a bank (Julia holy and Geoffrey white lead 2003, pp. 164).

We have to spend our money on planed way and on things that are essential. We ought to save our money first and then spend on what we will actually need now and in the future. Our attitude towards our saving is the most important, weather our income is big or small. To save means to be saving from loss, theft and got interest and security. One has to face up to the challenge how to make the best use of one's money. The study is aimed to examine factors that affect people culture of saving in North Shewa Zone. On the contrary almost all individuals in North Shewa Zone which is one of the Oromia regional states of Ethiopia are not in the position to develop their culture of saving. So the researchers identified factors that affects the household saving specially including cultural factors because the society have their own cultural practice and the researchers addressed factors affecting household saving in the North Shewa Zone.

There factors that affect the saving of the community indirectly through contributing low income, as rural households of the Zone depend on rain feed agricultural production, their plot of land is infertile as repetitively used for crop production, since most of the community are followers of Orthodox and there are different days in a given month used as anniversaries. These all are contributed to the low level of income which in directly affecting saving. Low interest rate, higher expenditure pattern, high inflation and less access to financial services are factors contributed to low saving.

Empirical review

Net Saving may be more appropriate than gross savings when concern is growth rates and development, since net saving indicates domestic resources available

for addition to the capital accumulation.The role of savings in the development process is well document in the literature of economic growth. Low level of domestic saving is said to be one of the reasons for slow stagnant economic growth in the developing countries. Thus, the revival of growth in emerging economics can be expected to require more investable resources for sustainable growth. (Agrawal et al, 2010 and Bordoloi and john, 2011). The cornerstone of the life cycle hypothesis is age relate consumers heterogeneity and the prediction that saving follows a hump shaped pattern (that is, high at middle age and low at young age and old ages).

There are some studies in Netherlands by Kalwji(2003), Canada by Gagnon et al (2006) and Uganda by Kiiza and Ppderson (2002) which shows that female households had better saving behavior than males because of the life developed style by the community and they are expected cover the principal household consumption costs in any social interaction where as in the other empirical study in Philippines by Bersales and Map (2006) shows that male households has better saver because the female has no power to control income even their own income. Kalwji(2003). Following endogenous growth theory, education has been included as a proxy for human development which increases the human productivity and capabilities, thereby increasing personal income as well as (Zhang et al, 2003). This is indirect positive effect of education on saving through increased income. On the contrary, Kulikovi et al. (2007) found that education as a human wealth ensures employability and stability of income and hence, it can have negative impact on saving. Education can affect saving directly through financial literacy. Higher financial literacy also was result in higher saving (Browning and Lusardis, 2000).

The longer life expectancy can change life cycle behavior which leads to the longer working life and possible higher saving for retirement (Sinha, 2001 and Moosk, 2010). Some empirical studies such as Sinha (2000), Muradoglu and Task in (2000) shows that self-employed household has consist ant saving because they have fear of work uncertainty in the future where as other studies such as Mosk (2010) show that the employed household has consistent saving because of their constant income. Keynes (1936) developed the absolute income hypothesis. The theory posits positive relationship between absolute income and saving. Such proposition is supported by much empirical evidence. This finding is consistent with the view that saving rise after income exceeds subsistence consumption. This finding challenges the recent revolution of microfinance institutions to mobilize micro- saving from the poor.

Methodology

Description of study area

The study conducted in the North Shewa Zone of Oromia regional state in Ethiopia. North Shewa Zone is located in the north-western direction of Addis Ababa (capital city). The zone is situated between 9030N and 38040E. The topography is ragged terrain with some mountains. The altitude ranges between 1300 and 2500 meters above sea level. It is divided into three agro-

ecologies, namely, 15% Highland, 40% Midland and 45% Lowland (CSA, 2007). There are two rainy seasons, namely Belg (February - April) and Meher (June - September). The average annual rainfall ranges from 1400 to 1600 mm; while mean annual temperature varies between 15 and 19 oC.3.3. According to North Shewa Health Office of 2018 the zone has total population of 1639587of whom 820595 men and 818992 women with area of 10,322.48 km2. The zone contains woredas like Abichu Gne'a, Kembibete, Debre Libanos, Yaya Gulele, Degem, Gerar Jarso, Hidhebu Abote, Dera, Kuyu, Wera Jarso, Sendafa (Town)Beke, Aleltu,, Wuchale(Muka Turi) and Jida. Income of the residents mainly generated from agricultural output as most of the people in the zone live in countryside.

Data source and type

This study used primary data and secondary data. Primary data collected directly from household head by using structured open and close ended questionnaire and completed by sample respondent. The questionnaire designed to capture all the necessary variables that used to establish the determinants of saving in the area. Interview also conducted with households head and officials (especially agricultural officers and woreda administrators).In addition in order to dig out further deep information key informants and focus group discussion (FGD) employed at each selected kebele. Secondary data collected from the different reports, financial institutions that have relation to farmers, published and unpublished materials.

Sample technique and size

The population of the study is the total rural householders in the North Shewa zone, Oromia. Multi-stage sampling method used to select the sample because the population is geographically dispersed. First five woredas selected purposively and then two kebeles from each woreda selected purposively. The researchers purposively selected those woreda and kebeles which are considered to be more productive in farming. Accordingly, Dara, Hidhabu Abote, Wera Jarso, Kuyu and Girar Jarso were woredas which are the focus of this study. Once we selected the woredas based on their productivity the same purposive sampling procedures implemented to select the two kebeles from each woredas again based on the productivity of the kebele. Finally the researchers implemented random sampling technique to select household respondents from each kebeles. Based on this random sample of 400 householders from five woredas, 40 householders from each kebele finally selected. Since the sampling procedure was fairly random, the samples adequately represent the targeted populations in the area of study. There is total population of 1639587 in the zone, used to determine sample size. From these projects, Slovin"s formula of determining sample size for finite population used to determine sample size. The formula is given by:

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

Where: n = the actual sample size
N = the total population
e = Degree of accuracy usually set at 0.05

So, depend on the formula actual sample size for this study:

$$n = \frac{1639587}{1+1639587(0.05^2)} \quad = 400$$

Field Strategy

Preliminary study undertaken to identify agricultural productive Kebeles in each woredas and the field strategy designed and follow a well-planned field procedure before the survey was going to be implemented. In this study, the following activities are carried out before the survey done. Enumerators were given clarification/training in order to avoid risks of miss interpretation of the questions to respondents during survey period without influencing the respondents' answers. A plan of action formulated stating the number of interviews to be undertaken per day, how the interviews should be distributed over the weeks.

Methods of data analysis

Data analysis has begun with the editing to ensure the completeness, consistency, and reliability of the data and coding of the survey data. The analysis of data collected was accomplished by the use of Statistical Package for Social Science (SPSS) software version 20, where the scores assigned to each factor by the respondents were entered and consequently the responses from the questionnaires retrieved was subjected to statistical analysis for further insight. The study employed descriptive analyzing of the data. Demographic variables of respondents, frequencies, percentages, means, etc. were analyzed using descriptive statistics.

Results and Discussion

Demographic and Socio-Economic Characteristics

Socio – economic characteristics of sample households by age, sex, household size, and education level are summarized in relation to the household saving status at household level. Possible explanations on factors supposed to have contribution on household saving are also presented and analyzed.

Table 1
Demographic characteristics of household

Variable	Category	Frequency	Percent	Percentage of saving
Sex	Female	68	17.00	23.5
	Male	332	83.00	25.5
	Total	400	100.00	

Age	Below 25	34	8.50	21
	26 - 35	50	12.50	16
	36 -45	110	27.50	12.75
	46 -55	116	29.00	7.5
	56-65	66	16.50	3
	Above 65	24	6.00	2
	Total	400	100.00	
Marital status	Single	9	2.25	12
	Couple	323	80.75	23.5
	Divorced	47	11.75	2
	Widowed	21	5.25	12
	Total	400	100.00	
Education	Illiterate	60	15.00	4.24
	Primary school	197	49.25	28.74
	Secondary school	75	18.75	75.67
	Certificate	45	11.25	72
	Diploma	23	5.75	87.5
	Total	400	100	

Family Size of the household

Table 2
Household saving by size

| Group (family size)	Quantity	Percentage	Saver	Percentage	Percentage out of the group
2-4	21	5.25	12	3	57.14
5-6	132	33	46	11.5	34.85
7-9	146	36.5	24	6	16.44
Above 9	101	25.25	13	3.25	12.87
Total	400	100	95	23.75	-

Source: Survey result 2020

Family size determined the saving behavior, as it is indicated in the table less the family size which contains two to four family members are familiar with saving while 57.14 of them are saving. Family size from five to six saves less or 34.85 of them are saving and following decrement of the saving as family size increases when the family size is greater than nine(9) only 12.87 of them are saving. Although the income of the household increases as family size increases the saving behavior of the sampled household becomes decrease as the real income of the household is determined by the per capita income of the household. Generally the larger the family size related to lower saving habits, means that the lower the family size practice saving while larger the family size practice lower the saving other things like size of income, means of income, expenditure etc. constant.

Household distance from financial institutions

It refers the physical distance in kilometers that the potential beneficiaries traveled for using saving services in formal financial institutions. The average distance traveled by savers   to their nearest financial institution was 14.5km. Households located relatively in far distance from financial institutions than households located in nearer to financial institutions save money. The survey results shows the savers household relatively live in short distant kilometers from financial institutions compared to the non-savers sampled household in other words the distance from the financial institutions of the household negatively related to the saving behavior of the household.

Saving
120
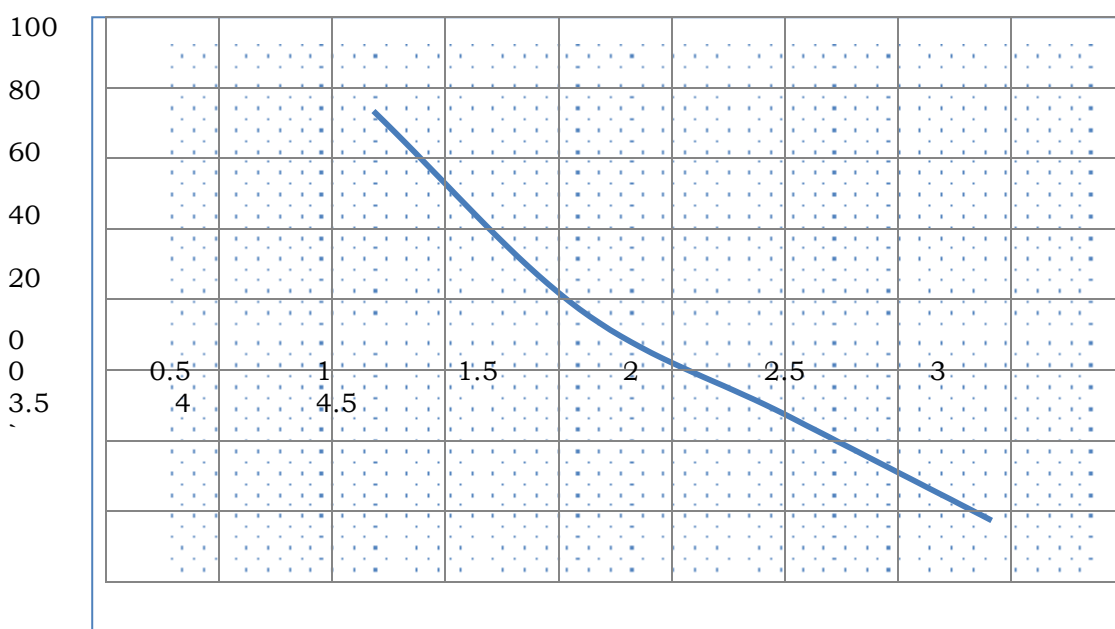
Physical distance
Figure 2. Physical distance of household from financial institution

Livestock ownership

Livestock is the most important asset for rural households in the study area. Rural households in the study area undertake both crop and livestock production activities. In the study area, livestock holding size varied among the sampled households. Based on Strock et al. (1991) the livestock number was converted in to tropical livestock unit (TLU) to facilitate comparison between the two groups. According to the survey result, the average size of livestock of the sampled savers and non- savers was 8.62 and 7.54. TLU respectively. The result indicated that there was no greater difference between savers and non-savers with respect to their livestock ownership. The mean difference of livestock

ownership between savers and non-savers was not affect the saving of the household. This finding was similar with Obayelu (2012) and Birhanu(2015) that showed negative relationship between rural households savings status and livestock ownership but contrary with the findings of Girma et al. (2014) and Degu (2007) that showed positive and significant relationship between households saving status and livestock ownership

Access to credit

Credit enables household access to essential resources and fuel economic growth. It also enables efficient allocation of risk, costs and financial reserves. Besides, rural households can acquire inputs and equipment such as fertilizers, tractors, farming equipment and livestock that make them more productive and enhance overall agricultural productivity. Credit access of sampled households was assessed as indicated in implies out of the total sampled households, 183 (45.75%) had credit access while the remaining 217(54.25%) of the sampled households had not credit access. . Based on the results, the percentage of non- savers who had no credit access was higher. The implication was that households who had more access to credit had higher probability to save their money in formal financial institutions. This possibly credit users would have more information and awareness regarding to saving in financial institutions than non-users.
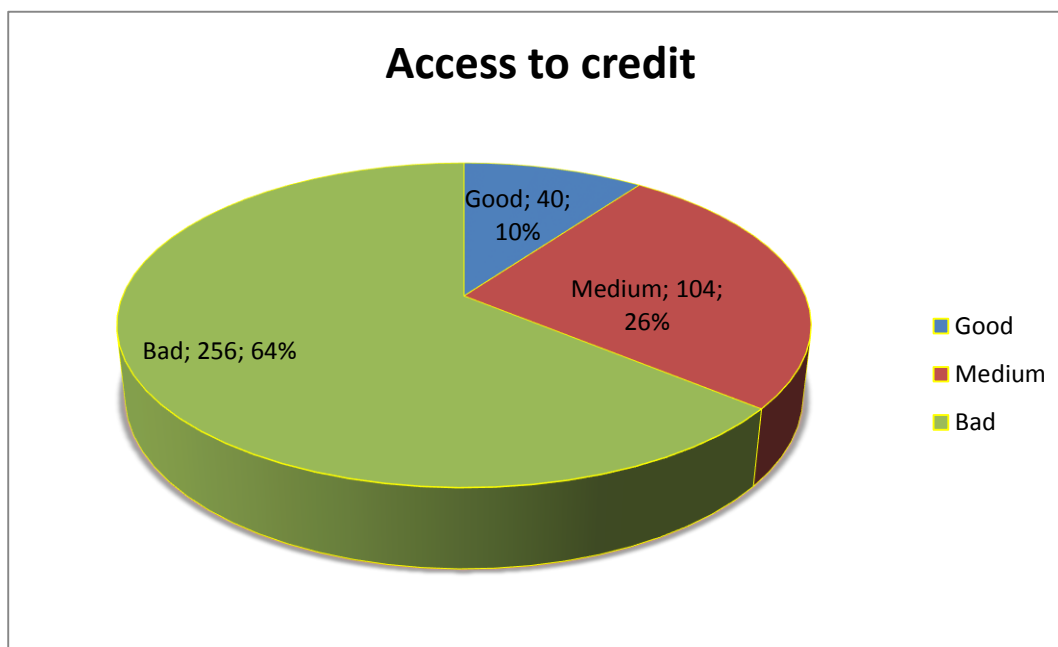

Figure 3. Accessibility of the Financial Institution Services to the Respondents

Reason of saving

Saver households were asked why they are saving and most of the responded to

meet unexpected costs, to accumulate capital, pay of debt, buy assets are factors that encouraged the savers in the sample area as indicated on the table 4.7. According to the result only 7.34% of the savers are motivated to save to bear interest from their deposit the remaining are for different purposes as indicated in the following chart, The focus group discussion result indicated that rural households were not ready to use formal system of saving due to lack of awareness but now there have been changes towards formal system of saving. Since 2016 there have been institutional reforms in the banking sector to enact interest free saving by formal financial institutions.
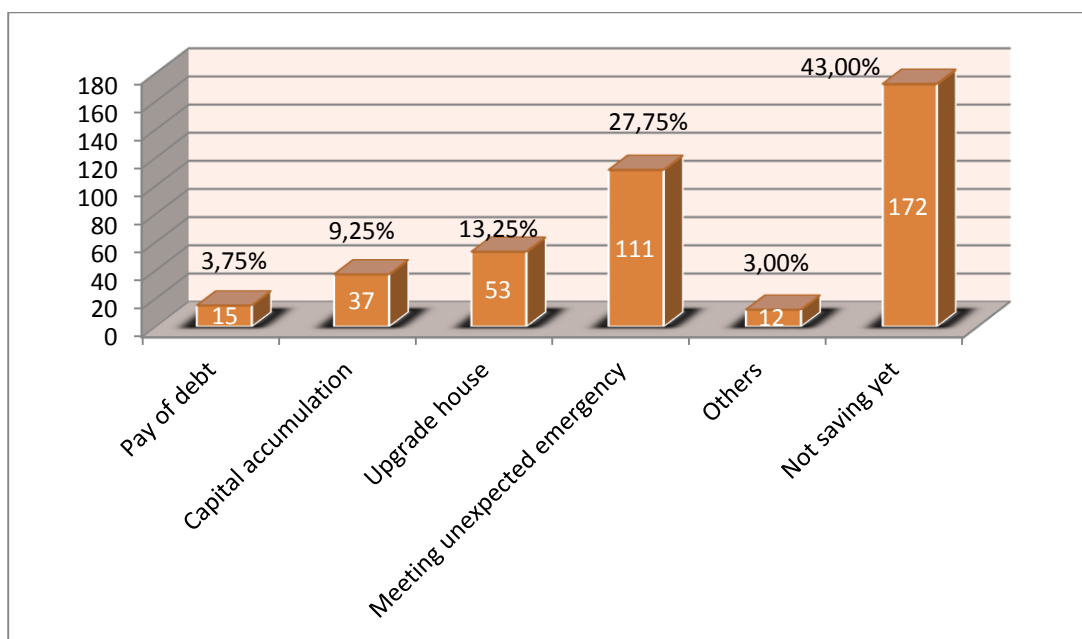

Figure 4. Reasons Led the Respondents to Save
Source: Survey result 2020

Saver households were also asked about the awareness level of the interest rate of financial institutions. Accordingly, of the saver sampled households 147 (36.75) did know the amount of interest rate which is paid for their saving whereas 253 (63.25 %) did not know. This indicated that half of the saver households had no awareness about the amount of interest rate given to their savings. Banks and Oromia Saving and Credit Share Company paid an interest rate of 7%for households who have saved their money in their institutions not time saving account.
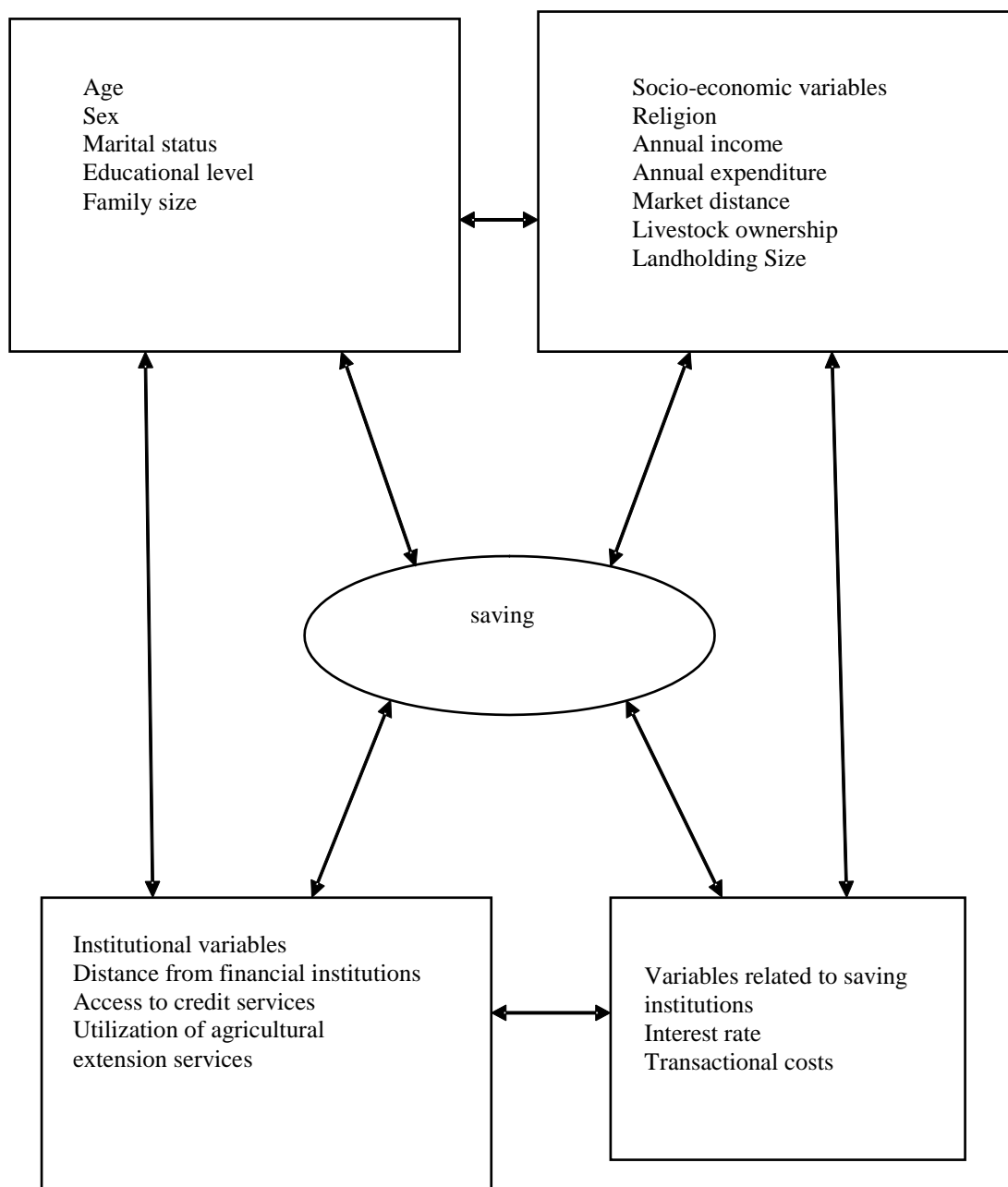
Demographic variables

Age Sex Marital status Educational level Family size	Socio-economic variables Religion Annual income Annual expenditure Market distance Livestock ownership Landholding Size

saving

Institutional variables Distance from financial institutions Access to credit services Utilization of agricultural extension services	Variables related to saving institutions Interest rate Transactional costs

Figure 5. Conceptual Framework of the Study
Source: Own formulation 2020

Summary and Policy Recommendations

Conclusion

This study was conducted in order to assess determinants of rural households saving in North Shewa Zone Oromia Region. Different characteristics of the households were analyzed among savers and non-savers. These characteristics were categorized as demographic (education level, sex, age, marital status, family size), socio-economic (landholding size, livestock ownership, annual income, annual expenditure,), institutional (distance from financial institutions and access to credit and) and variables related to saving institutions (interest rate).

In this study cross sectional data were used that were collected from 400 sample households and from 10 rural kebeles namely; Lencho Borsu, Bobe Liban, Halelu Chari, Hariro Derso,Boneya Gino, Gera Gubo, Kara niti kora, Ayda Malke, Elamu Aferso and Addidgi.   both primary and secondary source of data were used and interview schedule and focus group discussion were used as data collection tools. Data analysis methods like percentage, frequency and mean were used. In addition,   t-test were used to see associations and differences in characteristics between saver and non- saver respectively. The result of the descriptive statistics indicated that most of the variables hypothesized to determine the rural households were significantly associated with rural household savings status.

From rural households demographic variables, sex of the household head was hypothesized to affect rural households saving status significantly.   The descriptive result showed that sex had   significant association with rural household saving status age and family size were hypothesized to have significant association with rural households saving status. The result at the same time showed that they were not statistical significant associated with rural households savings status. Education level of the household head hypothesized to have significant association with rural household savings status. The result showed that education had statistical significant association with rural household saving status.

The socio-economic variables such as annual income, landholding size and livestock ownership were hypothesized to have significant association with rural households savings status. The results of the descriptive statistics also indicated that landholding size and annual income had statistical significant association but livestock ownership had no association with rural household savings status. Annual expenditure and physical distance of the household were hypothesized to have significant relationship with rural households savings status. The result of the descriptive statistics also showed that they had significant association with rural households saving. In line with this, from institutional variables access to credit and interest rate were hypothesized to have significant association with rural households saving status. The result of the descriptive statistics showed that credit access had significant effect on rural households' savings status.

Recommendations

The findings of the study identified major factors of rural household savings in North Shewa Zone. Based on the findings of the study, the following recommendations are given. According to the result   educational level of sampled households was found to have a affect rural households savings   status positively. Literate households have the awareness regarding the importance of saving and practice rural household savings than illiterate rural households.   In order to make illiterate rural households have better understanding towards savings and make decision to save, emphasis should be given towards strengthening different educational opportunities (non-formal education). Financial institutions in collaboration with agricultural offices, NGOs and other community based organizations should work on awareness creation activities in the study area through providing training to the rural households. In addition to awareness creation activities, financial institutions should have in kind reward system to motivate non-saver households.

The result again revealed that annual income had positive and statistically significant effect on rural household savings status. Based on this finding, to make non-saver households to save in financial institutions, there is a need to further improve through diversifying their agricultural activities and income source by engaging in nonfarm/off farm activities. Credit access had positive effect on rural household savings status. In order to make non-saver rural households to save, financial institutions should have awareness creation, consult program and provide productive loan and follow up their credit utilization so that they can use it to generate additional income and this in turn motivates rural households to save in financial institutions.

The   distance from financial institutions had negative effect on the saving status of rural households. Hence, financial institutions should provide saving services by establishing satellite or outlets branches reasonably near residences. In addition, policy interventions should focus on increasing the availability and accessibility of financial institutions in rural areas to promote rural households saving. Generally, these determinants rural household savings therefore emphasis have to be given in designing strategies aimed at improving the saving mobilization of rural households in the study area. Saving and investment level in rural area can be enhanced if diversified range of saving products is being availed to encourage the saving opportunities of the rural households as well as formulating legislation for being financial institutions is put in place.

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