ANALYSIS OF RURAL SAVINGS MOBILIZATION FOR POVERTY ALLEVIATION IN IJUMU LOCAL GOVERNMENT AREA OF KOGI STATE.

BY

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A THESIS SUBMITTED TO THE POSTGRADUATE SCHOOL OF AHMADU BELLO UNIVERSITY, ZARIA, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN AGRICULTURAL ECONOMICS.

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MAY 2004

DEDICATION

THIS WORK IS DEDICATED TO THE GIVER AND SUSTAINER OF LIFE – JEHOVAH GOD

DECLARATION

I hereby declare that this thesis was written by me and it is a record of my own research work, except where references are made to the published literature and duly acknowledged. This thesis has not been presented before in any previous application for a higher degree.

_____ _____

ADEBAYO, CORNELIUS OWONIYI **DATE**

The above declaration is confirmed.

_____ _____

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Chairman, Supervisory Committee

CERTIFICATION

This thesis entitled "ANALYSIS OF RURAL SAVINGS MOBILIZATION FOR POVERTY ALLEVIATION IN IJUMU LOCAL GOVERNMENT AREA OF KOGI STATE" by Adebayo, Cornelius Owoniyi, meets the regulations governing the award of the degree of Master of Science (Agricultural Economics) of Ahmadu Bello University, Zaria, and is approved for its contribution to knowledge and literary presentation.

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ABSTRACT

This study examined some important factors that determine savings behaviour and the magnitude of poverty in Ijumu Local Government Area of Kogi State. Primary data were generated using field interview and structured questionnaires were administered to one hundred and twenty respondents. The analytical tools employed were descriptive statistics, multiple regression, Correlation analysis and Foster-Greer-Thorbeeke poverty measures.

A quantitative determination of the dependence of rural savings on some household socio-economic characteristics like current assets, gross income, farmers' age, household size and years of experience of household heads was carried out using regression and correlation analyses.

The level of savings per household heads per annum in different occupational categories-farming, farming/trading, farming/artisans and farming/civil servants were ₦14, 989.45, ₦48, 471.00, ₦35, 005.30 and ₦41, 830.92 respectively.

Regression coefficients showed that gross income, age of household heads and years of experience made significant contributions of about 55% variations in the level of savings. The results of correlation analysis revealed that of the five socio-economic factors examined, four were statistically significant at 1% level of probability. These were gross income, age, household size and years of experience in farming while current asset was not statistically significant.

This study measures the magnitude of poverty in the area to buttress the need to boost the savings capacity of rural household with the aim of alleviating poverty. The result indicates that 66% of the sampled households live below the poverty line of ₦1, 274.90 while the poverty gap index and severity of poverty index were 0.42 and 0.27 respectively.

The study recommends that farmers should have other sources of income apart from farming because of its seasonality. Savings incentives can be further stimulated through the physical presence of savings institution in the study area.

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CHAPTER ONE

1.1 INTRODUCTION

Poverty in Nigeria is overwhelmingly a rural problem. In 1985, about 87% of those living below the poverty line (at $1/ day) was in the agricultural or rural sector. This figure dropped to 66% in 1992. However, in the same year, out of the total population of poor people, 10 million were extremely poor and 85% were living in the rural areas (Okunmadewa, 1996)

The incidence of poverty seems rather pathetic with the rate increasing from 28.1% in 1980 to about 66% in 1996. In absolute term, as indicated in Table 1.0, the population in poverty were 18.26 million, 34.7 million and 67.1 million in 1980, 1985 and 1996 respectively. The table also shows a progressive increase in the rate of poverty in both the rural and urban areas of the country from 28.3% and 17.2% in 1980 to 69.8 and 58.2% in 1996 respectively.

Table 1.0: Poverty Head count (1980-1996)

Year	Estimated Total Population (million)	Population in Poverty (million)	Poverty level %	Urban Poverty (%)	Rural Poverty (%)
1980	65	18.26	28.1	17.2	28.3
1985	75	34.7	47.3	37.8	51.4
1992	91.5	39.1	42.7	37.5	46.0
1996	102.3	67.1	65.6	58.2	69.8

Source: Federal Office of Statistics (1999)

The worsening levels of productivity and poverty in the rural areas directly threaten the food security and living conditions of the average Nigerian. More than 90% of Nigeria's food supply comes from the small scale agricultural sector dominated by poor peasants whose

productivity is constrained by their extremely low educational standards and have poor access to credit, productivity, inputs and modern technology (Nkom, 1990).

It is in realization of this fact that attempts were made in the past to tackle the problem of poverty and other constraints to development, by the introduction of various agricultural projects. Some of these projects include the Agricultural Development Programmes (ADPs) 1973, Operation Feed the Nation (OFN) 1977, Green Revolution (GR) 1980, Family Economic Advancement Programme (FEAP) 1997, and currently Poverty Alleviation Programme (PAP) 2000, among others.

The aforementioned programmes failed to achieve the desired objectives because the conceptualization of poverty was weak and the target beneficiaries (rural dwellers) were alienated from the initiation, design and implementation stages of the various projects. Therefore, in a predominantly agrarian and poverty stricken country like Nigeria, a pragmatic and grass-root oriented programme such as rural savings mobilization should be encouraged to alleviate poverty which entails lifting people to or above poverty levels.

Savings are important in capital accumulation for improvement in the standard of living and investment. The increase in capital requirements for various investment profiles call for use of more credit. Any analysis of the role of credit in agricultural developments needs to be time, place and farmer specific if it is to be helpful to the farmers and policy makers. Therefore, the issue of the amount of savings in peasant societies is important in Nigeria since the rural sector represent about 80 % of the country's human and natural resources (CBN, 1996).

Mobilizing rural savings viewed from an individual family level accords people a measure of independence and authority over their existence on earth which otherwise would have been difficult if all incomes had been consumed. Furthermore, savings theoretically

generate investment. The rural poor are thus helped out of poverty if lending from the pool of their integrated savings are extended to them or to finance essential projects in their communities (Akpan, 1994).

1.2 Problem Statement

Nigerian small-scale farmers are characterized by the use of unimproved inputs and traditional production tools that are capable of generating only very small income. This low income of the farmers leads to low levels of savings and investment, which leads to low productivity and low income, and the cycle is complete. The cycle, often called the vicious cycle of poverty, concludes that a farmer is poor because he is too poor to save and invest (Nafziger, 1994). Consequently, the Nigerian small-scale farmers are kept in positions of poverty in spite of the numerous agricultural development programmes embarked upon by the government and non-government organizations to assist them. In order to stimulate investment in agriculture, which will lead to high productivity and high per capita income, savings have to be mobilized to break the vicious cycle of poverty.

According to Mrak (1989), savings mobilization in the rural areas has become increasingly difficult despite its latent but potential volume. It is because savings in the developing countries have mainly taken the traditional forms and patterns. Mobilization becomes difficult as substantial part of the total household savings remain in non- monetary form. These forms of savings include agricultural produce, the keeping of cattles or valuable items like jewelry and gold for personal prestige.

Successive governments in the country however, have initiated programmes that stressed making credit facilities available to rural farmers for agricultural development, while neglecting savings mobilization in the rural areas. Poor rural savings does not only constitute a major

handicap to rural economic progress (via capital formation) but equally helps to perpetuate rural poverty and misery. Moreover, rural poverty has recently generated many discussions within the academic and government fora in Nigeria, but no attempt has been made to study savings mobilization as a tool for poverty alleviation and to determine the magnitude of poverty in the study area.

This study is intended to improve our knowledge about the determinants of rural household savings, practical ways savings are mobilized and the incidence of poverty in the area.

This study addressed the following research questions:

i) What are the socio-economic and demographic characteristics of the selected households in the study area?

ii) What are the determinants of rural savings behavior in the study area?

iii) What is the effect of socio-economic characteristics on value of savings?

iv) What are the constraints to savings mobilization in the area?

v) What is the magnitude of poverty using the income-expenditure-savings relationships in the selected villages?

1.3 Objectives of the study

The broad objective is to analyse the household saving behaviour for poverty alleviation in some villages in Ijumu Local Government Area of Kogi State. The specific objectives are to:

i). describe the socio-economic and demographic characteristics of selected households' heads.

ii) analyse the determinants of rural savings behaviour in the study area.

iii) determine the effect of socio-economic characteristics on value of savings.

iv) identify constraints to savings mobilization in the area.

v) determine the magnitude of poverty using the income-expenditure-savings relationships in the selected villages.

1.4 Justification of the Study

In Nigeria, a comprehensive rural saving scheme has never received the needed attention of the policy makers. The neglect appears to be based on the impression that the rural population has a very high marginal propensity to consume or a very low capacity and desire to save. This impression has, not been scientifically tested and substantiated due to lack of reliable data on income, consumption and saving behaviour of the rural households (Singh et al; 1978). The choice of the area is essentially on the basis that about 65% of the population lives in the rural area (National Population Commission, 1998).

There is lack of empirical work on the determinants of savings and the factors influencing savings in the study area. Savings mobilization in rural areas is relevant not only for the development of the agricultural sector but also for that of other sectors. This study was conducted because of the realization of the imperative to mobilize and channel rural savings into poverty alleviation of the rural household. Therefore, the findings of this study will be a proper starting point of any meaningful attempt at alleviating poverty.

1.5 Hypotheses

(i) There is no relationship between current assets and savings.

(ii) There is no relationship between gross income and savings.

(iii) There is no relationship between age of household heads and savings.

(iv) There is no relationship between household size and savings.

(v) There is no relationship between years of experience in farming and savings.

CHAPTER TWO

LITERATURE REVIEW

2.1 Concept of Savings

Theoretically, savings is defined as that part of disposable income (yd) that is not spent on current goods and services. Symbolically, it is written as:

S=Y-C

Where S= Savings, Y=Income, C=Consumption

This equation implies that savings is the art of abstaining from consumption for future satisfaction. This notion about savings forms major consensus in literatures (Shapiro, 1978; Bhagwatti, 1966; and Keynes, 1936).

A contrary view offered by Pischke (1978), suggests that it is neither an abstention from consumption nor a residual. He viewed savings as a normal and continuous activity. He asserted that the definition of savings as an abstention from consumption did not in itself prescribe any minimum period over which funds must be held. Moreover, conventional economic analysis speaks only of times and treats funds carried over from one period to the next as savings. Thus, any income not spent immediately it is received may be regarded as saved until the time it is disbursed.

The concept of savings is much difficult to define and measure. Rural savings may then be defined as that part of an income of a household, which is withheld from consumption. It is also an excess of current income over current consumption (Okanigbe, 1987). Little is known about the magnitude of rural savings in most developing countries.

2.2 Meaning of rural Poverty

According to Macaver (1999), rural poverty may be defined as the failure to achieve certain minimum standard of living by rural dwellers. It is a welfare concept that describes a condition of insufficiency of income relative to basic needs and/or inadequate access of rural people to basic needs such as food, shelter, water and education. He went further to say that rural poverty captures the proportion and distribution of people whose income or consumption level falls below a bare minimum income required for active and healthy living. Those below the threshold income or poverty line are classified as poor.

Sen (1983) on the other hand, believes that there is no universal definition of poverty but there are three different perspectives to it. The income-expenditure approach defines poverty as insufficiency of income relative to human needs or income level fall below a prescribed poverty line. The basic needs approach view poverty as inadequate access to food and non-food basic needs such as education, employment and decent shelter etc. Finally, there is the capacity perspective, which views poverty as deprivation. Poverty is a visible phenomenon since a poor person can be easily identified at sight. According to Akinbode (1991), poverty implies among other things low income. There is a strong propensity to consume and low propensity to save among the poor. Low savings generate low investment capacity.

Because it is difficult to conceptualize, most economists define poverty simply as a situation of low income or low consumption (Obadan, 1997). This has been used for constructing poverty lines – values of income or consumption necessary to purchase the minimum standard of nutrition and other necessities of life. Accordingly, people are counted poor when their measured standard of living in terms of income or consumption is below the poverty line. Thus, the poverty line is a measure that separates the poor from the non-poor.

In Nigeria, the Poverty Assessment Study by the Federal Office of Statistics (1999); showed that 87% and 67% in 1985 and 1992 respectively of the poor were in agriculture and reside in the rural area.

On a global scale, according to IMF Report (1999); about one-fifth of the world's population is afflicted by poverty. To buttress this, the Watchtower (2003) estimated that in 1998 1.2 billion people worldwide had consumption levels below $1 a day and 2.8 billion live on less than $2 a day. Poverty is therefore, considered a global phenomenon, which threatens the survival of mankind. It is in recognition of this fact that the United Nations declared 1996 International Year for the Eradication of Poverty. The decade (1997-2006) was declared United Nations Decade for Eradication of Poverty (Ozigbo, 2001).

Poverty as shown above is a multi-dimensional phenomenon for which its study cannot be complete without incorporating its major dimensions. Generally, there are four dimensions to the study of poverty thus: economic, social, institutional and environmental. These can be further grouped into two broad dimensions- economic and non-economic. The economic aspect, which this study looked at, has to do with those aspects of human life that are easily quantifiable, measured and to which monetary value is assigned. They include income and its attributes, expenditure profile, savings etc.

2.3 Studies in Rural Savings

A substantial rural savings capacity exists (Adams, 1978). Researchers on rural savings in Less Developed Countries (LDCs) are all unanimous in attesting to this fact (Bello, 1992; Yinusa, 1991; Mbat, 1985). Savings potentials of rural households have not been exhausted.

Furthermore, there is no indication that the propensity to save is significantly lower for rural than the urban households (Fischer, 1989).

The focus of rural savings research has been on estimations of rural saving functions & capacity, and econometric studies of rural savings behaviour. Evidences from the literature shows that there are conceptual measurement problems in the estimation of household income, consumption and savings. Furthermore, there seems to be confusion with regards to the exact nature of the relationship between savings and dependency ratio, family size, education and age of the household head (Bello, 1992; Ngang; 1992, Yinusa; 1991; Ram, 1982).

2.4 Determinants of Savings

There is a pervasive consensus by economists on a single variable determining savings in the literatures. This is most prevalent amongst the Keynesian Economists whose vehement belief and stance on the potency of the variable clearly and unambiguously remain unwavering. This stance has been criticized because a single variable or factor cannot unilaterally determine the saving pattern of several households in the world at large (Yusuf and Peters, 1984). These vary from place to place and among other factors which include socio-cultural values.

i. Savings and Household Income

The level of income as a determinant of savings was the major idea of the Keynes. His submission indicates that savings has a positive inclination towards income. That is once there is a rise in income, people tend to consume less and rather save more (Dasgupta, 1974).

Nwakeze (2000) pointed out that households try to balance their accounts by spending according to their income that is households' consumption is a function of their income. For a given household, savings can be positive or negative. The lower income households tend to have

positive savings under ceteris paribus assumption. However, household size is an important factor that determines household income, expenditure and consequently savings.

There are contrasting approaches to the estimation of household income and the distinction between gross income, net income and disposable income. Kahlon et al (1972) obtained farm family income by adding all the incomes from the farm and non-farm resource and borrowings from institutional and non-institutional sources. Disposable income was compiled by deducting production expenditure from farm family gross income.

Chauhan et al (1972) defined farm business income as gross farm income less farm business operating charges. Gross farm income was defined as the value at prevailing prices of retained as well as marketed crop output plus income from allied activities such as diary and poultry. Net household income was defined as business income plus non-farm income.

Yinusa (1991), measured income as the total value of farm output. He measured gross income as a sum of farm income and non-farm income, and net cash income as gross income less total cost of production. In all his analysis of savings behaviour however, he used gross income rather than net income (disposable income). While Ngang (1992), measured farm income as gross farm receipts minus production expenditures. Earned income (ye)= farm income + non-farm income, disposable income (yd)= earned income+ net transfers.

ii. Savings and Family Size

A typical household size, according to Atala (1984) is constituted by the summation of the number of wives, children, relatives and dependents living with the farmer in his household at the time of any investigation. Olukosi and Ogungbile (1991) reported that the average family size in Nigeria is about six to seven persons per family.

Yinusa (1991), in a study of farm households in Kaduna State, found an inverse relationship between savings and household size. Ngang (1992) and Okanigbe (1987) reported similar results in a study of household in Bamenda, Cameroon and some villages in Sokoto State respectively.

In some studies however, household size was found not to influence savings. Synder (1971) showed that the probability for positive savings for a sample of Sierra-Leone households was unaffected by family size. Durojaiye (1991) reported similar findings in Ago-Iwoye, Nigeria.

Indeed, under implausible assumptions, the impact of increased household size on savings rate is ambiguous; savings may increase, decrease or remain unchanged (Kelly, 1976).

iii. Savings and Dependency Ratio

Dependency ratio is the proportion of the non-working population in the young age bracket (i.e. between the age of 0-14 and in the older age group of 65+) to the total population.

It was observed that with high consumption, resulting from large number of dependents have an adverse effect on income; hence savings is retarded. In a multiple regression analysis for 74 countries with different specification shows, that there is no significant adverse effect of high ratio of aggregate savings in the less developed countries where the case is most prevalent (Ram, 1982). In Nigeria, dependency ratio was found to have a significant negative effect on rural household savings (Durojaiye, 1991)

iv. Savings and Age (life cycle) of Household Head

Age specific savings behaviour, based on the life-cycle hypothesis is very complex. Not many studies include age in modeling household savings behaviour. Yinusa (1991), found a marginal negative influence of age on savings. He defines age as the number of years an individual had lived from birth. Ngang (1992), found age of household head to exert a positive influence on savings.

v. Savings and Education

Resource-Poor farmers in the developing world have generally been regarded as lacking assets especially land and human capital as represented by skills and education (Walton, 1990). Education has increasingly therefore, been recognized as an important form of human capital for the agricultural sector (Schuh, 1993). The level of educational attainment of an individual is generally adjudged measurable in terms of the number of school years completed (Teixeira and Swaim, 1991)

Studies by Aneke (1981) and Ibezim (1985) have shown that farmers' illiteracy rate in the southern zone of the country varies from 60 to 80 percent and that this could be worse in the northern zone.

Akaah, et al (1987), in a study of bank savings behavior of Ghanaian households included education as an explanatory variable. The education coefficient in the estimated equation was negative and insignificant. This was interpreted to mean that households exhibited similar dispositions to save in banks regardless of their level of formal education.

On the contrary, Durojaiye (1991) found out that households, whose head had had secondary education, tended to consume more and save less.

vi. Savings and Farm size

Okanigbe (1987) suggested that savings performance among rural households might vary considerably depending on farm size. Yinusa (1991) found out that the larger the farm size of a household, the higher the propensity to save. Notwithstanding, that farm size, is often used only as a proxy to farm income.

2.5 Savings and Investment Identity

Early functions of consumption have shown that rich households save more compared to the poorer households, leading to Keynesian speculation that securely rising income would result in higher saving rates.

The basic macro-economic equation according to Shapiro (1978) is:

$Y=C+I+G$…….. (i)

Where Y= Gross National product (GNP)

C= Total Personal Consumption

I= Total Gross Investment both private and public

G= Total Government expenditure on current output.

On the other hand, the micro-economic equation is:

$Yd = C+I+S$……..(ii)

Where Yd= disposable income

C= consumption

I= Investment

S= savings

From equations (i) and (ii), disposable income is consumed, saved or invested. Disposable income is shared into consumption, savings/or investment, that is:

$Y= C+I$ or

$Y= C+S$

If $Y-C\equiv I= S$ is a standard identity in an economy, where savings will be identical to investment.

2.6 Savings and Farm Investment

Farm investment is defined as the commitment of resources in farm operations with the purpose of getting profitable returns. Investments by any economic unit are of two types, physical and financial (Alamgir, 1976). Investment in assets involves the commitment of resources in the procurement of physical assets, such as machinery, work bulls, tools etc. whereas investment in financial assets involves the purchase of government securities, stocks and bonds. Literature on farm investments reveals that attention is usually focused on physical asset. This is because in the rural economy, investments in physical assets predominate, for rural farmers usually do not have access to financial assets.

The saving-investment decision is integrated into the productive process and is closely linked with allocation of resources, particularly on labour. The simultaneous production-saving investment activity originates from the use of own or family labour in production of non-tradable capital assets, for example, land improvements, storage sheds, farm buildings. Such activities are known to be undertaken by all types of farm household in rural areas (Alamgir, 1976).

Farm investments are said to be low in most developing countries. Low farm investment implies either that savings are low and/ or are being used for non-farm investment. It is therefore impossible to finance a sound investment effort without adequate savings, because investment also generates savings.

2.7 Savings Mobilization and Poverty Alleviation

Okuneye (2001) identified some of the causes of poverty in the rural areas to include inadequate production & income, poor quality of labour force, low level of technology, lack of access to credit and other productivity resources. Therefore, for an integrated rural development programme, it was noted by Ojo (1990) that the most significant and viable approach to mobilizing the needed resources is the fostering of rural savings.

If the rural household savings could be successfully mobilized, not only would the credit requirements of the smaller farmers and non-farmers population be met, but also an impetus would be given to village economic development with larger production, setting up of small enterprises, and further increase in savings (Azher, 1995). In this way, the vicious cycle of poverty would be broken.

2.8 Savings and Rural Banking Scheme in Nigeria

The Rural Banking Scheme (RBS) was established in Nigeria with the following objectives:

a) the mobilization of savings from the rural people for the purpose of channeling them to profitable ventures;

b) the cultivation of banking habits among the rural dwellers;

c) the development of agriculture and agro-allied industries ;

d) the creation of equity and loans for small-scale industries; and

e) the reduction in rural-urban drift of young men and women.

Although the scheme achieved some success in expanding bank branch network, it cannot be said to have mobilized savings from the rural people as majority still have no access to banks

(Okorie,1988). On the other hand, Akpan (1994) discovered from an exploratory study that many rural people in Nigeria shy away from banking because of the delay that often accompanies bank transactions.

2.9 Savings Pattern in Rural Areas of Less Developed Countries (LDCs)

The rural economics in developing countries lack modern financial institutions and this make a vast majority of the rural people resort to traditional financial intermediation in the form of esusu clubs. These clubs are known by various names among different ethnic groups in Nigeria; *esusu* or *Ajo* among the Yorubas, *Isusu* or *Otutu* (at times *Utu*) among the Ibos, *Osusu* among the Edos, *Adashi* among the Hausas, *Dashi* among the Nupes, Efe among the Ibibios and *Oku* among the Kalabari Ijaws.

Generally the *esusu* club is regarded as an indigenous system of savings in which a group of people come together, contribute fixed amounts at fixed intervals and assign the total amount contributed to an individual member in rotation hence the alternative name of cycle saving club. But *esusu* clubs are also known to offer credit to members and to share their accumulated savings at certain times of the year rather than on rotation (Okorie and Miller, 1976).

This Self-Help Groups (SHG) is voluntary grass-root organizations at the group, community or local levels. They have functioned for centuries in Nigeria, meeting a variety of people's needs for goods and services. They help alleviate the worst aspects of poverty by mobilizing resources outside the government and by promoting government programmes along with their own. Self Help Groups in this country includes credit associations like 'Esusu" or "Adashi" which works through small saver-borrowers to make small loans available to the poor.

SHG also exist for agricultural production, consumption of public facilities, provision of healthcare, social welfare and mutual protection such as neighborhood watch (CBN, 1999).

Patterns and nature of savings in LDCs are characteristically similar based on a simple, non-complex organization, which gives easy access to members or participants. Its flexibility and mutual understanding also scores a plus for the savings among rural household. The organizations of saving patterns in the rural LDCs differ from place to place. Eligibility of members of a household rural saving club depends on a number of factors. This includes regular earnings, credit worthiness, age and class in which one belongs in a rural society. A common precondition amongst the saving and credit clubs in the rural areas is the fixed number of people in the system. Superficially, there seems to be no hindrance to membership as barriers to age, kingship groups, status and occupation are relaxed. A closer look, however, shows that a careful process of selection is very noticeable. Each grouping enlists for memberships; villagers with like interest or similar financial resources and common forms of employment and standing come together (Fernando, 1989 and Shanmugan, 1989).

However, several arguments have been raised for and against the esusu clubs as a savings and credit institution. Ngozi (1982) enumerated some of the disadvantages of esusu clubs to include lack of integration with each other and with other institutions within and outside the rural environment. They also possess certain operational characteristics that serve to reduce their attractiveness to the rural population.

According to Madu et al (1991) another disadvantage is the probability that the loan granted is not utilized properly. The initial and follow-up screening found in bank lending is not there and no one cares what a beneficiary uses the money for. Rural people are accused of misapplying such loans on activities, which are incongruent with their economic well-being.

Polygamy and chieftaincy titles are two of such activities. Such misallocation of funds is a misplacement of emphasis in a system that needs rational decision-making in utilizing available savings.

The above enumerated disadvantages notwithstanding, the informal credit institutions still enjoys enormous patronage. The reasons for this includes accessibility to credit, flexibility in borrowing and minimal lending cost (Reidinger, 1994); efficiency of information channels between informal lenders and customers (Teranishi, 1994); and joint liability that goes with team lending where such is the case (Zeller, 1994).

Holt and Ribe (1991) contended that the esusu groups do not have difficulty in meeting the needs of their clients when loans are synchronized as they are, for example, at the beginning of agricultural production cycles; nor do they typically pay interest. Money collector systems are also susceptible to security problems and when collectors run off with deposits, clients have little recourse.

However, there is growing evidence in the country that SHGs have been able to record productive gains and get at the root of poverty much more effectively than government institutions that benefit a few communities or a few families. For example, the Farmers' Development Union (FADU) successfully mobilized savings from 300,000 savers and disbursed loans totally 46.4 million in 1996 to thousands of the poorest of the rural poor. Repayment rates are over 96% (Awolowo-Dosumu et al, 1997).

In his study of Rotating Savings and Credit Associations (ROSCAS) in Bolivia, Adams (1983) concluded that ROSCAS may evolve over time as economic objectives, but gradually engulfing social function, hence playing an important socializing for both the poor and well to do.

It was however noted that there was a consensus among all the authors, that an important virtue of this arrangement is the freedom from bureaucracy/formality; there is no time wasting and accessibility is guaranteed. Rural people find ease in participating in it.

2.10 Measurement of Poverty

There are many ways by which poverty can be measured. These includes:

(i) **Absolute and relative measurement** – it is based on the mathematical formulation of Foster, Greer and Thorbecke which explains poverty indices using an index which varies according to the particular poverty measure one intends to compute.

Foster, Greer and Thorbecke (FGT) indices are based upon the existence of households within the country which are classified according to income and estimated directly or through consumption-expenditure and a poverty line.

(ii) **Subjective Poverty Measurement** – is based on premise that the opinions of persons with respect to their own situation should invariably be the determinant in defining poverty. Some of the exponents of this poverty measurement based their methods on Income Evaluation Questions while others based theirs on questions about necessities that a household should possess.

In nearly all the subjective measurement, approaches the issues of family size and a host of other household characteristics such as age, education and occupation have been found necessary as inputs (Job, 1998).

(iii) **Other Approaches to Poverty Measurement**

The Food Intake Method – this approach is based on the minimum nutritional requirement. This is a proxy for food intake (calories) and hence converted into minimum food expenses. Sometimes other non-food expenses such as shelter and education are added. Any household unable to meet these minimum requirements is considered poor.

The Basic Needs Method – It is predicted upon what are the necessity for a person or household to lead a functional life. This leads to the determination of both the food and non-food items that can constitute basic needs. These are then converted to expenditures.

Human Development Index (HDI) is based on life expectancy at birth, literacy rate and per capita income. Since 1994, the HDI has been calculated based on four variables thus life expectancy, adult literacy, average number of years of education and adjusted income (UNDP, 1994).

There is need to measure the extent, dimension and severity of poverty in order to know the right strategies to alleviate it. According to the World Bank (1992), measurement of poverty enables policy makers to:

i) gauge the magnitude of a country's poverty problem,

ii) provides statistical basis for analyzing the problem and monitoring its incidence,

iii) influence the design of intervention policies and strategies.

CHAPTER THREE

METHODOLOGY

3.1 The Study Area

The study was conducted in Ijumu Local Government Area of Kogi State. The State is in the Southern Guinea Savanna ecological zone of Nigeria. The study area is located in the Western part of the State and lie between latitude 7^0 30 and 8^0N and longitude $5^0$3 E and 6^0 0 E (Aiyeku, 1993). The State has an estimated population of 2,147,756 in 1991 out of which Ijumu Local Government area has a population of 61,895 (National Population Commission, 1998)

The State has typical Savanna climate with distinct wet and dry seasons. The wet season falls between the months of April and October while the dry season is between November and March. The mean annual temperature varies between 27^0C and 37^0C. The relative humidity varies between 30 and 40 per cent in January and rises to 70 and 80 per cent in July/August (National Population Commission, 1998).

The predominant occupation of the people in the area is farming. About 90% of the populations engage in farming. Crops grown include yam, cassava, maize, guinea corn, beans, cocoyam and vegetables. Tree crops are grown on a small scale in scattered patches that have been adversely affected by bush burning in recent times. Livestock such as goats, poultry, sheep and pigs are kept on small scale, though these do not constitute a major source of farm income (Aiyeku, 1993).

3.2 Sampling Procedure

Multi-stage sampling technique was adopted for this study. Ijumu Local Government Area was selected out of the 21 Local Government Areas that make up Kogi State. Four villages namely Iyah-Gbede, Aiyetoro, Iyara and Araromi were randomly selected out of about 23 villages/hamlets that make up the Local Government Area. Random sampling technique was then used to select respondents from each village. Thirty household heads were chosen from each of the selected villages to get 120 respondents. In order to gather reliable data on the economic activities of the selected households, the household heads were chosen as the unit of analysis.

3.3 Data Collection and Sources

Two major types of data were used for this study namely; primary and secondary data. The primary data were generated from field interview schedules and structured questionnaire. These were used to solicit answers to questions relating to:

i) household heads general background information such as age, years of experience (farming), household size, educational level, farm size, income level etc;

ii) utilization of savings, reasons for saving, problems associated with savings. The data were collected based on year 2002 farming/household activities.

Secondary data on farming system, savings pattern and other relevant existing information relevant to this study were obtained from the Local Government Area Headquarters, Journals, World Bank reports etc.

3.4 Analytical Tools

The following analytical tools were used to achieve the objectives of this study.

3.4.1 Descriptive Statistics

Descriptive statistics such as means, median, percentages and frequency distribution were used to achieve objectives (i) and (iv).

3.4.2 Multiple Regression

A multiple regression technique was used to achieve objective (ii). In this study, quantifiable factors, which were hypothesized to affect savings, were included in the equations. One of the first steps in the application of multiple regression analysis is the specification of the dependent and explanatory variables as well as the functional form of the behaviour model. The specification of the general form of the model would require that the variable to be explained (dependent variable), S be hypothesized as a function of independent variables – X_1, X_2, X_3 ….X_5. Therefore, the model under consideration can be specified as

$S = f(X_1, X_2, X_3, X_4, X_5, u)$

Where S= rural savings (₦)

X_1= current assets (₦)

X_2= gross income (₦)

X_3= age of household head (years)

X_4= household size (No)

X_5= Years of experience (years)

U= error term

It should however be noted that even under the best modeling conditions, only part of the variable is reportedly 'explained' by the regression with the unexplained portion occurring because the regression does not perfectly predict the dependent variable.

The general model can take several functional forms. Three functional forms were fitted to the data collected. These are the linear, semi-log and double log. The linear function was selected as the lead equation being the one with the best fit. The criteria for selection include:

(i) magnitude of coefficient of multiple determination (R^2)

(ii) appropriateness of the signs of regression coefficient

(iii) significance of F-values

3.5. Specification of the Models

1) **Linear Function-** In using this functional form, a linear relationship is assumed to exist between the dependent and the independent variable. The equation may be written thus:

$S= b_o +b_1X_1+b_2X_2+b_3X_3+b_4X_4+b_5X_5+u$

Where S= rural savings (₦)

X_1= current assets (₦)

X_2= gross income (₦)

X_3= age of household head (years)

X_4= household size (No)

X_5= Years of experience (years)

U = error term

b_o = constant term

b_1-b_5= regression coefficients

The biggest advantage of linear function is the ease with which it can be fitted with the Ordinary Least Square (OLS) regression model. Its disadvantage is the assumption that all inputs are perfect substitutes of each other with constant rate of return. In this study it was assumed that the incomes of respondents do not vary significantly.

(2) Semi-log function

$S= b_o +b_1 \log X_1+b_2 \log X_2+b_3 \log X_3+b_4 \log X_4+b_5 \log X_5+u$

Where S, b_o, b_1-b_5, X_1-X_5 and U are as defined in the linear function

The advantage of semi-log function are that it allows for constant, increasing or decreasing marginal productivities and allow for a constant elasticity. However, it does not have a defined optimum and do not allow for diminishing total product.

(3) Double-log Function

$\log S= b_o +b_1 \log X_1+b_2 \log X_2+b_3 \log X_3+b_4 \log X_4+b_5 \log X_5+u$

Where S, b_o, b_1-b_5, X_1-X_5 and U are as defined in the linear function.

One of the good qualities of this function is its ability to directly measure elasticities of response of independent variables. Another advantage is that it can be used for any number of independent variables without any problem in computation and interpretation of coefficients. Estimated beta coefficient was used to compare the relative importance or strength of the explanatory variables in explaining variability of savings.

$$B_j = \frac{C_j S_{xj}}{S_y}$$

Where Bj = beta coefficient

Cj = regression coefficients of Xj

Sxj = standard deviation of Xj

Sy= standard deviation of dependent variable (y)

(Olayemi, 1998)

3.6 Selected Variables and their Measurement

The variables selected and included in the multiple regression models are as follows:

1. Current Asset (X_1): This is the amount of cash in hand, values of harvested crops and animals in hand. It is assumed that the higher the current asset the more a household will tend to save. Thus, a positive relationship is expected between rural savings and farmers' current asset.

2. Gross Income (X_2): It is the sum of farm income and non-farm income accruing to the respondents at the time of the study. It is included in the model to accept or reject the assumption that the smaller a respondents income, the less will be his desire or willingness to save and vice versa.

3. Age of Household Head (X_3): This is the age of the household head in years. It was included in the model to confirm or reject the assumption in the literatures that the older the farmer, the better his savings capacity.

4. Household Size (X_4): It is the summation of the number of wives, children, relatives and dependents living in a household at the time of investigation. It was included in the model to accept or reject the assumption that, the larger the household the less its savings.

5. Years of Experience (X_5): This is the number of years that the household head has been involved in farming- the primary occupation in the study area. Its inclusion is therefore to accept or reject the assumption that the more experienced the respondent is in farming, the more he will be able to produce, which may influence his desire to save positively.

6. Savings (S): The amount of savings mobilized over a period (a year), it is measured in naira (₦).

7. Error term (U): The amount of savings mobilized by household may not be completely accounted for by the five selected quantifiable variables. The model may not account for some other unquantifiable factors such as status and attitude. Therefore, the inclusion of the error term was to account for other variables, which may not have been captured by the model.

3.7 Person Correlation Analysis

Pearson Correlation coefficient or simply the Pearson (r) examines the significance or otherwise of the association between two variables both of which must have been measured on at least an interval scale. It is regarded as the most powerful measure of correlation.

Two variables may have a positive correlation, a negative correlation or may be uncorrelated. Positive correlation occurs when two variables tend to change together in the same direction, that is, they tend to increase or decrease together. Negative correlation occurs when two variables change in opposite direction, that is, one increase while the other decreases and vice versa. No correlation occurs when two variables tend to change with no correlation to each other.

Pearson Correlation analysis was used to achieve objective (iii), the basic tool of correlation analysis is the correlation coefficient. The correlation coefficient measures the degree of linear association between two jointly distributed random variables. The sample correlation coefficients were calculated using the formula:

$$r_{xy} = \frac{\sum_{i=1} (x_i - x)(y_i - y)}{\sum_{i=2}^{n} \sqrt{(x_i - x)^2 (y_{i-} y)^2}}$$

Where x_i and y_i are the observations on x and y respectively; n is the sample means of the variables; y is savings and xi is explanatory variables as indicated in 3.4.2.

Limitations of Correlation Analysis

(1) It can only be applied when the relationship between the variables is linear. However, two variables may be strongly correlated with non-linear relationship.

(2) Correlation analysis does not establish a functional relationship, that is, it does not prove which is the dependent and which is the explanatory variable.

3.8 Poverty Gap Index (or ratio)

This is the difference between the poverty line and the mean income of the poor, expressed as a ratio of the poverty line. It gives a good indication of the depth of poverty. It was used to determine the percentage of income required to bring each individual below the poverty line up to the poverty line. The mathematical model developed by Foster, Greer and Thorbecke (1984), which is also called the P-alpha class of poverty measures was used to achieve objective (v).

$$P_\alpha = \frac{1}{N} \sum_{i=1}^{q} \frac{(Z - Y_i)^\alpha}{Z}$$ (poverty gap index)…………………………….(1)

Where Z= poverty line

q= number of households below the poverty line

n= number of households in the reference population

Yi= expenditures of respondents households

$\propto$= Foster, Greer and Thorbecke (FGT) index which takes the values 0, 1, 2

In using this model, consideration was given to differences in the needs due to different household size and composition. The household expenditure per adult equivalent was used as the welfare measure. There are wide choices of adult equivalent scales and different scales are used in different countries. The most commonly used is that of the Organisation for Economic Co-operation and Development (OECD) because of its simplicity of use and wide familiarity. The scale is expressed as follow:

$$Exp_{eq} = \frac{Exp}{n^{(0.7)}}$$

where

Exp = total household expenditure

n = household size

0.7= exponential formation representing other adults in a particular household (Glewwe, 1990)

A cut-off point need to be selected to serve as poverty line across the distribution of real household expenditure per adult equivalent. The use of an absolute line such as x dollars in Purchasing Power Parity (PPP) is rejected due to frequent fluctuation in the country's exchange rate, hence a relative poverty line set at one-third (1/3) of the mean consumption-expenditure was used in identifying the core poor (Anyanwu, 1997).

3.8.1 Simple Head Count Ratio/Poverty Incidence

This gives the percentage of the sample, which lives in the household with consumption per capita less than the poverty line. In other words, it measures the number of poor as a percentage of the total population. The poverty aversion parameter equal zero.

From equation (1)

If $\propto = 0$ the poverty index becomes

$$P_0 = \frac{q}{N} \qquad \text{…….(2)}$$

3.8.2 Poverty Depth (Income Gap Ratio)

The Poverty Depth or Income Gap Ratio/Expenditure Gap Ratio expresses the average short fall as a fraction of the poverty line itself. It can be used to determine the percentage of income required to bring each individual below the poverty line up to the poverty line. A useful index is obtained when the head count ratio of poverty is multiplied by the income or expenditure gap ratio; or it is when the poverty aversion parameter is equal to one.

$$P_1 = \frac{1}{N}\sum_{i=1}^{q}\frac{\left(Z - Y_i\right)^1}{Z} \qquad \text{…….……..…..(3)}$$

3.8.3 Severity of Poverty Index

This is the mean of the squared proportion of poverty gap expressed as:

$$P_2 = \frac{1}{N}\sum_{i=1}^{q}\frac{\left(Z - Y_i\right)^2}{Z} \qquad \text{…….(4)}$$

This index attaches greater weight to the poverty of poorest people than to those just below the poverty line.

The advantage of P-alpha measure is its decomposability. For example, the overall measure of poverty can be expressed as the sum of group measured weighted by the population share of each group.

3.9 Limitations of the Study

(1) This research was limited to one Local Government Area out of 21 Local Government Areas in the state. A more detailed study of the state (Kogi) as a whole would have been more representative and permitted for a better understanding of determinants of savings mobilization and problems associated with it so that general statements can be made.

(2) Lack of accurate data concerning farmers' operations and dependence of the research on verbal information, which depends on memory lapses and therefore are subject to errors.

(3) Using data from different households in the same year may not provide a good basis for drawing conclusions from a study of this nature.

These limitations not withstanding, the findings of this research will improve our knowledge about determinants of rural savings, forms and utilization of savings, the influence of socio-economic characteristics of household heads on value of savings and the incidence of poverty in the study area. This will help in the articulation of policies and programmes aimed at reducing rural poverty through rural capital accumulation.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

This chapter deals with the presentation and discussion of the results of the study.

4.1 socio-economic & demographic characteristics of households' heads

This section examines the socio-economic and demographic profile of the 120 households sampled in the study area. The socio-economic variables investigated include sex, age, level of education, household size, dependency ratio, farming experience, other occupations, savings habits and utilization in the study area.

4.1.1 Sex Distribution

The study revealed that the number of male-headed households was 105 accounting for about 87 per cent of the total sample. The number of female-headed households was 15 representing about 13 per cent of the sample. Since males head the majority of households, it means that it is likely that they will generate more income for the family, which might lead to more savings; as farming is predominantly carried out by males in the study area.

Table 4.1: Sex Distribution of Respondents

Sex	Frequency	Percentage
Male	105	87.5
Female	15	12.5
Total	120	100

4.1.2 Age of Household Heads

Table 4.2 shows the distribution of respondents according to age. About 60% were between the ages of 31 and 50 years, about 17% were between the ages of 51-60 while only 4% were over 70 years. This shows that most of the respondents were middle aged. The average age of the respondents was 48 years. This age group is considered more productive, active and virile for the primary occupation of the respondents - farming.

Table 4.2: Age Distribution of Respondents

Age	Frequency	Percentage
21-30	7	5.83
31-40	27	22.5
41-50	46	38.33
51-60	20	16.66
61-70	15	12.50
Above 70	5	4.16
Total	120	100

4.1.3 Educational Status

The result in Table 4.3 showed that about 21% of the respondents had no formal education, about 35% had primary school education, 25% had secondary education and about 19% had tertiary education. The analysis of educational status revealed that about 79% of the respondents had one form of formal education or the other. Majority of these terminated their education at the

primary school level (35%). This is not adequate to influence the adoption of new techniques that will improve their productive activities.

Illiteracy is generally regarded as one of the factors militating against agricultural development among farmers in Nigeria. Education will enable farmers to handle instructional manuals on input and machinery uses. It will also help him to expand thereby generating more income that ultimately increases his savings capacity.

Table 4.3: Educational Status of Household Heads

Educational Status	Frequency	Percentage
No Formal Education	25	20.83
Primary	42	35.00
Secondary	30	25.00
Tertiary	23	19.16
Total	120	100

4.1.4 Household Size

Household size was categorized into four groups namely: 1-5 persons, 6-10 persons, 11-15 persons and 16-20 persons. The result of this is as shown in Table 4.4. Data analysis revealed that average household size is 6 persons. Respondents in the first category made up 40% of total sample, the second category had 48 %, third category 10% while the fourth category constituted about 2% of the sample. This indicates that a substantial amount of household income will be consumed due to the relatively large household size.

Table 4.4: Household Size

Family Size	Frequency	Percentage
1-5	48	40.00
6-10	58	48.33
11-15	12	10.00
16-20	2	1.66
Total	120	100

4.1.5 Dependency Ratio

The proportion of the non-working population (adults above 65 and children below 14 years) to the working adults in the sampled population is the dependency ratio.

Table 4.5: Dependency Ratios

Household Structure	Frequency	Percentage
Working Adult	256	46.04
Non-Working Adult	72	12.94
Children	228	41.00
Total	558	100

As shown in Table 4.5 the working adult accounted for about 46 per cent, non-working adults were about 13 per cent, while the non-working children accounted for 41 per cent of the sampled population. Therefore, the dependency ratio is about 1:1. It means that consumption will be high because of large number of dependents. This will have adverse effect on income hence savings is retarded.

4.1.6 Farming Experience

Most researchers in lieu of management as a factor of production use years of farming experience of household head. It is believed that the higher the years of farming experience of a farmer, the more the management ability of such farmer in making farm decision. Table 4.6 shows that the mean years of farming experience of respondents were 26 years implying that most of the farmers interviewed were experienced. The implication is that such farmers are likely to make sound decisions that would increase output, income and consequently savings.

Farmers below 10 years of experience were about 6 per cent. About 37 per cent had experience of between 10 and 20 years; 27 per cent had experience between 21-30 years, 18 per cent had experience between 31-40 years while about 13 per cent had experience above 40 years.

Table 4.6: Farming Experience of Respondents

Experience (Years)	Frequency	Percentage
Below 10	7	5.83
10-20	44	36.66
21-30	32	26.66
31-40	21	17.50
Above 40	16	13.33
Total	120	100

Mean years of experience = 26

4.1.7 Occupation and Average Savings per Household Head

Apart from farming which was the major occupation of the respondents, other occupations such as trading, carpentry, tailoring, and civil service also exist. Table 4.7 shows that farmers motivation to save depend largely on the incomes they get from primary and auxiliary economic activities. Household heads with off –farm income to supplement farming had more to save, while savings were least with household heads with farming as the only occupation.

The average savings per household in different occupational categories were: farming, farming/trading, farming/Artisans, farming/civil servants were ₦14, 989.45, ₦48, 471.00, ₦35, 005.30 and ₦41, 830.92 respectively. The reasons for low savings by households with farming as the only occupation may be attributed to the fact that they were more inclined towards consumption rather than investment opportunities provided by other forms of occupation. In addition, it showed that farming, as the only occupation was the most unfavorable occupation for savings. The implication for this is that policies must be designed to generate higher income by introducing off-farm (cottage) industries, which may lead to greater savings in the rural area.

The above findings are similar to that by Yinusa (1991) who asserted that multiplicity of avenues of earning was a contributing factor for enhancing rural farmers' savings behaviour.

Table 4.7: Distribution of Respondents by Occupation and Average Savings

Occupation	Number of Respondents	Percentage Of Respondents	Average Savings/Household heads (₦)
Farming	24	16.7	14,989.45
Farming/Trading	18	20.0	48,471.00
Farming/Artisan	40	28.9	35,005.30
Farming/Civil Servants	38	34.4	41,830.92
Total	120	100	

It can also be deduced from the findings that a household's ability to save depend to a greater extent on the income they get from both primary and auxiliary economic activities. Households involved in farming/trading had the highest amount of savings, while for household with farming as the only occupation had the least.

The study further shows that the mean amount saved was ₦35, 393/household while the gross income was ₦163, 597/household. This means that either large sum of money is spent for consumption or that household had no enough to save. The minimum and maximum Average Propensity to Save (APS) were 0.05 and 0.466 respectively. The implication is that a minimum of 5% and maximum of 46% of gross incomes of household heads were saved while the remaining were either consumed or invested.

The implication of this ratio is that about 22% of gross incomes of households were saved while the remaining 78% were either consumed or invested.

4.1.8 Distribution of Household Head Income and Savings

Table 4.8 shows that the mean gross income and savings were ₦163, 597 and ₦ 35,393 respectively while maximum gross income and savings were ₦558, 100 and ₦260, 000 respectively.

Table 4.8: Sample Statistics for Household Income and Savings Distribution

Sample Statistic	Gross Income (₦)	Savings (₦)	APS
Mean	163,597	35,393	0.216
Mean Deviation	162,234.075	35,098.15	0.216
Maximum	558,100	260,000	0.466
Minimum	19,400	1,152	0.059
Standard Deviation	104,970	41,497	0.395
Coefficient of Variation (%)	64.16	117.24	-

Two indices of inequality, mean deviation and coefficient of variation were computed for income and savings. The higher the indices, the greater are the dispersion and therefore the greater the inequality among households. From Table 4.8, gross income was more equitably distributed and stable than savings because its coefficient of variation (64.16 %) is lower than that of savings (117.24).

4.1.9 Forms of Savings

Table 4.9 shows the various forms of savings by different households. From the table about 33% of the sample respondents prefer to save with the savings clubs (*Ajo*) because of its simplicity and easy accessibility by participants. A similar study by Mrak (1989) confirmed the above reasons for the high percentage of household that belong to at least one savings club. On the other hand, about 30% belongs to savings club and at the same time have some form of savings with the bank; while about 17% saved only with the banks. About 20% do not save either with the savings club or with the banks. They keep their money either with friends and relatives or at home. The reason for this could be due to lack of regular earnings, age and class in which a respondent belongs to in the rural society. The findings confirm that of Shanmugan (1989) who stated that one of the condition for eligibility into a savings club is regular source of income.

Table 4.9: Forms of Savings

Forms of Savings	No. of Respondents	Percentage	Average Savings (₦)
Savings Clubs (Ajo)	40	33.33	86, 658
Savings Club & Banks			
Banks	36	30.00	78, 000
Friends & Relatives	20	16.66	42, 016
At Home	16	13.33	41, 600
	8	6.66	20, 800
Total	120	100	

4.1.10 Households Savings Habits and Utilization

Savings in the study area are held in two forms- cash and in kind. Savings in cash were generally held with informal financial institutions. Savings in kind were generally composed of animals and birds (goats and chickens), farm produce reserves, economic trees. Animals are easily convertible to cash within a few hours as the need arises. Therefore, this forms of savings functions like money in the rural economy.

Savings utilization by households as shown in Table 4.10 it shows that about 28% of respondents use their savings for farm investment principally for purchase of hoes and cutlass; 20 and 19 percent used savings for the education of children and family upkeep respectively.

Table 4.10: Savings Utilization by Households' Head

Uses of Savings	Numbers of Household	Percentage
Family Upkeep	23	19.16
Children's education	24	20.00
Emergency cases	13	10.83
Farm investment	33	27.50
Precautionary Motive	17	14.16
Improving standard of living	10	8.33
Total	120	100

4.2 Determinants of Rural Savings

Empirical results of the determinants of rural household savings were obtained by means of regression analysis. Several factors are known to influence the saving capability of farmers. The purpose of this analysis was to determine the extent to which these important factors explain the variability of savings. The three models mentioned in chapter three were fitted to the data.

The linear function had the best fit and was selected as the lead equation for the analysis based on the criteria mentioned in chapter three. The linear function was estimated as:

$S= -4295-0.0626X_1 + 0.01541X_2 +909.6632X_3-413.0332X_4 +748.3643X_5$

The regression results as shown on Table 4.11 indicates that about 55 per cent of the variability in savings was accounted for by the explanatory variables included in the model. The regression signs for gross income, age of household head and years of experience show positive relationship with the amount of savings, while that of current asset and household size show a negative relationship.

The regression coefficients of gross income, age of household head and years of experience were significant at 1% level of probability, while that of current asset and household size were not significant at 1%, 5% and 10% levels of probability. The F value, which measures the joint significant of all the explanatory variables in the model, was 27.524, which was significant at 1% level of probability.

Table 4.9 also shows that the age of household head had the highest beta coefficient of 0.3381, it means that a 1 standard deviation change in the independent variable leads to 0.3381 standard deviation change in the dependent variable. The beta coefficients can thus be ranked as:

$X_3>X_5>X_1>X_2>X_4$

Table 4.11: Estimated Regression Coefficients for Savings

Independent Variables	Regression Coefficient	T-Values	Beta Coefficient
Constant	-42952*	-5.435	
	(7902.78)		
Current Asset (x_1)	-0.06265	0.751	0.0531
	(0.0834)		
Gross income (x_2)	0.1541*	5.752	0.0424
	(0.0267)		
Age (x_3)	909.6632*	4.350	0.3381
	(209.1388)		
Household size (x_4)	-413.0332	-0.488	0.0368
	(846.81168)		
Years of experience	748.3643*	3.889	0.2928
(x_5)	(192.4468)		
$R^2 = 0.546$			
$R^{-2} = 0.527$			
DW=1.86			

Source: Author's Computation

* = Significant at 1% level of probability

DW= Dublin Watson test

Figures in parenthesis are standard errors.

Test for Autocorrelation

To test for the presence or absence of autocorrelation.

If DW> du and DW< 4-dl, then there is no autocorrelation.

Where Dw = Dublin Watson

Du = Upper table value for Dublin Watson

Dl = Lower table value for Dublin Watson

Therefore 1.86 > 1.758 and 1.86 < 4-1.592 (2.408)

It can be concluded that there is no autocorrelation.

4.3 Effects of Some Socio-economic Characteristics on Value of Savings

The Pearson Correlation Analysis was used to determine the effects of socio-economic characteristics on value of savings in the study area.

Current Asset and Savings

The result in Table 4.12 shows that current asset was positively correlated (r =0.0899) with values of savings. The correlation coefficient was however not significant. The explanation for this is that respondents with less current asset save more. Although this finding is against the a priori expectation, it clearly highlighted the fact that having more current asset may not always be a factor in the value of savings.

Gross Income and Savings

Table 4.12 shows that the correlation coefficient of savings with gross income was significant at (1% level of probability) and positive (r =0.52318). It implies that household heads with higher income tend to save more. The result confirms the a priori expectation, that the higher a respondent's income, the more the likelihood that he will save more. The relationship between

gross income and current asset was significant at 1% level of probability. This means that the higher the income, the more the current asset that is likely to be acquired.

Age of Household Head and Savings

As shown in Table 4.12 age of household was positively correlated (r =0.57609) with savings. The correlation coefficient was significant at 1% level of probability. This was however, contrary to the a priori expectation. It is expected that the older the household head, the less his physical abilities and savings capacity; hence his savings will gradually fall. Thus, a negative coefficient of household head age appears to be consistent.

Household Size and Savings

The result in Table 4.12 shows that household size was weakly correlated with savings (r = 0.35986) and statistically significant at 1%. This finding does not conform to the general expectation. Large households consume more and save less out of their gross income, which leads to a negative coefficient. An explanation for the positive correlation of savings with household size according to Yinusa (1991) may be due to the fact that, larger households have higher level of family labour and consequently a substantial amount is saved from farming expenditure

Years of Experience in Farming and Savings

The result in Table 4.12 shows that year of experience in farming was positively correlated (r = 0.50623) and significant (1% level of probability) with savings. This is in agreement with the a priori expectation that the more experienced the respondent is in farming, the more he will be able to produce, which may influence his desire to save more.

Table 4.12: Pearson Correlation Coefficients between Values of Savings and Socio-economic Characteristics

	Value of savings	Current Asset	Gross Income	Age	Household size	Years of experience
Value of Savings	1.0000					
Current Asset	0.08994	1.0000				
Gross Income	0.52318*	0.41160*	1.0000			
Age	0.57609*	-0.01733	0.26295*	1.0000		
Household Size	0.35986*	-0.06195	0.24627*	0.47466*	1.0000	
Years of Experience	0.50623*	-0.09538	0.14010	0.48819*	0.43874*	1.0000

*Coefficients significant at 1% level of probability

4.4 Constraints to Savings Mobilization

Respondents were asked to indicate problems militating against savings mobilization in the study area. The main factors identified were:

i. Limited savings capacity was ranked first by about 38% of respondents (Table 4.12), it means that majority of respondents economic activities are at a subsistence level, therefore

income from these activities cannot meet their basic needs not to talk of having surplus to save. This affects their savings capacity adversely.

ii. Distance and cumbersome procedures of banks were ranked second and third respectively. Banks network in the study area is sparsely distributed, 22% of respondents have to travel long distances to have access to a bank. On the other hand, about 20% of respondents shy away from banking because of the delay and red-tapism that often accompanies bank transactions.

iii. Another major constraint to savings mobilization is low interest rate (about 17 % of the major constraints). Nigerians do not general save because of the impact of inflation in our economy. A situation where high rising inflation is the norm, savings is endangered as the value of the sum saved is depreciated, hence most respondent would not embark on such as the interest paid for saving is lost to inflation.

iv. Price instability was ranked fifth and accounted for about 9% of the major constraints. All respondents participate in one form of farming or the other. Prices of their farm produce fluctuate due to the forces of demand, supply, and glut in the market during harvest. The resultant effect is price instability, irregular income and savings.

Table 4.13: Constraints to Savings Mobilization

Constraints	Number of Respondents	Percentage	Ranking
Limited Savings Capacity	45	37.5	1st
Distance of Banks	26	21.66	2nd
Cumbersome Procedures	24	20.0	3rd
Low Interest Rate	14	16.66	4th
Price Instability	11	9.16	5th
Total	120	100	

4.5 Magnitude of Poverty in the Study Area

In estimating the poverty indices, this study measured the well-being of households by their total consumption-expenditure and by their household size using the adult equivalent scale. Having established the individual member of the household consumption-expenditure, a cut off point (using the 1/3 of mean income per capital consumption-expenditure of the whole sample under study a poverty line) was established at ₦1, 274.90 per month per adult equivalent, to identify the core poor. The method is also known as absolute poverty measure. From this the P-alpha class of poverty measure was used in determining the head count, depth, and the severity of poverty in the households.

The measures were divided into two namely, number of households below poverty line using occupational groups and total number of poor household below poverty line (Table 4.14).

Results of the analysis as shown in Table 4.14 shows that farming/artisans had the highest number of households (35) below poverty line, followed by farming (18), farming/trading and farming/civil servants had nine households each. The corresponding head count poverty indexes were 0.29, 0.15, 0.075 and 0.075 respectively. This means that 29%, 15%, 7.5% and 7.5% of household heads in these occupational groups in the study area has a consumption level below the poverty line respectively. Household heads engaged in farming/artisans therefore had the highest poverty level, followed by those in farming, while farming/trading and farming/civil servants had the lowest poverty level. The reason might be due to the composition and size of the household. Inadequate access to markets for the goods and services due to poor road network might be another probable reason.

The poverty gap (depth) results shows that household heads in farming/artisans has the highest index of 0.11, followed by farming (0.058), farming/trading (0.041) and farming/civil servants (0.019). It means that 11%, 5.8%, 4.1% and 1.9% of expenditure is required respectively to bring individuals within the households up to the poverty line.

The poverty severity indexes as shown in Table 4.14 shows that farming/artisan has the highest index of 0.041 followed by farming only (0.0228), farming/civil servants (0.005) and farming/trading (0.0022). This means that household heads engaged in farming/artisans has the highest percentage of the poorest (4.1%) followed by farming only (2.28%), farming/civil servants (0.5%) and the least farming/trading (0.2%).

The poverty measures for all categories of households as indicated in Table 4.14, shows that 77 households out of the 120 sampled household were classified to be living below poverty line; while only 43 households were above poverty line. The poverty head count; depth and severity were 0.66, 0.42 and 0.27 respectively. It means that 66% of the sampled

households lives below the poverty line of ₦1, 274.90 per month; while 42% of the expenditure is required to bring individuals within these 77 households up to the poverty line. The poorest households accounted for 27% of the sample households.

The average household size of households living below poverty line was about seven. This has implication on the poverty level in the study area. According to CBN/World Bank Study (1999), poverty becomes compounded with large household size. For example, poverty head count was 9% for those households of four members in 1980 while it was 80.9% of households with 20 members. The corresponding figures are 64.6% and 93.6% in 1996 respectively (Awoseliya, 1999)

Table 4.14: Foster-Greer-Thorbeeke (FGT) Poverty Measures for Households

Types of Occupation	No of poor Households	P_o Index	%	P_1 Index	%	P_2 Index	%
Farming/artisans	35	0.29	29	0.11	11	0.041	4.1
Farming only	18	0.15	15	0.058	5.85	0.0228	2.28
Farming /trading	9	0.075	7.5	0.041	4.12	0.0022	0.2
Farming/civil servants	9	0.075	7.5	0.019	1.9	0.005	0.5
Total Sample	77	0.66	66	0.42	42	0.27	27
Avg. H/hold size	7						

Source: Author's Computation from Field Survey Data, 2003

Where P_o = Head Count Poverty Index

P_1 = Poverty gap (Depth)

P_2 = Poverty Severity

4.6 Test of Hypothesis

F-Ratio was used to test the significance of the entire regression relationship.

Variation in Y due to:	Sum of squares (ss)	Degree of freedom (df)	$\frac{Ss}{df}$
Regression	112306156071	5	22461231214.2
Residual error	93030557786	14	81605752.44

$$\therefore F = \frac{22461231214.2}{81605752.44}$$

$$= 27.524$$

From the table of F values, the 1 and 5 per cent critical value of F with $df_1 = 5$ and $df_2 = 114$ is found to be 2.29 and 3.17 respectively. Since,

$F = 27.524 > F_{.01} = 3.17$

$F = 27.524 > F_{.05} = 2.29$

The hypotheses of no relationships between socio-economic characteristics and savings were rejected, the alternative hypotheses H_as were accepted.

CHAPTER FIVE

5.0 SUMMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

This study was designed to analyse rural savings mobilization as a means of alleviating poverty in Ijumu Local Government Area of Kogi State. One hundred and twenty households were randomly selected in the study area. The data used were of primary source, which were collected with the aid of an interview schedule and structured questionnaires. The analytical tools employed include descriptive statistics, multiple regression analysis, correlation analysis and the Foster, Greer and Thorbecke poverty measures.

The results showed that 88% of households were male-headed, while 90% were within the age group of 30 to 69. About 79% had one form of formal education. The average family size at the time of the study was six. Furthermore, the dependency ratio between working adults and non-working adults and children was 1:1. About 37% of the sampled household head had between 10 to 20 years of experience in farming. Households with farming as the only occupation accounted for 20% with an average savings of ₦14, 989.45 per year, which was the least, hence single occupation was found to be unfavorable to rural savings.

Results of the regression analysis showed that gross income, age of household head and years of experience were significant (1% level of probability). About 55% of the variations in amount of savings were accounted for by the variables included in the model. Age of household head had the highest beta coefficient of 0.33819.

The Pearson Correlation analysis showed that the relationship between savings, current asset and household size was weak, while gross income, age of household head and years of

experience in farming were found to have moderate relationship with savings at 1% level of probability.

The results also indicated that 66% of the sampled household lives below the poverty line of ₦1, 274.90 per month, while the poverty depth and incidence were 42 and 27 per cent respectively.

5.2 Conclusion

This study revealed that regular income is the single most important determinant of savings such that an improvement in farm income and other economic activities will necessitate an improvement in savings capacity. Constraints to savings mobilization such as limited savings capacity, distance and non-proximity of bank to clients, cumbersome procedures, low interest rate and price instability of farm produce. The measurement of the magnitude of poverty using consumption-expenditure showed that interventions are urgently needed to address the worsening poverty level in the study area. Such interventions and policies must be designed as a package that will address the underlying causes of low levels of income, investment and productivity.

5.3 Recommendations

(1) This research work has shown that farming being a seasonal occupation was seriously unfavorable to savings. Therefore, it is recommended that farmers should have other sources of income from trading, carpentry, fishing, tailoring etc to enhance their income, savings capacity.

(2) Low savings capacity was the major hindrance to participation in both formal and informal savings schemes. It means that respondents' resources were hardly enough to meet the basic

needs of household members. There is therefore the urgent need to bring them out of this vicious cycle of poverty by granting them credits on easier terms.

(3) It is also recommended that, more banks are needed in the area to stimulate banking habit. The few banks available need to improve in their service delivery to enlist rural Nigerians interest in banking.

5.4 Suggestions for Further Study

(i) This study was only limited to one local government area out of the existing twenty- one (21) Local Government Areas in the State; therefore effort should be made to cover more areas for a comparative result.

(ii) More studies need to be carried out all over Nigeria to ascertain the impact of socio-economic characteristics of households on their savings behaviour.

(iii) The income - expenditure approach was used in the measurement of poverty in the study. There is the need for a combination of this with the basic needs approach in order to have a general overview of the incidence of poverty in the study area.

(iv) This study limits itself to only economic variables; there is the need for a sociological study on the role of status, attitudes as they affect decisions on savings and investment.

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APPENDIX

Appendix 1: Regression Analysis Results

Functional Forms	Linear	Semi-log	Double Log
Constant	-42952	-354774	0.8828
Variable	(7902.787	(51671.191)	(1.26188)
X1	-0.00626	4871.148	0.0040
	(0.08345)	(3655.628)	(0.0892)
X2	0.15413*	14644*	0.6634*
	(0.02679)	(3909.301)	(0.0954)
X3	909.6632*	33621*	0.7341
	(209.1388)	(7537.117)	(0.1840)
X4	-413.0332	-6139.4255	-0.1428
	(846.8116)	(5149.4681)	(0.1257)
X5	748.3643*	19211*	0.1920
	(192.4468)	(5618.3300)	(0.1372)
R2	0.546	0.391	0.452
R-2	0.527	0.364	0.428
F Values	27.524*	14.646*	18.808*

The variables X_1, X_2, X_3, X_4 and X_5 are as previously defined. The standard errors of the coefficients are in the brackets. The postscripts * means that coefficients were significant at 1% level of probability.

QUESTIONAIRE

DEPT OF AGRICULTURAL ECONOMICS & RURAL SOCIOLOGY

Ahmadu Bello University, Zaria

Topic: Analysis of Rural Savings mobilization for Poverty Alleviation in Ijumu LGA of Kogi State.

Instruction: This questionnaire is for research purpose only, kindly tick or fill in the blank spaces as applicable.

Questonaire No……. Village…… Date……..

A. SOCIO-ECONOMIC CHARACTERISTICS OF RESPONDENTS

1. Age……..
2. Sex: Male ( ) Female ( )
3. Level of Education
   - (i) No formal education ( )
   - (ii) Primary education ( )
   - (iii) Secondary education ( )
   - (iv) Others (specify)…….
4. Household size: Working adult…….Male, …….Females

   Non-working adult…….Male,…….Females

   Non-Working children……Male……Females
5. How much did you and other members of the family earn from hiring out your labour during the immediate past year? N……..myself, N……..others.
6. Years of experience in farming…….years.

7. What other economic activity do you engage yourself apart from farming and how much do you earn from it?

   a. Trading ( ) Tailoring ( ) Carpentary ( ) Salary worker ( ) Others ( )

   b. Incom,e from the occupation N ……..per annum.

8. How many plots of land do you have…….?

Field number	farm size (ha)	
1……..1-2 ( )		Assumptions
2……..3-4 ( )		2, 500 heaps of upland = 1 acre
3……...4-6 ( )		6,200 heaps of upland = 1 ha
4……>7 ( )		1,000 heaps of lowland = 1 acre
		2,500 heaps of lowland = 1 ha.

B. INFORMATION ON SAVINGS AND INCOME

9.Do you have any form of savings ? Yes ( ) No ( ) if yes what form or place do you save?

Ajo ( ) Cooperatives ( ) Banks ( ) At home ( ) Others ( )

10. Give 3 reasons why you save.

…….

…….

……

11. Do you know that banks are very safe for keeping money? If so do you use the banks ? yes ( ) No ( ) , if you don't use the banks state why……..

12. What is your daily/weekly/monthly contribution or savings? N ……

13. Please indicate the assets sold during the year and the amount realized from the sales

Assets Quantity Amount (N)

Cow/bulls

Sheep

Fowls

Clothes

Yams

Banana/Plantain

Cassava

Any other (Specify)

14. List the items you gave out to friends and relations as gifts during the production year.

(a)……..(b)…….(c)…….(d)……..

15. How much did you lend to other people during the production year?

16. Indicate the items purchased during the production ?

Items Number Cost (N)

Beds

Tables

Chairs

Mattresses

Wall Clock

Mats

Cooking pots

Cooler/refrigerators

Plates

Cupboards

Buckets

Shoes

Clothes

Bangles/beads

Any other (specify)

17. What quantity of your produce did you eat……. What is the amount? N……..

18. Where do you sell your produce ?

a. At farm gate ( )

b. At the local market ( )

c. I don't sell at all ( )

19. Could you please indicate in the table below, what you spent your saving on and by how much during the year.

Items/Uses	Amount spent (N)
Farm investment	
Marriages	
Building/ repair of house	
Ceremonies	
Food	
Hospital bills, drugs	
School expenses	

Emergencies

Others (specify)

20. In addition to your farm produce and food gifts from friends and relatives, how much do you spend t feed yourself and members of the family for a week? ……

21. Did you rent out any house this year, if so how much did you realize from it?

N……

22. Did you carry out any craft this year, if so how much did you realize from it?

N……..

24. How much load of cassava did you sell this year? N…….

25. Do you own a milling machine? Yes ( ). If yes how much do you realize from operating it per day ? N ……

26. Do any of your children/relation outide the village send you money regularly ? If so how much? N…….

27. What is your major means of transportation and how much did you spend on it this year ?

a. car ( ) N……...

b. Motorcyle ( )……

c. Bicycle ( ) N……..

28. What problems do you encounter in the process of saving ?

…….

…….

Thank you for your cooperation

Cornelius Adebayo.