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DETERMINANTS OF RURAL HOUSEHOLD SAVING IN TANZANIA

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Abstract

This paper examines saving motives of rural household in Tanzania. Descriptive and econometric method of analysis is used to analyse data from 810 households gathered through structured questionnaire. Further, it employs logistic regression to determine association between saving motives and demographic characteristics. Triangulation of data is done through focus group discussion to verify data collected via the survey questionnaire. Data was collected in thirteen districtsin *quasi-randomized*zones. Accordingly, of the two categories of saving motives, majority of rural household prefer motives under the livelihood category. As for twelve motives analysed education motive is top priority saving motive. Further education level is the only independent variable that increases the logit of the dependent variable that means it increases the odds of an individual to choose livelihood saving motives. The study found majority of rural households arerigid towards changing saving motives.

Keywords:Saving motives, livelihood motives, non-livelihood motives

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1. Introduction

Saving behaviour is an old phenomenon. For example, saving matter is written in the book of Genesis chapter 41 and the Gospel of Saint Mathew chapter 25 in the Holy Bible being scriptures of over two thousand years ago. As such people including the poor save for a variety of reasons most of which are aimed at risk management and risk coping. Dercon (1996) and Ravi (2006) underscored reasons for saving by poor households in two categories: 1) ex-ante protection against risk and 2) ex-post management of risk and that in the relative absence of complete credit and insurance markets rural households save to mitigate and coping with risks associated with income uncertainty.

It is commonly agreed by many studies, most poor rural households in less developed countries do not have ready access to saving facilities in banks or other formal financial institutions. Instead, they use alternative, informal vehicles for their saving, such as livestock, gold and other precious metals, jewellery, and housing materials or other stock of physical goods. They also maintain cash at home, or may deposit savings with a friend, family members, or moneylender. Or they may participate in rotating savings and credit associations with trusted family members or neighbours (Rutherford, 2000; FSDT, 2006 and Nga, 2007). On whether poor save or not, the study by Rutherford (2000) affirms that there are considerable amount of researches disapprove the commonly believed view that many rural households in less developed countries are too poor to save. Saving by rural households has been confirmed by many empirical studies beyond doubt including those done in Africa like works of Chowa (2012); Mirach and Hailu (2014); Teshome et al. (2013); Precious and Asrat (2014); and Nigus (2015).

Studies confirm own saving is the most important factor for a country's investment. According to Attanazio and Szekely (2000) saving is an alternative means to accumulate assets in the absence of credit and insurance markets, the capacity to save becomes one of the main vehicles of social mobility and of enhancing future income-earning possibilities. Horioka (1990), Wakabayashi and Mackellar (1999); Kitamura et al. (2001); and Upender and Reddy (2007) their empirical studies expound household saving contributes a lion's share of gross saving in the biggest economies such as China, Japan, USA, and India; these countries are among countries with higher household saving in the world.

According to the World Bank indicators report of 2010 released in 2011, Tanzania national accounts had gross domestic savings of about 16.85 percent gross domestic product (GDP) of the year (Gross domestic savings calculated as GDP less final consumption expenditure (total consumption)). Further, the report indicates that over the past 20 years, the value of gross domestic saving indicator has fluctuated whereby in 2008 gross domestic saving was 10.31 percent GDP. There is evidence that per capita household saving is on increase alongside rural financial services growth in Tanzania. For example IFAD (2013) reports about 3000 Rural Saving Credit and Cooperative Societies (RUSACCOS) in Tanzania with saving per capita increased to TanzanianShillings 294,397 in 2012. As Dercon (1996) and Ravi (2006) underscored two main categories of reasons for saving by poor households namely: 1) ex-ante protection against risk and 2) ex-post management of risk that in the relative absence of complete credit and insurance markets rural households save to mitigate and coping with risks associated with income uncertainty.

However, economic theory provides a number of motives which pull or push households to save including life cycle motives, permanent income motives, bequest motives, precautionary motives. Study by Dauner (2004) outlines a number of reasons and motives of household saving including (i) to decrease vulnerability to shocks i.e. income, health, death, etc; (ii) to accumulate lump sums; (iii) to cater for life-cycle needs i.e birth, wedding, death; (iv) to furnish for investment in human, physical and social capital; (v) to bequeath relatives and friends; and to obtain credit. The priority saving motives by rural household differ among countries and even within a country. Furthermore, saving motives play different role on social and economic aspects of the household as some motives advance social attributes while other motives promote economic prospects; the type of motives pursued by household has connotation on poverty reduction. This paper examines saving motives and relationship between saving motives and demographic characteristics of rural household in Tanzania.The paper therefore underscores *"what pushes or/and pulls"* rural household in saving.

2. Literature

Like many other subjects in economics, modern theories and models of saving and consumption originated in studies of saving behaviour conducted in western countries, developed countries, and market economies (De Nardi et al., 2009). Among well-known models of saving in this context are the Absolute-Income Hypothesis (AIH) of Keynes; Permanent-Income Hypothesis (PIH) of Friedman; and the Life-Cycle Hypothesis (LCH) of Ando and Modigliani. Similar to Chowa et al. (2012) this paper presents the underlying theories of household saving in three perspectives: 1) an individual-oriented perspective; 2) a social perspective; and 3) an institutional perspective.

(a) Individual-oriented perspectives

Saving theories under an individual perspective include neoclassical economics, economic psychology and behavioural economics. Neoclassical economic theory assumes that individuals are rational beings who respond in predictable ways to change incentives. From this perspective, there are two broad determinants of individual behaviour: opportunities (or constraints) and individual preferences (Chowa et al., 2012). The starting points for much neoclassical economic research on saving and asset accumulation have been the Life Cycle Hypothesis (Albert Ando, Franco Modigliani and Richard Brumberg) and the Permanent Income Hypothesis (Friedman Milton). Other models of saving developed by economists as an extension of LCH and PIH economists include buffer-stock models and augmented life cycle models which try to incorporate bequest motives and precautionary motives.

Economic psychology theory unlike neoclassical economic theory this perspective do not assume that people behave in a rational manner and have perfect knowledge. The perspective assumes that personality characteristics and attitudinal variables affect saving and asset accumulation. Jevons (1965) and Marshal (1961) although they approve neoclassical economic they also believed that there are various psychological characteristic that influence the temptation to spend and forego saving. As such there are some established psychological models on savings behaviour by psychologists including those of Katona (1975); and Olander and Seipel (1970). For example Katona's theory of saving (1975) is partly determined by income and partly by some independent intervening factors. Two important factors are the ability to save and

willingness to save. Ability to save refers to those who can save, whereas willingness to save is related to the degree of optimism and pessimism of economic conditions (Katona, 1975).

Psychological and sociological theories of saving consider additional determinants of saving and asset accumulation, including personality characteristics, motives, aspirations, expectations, and peer and family influences. Some of the propositions emphasize the effects of relatively stable personality characteristics on asset building. Other psychological and sociological propositions assume that saving-related preferences and aspirations are not fixed and in fact seek to explain how motives, aspirations, and expectations are shaped. The propositions that emphasize relative stable personality characteristics typically come from psychology. For example, psychologists have examined the effects of thrift, conscientiousness, emotional stability, autonomy, extraversion, agreeableness, inflexibility, and tough-mindedness on saving. The propositions that seek to explain how motives, aspirations, expectations, and even preferences are shaped come from both sociology and psychology.

Behavioural economics perspective does not assume that people are rational and all-knowing. It integrates insights from psychology and economics. Behavioural economics qualifies some of the unrealistic assumptions of standard economic models of human behaviour, such as unbounded rationality, unbounded will power, an unbounded selfishness (Shefrin and Thaler, 1988); Aisle, 1975; Angeletos, et al., 2001; Laibson, 1997; Mullainathan and Thaler, 2000; Shefrin and Thaler, 1998; Thaler 1981) explain that behavioural economics decisions are influenced by common human characteristics such as self-control and ability to delay gratification, mental accounting, use of rule-of-thumb, default options, and hyperbolic discounting. However, given scant studies in developing countries little is known about the explanatory powers of these factors on saving behaviour of poor rural income households.

Behavioural theorists have identified a number of common human characteristics that shape financial behaviour, including lack of self-control (people tend to place too much weight on current consumption relative to future consumption); limited cognitive abilities (people do not always learn from their mistakes, and people tend to be overwhelmed by too many choices);

inertia (people tend to continue doing what they are currently doing); the tendency to interpret default options as advice; and the tendency to use mental accounting techniques.

(b) Sociological perspective

According to Chowa et al (2012) this perspective entails social stratification theory referring essentially to a distribution of power in society. The divisions in society, based on economically conditioned power, are called classes, which refer to any group of people that is found in the same economic situation (D'Souza, 1981; Weber, 1967). Class and social stratification have strengths in explaining the factors affecting savings behaviour among low-income households because class relates to the possession (or lack) of resources (economic or otherwise) necessary for individuals and households to save and build up their assets. Individuals and families in lower economic classes have limited access to information, resources, and services that can help them save and accumulate assets over time. This study also found some respondents were saving to invest in assets accumulation like bicycle and motorcycles in order to acquire higher *status-qou* in their families and community. Occupation and education are among important class related factors which are explained by sociological perspectives.

(c) Institutional perspective

Institutional theory asserts that individuals and households are faced with institutional level factors that make it impossible or difficult to save. The main hypothesis of institutional theory assumes that low-income individuals and families are unable to save and accumulate assets primarily because they do not have the same institutional opportunities that higher income individuals and households receive (Beverly and Sherraden, 1999; Sherraden, 1991). Institutions in the institutional theory refer to purposefully-created policies, programs, products, and services that shape opportunities, constraints and consequences. Seven institutional-level dimensions have been hypothesized to influence saving and assets accumulation. These dimensions are access, information, incentives, facilitation, expectations, restrictions, and security (Beverly and Sherraden*et al*., 1999; Beverly *et.al*., 2008; Sherraden and Barr, 2005; Sherraden*et al*., 2003).

2.2 Empirical literature

There are plenty of empirical studies on household saving most of them done in developed countries in Europe, North America and Asia. On the contrary very few studies on saving especially rural household saving have been done in poor countries especially in Africa. Kraay (2000) identified important saving motivations in China to be precautionary reasons and target saving motives. Also Wei in 2009 pointed out reasons underlying high household saving in China as social safety net, low level of financial development, life-cycle motives, culture, habit, corporate saving, and unintended consequences of social policies. According to Abdelkhalek*et al.* (2009) in Morocco saving is used as buffer stock to help households copy with uncertainty of both income and needs implying that insurance or precautionary reason is prime motive for saving.

In the United States, Stilglitz (1993) claims rich individuals save a considerable amount, often more than they need for their own retirement. Similar findings were noted by Lawrence Summers of Harvard University and Laurence Kotlikoff of Boston University who claim that wealthy people in United States save relatively larger amount for bequest implying that bequest motive was more important, but target motive to finance education for students missing scholarships found to be existing. However, the studies found less need for precautionary saving in the United States as there is an effective insurance system covering a range of risks facing a household. Kotlikoff and Summers (1981) obtained surprising finding that intergenerational transfers account for about 80 percent of total household wealth in United States. By contrast, Modigliani (1988) obtained diametrical opposed finding that intergenerational transfers account for only about 20 percent of total household wealth in the United States.

Kitamura *et al.* (1994) found that, the presence of well-established social security system and generous public pension programs increases consumption expenditures of workers households in Japan. The accumulation of wealth by Japanese households starts very early and lasts until very late in life, with unconsumed wealth transferred to the next generation in the form of bequest (Hayashi, 1997). Barthold and Ito (1991) found that about one-third to one-half of household assets is obtained by bequest in Japan. Retirement and housing motivations found also to be important in Japan (Horioka and Watanabe, 1997).

Fehr and Habermann in 2008 found that tax incentives motivated individuals saving in Germany. They explain that as many other OECD countries before, Germany also introduced a programme to promote the development of private saving in 2001. The program was similar to individual retirement accounts (IRAs) in the United States and United Kingdom. Saving was mainly for life-cycle motives. Also, study by Borsch-Suppan and Essig (2003) found that more than 40 percent of Germany households save regularly a fixed amount and about 25 percent households plan their saving and have clearly defined saving target in mind. Most of Germany household saving is in form of contractual saving, such as saving plans, whole life insurance and building society contracts. Thus makes the flow of saving rather unresponsive to economic fluctuations, such as income shocks. Also the study found most households prefer to cut consumption if ends not met.

Banks and Tanner (1999) reviewed the economics of household saving in United Kingdom (UK). The key findings were: total wealth in the UK was held in the form of liquid financial assets, housing, pensions and life insurance; some inequality in the distribution of wealth would be expected, given economic theories of the way households accumulate wealth over life-cycle; the 1980s were a period of dramatic change in ownership of key assets such as housing, pensions stocks and share; in spite of the proliferation of new saving vehicles, majority of the people still hold the majority of their wealth in conventional forms such as interest bearing accounts at the bank or building society; most individuals do not typically hold large amounts of financial wealth; tax-privileged saving vehicles have been taken up relatively widely, but are held predominantly by wealthier households; and almost one-ten of the population have no assets at all and this proportion has been increasing over time.

Using a GMM-system estimator and a balanced panel of 258 Norwegian farm households, Sand in 2002 found that traditionally in Norway farm households have relatively high saving and low marginal propensity to consume.

Upender and Reddy in 2007 done a study in India and found that the estimate of constant income elasticity of household saving to be more than unit implying that the marginal propensity

to save is higher than the average propensity to save, all else equal. Another study by Unny (2001) found positive factors influencing saving in India including level of income, income inequalities, value of assets and level of education, however, dependency ratio and number of male children had negative influence. According to Salam and Kulsum (2001) Indian government has policy in place promoting saving and capital formation as primary instrument of economic growth and that saving is used to finance increasing requirement for investment. In India, household sector saving provide bulk of national saving.

According to Waweru (2011) in Kenya SACCOs are seen as vehicles for resource mobilization and gateways to economic prosperity for families especially those in the lower and middle income category. Kibet*et al* in 2009 outlined determinants of saving in Kenya including type of occupation, household income, age, and gender of household head, level of education, dependency ratio, service charge, transport costs and credit access. Study by Ellis *et al* in 2010 found that, in Kenya, savings are used to undertake productivity-enhancing investments and education provision. As expected, rural inhabitants found to save more for agricultural investments while urban inhabitants tend to save for other purposes, such as starting a business. Individuals with a better education are more likely to save and invest than those with less education. Men and women exhibit similar patterns of behaviour in terms of saving for investment purposes.

Boring in 2010 found several solid determinant of household saving behaviour in Uganda namely: the age of the respondent (not just the age of the head of household), literacy, higher education, formal sector employment, entrepreneurial activity, and attitudes about life's current state. Marital status and whether or not the respondent is sole responsible for the household financial decisions is statistically insignificant regarding whether or not to save but quite important regarding institutional choice. Also wealth found to play a significant role in the decision to employ informal and non formal institutional saving methods. Ssemakula in 2007 conducted a review of Rural Speed a USAID funded project on saving promotion radio programs in Uganda, he found that saving campaigns on radio generally demystified the thinking that Ugandans do not have the saving culture except there was a general lack of information on saving. The study found that project beneficiaries assert that they save in order to secure loans to

establish or expanding their enterprises. The USAID assisted project aimed at a broad-based public awareness campaign with the aim of promoting the value of saving money. The programs included saving related key topics such as reasons for saving, a potential saver, where to save, why to save, and limitations of saving by rural households.

Hardly few studies on household saving have been done in Tanzania including findings by Lwoga et al (1999). The findings concur with studies like those done by Johnson and Rogaly (1997) and Rutherford (1999) that the poor use their saving for a variety of reasons which include daily expenditure, consumption smoothing, and accumulation to meet life-cycle needs and events and financing of emergencies.

3. Methodology

This paper presents cross-sectional data collected through structured questionnaire and focus group discussion in thirteen districts in Tanzania. The data is all primary, as such secondary data on rural households in Tanzania is scant. However primary data deemed to present more recent state of affairs than secondary data. Mixed methods approach using questionnaire method and focus group discussion facilitated triangulation of data. Further, *quasi-randomized* design approach was adopted to ensure sample representatives are selected from sixgeographical zonesin the country i.e. north, south, central, west, east for mainland, and Zanzibar.

Rural area in Tanzania constitutes largest part both geographically and population wise which according to NBS (2014) rural population was 70.4% out of 44,928,923 people in 2012. Rural area is characterized by poor transport infrastructure thus making accessibility difficult in some areas; there are many ethnic groups (over 120) with diverse culture, norms, traditions, taboos, customs and behaviours; there is different livelihood systems including crop farming, pastoralism, mixed farming, and off farm activities (rural micro small enterprises); rural is populous, relatively poor and illiterate than urban Tanzania. Therefore, sampling strategy is designed to take into consideration of this diversity.

Probability and non-probability sampling methods namely simple random sampling, convenience (or accidental) and purposive (or judgemental) sampling were used to establish sample

respondents. The representative sample administrative regions in each zone are: Kusini Pemba and Mjini Magharibi regions for Zanzibar zone; Kilimanjaro and Manyara regions for north zone; Iringa and Lindi regions for south zone; Dodoma region for central zone; Mwanza region for west zone; Tanga, Morogoro and Pwani for east zone. Therefore data collection is done in thirteen rural districts in eleven regions in Tanzania (both mainland and Zanzibar) with each zone represented by at least one rural district. Table 3.1 shows information on geographical location and respondents' occupation.

Table 3.1 Respondents occupation and geographical location

No	District	Region	Zone	Data collection method and samples		Major livelihood activity of respondents
				Questionnaire respondents	FGD participants	
1	West district	Mjini Magharibi (Unguja)	Zanzibar	75	10	Fisheries & farming
2	Mkoani	South (Pemba)	Zanzibar	70	10	Fisheries & farming
3	Kondoa	Dodoma	Central	60	10	Pastoralism (Maasai)
4	Sengerema	Mwanza	West	45	10	Farming
5	Mheza	Tanga	East	35	10	Farming
6	Ulanga	Morogoro	East	60	10	Farming
7	Kilombero	Morogoro	East	45	10	Pastoralism & farming
8	Rufiji	Pwani	East	35	10	Farming
9	Mufindi	Iringa	South	90		Farming
10	Iringa Rural	Iringa	South	75	10	Farming
11	Kilwa	Lindi	South	95		Farming

12	Katesh	Manyara	North	65	10	Pastoralism & Farming
13	Moshi Rural	Kilimanjaro	North	50	10	Farming
			TOTAL	810	110	

Source: Field data

Data collection was done via structured questionnaire and focus group discussion. In order to control biasness and reinforce independence,structured questionnaire and focus group discussion were administered by one person each. The questionnaire was administered in its original language (English) by enumerator who was conversant in both English and Kiswahili (national and local language). Enumerator performed questionnaire pretesting exercise prior to the actual field data collection. Structured questionnaire was administered in all thirteen districts while focus group discussions were done in eleven as presented in table 3.1. There were 810 respondents of the questionnaire whereas there were eleven focus group each with 10 participants making 110 people. The total sample size of respondents for both questionnaire and focus groups is 920 households. Household is the unit of study therefore study data was collected from household heads or their represenatives.

The focus group discussions were done among beneficiaries of one Belgian Technical Cooperation (BTC) financed project known as Kilombero and Lower Rufiji Wetlands Ecosystem Management Project (KILORWEMP) and four IFAD financed projects namely Rural Micro Small and Medium Enterprise Support Programme (MUVI); Marketing Infrastructure Value Addition and Rural Finance Programme (MIVARF); Agricultural Services Support Programme/ Agricultural Sector Development Programme-Livestock Zanzibar (ASSP/ASDPL-Zanzibar); and Belgian Funds for Food Security (BFFS). Table 3.2 presents details of geographical locations of focus groups.

Table 3.2. Names and dates of focus group discussions

no	Names of Focus Groups	District	Date
1	Fuoni Dairy Association	West District	June 2012

2	Farm Field School in Kendwa	Mkoani	May 2012
3	Pangalua Village Water User Association	Kondoa	October 2013
4	Farmer Group	Sengerema	April 2013
5	Sayuni SACCOS Galangala Village	Katesh	April 2013
6	Maduma Farmers	Mheza	April 2013
7	Farmer group	Iringa Rural	April 2013
8	Juhiwangumwa Wildlife Management Area Community Based Organisation	Rufiji	February 2015
9	Mbuti Beach Management Unit	Kilombero	March 2015
10	Chokoachoko Community Based Forest Management	Ulanga	March 2015
11	SACCOS in Umbwe	Moshi Rural	July 2012

Source: Field data

The framework of analysis of data is constituted by descriptive analysis which is used to estimate descriptive statistics i.e. frequencies, percentages and cross tabulations and logistic regression analysis is used to estimate the study model.

Econometric Model

Logistic Regression is used to establish relationship between dependent variable and independent variables. Independent variable are age, sex, education, marital status, family size, occupation and income whereas saving motiveis the dependent variable. Similar independent variables have been used in many studies on determinants of household saving. The model assumes dependent variable is in two categories "dichotomy dependent variable": (i) Livelihood motives refer to saving motives that contribute to poverty reduction they include business motive, retirement motive, precaution motive, education motive, house motive, land motive, assets motive, extra living cost motive, taxes and loan repayment motive and (ii) non-livelihood motives refer to motives that do not contribute to poverty reduction such as leisure and travel motive, luxury motive, entertainment motive, wedding motive, and funeral motive.

Therefore, the logistic regression model is presented by logistic function in equation (1):

$$f(y) = 1/1+e^{-z} \quad (1)$$

The variable Z is defined as

$$z=\beta 0+ \beta 1X1+\beta 2X2+\beta 3X3+\beta 4X4 +\beta 5X5+\beta 6X6+\beta 7X7$$

The logistic regression in equation (1) re-written with variable Z defined

$$f(y) = 1/1+e^{-\beta 0+ \beta 1X1+\beta 2X2+\beta 3X3+\beta 4X4 +\beta 5X5+\beta 6X6+\beta 7X7} \quad (2)$$

Where:

$f(y)$ = Dependent variable (livelihood and non-livelihood saving motives)

$\beta 0$ = intercept

$\beta 1$-$\beta 7$ = regression coefficients

$X1$- $X7$ = predictors (age, education, marital, sex, income, occupation, family size)

The variable x in equation (2) represents individual factors or independent variables affecting the dependent variable, whereas f(y) represents the probability of a particular outcome (dependent), given the set of determinants (factors). Therefore variable z is a measure of the total contribution of all the factors used in the model and is known as the logit.

Each of the regression coefficients describes the size of the contribution by the predictor. A positive regression coefficient means that the predictor increases the odds (likelihood) of outcome, while a negative regression coefficient means that the predictor decreases the odds of outcome; a large regression coefficient means that the predictor strongly influences the odds of the outcome; while a near zero regression coefficient means that the predictor has little influence on the odds of outcome.

4. Analysis and Results

The total number of respondents participated in the questionnaire survey are 810 with 96.4 percent response rate. The high responses rate implies that the subject was well understood and interesting to the respondents. There was a good balance of gender whereby of the total respondents 52.3 percent are men and 47.7 percent are women. Further the results implies that

the subject was interesting to both female and male gender. Respondents who claim not to have attended school at all is 12 percent, 62.7 percent have primary education, and 22.2 percent have secondary education while only 3.1 percent have managed to study up to tertiary level (College or university education). Results of education level of respondents reflects situation of literacy in many developing countries including Tanzania whereby reports show high illiteracy in rural areas. Marital status of the respondents include: 53.3 percent are married, 36.2 percent are single, 3.7 percent are widow, 3.1 percent are divorcees and 3.3 percent are separated. Results show occupation of the respondents as farm and off farm activities 95.1 percent and 4.9 percent are employed. As for the family size on average every respondent has four dependants.

Table 4.1 Aggregated results

Description	Results (%)
Preference of livelihood motives	74.1
Preference of life-cycle model	85.4
Education as first priority	66.8
Rigid to change saving motives	82 .9
Savings used to buy household assets	56.2
Finance illiteracy	79.4

Source: Field data

Table 4.1 presenting aggregate results of data collected from respondents, rural households are saving for motives in the livelihood category which are capable to reduce poverty. Also the results confirm that rural household follow life-cycle model meaning that they do save for retirement. They save money for use when they are old and retired from production activities or employment. Further the results show that education is priority motive of saving by rural household as 66.8 percent of the respondents rank education as top priority motive to save. This is positive results since education has great impact in poverty reduction. Also the results show that rural household is not willing to change motives for saving. On one hand this aspect is good in case of livelihood motives but on the other hand it is negative in case of non-livelihood motives. For example if household doesn't want to change the motives to buy agricultural inputs

such as seeds, fertilizers etc. it means that agricultural production would increase. But if household was not willing to change non-livelihood motive like entertainment for livelihood motive like saving for education it means that illiteracy remain with the household. Further the results show rural households use savings to buy durable items or household assets by 56.2 percent. Finance illiteracy is prominent with 79.4 percent are without basic finance knowledge. The results were supported by majority during focus group discussion thus confirming data collected via structured questionnaire.

Table 4.2 Disaggregated results

Description	Findings/Results (%)			
	Gender		Age	
	Men	Women	Young	old
Preference of livelihood motives	71.7	76.7	73.4	82.8
Preference of life-cycle model	85	85.8	89.9	74.1
Education as first priority	66.7	66.8	67.1	62.1
Rigid to change saving motives	80.9	87.1	85.3	64.9
Savings used to buy household assets	59.4	52.6	54.2	82.8
Finance illiteracy	74.5	84.7	80.7	62.1

Source: Field data

Disaggregating results by gender and age the findings show slightly differences based on gender and age. Women has slightly higher rate for livelihood than men this is explained by the fact that women especially in the rural are the ones who ensures food for the young children in the family unlike men who may spent savings on entertainment e.g. localdrinks. Old people have slightly higher preference of livelihood than young it is perhaps because old people have farms and may need more savings than young to support agricultural production. As regard to education motive, men and women are indifferent, however, young people place higher preference on education motive than old people thus confirming the fact that they are the one getting education thus it is positive that young people would prefer saving for education than old people. The results show that old people are slightly flexible in changing motives for saving whereas men, women and young people seem rigid in changing motives for saving. This can be explained by the fact that

old people have short period remained on life span thus they may be willing to revise their motives especially those of long term nature like infrastructure, valuable assets and investment. Old people seem too illiterate than old meaning that young generation has more education on finance matters than old people.

Table 4.3 presents results on ranks of saving motives in terms of preferences. Respondents assigned ranks in order of preference from 1st to 12th with top priority motive ranked 1st and least priority motive ranked 12th. Results show that preferences were relatively different on seven saving motives thus there is no dominant rank with relatively high score. However, results show that five saving motives education ranks 1st (50.9%), bequest ranks 9th (28.9%), marriage ranks 10th (38.6%), leisure and entertainment ranks 12th (74.9%), and non-specific ranks 11th (45.6%) respondents were indifferent thus there is a dominant rank with high score. The results imply that these saving motives are common to many. Results show high scores of non-specific motives means that there are other motives for saving by rural households besides eleven motives presented in this study.

Table 4.3 Results on saving motive preferences

No	Saving Motive	Score (%)											
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1	Retirement	3.2	6.7	17.8	14.2	14.8	10.7	10.2	11.4	6.0	2.5	1.1	0.4
2	Extra living cost	1.7	4.8	5.4	9.6	8.0	15.8	18.5	20.1	11.9	2.2	0.9	0.2
3	Illness , disaster (precautionary)	9.3	28.9	20.1	16.3	12.3	6.7	2.8	1.6	0.5	0.6	0.0	0.0
4	Education	50.9	13.1	8.8	6.5	4.4	4.0	4.2	3.6	1.9	1.0	0.2	0.0
5	Marriage	0.7	0.6	0.5	1.1	1.5	1.2	2.3	6.2	14.	38.	29.	2.5

										0	6	6	
6	House & land	15.6	19.1	12.0	12.5	12.7	8.6	9.9	5.6	1.7	0.6	0.7	0.4
7	Assets (durable items)	7.0	10.9	12.1	11.5	11.7	15.1	11.2	8.3	6.9	4.1	0.2	0.1
8	Leisure & entertainment	0.5	0.2	0.4	0.9	0.4	0.5	0.5	0.9	1.9	3.7	15.3	74.9
9	Taxes & loan repayment	0.5	1.7	4.9	7.2	10.0	14.6	17.0	18.6	14.4	6.9	1.7	0.7
10	Business	8.9	11.5	15.2	14.9	15.9	13.8	10.7	4.0	2.3	1.6	0.6	0.0
11	Non specific	0.2	0.1	0.1	0.4	1.0	0.5	0.4	1.7	8.9	22.2	45.6	17.9
12	Bequests	0.9	1.7	2.0	4.2	6.8	7.7	11.1	17.2	28.6	14.9	2.8	1.5

Source: Field data (2015)

Notably, views of participants in the group dicsussions held in eleven districts are perfectly inline with study results collected via the structured questionnaire. Therefore information collected through questionnaire interview is valid to support conclusion of this paper.

Econometric results

Table 4.4 presents results of logistic regression. The β-values presents coefficient of determination for each independent variable in the model. The results show positive relationship between level of education and livelihood outcome. This results is consistent with the fact that an educated individual is likely to make rational decision in choosing saving motives that can reduce poverty. Marital status seem to be negatively related to livelihood saving motives. This results was perhaps influenced by young persons as they may be concerned with cost of marriage

therefore they choose to save in order to cover for the costs related with wedding ceremonies. Further, occupation is negatively related to the dependent variable. Perhaps this results imply that once a person has steady income source from employment he or she may not care about use of savings for livelihood since the person has stable income source from employment to take care the role of savings. Therefore saving here seems important aspect to persons with entrepreneurial spirit or persons with unpredictable income. The other factors in the model are more or less neutral meaning that they actually do not influence dependent variable.

Table 4.4 Logistic regression results

								95.0% C.I. for EXP(β)	
	Expected sign	β	S.E.	Wald	df	Sig.	Exp(β)	Lower	Upper
Sex	+	-0.225	0.231	0.947	1	0.330	0.799	0.508	1.256
Age cohort	+	-0.174	0.467	0.139	1	0.709	0.840	0.337	2.099
Education level	+	1.264	0.879	2.066	1	0.151	3.539	0.632	19.837
Marital status	+	-1.019	0.847	1.446	1	0.229	0.361	0.069	1.900
Dependants level	+	-0.249	0.266	0.876	1	0.349	0.780	0.463	1.313
Occupation	+	-1.746	0.777	5.055	1	0.025	0.174	0.038	0.799
Income level	+	-0.069	0.323	0.046	1	0.830	0.933	0.495	1.757
Constant		2.562	1.228	4.352	1	0.037	12.961		

Source: Field data

5. Conclusion

Generally, based on the findings, it is possible to conclude that rural households in Tanzana are saving for sound causes. With regard to the effect of explanatory variables on household saving motives in the model, therefore (i) Education level is the only factor that positively influence chances to select livelihood saving motives which is capable to reduce poverty; (ii) Marital status of an individual negatively affects chances to save for livelihood motives thus persons who are not married would save to finance cost of future marriage wedding events; (iii)Occupation of a person affects chances to choose livelihood saving motive; (iv)Rural households follow life-cycle model meaning that they also save for retirement; and (v)The study has found rigidity in switching off saving motives among rural households. Policies emphasing provision of financial education to boost financial literacy e.g. saving, bookkeeping, financial statements, costing, interest, dividends, pricing; fostering financial and insurance markets for increased financial inclusion and insurance markets in rural areas would enhance household saving for investments and agricultural production for poverty eradication. The above are underlying policy recommnedations suggested by this paper.

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Abreviations and Accronyms

AIH	Absolute Income Hypothesis
BTC	Belgian Technical Cooperation
GDP	Gross Domestic Product
IFAD	International Fund for Agricultural Developmnet
LCH	Life-Cycle Hypothesis
NBS	National Bureau of Statistics of the United Republic of Tanzania
OECD	Organisation for Economic Cooperation Developmnet
PIH	Permanent Income Hypothesis
SACCOS	Savings and Credit Coorperative Society
USAID	United States Agency for International Developmnet

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