academicJournals

Vol. 6(4), pp. 177-183, April, 2014
DOI: 10.5897/JDAE2013.0507
Article Number: 0FCED8F46839
ISSN 2006-9774

http://www.academicjournals.org/JDAE

Journal of Development and Agricultural Economics

Full Length Research Paper

Saving patterns of rural households in east hararghe zone of Oromia National Regional State, Ethiopia

Girma Teshome[1]*, Belay Kassa[2], Bezabih Emana[3] and Jema Haji[4]

[1]School of Agricultural Economics and Agribusiness, Haramaya University, P. O. Box: 106, Dire Dawa, Ethiopia.
[2]Department of Agricultural Economics, Haramaya University, P. O. Box 138, Dire Dawa, Ethiopia.
[3]HEDBEZ Business and Consultancy PLC, P. O. Box 15805, Addis Ababa, Ethiopia.
[4]Department of Economics, Haramaya University, P. O. Box: 138, Dire Dawa, Ethiopia.

Received 17 September, 2013; Accepted 20 November 2013

This study examined the patterns of rural household savings in East Hararghe zone of Oromia National Regional State in Ethiopia. The major objective of the study was to assess the patterns and its determinants of household savings in the study area. Data were collected from a total of 700 sample households which were also analyzed using descriptive statistics and multinomial logit model. The result of the study signified that 38.5, 23.4, and 38.1% of the sample households have saved in physical assets only, financial form only, and both in physical assets and financial forms, respectively. The result from the econometric model used indicated that, credit access, contact with development agents, leadership role of household heads in the community, information access and membership in microfinance institutions have a significant impact on savings in financial forms only. Whereas, livestock holdings of household in TLU, annual farm income in Birr and leadership role of household heads in the community have a significant effect on the choice of both financial savings and physical saving forms, as compared to saving in physical form only. This study indicated that, the rural households in the study area mainly use the physical forms for savings. However, this savings in physical forms in the study area was not accessed by the formal financial system of the country. Therefore, the study recommends the physical savings of the rural households should be accessed and encouraged to augment gross domestic saving of the country.

Key words: Saving patterns, household savings, east hararghe zone, oromia, Ethiopia.

INTRODUCTION

It is evident that, saving is an important variable at national, private and household levels in contributing for economic growth (Schultz, 2005; Nga, 2007). However, low saving has been a dominant feature of many developing countries (Deaton, 2005; Zhu, 2004). In Ethiopia, the average share of gross domestic savings during the year of 1980 to 2012 was 12.4% of GDP creating the average resource gap of 6.1% during these years (EIA, 2010).

Rural households in Ethiopia in general and the study

*Corresponding author. E-mail: girmateshome@yahoo.com.

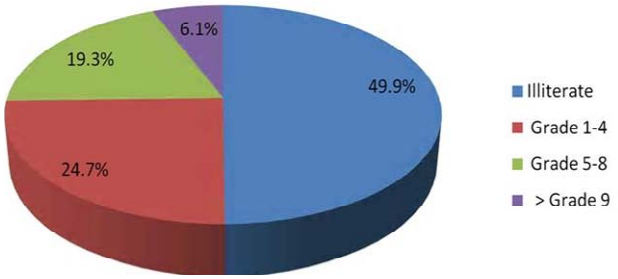

Figure 1. Education level of household head, Source: Own computation from survey data.

area in particular, however, do indeed save in the form of tangible assets and/or in financial forms (Nwachukwu and Odigie, 2009; Kidane, 2010). Some of the major motivations for these households to save include the desire to build up a reserve against unforeseen contingencies, providing for anticipated future differences between income and expenditure, concerns leaving money to heirs and pure miserliness (Canova et al., 2005; Rehman et al., 2010). Rural households usually save in kind when prices are continually rising, when there is little cash in circulation or/and when there is no bank around (Bereket, 2006). The disadvantages of in kind savings are that, they tend to be less portable, more difficult to store and less easily converted into cash (Dejene, 2003; Nwachukwu and Odigie, 2009). According to Beverly et al. (2003) households also saves in cash with the advantages that, cash is very portable, storable and exchanged for almost anything. However, this king of saving form has the problem of losing its value during high inflation (Degu, 2007; Hussien et al., 2007; Nwachukwu and Odigie, 2009). Even though, saving is an important variable that can enhance the productive capacity of the households, very few studies (Abu, 2004; Degu, 2007; Kidane, 2010) have been conducted to assess household saving behavior in Ethiopia. Even, none of these studies have addressed the saving patterns of households in rural areas of the country.

Thus, this study helps to clearly and understands the factors affecting rural household's patterns of savings in the study area. It gives an important input to the country in general and the study area in particular in strategizing and decision making processes of promoting domestic savings at household level to fuel sustainable economic growth. The study also contributes to the few existing studies in developing countries in general and in Ethiopia in particular that gives insight to researchers and can be used as a stepping stone for further similar researches.

MATERIALS AND METHODS

The study was conducted to assess the pattern and the determination of rural household savings in East Hararghe zone of Oromia National regional state in Ethiopia (Table 2). East Hararghe zone is geographically located between 7032' to 9044' North latitude and 410 10' to 43016' East longitudes (Figure 1) (FEDB, 2010). Based on the 2007 Census, the Zone has a total population of 3,039,680 with population density of 151.87 persons per km^2 and with an average of 5 persons per household. Of the total population of the zone 87.4, 12.6, and 1.11% are residents of urban, rural and pastoralists, respectively.

Based on a multistage sampling technique and probability proportional to size (PPS)1 random sampling technique, a sample of 700 households was used for the study. The sample size was determined using the simplified formula developed by Yamane (1967) at 95% confidence level, 0.5 degree of variability and 95% level of precision (Equation 1).

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

Where n is the sample size, N is the total household heads size, and *e* is the level of precision.

Descriptive statistics were used to describe, compare, and contrast various data collected from the households. Multinomial Logistic Regression Model was fitted to estimate the effects of hypothesized explanatory variables on the degree of households' choice of saving patterns (Equations 2 and 3). According to Gujarati (2007), let X be a 1 x K vector with first element unity, then the model has response probabilities of:

$$\Pr(y_i = j) = \frac{\exp(X_i \beta_j)}{1 + \sum_{j=1}^{J} \exp(X_i \beta_j)} \quad (2)$$

and to ensure identifiability;

$$\Pr(y_i = 0) = \frac{1}{1 + \sum_{j=1}^{J} \exp(X_i \beta_j)} \quad (3)$$

Where; for the i^{th} household, y_i is household saving patterns which are savings in kinds only, savings in financial forms only and savings in both kinds and financial forms in which savings in kinds only used as the base category: X_i is a vector of explanatory variables: The unknown parameters β_j is *K x 1* vector matrixes which are typically estimated by maximum likelihood estimation methods.

As it is shown on Table 4, a set of 21 variables (15 continuous and 6 discrete) were included in the model for analysis after all variables were tested for multicollinearity and heteroscedasticity problem. All options of household saving patterns were also tested using Hausman test to check for independence of irrelevant alternatives (IIA).

RESULTS AND DISCUSSION

Here in this study, demographic characteristics and saving patterns of households were discussed using

[1]The PPS is used to determine proportional allocation under which the sizes of the samples from the different cluster are kept proportional to the sizes of the cluster (Kothari, 2004)

Table 1. Age, sex and family size of households.

Parameter	Age of household head in years			Family size in AE			Sex of household head	
	15-33	34-64	>65	< 3.5	3.5-5.5	>5.5	Male	Female
Number of household head	251	359	90	65	299	336	679	21
Total (700 %)	35.9	51.2	12.9	9.3	42.7	48.0	97.0	3.0
	Mean = 38.8, St. Dev. = 11.5 Min = 19 Max = 80			Mean = 6.47, St. Dev. = 2.322 Min = 1 Max =13				

Source: Own computation from survey data.

descriptive statistics. In addition to the descriptive statistics, the result of the econometric model is also discussed here.

Demographic characteristics of households

Age, sex, and family size of households

The survey results (Table 1) show that, the average age of household heads was 38.8 years with the minimum and maximum ages of 19 and 80 years, respectively and standard deviation of 11.5 years. Out of the total 700 interviewed households 251 (35.9%) were in the range of age between 15 to 33 years, 359 (51.2%) were in the range of age between 34 to 64 years and the remaining 90 (12.9%) were in the range of age greater than 65 years. On the other hand, the average family size of the sample households was 6.47 which were higher than the national average of 5 persons (CSA, 2007). The largest family size was 13 and the smallest was 1 with standard deviation of 2.32.

In this study, among the total sampled household heads 678 (97.0 %) were male and the rest 21 (3.0%) were female (Table 1). Of the total sampled household heads, 678 (96.9%), 7 (1.0%), 5 (0.7%) and 10 (1.4%) were married, single, divorced and widowed respectively. About 12.1% (70 male household heads) of the married sample household heads practice polygamy (two wives); while the remaining 96 percent were married to one spouse.

Educational level of household head

Educational background of sampled household heads is believed to be an important feature that determines the ability and willingness of the household head to save and invest. The result shows that, the educational status of households in the study area was considerably low. Most of these household heads had no formal education and are illiterate. From the total sample household heads 349 (49.9%) of the household heads were illiterate, that is, they do not have both writing and reading ability either in their mother tongue or in any other languages. Whereas, 173 (24.7%) have completed grade 1 to 4 level of formal schooling or can read and write. The remaining 135 (19.3%), and 43 (6.1%) attended formal education from grade 5 to 8 primary education and secondary school (grade 9 and above), respectively in which they might be dropped at each levels. The average educational attainment of household head was less than three years with the maximum diploma level education (10 + 2) and 0 year minimum of schooling with standard education of 3.4 (Figure 1).

Saving patterns of households

The survey results revealed that 79.2% of the sampled farm households practiced saving and the rest not with Birr 11365.30 average savings with Birr 1990.50 of standard deviation. The lowest saving level among the savers was Birr 100 and the highest was Birr 236000.

The pattern of disposition of saving is an important factor in determining whether the saved amount is utilized for productive purposes or not. This study has made an analysis of the pattern of savings of the households into financial and physical assets, in general. In Table 3, it is shown that, 38.5, 23.4, and 38.1% of the sample households of those who have saved in physical assets only, financial form, and both in physical assets and financial forms, respectively. Saving in physical assets mainly consists of livestock purchase, grain storage, and others in the study area. The proportion of household saving in financial assets determines the transfer of savings into investment in other sectors of the economy. The volume of saving in physical assets determines the productivity and generation of income in that sector itself.

As it is shown in Table 3, the sample households

Table 2. Patterns of household savings.

S/N	Forms of savings	Frequency	Percent
1	Physical savings only	214	38.5
2	Financial savings only	130	23.4
3	Both physical and financial savings	212	38.1
	Total	556	100
Savings in Birr: Mean 11365.3 Std. Deviation 1990.5 Minimum 0 Maximum 236000			

Source: Own computation from survey data.

Table 3. Reasons for keeping different agricultural products

Reason	Crop products (%)	Livestock products (%)
High price expectation	29.7	72.5
Lack of demand	1.0	3
Saving purpose	63.6	23
Other	5.7	1.5

Source: Own computation from survey data

reported that, about 23.0% of livestock products and 63.6% of crop producing sample farmers avoided sales of their product immediately after harvest for saving purpose. The average storage time of sorghum and maize, the major crop produces in the study area, was3.5 and 5.6 months, respectively.

Econometric model result and discussion of significant variables

As it is discussed earlier, multinomial logit is used to show the determinant variables for each category (savings in financial forms and savings in both financial and kind forms) versus the base category (savings in kind only).

From the model outputs presented on Table 4, the likelihood ratio test statistics exceeds the chi square critical value of 89.6 at less than 1% level of significance, indicating that the hypothesis that, all coefficients except the intercept are equal to zero is rejected that validated that the model fits the data well for this section of the study.

All hypothesized explanatory variables were checked for multicollinearity and heteroscedasticity data problems. The Hausman test results also indicated that, the acceptance of the null hypothesis of independence of the saving forms under consideration as the application of the multinomial logistic regression specification to model was justified ($p = 0.213$).

After Multinomial Logit model estimation, marginal effect of explanatory variables was calculated to see the impact of each explanatory variable on saving patterns of households and the result is presented in Table 5.

Education level of household head

In line with expectation, household head education level was found to have positively significant relation to the choice of saving in kind and financial form as a saving form at 5% probability level (Table 4). *Ceteris paribus*, one extra education level of household head relative to the base category increases the likelihood of the use of savings in both in-kind and financial form increase by 1.1% (Table 5). The positive relation might be due to education can help household heads to decide to use many saving forms at the same time and to involve in available alternative activities to generate more income. This finding is contrary to the findings of Rehman et al., 2010.

Livestock holdings of households in TLU

As expected, livestock holdings of household in TLU were found to have positive and significant (at 5% probability level) influence on the choice of savings both in kind and financial forms as a saving form (Table 4). Given all other variables constant, the likelihood of household head's choice of both in kind and financial saving form relative to the base strategy (in kind saving only) increases by 4.86% when TLU increase by one unit (Table 5).

This implies that household with more livestock holdings would like to save in both financial forms and in kinds. This finding is similar with that of Degu (2005) but not similar with the findings by Obayelu (2012) that shows a negative relationship between financial savings and livestock holdings of rural households.

Table 4. Parameter estimates of the multinomial logit for patterns of household savings

Variable	Financial Saving only				Saving in kind and financial forms			
	Coef.	Robust Std. Error	z	P>|z|	Coef.	Robust Std. Error	z	P>|z|
Age of household head	0.0025675	0.0125573	0.20	0.838	0.0062956	0.0115677	0.54	0.586
Sex of household head *	0.1874724	0.5997699	0.31	0.755	0.1074998	0.7175693	0.15	0.881
Household head education level	0.0380841	0.0390735	0.97	0.330	0.0642625**	0.0348289	1.85	0.045
Household size in AE	-0.0702926	0.0653019	-1.08	0.282	-0.0484418	0.0554937	-0.87	0.383
Dependency ratio	-0.0289937	0.1580245	-0.18	0.854	-0.1951532	0.1612004	-1.21	0.226
Annual household investment in Birr	8.31e-06	0.0000131	0.64	0.525	0.0000137	0.0000123	1.11	0.265
Land holdings in ha	-0.0412524	0.0372404	-1.11	0.268	0.0620527	0.0480857	1.29	0.197
Livestock holdings in TLU	0.0171411	0.0966979	0.18	0.859	0.2281329**	0.0888387	2.57	0.010
Annual farm income in Birr	0.0000174	0.0000108	1.62	0.106	0.0000276**	9.48e-06	2.92	0.004
Annual nonfarm income in Birr	0.000044	0.0000375	1.17	0.240	0.0000527	0.0000378	1.39	0.164
Credit access *	-0.880353***	0.2639512	-3.34	0.001	0.0807509	0.2526188	0.32	0.749
Distance from financial institutions in km	-0.0224777	0.0296192	-0.76	0.448	0.0068508	0.027026	0.25	0.800
Distance from market center in km	-0.00031	0.0288163	0.01	0.991	0.0144458	0.0286286	0.50	0.614
Distance from all weather road in km	-0.0071841	0.0176329	-0.41	0.684	-0.0092372	0.0194728	-0.47	0.635
Training participation	0.0730112	0.1062034	-0.69	0.492	0.0801049	0.1005948	0.80	0.426
Contacts with DAs	-0.0156876**	0.0075408	-2.08	0.037	0.0054852	0.0064486	0.85	0.395
Leadership role in the society*	0.986194**	0.4000655	2.47	0.014	0.8043724**	0.4263863	1.89	0.049
Information access*	0.6643871***	0.4762724	1.39	0.003	0.6927813	0.4298232	1.61	0.107
Membership in microfinance institution*	1.484554***	0.273561	5.43	0.000	-0.1394401	0.2743923	-0.51	0.611
Income from perennial crops in Birr	0.0000119	0.0000173	0.69	0.493	0.0000212	0.0000162	1.31	0.190
Constant	0.9467256	1.253236	0.76	0.450	-2.450779	1.252526	-1.96	0.050
Savings in kinds only (base outcome), Number of obs = 540, Wald chi2(42) = 137.51, Prob > chi2= 0.0000 Log pseudolikelihood = -502.29899, Pseudo R2 = 0.1376								

Source: Own computation from survey data.

Annual farm income in Birr

Annual income from farm activities of sample households had positive and significant (at 5% probability level) impact on the probability of using *savings* in kind and financial forms option (Table 4). As compared to in kind savings only (the base category), an increase in farm income by one Birr increases the probabilities of the use of savings both in kind and financial form option by 0.0004%, *ceteris paribus* (Table 5). Part of the explanation for this king of result is farm income would increase household's saving ability and enhance the probability of household to save in different forms. This is consistent with studies by Adeyemo and Bamire (2005), and Rehman et al. (2010).

Credit access of household

As expected, credit access of the household member was found to influence financial saving option of households' saving forms negatively and significantly at 1% probability level (Table 4). This result indicates that households with access to credit less prefer financial saving form to in-kind saving as compared to households without credit access. Keeping other factors constant in the model, as compared to in kind savings (the base category) the likelihood of households with access to credit to chose financial saving decreases by 17.6%, when access to credit increases (Table 5). The available credit was mainly used to purchase improved agricultural inputs as lack of capital source for investment in agriculture sector is the bottleneck in the study area. This finding is similar to that of Adeyemo and Bamire (2005) but contrary to the findings of Obayelu (2012).

Contact with development agents

Contrary to hypothesized, contact with development agents was found to be negatively and significantly correlated to the choice decision of financial saving option at 5% probability level (Table 4). This means, keeping other variables in the model constant, when contact with development agents increases by one , the probability of using financial saving options decreases by

Table 5. Marginal effect of explanatory variables on patterns of household savings.

Variable	Financial Saving Pattern only dy/dx	Saving in kind and financial Patterns dy/dx
Age of household head	-0.0000278	0.0011738
Sex of household head *	0.0435848	0.0386449
Household head education level	0.0019296	0.0110259
Household size in AE	-0.0092047	-0.0049672
Dependency ratio	0.0102911	-0.0404531
Annual Household investment in Birr	4.48e-07	2.33e-06
Land holdings in ha	-0.0026979	-0.0102867
Livestock holdings in TLU	-0.0151523	0.0486367
Annual farm income in Birr	1.02e-06	4.66e-06
Annual nonfarm income in Birr	3.97e-06	8.00e-06
Credit access *	0.1760081	0.0900782
Distance from financial institutions in km	-0.0036382	0.0003057
Distance from market center in km	-0.0012195	0.003192
Distance from all weather road in km	-0.000596	-0.0014474
Training participation	0.0200494	0.0234337
Contacts with DAs	-0.0033648	0.0024642
Leadership role in the society*	0.1191088	0.0970365
Information access*	0.062584	0.0932432
Membership in microfinance institutions*	0.2654641	0.0888206
Annual income from perennial crops in Birr	5.13e-07	3.69e-06
y = Pr(Financial only) (predict, outcome (2)) = 0.24775258		
y = Pr(Both in kind and financial forms) (predict, outcome (3)) = 0.32460685		

(*) dy/dx is for discrete change of dummy variable from 0 to 1, source: Own computation from survey data.

0.34% relative to the base category (in kind savings only) (Table 5). One of the reasons could be, development agents are mainly encouraging rural households to use their capital on agricultural development and have little knowhow about financial institutions and savings.

Household head leadership role in the society

In line with expectation, household heads' leadership role in the society was found to have positive and significant influence on both financial saving only and savings in kind and financial forms at 5% probability level (Table 4). *Ceteris paribus*, the likelihood of household heads with leadership role in the society to choose of both financial saving only and savings in kind and financial forms increases by 11.9 and 9.7% in relative to the base category, respectively (Table 5). Households who bear the responsibility to execute and organize on the behalf of the community get the chance to acquire timely and vital information from government officials and change-agents. Thus, household heads with leadership role in the society were better off in financial and in kind savings than the household heads that do not have leadership role in the society. This finding is similar to that of Kifle (2012).

Information access of household head

As expected, access to information was found to have positive and significant (at 1% probability level) to influence on decision to use financial saving (Table 4). Given all other variables in the model held constant, the likelihood of household heads' choice of financial saving relative to the base category increases by 6.3%, when households get access to information (Table 5). This implies that the household head savings in financial forms increases as their access to information increases as it improves their knowledge about the use of financial institutions. This finding is similar to that of Rehman et al. (2010).

Membership in microfinance institution

In line with prior expectation, being a member of MFI influence the choice of financial saving positively and significantly at 1% probability level (Table 4). *Ceteris paribus*, the likelihood of using financial saving option increases by 26.5% for those MFI of member households relative to the benchmark alternative (Table 5). The household who are participating in microfinance activities would have more of in financial forms as compared to

households with no participation in microfinance institution. This implies membership of households in MFI plays a determining role in providing access to formal credit and compulsory savings. This finding is similar with that of Kifle (2012).

CONCLUSIONS AND RECOMMENDATIONS

In this paper an attempt has been made to analyze saving patterns of rural household in East Hararghe Zone of Oromia National Regional state, Ethiopia. The result of the study indicate that, households have different saving patterns namely savings in physical forms and savings in financial forms.

The result of the study also shows that, education and training participation enhance household's awareness to decide to use many saving forms at the same time. Households with more livestock holdings and annual farm income would like to save in both financial forms and in kinds as they increase the saving ability and opportunity of households. Households with access to credit less prefer financial saving form to in-kind saving as the available credit was mainly used to purchase agricultural inputs. Access to information increases household's saving in financial forms as it improves their knowledge about financial institutions.

The study has shown that, households have the capacity to save mainly in nonfinancial forms showing high request for accessibility potential for formal financial institutions. Therefore, the physical saving forms of rural households should be encouraged and needed to be accessed by the financial intermediaries of the country.

Conflict of Interests

The author(s) have not declared any conflict of interests.

REFERENCES

Abu G (2004). On the Determinants of Domestic Saving in Ethiopia. Prepared for the Second International Conference on the Ethiopian Economy. Ethiopian Economic Association Retrieved July 17, 2013, from http://www.scribd.com/doc/53352267/Abu-Girma-Determinants-mestic-savings-in-Eth.

Adeyemo R, Bamire AS (2005). Saving and Investment Patterns of Cooperative Farmers in Southwestern Nigeria. J. Soc. Sci. 11(3):183-192.

Bereket K (2006). Land Reform, Distribution of Land and Institutions in Rural Ethiopia: Analysis of Inequality with Dirty Data. School of Development Studies, University of East Anglia and Center for the Study of African Economies, University of Oxford.

Beverly SG, McBride A, Schreiner M (2003). A Framework of Asset-Accumulation Stages and Strategies. J. Fam. Econ. 24(2):143-156.

Canova L, Rattazzi A, Webley P (2005). 'The hierarchical structure of saving motives'. J. Econ. Psychol. 26:21-34. Accessed on August 3, 2013 from http://www.researchgate.net/publication/222838006_The_hierarchical_structure_of_saving_motives/file/32bfe50f84aa9b8b4c.pdf.

Central Statistical Agency (CSA) (2007). Statistical abstract. Addis Ababa, Ethiopia.

Deaton AS (2005). Franco Modigliani and the Life Cycle Theory of Consumption. Banca Nazionale del Lavoro Quarterly Review. [Provide page number(s)]

Degu A (2007). Household Savings Behavior and Determinants of Savings in Rural Savings and Credit Cooperatives in Selected Districts of Western Amhara Region, Ethiopia. An MSc Thesis Presented to the School of Graduate Studies of Haramaya University. p. 135.

Dejene A (2003). Informal Financial Institutions: The Economic Importance of Iddir, Iqqub, and Loans, Technological Progress in Ethiopian Agriculture, Proceedings of the National Workshop on Technological Progress in Ethiopian Agriculture. Addis Ababa University, Ethiopia.

EIA (Ethiopian Investment Agency) (2010). Ethiopian Investment Guide, Adiss Abeba, Ethiopia. [Online] Available: http://www.ethiopianembassy.org/PDF/Investment_Guide_2010.pdf [February, 2013].

FEDB (Finance and Economic Development Bureau) of East Hararghe Zone (2010). Physical and Socio - Economic Profile. Harar, Ethiopia.

Gujarati DN (2007). Basic Econometrics. 4th edition. Mc Graw-Hill, Inc., New York.

Hussien H (2007). Farm Household Economic Behaviour in Imperfect Financial Markets: Empirical Evidence and Policy Implications on Saving, Credit and Production Efficiency in Southeastern Ethiopia. A Doctoral Thesis Presented to the Department of Economics, Swedish University of Agricultural Sciences. Uppsala, Sweden.

Kidane B (2010). Determinants of Gross Domestic Saving in Ethiopia: a Time Series Analysis. StudyMode.com. Retrieved July 17, 2013, from http://www.studymode.com/essays/Determinants-Of-Gross-Domestic-Saving-In-535269.html.

Kifle T (2012). Determinants of saving Behaviour of cooperative members survey evidence from Tigrai region, Ethiopia. Journal of Research in Economics and International Finance (JREIF) 1(5):150-158.

Kothari CR (2004). Research Methodology: Methods and Techniques. 2nd edition. New Age International Publications. Dharmesh Printers, Delhi.

Nga MT (2007). An Investigative Analysis into the Saving Behavior of Poor Households in Developing Countries: With Specific Reference to South Africa. University of the Western Cape, South Africa.

Nwachukwu T, Odigie P (2009). What Drives Private Saving in Nigeria. Centre for the Study of African Economies Conference, University of Oxford.

Obayelu OA (2012). Saving Behavior of Rural Households in Kwara State, Nigeria. Afr. J. Basic. Appl. Sci. 4(4):115-123.

Rehman H, Faridi MZ, Bashir F (2010). Households Saving Behaviour in Pakistan: A Case of Multan District. Pak. J. Soc. Sci. 30(1):17-29.

Schultz TP (2005). Demographic Determinants of Savings: Estimating and Interpreting the Aggregate Association in Asia. Discussion paper series IZA DP Yale University and IZA Bonn. p. 1479.

Yamane T (1967). Statistics, an Introductory Analysis, 2nd Ed., New York: Harper and Row.

Zhu Q (2004). The Impact of Rural Enterprises on Household Savings in China. ZEF – Discussion Papers on Development Policy Bonn, Germany.