Thesis

By

OKPUKPARA,

BENJAMIN CHIEDOZIE

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF NIGERIA, NSUKKA

Response of Women Farmers' Savings Supply to Interest Rate and Non-Price Determinants in Abia State, Nigeria: The Implications for Rural Women Productivity

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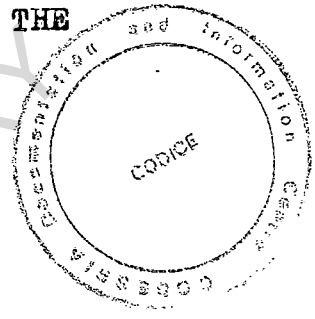
TITLE PAGE

RESPONSE OF WOMEN FARMERS' SAVINGS SUPPLY TO INTEREST RATE AND NON-PRICE DETERMINANTS IN ABIA STATE, NIGERIA: THE IMPLICATIONS FOR RURAL WOMEN PRODUCTIVITY



A THESIS SUBMITTED TO THE DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF NIGERIA, NSUKKA, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF DOCTOR OF PHILOSOPHY (Ph.D) IN AGRICULTURAL ECONOMICS

BY

OKPUKPARA, BENJAMIN CHIEDOZIE
PG/Ph.D/95/22302

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CERTIFICATION

Benjamin Chiedozie Okpukpara, a postgraduate student in the Department of Agricultural Economics and with the registration number PG/Ph.D/95/22302 has satisfactorily completed the requirements for the degree of Doctor of Philosophy (Ph.D) in Agricultural Economics. The work embodied in this thesis is original and has not been submitted in part or full for any other diploma or degree of this or any other university.

Dr. E.C. Okorji
Supervisor

Date: 19/11/98

Dr. E.C Okorji
Head of Department

Date: 19/11/98

DEDICATION

Dedicated to my Darling Mother and all those that hunger and thirst for the things of Christ.

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I am sincerely grateful to all who have rendered help, encourage or prodded me either overtly or covertly, in the course of this study.

I am particularly most grateful to my supervisors, Dr E.C. Okorji, and Dr. S.A.N.D. Chidebelu, whose enduring patience and unrivalled sense of committment proved an invaluable source of inspiration for this study. The candid advice and attention enjoyed from them is still green in my memory. I am particularly challenged by their humidity and hard work.

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ABSTRACT

The study of response of women farmers' savings, supply to interest rate and non-price determinant in Abia State, Nigeria, was carried out. A Multi-Stage random sampling technique was used to select respondents. Primary and secondary data were analysed using descriptive statistics, test of differences between means, regression analysis, chow test and beta-coefficient test.

The major findings were that women save more in informal financial institutions that formal institutions, It was also found that non-price determinants affects savings more than interest rate factor. Specifically, the major determinants of savings were level of education, dependency ratio, farm income, total consumption, proximity to informal financial institution and farm size.

The recommendations, among others things, were that women oriented informal savings institutions should be encouraged because women felt at home with such financial institutions in mobilizing savings, since non-price factors affects savings more than interest rate, much effort should be channelled into ability to save than interest rates, government should force the commercial banks to establish their banks in rural areas and give special concession to women savers.

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CHAPTER ONE

INTRODUCTION

1.1 Background Information

The importance of agriculture in economic and social development of any country cannot be overemphasized. Agriculture is the main source of income for rural families . Therefore, food production is often a path out of poverty for many poor families. Rural farmers are the main actors in agricultural development as they account for about 90% of food production in Nigeria (Olayide, 1981; Adams and Vogel, 1990). It has been reported that women in Sub-Saharan Africa now dominate the smallholder farmers and account for more than three-quarter of the food produced in the region (Saito, 1994; Mayres and Rekha, 1990). Therefore, the goal of economic diversification through food production requires enhancing the productive capacity of women farmers' economic opportunities and earning potentials.

However, the contribution of rural women in agriculture is affected by access to information, access to credit, illiteracy, and cultural and numerous socio-economic factors (Adams and Vogel, 1990). According

to Okorie (1993) and Okonjo (1991), in many African countries, including Nigeria, lack of access to credit or its inadequacies is most frequently mentioned as a leading constraint in agricultural production. This constraint is particularly more acute for women, most of whom could improve on their agricultural production if they had the requisite financial resources (Coleman, 1997). Though women in Abia State, represent majority of bankers in community banks, peoples banks, informal banks and other rural banks (because they are more populated in rural areas due to male migration), formal banks still discriminate against them from getting access to credit (Okorie, 1993; NBCB, 1997). They attributed this to the fact that women spend less time in school, rarely own property and lack collateral. In addition, credit obtained from informal financial institutions is not always enough to meaningful increase their agricultural production (Sarris, 1996; Desai and Mellor, 1993). Therefore, accessibility of credit to women is an issue of development significance.

In view of credit situation in rural Nigeria, and a peculiar constraints that surrounds the credit availability, reports have shown that a sustainable way to reduce this problem is through enhanced savings

mobilization from women farmers themselves to increase the amount of loanable funds in rural banks and increase the extent to which they accumulate capitals for farming (Rosenweig and Wolpin, 1993; Dwight, 1994; Saito, 1994; Okorie, 1993). In addition, Adams and Vogel (1990) reported that policies that focus on improving services for savers are therefore a better way to help the rural women (poor) than is cheap credit.

Savings is defined as a means of accumulating assets that perform specific functions for the saver (Vogel, 1981). Savings is categorized into financial and non-financial (physical) savings. Financial savings can be mobilized in formal and informal credit institutions. The differences in financial savings lies in their mode of operations and control. Household savings is viewed as a major form of domestic savings in most developing countries including Nigeria (Deaton, 1997). Therefore effective savings mobilization must focus on the household unit. In addition, since the population of women are by far greater than men in rural areas, the extent of savings mobilization in rural areas is determined by savings mobilization strategies that focus on women. However, Desai and Mellor (1993) noted that rural households are

mainly farmers who prefer to hold their savings in physical productive assets. These farmers also rely on external credit (which always resulted from the financial savings mobilized) to finance their farming activities.

In spite of effort and strategies to mobilize savings in rural areas through establishment of rural banking schemes and many other rural credit schemes in Nigeria, low savings (in both physical and financial terms) are still prevalent in these areas (Agu, 1985; Slob, 1991; Okorie, 1993). While the saving performance varies substantially across countries, Sub-saharan African have lower saving and investment rates than other less developed countries. Schmidt-Hebbel, et al (1994) reported that savings rate has declined from 10.7% from 1965 - 73 to 4.8% from 1982-1992. The reports also show that the gap between savings and investment has also expanded fron 6.2% to 14.4%. In Nigeria, similar results also have been reported CBN (1993) reported a decline of savings from 15.5% in 1965-73 to 7.2% from 1982-92.

Empirical evidence suggests that domestic savings and investment rate are highly correlated (Bosworth, 1993). Domestic saving is therefore central to understanding growth differentials among countries. Rural savings forms major part of domestic savings for rural agricultural investment.

In the recent, many researchers have tried to analyze the determinants of savings mobilization and savings behaviour in rural areas (Zeller et al, 1997; Desai and Mellor, 1993). They severally come to different conclusions. But often such differences centered on non-price factors and interest rates. Empirical evidence abound to support the motion that interest rate changed by financial institutions is a major determinants of savings mobilization (Fry, 1988; Sarris, 1996). There is also strong evidence that household socio-economic and other non-price factors significantly affects the total savings mobilized (Deaton, 1997; Slovin and Sushka, 1977).

However, not only that little or no work has been done on the response of rural savings to interest rates and non-price factors in Nigeria, but also works on the determinant of women farmers savings supply

in Nigeria are lacking. This has a major implication for rural finance policy and women agricultural productivity. It is as a result of the above that it becomes necessary to study the response of women farmers' savings supply to interest rates and non-price determinants in Abia State, Nigeria and its implications for rural women productivity.

1.2 Statement of Problem

The main problem currently facing the Nigerian economy (which is poor performance of her agricultural sector) is not only increasing but it is worsening even with various programmes geared towards its growth and sustainability. This problem of poor performance of agricultural sector is as a result of numerous constraints facing agricultural production. Credit has been identified as the most important constraint in agricultural production especially among women smallholder farmers. This is because not only that credit is needed by farmers to finance agricultural production but the realization of income and act of expenditure do not occur at the same time. However, far more important than this are the stochastic surges in credit and savings need that accompany technological innovation in agriculture (Desai and Mellor, 1993; Sarris, 1996).

This major problems associated with credit needs among rural women farmers could be addressed through effective savings mobilization in rural areas. Also 60 - 70% of farm investment by smallholder farmers are financed through their savings (Saeed, et al, 1996). Since majority of rural dwellers are women, the importance of developing appropriate policy to enhance women savings supply becomes a compelling necessity. Therefore, farmers need not just cheap loans, but more and better opportunities for savings, partly to reduce their dependency on borrowing.

However, low savings (both in physical and in financial terms) has been identified among women in rural areas. For instance Eze (1997) reported that women savings in formal institutions is less than 0.3 millions naira and about 0.9 million naira in informal banking institutions in rural areas. Low savings places a limit to farmers' scale of operation through low investment. In addition, almost all rural finance project in LIC's have stressed low-interest loan for agriculture and have neglected savings mobilization. This bias towards lending is also reflected in the literature of rural finance (Donald, 1976; Okorie, 1993). In Nigeria, the

situation is even worse. Evidence from rural areas in Nigeria shows that in spite of several efforts made to enhance savings mobilization, report shows that the schemes and policies have been marginal and unsatisfactory (Okorie, 1993).

A good number of studies do not make distinction between financial and non-financial savings, most often they regard financial savings (deposits) to mean total savings, neglecting the fact (Desai and Mellor, 1993) that in developing countries physical savings dominate financial savings. This error is costly and inappropriate and always lead to misleading recommendations and conclusion. Therefore, this study will examine and differentiate physical savings and financial savings as well as the determinants of each.

Apart from criticism received by both formal and informal financial credit market in financial savings mobilization, most studies have stressed on the importance of interest rate alone as an effective policy instrument for increasing savings in rural areas (Edwards, 1994; Okorie, 1993). Others Udry (1990), and Deaton (1997) have reported that total savings mobilized is determined to a large extent by non-price

factors prevailing around the savers, such as differences in socio-economic, cultural factors access to financial institutions among others. This varying views of determinants of savings shows that there is still controversy about the determinants of savings in general. In addition empirical evidence is less clear on the economic and social factors that influence saving behaviour in general and rural area in particular. According to Edward (1994), existing work has been controversial or has offered limited help to policy-makers on how saving rates can be increased.

More importantly, the issues about targeting women and women financial savings group in effort to ascertain the real determinants of rural savings supply (which often have been neglected by many researchers), may give a better policy recommendation for the determinants of rural savings. It becomes necessary, therefore, to investigate the response of women farmers' savings supply to interest rate and non-price determinants in Abia State and its implication for rural women productivity.

1.3 Objectives of Study

The broad objective of the study is to investigate the response of women farmers' savings supply to interest rates and non-price determinants in Abia State, Nigeria and its implication for rural women productivity.

Specifically the study seeks to

1) Identify various savings institutions and extent of their patronage;
2) Identify and describe different forms of non-financial savings as practiced by the rural women farmers in the study area;
3) compare the volume of financial and non-financial forms of savings;
4) determine factors that influence rural savings as well as their degree of importance as it concerns rural women farmers in Abia State.
5) make recommendation based on the findings for rural finance policy in Nigeria.

1.4 Hypotheses of the Study

Drawing from the specific objectives, this study will be guided with the following null hypotheses.

a) There is no significant difference between the value of financial and non-financial forms of savings.

b) Interest rates has no significant effects on total savings.

c) Non-price factors has no significant influence on total savings.

d) Non-price factors has no significant influence on financial savings.

e) There is no significant difference between the determinants of different types of savings (financial and non-financial).

1.5 Justification of the Study

Sustainable food production is the first pillar of food security. Studies have shown that women contribute significantly to the quest for food security (Ijere, 1986; Saito, 1994). Women have been described as the invisible workforce and the unacknowledged backbone of the family and national economy. In agriculture, the contributions of women are said to be central and pivotal. It is within this context that the well known conclusions about women emerge namely, that they contribute 60% of the labour force, and produce 80% of the food, earn 10% of the money income and own one percent of the assets (Tanko, 1995). Despite women's prominent role in agriculture, they are often faced with numerous constraints which reduce their productivity in agriculture. Many writers have

attributed this development to low savings (credit).

Worse still, the determinants of savings among rural women have not been adequately established especially as it concerns interest rates and non-price determinants in a single study. This has a far reaching implication for farm growth and food production. This research is therefore, necessary since it is expected to ascertain the problems associated with the supply of savings among rural women as well as finding ways of improving the strategies for mobilizing rural savings.

A significant number of studies do not make a distinction between financial and non-financial forms in which women hold their savings. This is important because, many a time savings are considered identical to deposits, which is clearly inappropriate. This study will therefore, distinguish between these two two forms of savings as well as the determinants of each.

It is hoped that this study will provide clearer insight into the dynamics of rural savings among women with a view of increasing farm investment among women. This study will also assist policy makers in formulating appropriate rural finance policies.

The result of this study will assist women commission, family support programme (FSP), Women Economic Advancement Programme and other governmental and non-governmental organizations that are interested in gender studies and women empowerment. Also, this work will be beneficial to researchers and students as a reference point.

1.6 Scope and Limitation of the Study

This study is a female gender study and as such it only looked at women savings whether in women-headed or men-headed household. The study also was limited to rural Abia State where farming is more prominent.

The study was also carried out in formal or informal financial institutions that has women as majority of her customers. Specifically, only these women oriented informal financial institutions were selected for interview. Formal financial institutions selected were mainly rural credit institutions. The non-financial savings was restricted to agricultural savings such as inputs, equipment and other forms of physical savings that could enhanced agricultural production.

The major limitation encountered in this study were also those that had to do with the respondent's level of literacy and those affected the accuracy of values given to income consumption, savings and investment. There was also memory lapse which could result to over-estimation or underestimation of the required information.

Also there are cases where some women were meticulously skeptical about the purpose of the research which they describe as "prying into their coveted private life", refused outrightly to grant the interview.

These limitations notwithstanding, the facts gathered and analysed are adequate satisfy the set objectives as well as permit an understanding of the response of rural savings to interest rates and non-price determinants among rural women in Abia State Nigeria.

1.7 Plan of Research Report

The work is arranged into five chapters. The first chapter consists of the introduction, problem statement, objectives of the study, justification of the study and scope and limitation of the study.

The review of the relevant literature follows in chapter two. It centres on women's credit and agricultural development, need for savings, savings institutions and their characteristics, forms and motives of savings and determinants of saving.

The third chapter focuses onmethodology adopted for the research work. In chapter four, the major findings were reported and discussed.

Finally, chapter five comprises of the summary, recommendations and conclusion based on the research findings.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

Existing literature wasreviewed under the following headings. Women, credit and agricultural development, need for savings, savings institutions and the characteristics, forms and motives for savings, and determinants of savings.

2.2 Women Credit and Agricultural Development

Important of credit in agricultural development cannot be overemphasized. Adegeye and Dittoh (1982) defined agricultural credit as the process of obtaining control over the use of money, goods and services in the present in exchange for a promise to repay at a future date. Credit for agricultural production, has been rightly recognized by both government and donors alike as important and has been promoted through various programmes and projects in Nigeria. Pishke (1974) described credit as a vehicle for agricultural development and remarked that credit is needed in agriculture in order to derive the benefits of improved technology. He reasoned that lack of small farmers' access to credit constituted a critical constraint

to the adoption of improved inputs and technology as well as overall development of agricultural production and increase farmers income. Credit constraint is more critical to women than men (Saito, 1994).

Although farmers as producers greatly prefer to hold their savings in physical productive assets in their own farms, they must also rely on external credit at various point in time, generally because the realization of income and the act of expenditure do not occur at the same time (Desai and Meelor, 1993). In another report, Olayide et al (1981), recognised the use of farm credit as a necessary input for the structural transformation and expansion of rural production. They suggested that for efficiency, credit should be institutionalized and backed by adequate funding, purposeful training, proper supervision and timeliness of operation. The question is, how many women will be able to benefit from such credit programs if we are to go by the suggestion by Olayide et al. Oyatoye (1981) attributed insufficient food production in Nigeria to lack of efficient and effective agricultural credit facilities. In addition Chidebelu (1983), reported that lack of

credit to strengthen the position of farmers in disposing their farm produce was a major problem among Nigerian farmers.

Okonjo (1991) singled out lack of credit facilities in the rural areas as the most critical problem limiting the productivity of smallholder farmers in Nigeria, especially women. Carter et al (1997) explained that the growing use of purchased inputs, compared to farm produced inputs, has created an increased demand for cash operating funds. For these inputs to become available to the smallholder farmer, who is always handicapped in terms of cash availability, there is always need for provision of adequate credit. UNDP (1997) observed that availability and access to credit by the mass of the people in the productive sector, particularly in the rural agricultural sectors are fundamental conditions of economic empowerment. Unfortunately, the Nigerian smallholder suffer seriously from severe credit droughts, despite various programme put in place.

Ezumah (1992) pointed out that there was no detailed information about female farming, that rural women are usually excluded from development planning and that only few development programmes are being undertaken for women. He attributed continued hinderance of women's access to credit to this development. He therefore concluded that rural women lack access to resources for the modernization of agriculture when compared with men. Gallin and Ferguson (1991) reported that the development of women's capabilities and potentials, however, was hindered by their lack of access to resources, that is land and credit facilities vital for agricultural production.

Saito (1994) observed that among smallholders women are particularly disadvantaged in their access to formal financial services. In Saito further reported that not only did relatively fewer women obtain credit but loans to women were also much smaller than those of men. According to Ezumah (1992) the larger gender differences in obtaining formal credit can be attributed to several factors namely, women are less mobile than men, women are less educated than men, and women lack adequate collateral.

So far, various views on women, credit and agricultural development by various scholars revealed that adequate and timely credit is a leverage for agricultural development which the smallholder farmers are lacking especially women. Sustainable financial services are critically needed by both men and women farmers to increase agricultural production. However, since women perform more functions than men presently, women would definitely need more credit than men to increase agricultural production.

2.3 Needs for Savings

Savings is income not spent on goods and services. If savings are to be mobilized, current consumption, must be held below current production and the difference channelled into added tools of production (Ifemedebe, 1995). Yaron et al (1997) recognized the fact that efficient mobilization of savings is germane to any meaningful programme of rural development. Deaton (1997) reported the important role of household consumption and saving in economic development. He observed that household saving is a major component and determinant of saving in most developing countries. Many economists see saving as the well-spring of economic growth, so encouraging savings becomes a

crucial component of a policy for growth. Others (Balassa, 1990; Browning and Annamaria, 1996); veiwed saving as a minor component of economic growth, the root of which must be sought elsewhere. Campbell (1987), reported that one method of increasing the flow of funds within the agricultural sector is to tap the surplus funds of those who have successfully adopted new technology. Desai (1976) reported that there is always stochastic surges in capital needs and savings that accompany technological innovation in agriculture. Therefore, in order to shift production function upward, farmers must be be able to save in order to purchase modern inputs.

With respect to investment, Lewis (1954) observed that the level of investment determines whether people will save more or less. He reported that if people's desire to save is excessive, there will be deflation, and if their desire to save is inadequate there will be either expansion of output if this is possible, or else inflation of prices. Hubbard, et al (1995) noted that saving may be involved in the process. They reported a situation where the required growth in agricultural productivity usually means that more capital

must be invested in agriculture. Sums of money can be set aside for this purpose by the government, and lent to the farmers through rural banks or credit societies. This involves, however, an absorption of capital into agriculture from other sectors of the economy and since all other sectors are simultaneously clamouring for capital, the more the farmers can finance themselves the better. This gives special point to savings campaigns and savings institutions in rural areas.

Agu (1985) observed that the mobilization of financial resources requires an institutional arrangement which encourages and mobilizes savings on one hand and channel savings into productive investment, on the other Sohmidt-Habbel et al (1996) observed that if saving drive growth through an automatic translation of saving into growth-enhancing investment, the main goal of policy should be to encourage savings. He also commented on the simple keynesian model which portrays saving as adjusting (through income changes) to the level of investment, with some forced savings in the short term. Greenaway et al (1991) maintained that investment expenditure are constrained by the available finance which in turn is constrained by the

availability of savings.

World Bank (1995) considers the availability of financial services and access to them as important because savings provide a kind of self-insurance. Aryeetey et al (1994) noted that as many as 67% of sampled, used their own savings as the primary source for start-up capital. They also emphasized that while owners' savings dominated the financing of all sizes of enterprises, its importance as the primary source varied by size of the firm. Saeed et al (1996) agreed that 60 to 70% of farm investments are financed by farmers through savings. Schmidt-Hebbel et al (1996) also reported that saving determines the financial rate of capital accumulation. Regardless of whether savings is the chief force during growth ensuring adequate level of savings remains a central policy concern in order to provide sufficient financing for investment.

Classical economists believed that higher saving is the precursor of economic growth so that the key to raising growth rate is to design incentives to encourage saving, almost certainly in conjunction with educational expansion so that physical and human capital formation are expanded together.

According to Balassa (1990), faster growth, whether of population or of per capita income, expands the total scale of saving among the young relative to the scale of dissaving among the old and so raises the average saving rate. Solow (1956) model showed that in neoclassical framework, increase in the saving rate would increase the level of per capita income, but would raise the rate of growth only along the transition from one growth path to the other, not permanently.

Therefore, savings is an important factor in both agricultural and economic development. The existence of vicious circle of low savings and investment and deteroriating growth in rural areas is still valid. Chimedza (1985) reported that savings has not only increased women agricultural production and other income generating activities, but also has improved women's socio-economic and financial empowerment. Savings in not only important for development, but also, maintaining adequate level of savings must be ensured in order to increase the productivity of the less vulnerable especially women.

2.4 Savings Institutions and their Characteristics

Rural women can save in formal and informal financial institutions. Formal financial institutions are subjected to Central Bank Control, while informal financial institutions are not and are prevalent in areas where individuals are quite familiar with and confident in one another. The activities of informal financial institutions are confined to well known localities and do not extend into wide geographical areas (Ijere, 1986; Adekanye, 1983).

Saito (1994) reported that women farmers are not well served by formal financial institutions. She reported that 12 percent of farmers surveyed in Nigeria had access to formal financial institutions, while the rest obtained their credit, especially women, from informal sources, such as money lenders, relatives, credit and savings associations. She also observed that informal credit sources were by far the most important sources of credit or saving mobilization from women farmers. Saito estimated that the main sources of savings were relatives (56%) and credit/savings societies (34%).

Stiglits (1996) observed that credit and savings groups are often cited as an important source of credit for rural women. However Deaton and Paxson (1995) noted that effective mobilization of personal savings depends, to a large extent, on sound monetary management and regular and expanding use of facilities provided by appropriate savings and credit institutions. Anusionwu (1986) contended that lack of banking facilities in the rural areas have accentuated a major obstacles in the way of rural banking in the country. He lamented that the rural population (which are mostly women), were left to traditional way of savings, using schemes as Isusu and other non-institutional credit markets. He concluded that it is always difficult to develop an orthodox banking habit among the rural populace.

Sarris (1996) reported that the rural informal financial market blends perfectly into the political, cultural and socio-economic lives of the people. Therefore, the habits, requirements and motivation of different types of savers are considered in these institutions. Sarris concluded that the informal credit market appears only as one of the possible assets of households among rural dwellers.

However, formal financial institutions have been criticized on the grounds that they have not been able to dominate a larger percentage of patronage among rural women because of many factors. These factors include low density of coverage, inaccessibility and interest rate (Saito, 1994; Sarris, 1996). Desai and Mellor (1993) reported that informal saving institutions have been criticized because their savings are inadequate, unsafe and less remunerative.

Apart from informal credit markets, the following association have been noted as savings and credit associations, Rotating Savings and Credit Association (ROSCAS), Rotating Savings Association (RSA), Non-rotating Savings Association. In Rotating Savings and Credit Association, members pay fixed amounts at regular intervals. Parts of the contribution is allocated to one member at a time in rotating order, another part is put into a general fund for loan. Members pay fixed or variable amount at regular interval in non-rotating savings and credit associations. The contributions are deposited and paid lack to individual members at the end of the stipulated period. All other savings associations copy from any of the two association explained above (Agu, 1985).

2.5 Forms and Motives of Saving

Apart from formal and informal credit institutions, where women can save, women may decide to hold their savings in form of financial and non-financial form. Ibiam (1992) identified the different forms of savings among rural women in Abia State to include storing of agricultural products in barns or leaving them standing in the field, giving out livestock such as fowl and goat (in such a way that the giver and the benefactor will share the livestock offspring in rotation), as well as deposits. Clark (1985) observed that women often take responsibility for particular crops where male household exists. He reported that such women crops as cassava, maize, vegetables and other grains. Mark and Knander (1996) observed that rural farmers tended to hold their savings in tangible assets.

Deaton (1997) reported that some people save to accumulate wealth, for themselves, others save so as to have something for a "rainy day", a rainy year or a rainy retirement, and yet others save because they fear consequences of facing an uncertain future with no assets. Ahluvalia (1970) observed that savings may even reflect the lack of suitable consumption opportunities, or simply the inability of a traditionally poor people to adjust their habits quickly to their

new found properity. He also remarked that where credit markets are poorly developed, people need to save in anticipation of large purchase of items.

Desai and Mellor (1993) observed that in the early stages of development, physical productive savings dominates in total savings, especially where agriculture is not commercialized and new technology has not been adopted. They argued that even when these constraints are relaxed, farmers preference for physical productive savings remains high. They concluded that through this process, farmers acquire new forms of real resources, associated with technological change, that act as different sources of capital formation and hence income.

Okonjo (1991) pointed out that the form in which rural households hold their savings is important because during the agricultural transformation phase, farmers prefer to hold savings in the form of modern, physical, productive resources. He however, felt that rural non-financial savings can only increase with an increase in agricultural production, since agriculture is the main sources of income for the rural populace.

The review has shown different forms and motives for savings. However research has shown support for different interpretations of saving behaviour and forms of savings.

2.6 Determinants of Savings

The determinants of savings have been examined in literature in developing countries. Giovanni (1985) asserted that in theory desired saving is positively related to real interest rate through both wealth and substitution effects. CBN/NISER (1992) stated that increase in rural households income since SAP should naturally have boosted rural savings and investments. The study further emphasised that the deregulation of interest rates under SAP and the resulting increase in interest rate are also expected to enhance savings. However, this had not happened, Okorie (1991) reported, that since the introduction of SAP, household savings has been decreasing. This means that interest rate alone is not capable of raising savings. Interest rate is the price of credit in the financial market interest rates usually vary over time. Anderson (1996) reported that there are theories that seek to explain fluctuation of interest rates over time. According to him, the most often used by financial managers is based on fluctuations in the supply of and demand for loanable funds. He reported that the supply of loanable funds consists of the savings of individual and changes in the amount of money in the economy. He concluded

that the general level of interest rates at any time is primarily determined by individuals desires for current expenditure, relative to their income (which determine savings) and the amount of investment opportunities available. Deaton (1990) sees the high real interest rates that accompany economic growth as promoting saving and providing the fuel for growth. Deaton observed that the accompanying physical controls on rates are seen as discouraging saving diverting what is saved. However, Balasso (1990) is of the view that the economic theory of intertemporal choice does not predict that higher interest rates raise saving, but is ambiguous about the direction of the effect. Both the life-cycle hypothesis and the buffering model are consistent with modest positive effects of interest rates on savings. Desai and Mellor (1993) reported that real interest rates in developing countries, are seen as typically low and lending to reduced savings and hence low investment rates.

Given that Desai and Mellor (1993) made a major issues of the response of savings to real interest rates, there have been substantial literature on the interest elasticity of total private saving in

developing countries. In reviews of Fry (1988), however, revealed that the empirical evidence of the response of savings to interest rate is weak and mixed. In fact, experts, such as, Deaton (1992) studied the response of the current state of developing country's total savings to real interest rates. He concluded that savings are more influenced by the ability to save and by borrowing and liquidity constraints.

Fernando (1991) noted that the determinants of rural savings are smallholder export earnings and this size and productivity of food gardens of rural households. He noted that although the real interest rate seems to have an influence, it appears that rural savings are more service elastic than interest elastic. Fernando, therefore, recommended that greater access to institutional facilities would have a considerable effect on the volume of rural savings. However, Adams (1986) admitted that interest rate policy is the most important factor in savings mobilization. Sarris (1996) cautioned that judging the potential of interest rate policy to induce farm households to save in the form of financial deposits should be undertaken with great care.

The literature considers price and non-price factors as determinants of savings price factors are represented by some measure of expected real rate of return. Because of the complexity that are involved in measuring real rate of return, many studies use norminal interest rate on one of the other form of financial saving minus the expected inflation rate (Desai and Mellor, 1993). They enumerated the non-price factors that affects savings to include permanent and transitory income, wealth, family size, dependency ratio in the family, family size, source of income and liquid assets (those essentially represent the ability to save) their study concluded that there is substantial saving even in developing countries and more importantly, in their rural sectors. They also found that non-price factors are more important than interest rate in mobilizing rural savings.

Very few studies analysed whether high fertility and closely spaced children have consequences for savings. This topic may have been neglected because, in the past, it was often believed that little saving occur at the household level in Sub-Saharan Africa (Assadi et al, 1990). Yet more resent studies of

traditional savings and credit associations and credit unions (Delancy, 1981) have shown that individual often save a considerable portion of their income. However, it is uncertain whether having many children encourages families to save more, particularly for future education costs or whether the current cost of these children prevent families from saving (Deaton, 1997). Savings may vary greetly from location, depending upon the opportunities to earn cash income and the costs of important expenditure such as, education and farming.

In his study of personal savings and family size and composition, Chernichoveky (1979) cited two examples from sub-Saharan Africa. Each of them used family size as an explanatory variable but did not consider family composition and life-cycle issues. Their results differed. Synder (1974) in Sierra Leone, found that household size did not affect the probability that household would have positive savings, but Waldorf (1977) found a negative effect of family size on household savings in Uganda.

Kolley and Swarts (1979) estimated two sets of savings model. The first, involved the net direct impact of household structure upon savings; the

second concerned the various effects of extended family's demographic structure on savings. In neither set of equations did the number of children in the household influence the level of total financial savings when income and household structure were controlled. The study showed, in general, that nuclear families earned comparatively less but save more. Whereas extended families earn more but save less. It was hypothesized that extended families offered, security to members, which decreased the importance of savings, whereas the nuclear family much accumulate savings for its own protection. Thus the number of children may be less critical than the structure of the family.

Adekanye (1983) noted that small farmers are simply two poor to save. He attributed this to high marginal propensity to consume in rural areas. Lanjauw and Rovallion (1994) observed that there is considerable evidence of a strong negative correlation between household size and composition per person in developing countries.

However, empirical investigations of savings (whether rural or total) invariably suffer from two data problems (Sarris, 1996). The first is that personal savings, whether measured by macro or

micro data are imperfectly measured. The underestimation of income in household microsurveys are well known. Also an attendant problem is that many times savings are considered identical to deposit. In settings where bank deposits form only a small portion of total savings, this is clearly inappropriate. These problem will be taken care of in this study.

This review has shown that rural saving is determined by interest rates and non-price factors. Some researchers viewed interest rate alone as an important determinants of savings while others opined that interest rate alone could not explain the determinants of savings, other factors which they called non-price factors played a major roles in determining savings supply than interest rate alone.

CHAPTER THREE

METHODOLOGY

The methodology used in this study centered on, study area, sampling procedure and sample size, method of data collection and method of data analysis.

3.1 Area of Study

Abia State Nigeria was choosen to be the study area. Abia State is located in the South-Eastern Nigeria, and is one of the nine states created in the country in August 27th,1991. It has a population of about 2,297,978 persons (Federal Republic of Nigeria Census, 1992). It is bounded on the West by Imo State, on the East by Cross River State and on the North and South by Enugu and Rivers State respectively.

Abia State lies between latitude $6^{o}0'$ and $5^{o}10'$ north and longitudes $7^{o}20'$ and $8^{o}0'$ east. It is found within the tropical rain forest ecological zone with an annual rainfall of about 2,555mm. It has two distinct seasons, the dry season which lasts from October to March and the rainy season which is from April to September. The maximum temperature is about $27^{o}C$.

Farming is the main occupation of the inhabitants of the state and these farmers are predominantly small scale farmers. The dominant criterion for selecting Abia State was the fact that formal and informal financial institutions were more prevalent in the state especially in the rural sector (NBCB, 1997). They also reported that women constitute about 2/3rd of the bankers in some of these rural banks. Apart from farm activities, women in Abia State also engaged in a wide variety of off-farm and non-agricultural activities.

Abia State is made up of three agricultural zones.

3.2 Sample Size and Sampling Procedure

Multi-stage technique was used to stratify the sample frame. At various stages, purposive and random sampling technique was used in selecting research sites and exact respondents for the study.

Stage 1: Selection of Agricultural Zones

Aba and Umuahia agricultural zones were randomly selected for this study. All the local government areas that make up these two zones formed the sample frame.

Stage II: Selection of Local Government Areas

Random sampling technique was used to select Aba North, Ukwa and Obioma Ngwa Local Government Areas from Aba Agricultural Zone and Bende, Umuahia and Ikwuano Local Government Areas from Umuahia Agricultural Zone.

Stage III: Selection of Communities

Two communities were randomly selected from each of six randomly selected local government areas. The selected twelve communities include: Umuelenda, Umechem-Ariaria, Aparazu, Ogwe, Umule, Ekenkpara, Uzuakoli, Bende, Ubakaia, Ubahu-Ibeku, Amaba and Nnono-Oboro. All the rural women farmers in these communities formed the sample frame for the respondents. This was made possible through the help of Agricultural Extension Agents covering each of the selected villages.

State IV: Selection of Respondents

From the list of selected villages and the data presented by Agricultural Extension Agents, a random sample of ten rural women were made from each of the 12 villages. This gives a total of 120 rural women (respondents).

Selection of Financial Institutions

All the financial (both formal and informal) institutions in the selected villages formed the sample frame. From the list available, 10 formal financial institutions and 26 informal financial institutions were selected for the study. The criteria for selection are one ability to divulge information, such institution must have savings facilities and such institution must be situated in rural area.

3.3 Method of Data Collection

This study used primary and secondary data for the analysis.

Primary data were collected with two sets of questionnaire, which the researcher participated himself. This was very necessary since a lot of prodding was needed to get the rural women to anser questions related to their income, savings and investments.

The first set of questionnaire was used to collect information on socio-economic and family characteristics of the respondents. Information on types of financial institutions patronized, forms in which they hold their savings and motives for such savings formed part of data collected. The choice of financial institutions patronized and reasons for the patronage also formed

required data. Information on farm size, value of agricultural assets, including agricultural stocks and inputs reserved for next planting seasons, as well as the value of agricultural produce reserved for consumption was also collected.

Information on income and expenditure of women as well as the uses of such savings were also collected.

The questionnaire for financial institutions solicited information on interest rates, volume of financial savings, inflation rates and mode of their operations in terms of opening accounts, etc.

The questionnaire were pilot-tested with 12 women farmers and two financial institutions (one formal and one informal financial institutions) before it was distributed to the targeted respondents.

Secondary data were sourced from relevant publications including text books, journals, bulletins, monographs reports; periodicals and bank document.

3.4 Method of Data Analysis

The data for this study was analysed with both qualitative and quantitative analytical techniques. A post stratification technique was used to group respondents into financial savers, those saving in both financial and non-financial savers as well as

savings in informal financial institutions and savings in formal financial institutions.

Specifically, objectives (1), and (2) were achieved with descriptive statistics, such as mean, percentages etc. Objective (3) was analysed with test of differences between means (t-test).

To realized objective (4), (5) and (6) different multiple regression analysis was used for financial savings, total savings, formal financial institution savings and informal financial savings. In addition beta coefficient test was used to measure the relative effects of explanatory variables on dependent variable. Also chow test was also used to ascertain if there is significant differences in the determinants of financial savings and non-financial institution savings.

3.5 Model Specification

The t-test model that was used to capture objective 3 is specified as thus

$$t\ cal = \frac{\bar{Y}_1 - \bar{Y}_2}{PSE} \qquad \ldots\ldots(1)$$

where $PSE = \sqrt{SE_1^2 + SE_2^2}$

PSE = Pooled standard error

$\bar{Y}_1$ = Mean for financial savings (₦)

$\bar{Y}_2$ = Mean for non-financial savings (₦)

SE_1 = Standard error for value of women's financial savings

SE_2 = Standard error for value of women's non-financial savings

The multiple regression model used to capture objective (4) is specified as thus:

$$Y_i = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, X_{10}, X_{11}) + e \quad (2)$$

where Yi = ranges from 1 to 2

Y_1 = total financial savings (₦)

Y_2 = total savings (₦)

X_1 = age of the respondents (years)

X_2 = level of education (yrs)

X_3 = dependency ratio

X_4 = household size

X_5 = Farm income (₦)

X_6 = Non-farm income (₦)

X_7 = Index of modern technology adoption

X_8 = Farm size (Ha)

X_9 = Proximity to formal financial institutions (km)

X_{10} = Proximity to informal financial institutions (km)

X_{11} = total consumption (₦)

The simple regression model that was used to capture objective 5 is specified as thus:

$$Y_i = f(X_1) + e \quad \ldots\ldots (3)$$

where i ranges from 1 to 3

Y_1 = total financial savings

Y_2 = savings in formal financial institutions

Y_3 = savings in informal financial institutions

X_1 = interest rate (%)

The model that was used to ascertain the relative effects of non-price, determinants and interest rates on financial and total saving is specified as thus:

$$b^* = \frac{bi - pi}{Y} \quad \ldots\ldots(4)$$

where b^* = beta coefficient

bi = regression coefficient of a given independent variable

pi = Standard deviation of a given independent variable.

Y = Standard deviation of the dependent variable.

The chow test that was used to determine whether there is any significant difference between the financial savings determinants and non-financial savings determinants is specified as thus:

$$F^* = \frac{\left[e^2_p - (e^2_1 + e^2_2)\right] / K}{(e^2_1 + e^2_2)/(n_1 + n_2 - nk)} \quad \ldots\ldots(5)$$

where F^* = F-ratio calculated from sample data

$e^2_1 p$ = sum of residual of ppoled sample of observation

e^2_1 = Sum of residual deviation of total financial savings

e^2_2 = Sum of residual deviation of total non-financial savings

n_1 = Sample size of financial savings

n_2 = Sample size of non-financial savings

k = number of variables

The models were represented explicitly in three functional forms, linear, semi-log and double log. These three functional forms were tested and double log gave the best fit in terms of coefficient of determination (R^2) and the number of significant variables. Therefore double log were used in all the analysis.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Socio-Economic Characteristics of the Respondents

This section, examines the socio-economic characteristics of the rural women in Abia State with emphasis on age, educational level, income level, marital status, number of dependents, primary occupation and farm size. This discussion is pertinent since it will provide an insight into the socio-economic environment of these women and help in understanding their resources needs and therefore, the pressure on savings and capital formation.

4.1.1 Age

Table 4.1 shows the age distribution of the respondents.

Table 4.1: Age distribution of the respondents

Age in Years	Frequency	Percentage
21 - 30	14	12
31 - 40	22	18
41 - 50	28	23
Above 50	56	47
Total	120	100

Source: Survey Data, 1997 - 1998.

From the above table, the age distribution of the respondents was skewed towards the upper age group of 50 and above. This indicates that there were relatively high proportion of middle aged to old women in the survey villages. Only about 12 percent of them were between 21 and 30 years.

Age of respondents have been shown to be inversely related to savings and capital formation. While the younger and middle aged strive had to increase their savings and capital base, the older ones concern themselves with meeting their immediate needs (Nweze, 1990).

4.1.2 Occupational status

The women were grouped according to their different occupations apart from farming. The full time women farmers were those who spent at least two-third ($^2/_3$) of their time on the farms, and made most of their income from farm work. Those that spent less than two-third ($^2/_3$) of their time on the farm and made most of their income from non-farm occupations were regarded as part time farmers (Nweze and Nwosu, 1980). These part time farmers, have in addition, other primary occupation that they

engaged in. Table 4.2 shows the distribution of respondents according to part-time occupation they engaged in.

Table 4.2: Distribution of respondent according to part-time occupation

Occupation	Frequency	Percentage
Trading	65	54
Sewing	25	21
Hair plaiting	12	10
Craftswork	10	8
Civil service	8	7
Total	120	100

Source: Field Data 1997 - 1998.

The table shows majority (54%) of the women were engaged in trading as part-time work. Twenty-one percent had sewing as their part-time occupation. While the least were engaged in civil services.

The occupational status of the respondents, invariably affect their saving habits and the type of capital they form. This is true because women that are full time farmers tend to save and form more of agricultural capital while those that are traders, tend to also save and form their capital as stock of goods.

4.1.3 Educational level

Table 4.3 shows the level of educational attainment of the respondents.

Table 4.3: Level of educational attainment of the respondents

Educational Level	Frequency	Percentage
Zero (No formal schooling)	40	33
1 - 6 years	64	53
7 - 11 years	14	12
12 years and above	2	2
Total	120	100

Source: Field Data 1997 - 1998.

The table above indicates that 33 percent of the respondents had no formal education whatsoever, whereas about 53% of them, spent between one to six years in formal school. The respondents who spent about 12 years and above in formal school were only two percent. Thus, the table simply shows that most of the respondents are mainly illiterates, as the more educated ones migrate to the cities in search of white collar jobs.

The educational level of the respondents might affect their pattern of savings and capital formation as well as the savings institutions patronized. This is because, most rural women without education may find it very hard to patronize the formal banking sectors either due to ignorance of the existence of savings facilities in these banks, or fear that they might be cheated in their transactions because of their illiteracy.

4.1.4 Income level

The annual income was estimated in this study using total expenditure on goods and services plus savings per annum as a proxy. This is the best practical way to measure income especially for a study of this nature conducted in all environment where it was not easy to obtain accurate and reliable information on income directly. The annual income of the respondents in this study was grouped into three income levels and presented in table 4.4.

Table 4.4: Distribution of the respondents according to their income levels

Income level per Annum (₦)	Frequency	Percentage
Less than 10,000	43	36
10,001 - 20,000	56	47
Above 20,000	21	17
Total	120	100

Source: Survey Data, 1997 - 1998.

From table 4.4, the highest number of respondents (57%) fell within the medium income group of between ₦10,001 to ₦20,000. High income group (Above 20,000) had the least share of the respondents (17%). The average income earned by these group of women was about ₦13,167.

Income influences savings and capital formation in no small way. For instance, the level of a woman's income, affects the amount of savings and nature of capital formation. An analysis of the relationship between income level of the rural women and the amount of savings and capital formation revealed a positive relationship (Desai and Mellor, 1993).

4.1.5 Farm size

The total number of plots cropped in 1994 per survey women varies. The result showed that the typical plot of land was small, consequently, most of the survey farmers held more than one plot of farm land scattered in different locations. The average size of a plot was 0.54 hectare in Aba agricultural zone and 0.48 hectare in Umuahia agricultural zone.

The distribution of the respondents according to the number of farm plots cultivated in the study year is presented in the table below:

Table 4.5: Distribution of respondents according to their farm size

Farm size in plots	Number of Respondents	Percentage
1 - 3	32	27
4 - 6	52	43
7 and above	36	30
Total	120	100

Source: Field survey, 1997 - 1998.

Table 4.5 indicates that 43% of the respondents cultivated between four to six plots while 27% of them, cultivated between one to three plots. The average number of plots cultivated per respondent was four.

Farm size, could be said to have a negative effect on savings on one hand and a positive effect on capital formation on the other hand. This is because, during planting periods, more farm plots require greater cash outlay and hence decrease amount saved by the farmer. Whereas more farm plots could lead to increased accumulation of agricultural capital such as farm implement, tools, seeds, etc. which are needed to plant in these farm plots.

This negative effect of farm size on savings cannot hold true during harvest periods. This is because during this period, more farm plots means higher revenue to the farmer which could also lead to increased levels of savings and capital formation.

4.1.6 Marital Status and family size

Besides, the 27% of the respondents who were either widowed, separated or divorced and five who were single, all the respondents were married. The average number of dependent per survey woman was six. In addition, to own children, 79% of the respondents had relatives including mothers, fathers and cousins living with them. The average number of these relatives per rural woman was three, thereby making the average household size to be nine.

4.2 Patterns of Savings Formation Strategies Among Rural Women in Abia State

This section examines the different forms of savings method adopted by the rural women in the study area.

The different forms of savings formation amongst these group of women include contributions with women savings associations, Isusu Clubs (contributory clubs), mobile savings banks, community banks, cash at home, storage of farm produce, giving of livestock, stock of trade and buying of farm inputs and implement. From the above, it can be deduced that rural savings are mobilized by both institutional and non-institutional sources and are also formed as cash and non-cash deposits.

The different patterns of savings and capital formation amongst rural women in Abia State are discussed under two main headings depending on whether they are formed in cash or in non-cash bases.

4.2.1 Cash forms of savings and capital formation strategies

Table 6 shows the distribution of respondents according to cash forms of savings strategies adopted.

Table 4.6: Distribution of respondents according to cash forms of savings and capital formation strategies adopted

Methods of saving and Capital formation	Frequency	Percentage
Women's savings Association	28	23
Cash at home	35	29
Isusu clubs	19	16
Mobile Savings banks	14	12
Community and other Commercial banks	10	8
Cooperative societies	8	7
Loans and/or cash with friends and relations	6	5
Total	120	100

Source: Field survey, 1997 - 1998.

Table 4.6 shows that the greatest percentage of the respondents (29%), saved their money as cash at home. This is closely followed by women's savings associations which had 23% of the respondents saving with them. The least form of savings and capital formation adopted by the rural women in the study area was as cash or loans to friends and relations with only about five percent of the respondents. Others are isusu clubs, mobile saving banks, community/ Commercial banks, and cooperative societies with percentages as shown in the Table 4.6.

From the above analysis, about 25% of the total level of savings and capital formation in cash form are mobilized by institutional sources while the remaining 75% are mobilized by non-institutional sources.

Cash at Home

Twenty-nine percent of the respondents saved and formed their capital as cash balances at home. Their reasons are that such money is readily available to meet their immediate needs and other contingencies as well as for precautionary purposes. Thus, these group of women exhibit liquidity preferance attitude towards savings.

4.2.2 Cash and/or loans to friends and relations

About three percent of the respondents kept their money with either friends or relations for safe-keeping. Their main reason for engaging in this practice was that they do not want their husbands to know about the existence of such money. This money was usually saved for a specific project which might be to buy the uniform of one's social or religious groups or for other purposes.

The money, is usually saved in bits with the friend or relation and is finally collected when the targetted amount is reached or saved. This practice is usually done in secret; therefore, one must be very careful in the selection of the friend or relation that will safe-keep her money. This is to prevent incidence of the money lost, or being used up by the saver or the deal becoming an open-secret.

Giving of loans to needy friends and relations is also another form of savings and capital formation. This however, is not a common practice among the women in the study area since only about two percent of the women engaged in this practice in the study year. These women that gave loans to friends and relations, claimed that no interest charges were made and that the loans were short-termed, usually less than a year. Also, the amounts lent out are usually small and are often less than ₦1,000.00.

4.2.3 Non-cash forms of savings and capital formation strategies

Table 4.7 shows the distribution of respondents according to non-cash forms of savings and capital formation strategies adopted.

Table 4.7: Distribution of respondents according to non-cash forms of savings and capital formation strategies adopted

Forms of physical savings	Frequency	Percentage
Storage of farm produce	75	50
Transferred husbandry of livestock	19	3
Stock of Trade	27	10
Buying of farm inputs and implements	59	37
Total	*180	100

*Multiple Responses were recorded.

Source: Survey Data 1997 - 1998.

The table shows that about 50% of the respondents stored part of their harvested farm produce as a form of saving. This is closely followed by the percentage that bought farm inputs and implements (37%). The least proportion of women (about 3%) formed through transfered husbandry of livestock.

It can be explained from the above analysis that about 90% of the total non-cash forms of savings and capital formation amongst the respondents were made for agricultural activities and the remaining (10%) for non-agricultural enterprises. These non-cash forms of savings and capital formation strategies are discussed herein.

4.2.4 Storage of farm produce

This is the commonest form of savings and capital formation strategy adopted by the respondents. While all of the women that engaged in this practice claimed that the essence of storing these farm produce was to plant them later in the next season, about 30% of the women, attested to having sold part of these stored farm produce at loan agricultural period at higher prices.

The farm produce usually stored were seeds of maize, Okro, pepper, tomatoes, melon, cowpea and garden egg. Others include yam tubers and seed yam as well as cocoayam.

The seeds were stored in the kitchen above the fire place (whereas the tubers and corns were stored in barn and other cool places. These storage facilities are simple but suitable, as they still serve the purpose of preserving these farm produce.

Most women that sold all their farm produce at harvest time, did so either because they wanted to escape the harzards of storage, did not have where to store these farm produce or that they needed the proceeds from the sale of these produce to solve their immediate problems.

4.2.5 Transferred Husbandry of Livestock

This was mostly practiced by middle-aged and old women. It involved the giving of livestock to either a friend or a relation for husbandry in such a way that the giver and the benefactor share the offspring. The livestock that were usually given out for such husbandry include goats, sheep and chickens. This practice was seen as a form of saving and capital formation in the sense that the owner of the livestock can either sell it off to earn money, keep it herself as a breeding stock or give it our again for another cycle.

4.2.6 Stock of trade

This form of savings and capital formation was commonly practised by women that engaged in trading as either a primary or secondary occupation. The kinds of goods they trade on, differ from one woman to another. While most of them (54%) are traders of foodstuffs. About 60% of these women traders claimed that they preferred to invest their income in their stock of trade than saving them with the savings institutions.

4.2.7 Buying of farm inputs and implements

Since all respondents were farmers, they formed their agricultural capital through buying of farm inputs and implement. The farm implement bought by the respondents were simple and rudimentary and limited to a small number of such simple hand tools as hoes, cutlasses, head pans, baskets and shovels. About 80% of the respondents bought one or two of the above mentioned farm implements in the study area. Those that did not buy any gave their reasons as either due to lack of money, not having need for them, or having accumulated enough of such implements.

The respondents, believed so much in the use of fertilizer to improve their soil fertility. Therefore, as many as 67% of the women bought an average of two bags of fertilizer in the study year. The problems encountered in acquiring this product is linked with its limited and irregular supply. The rest of the women that did not use fertilizer on their farms in the study year, complained of lack of access to it as and when needed, and also its costly nature.

Whereas the use of improved seeds, seedlings and cuttings are common among women in Umuahia agricultural zone; may be due to the presence of

research institutions located in this area, those in Aba agricultural zone claimed that they did not have access to such imput and therefore did not use them on their farms in the study year.

The production factor land, was considered by the women to pose the greatest problem to agricultural production especially as regards to its acquisition. About 95% of the respondents could not readily acquire additional farm plots if they wanted to either due to the high rentage cost paid on land or the unavailability of land to them. This therefore, put a big limitation on the number of plots the women could cultivate.

4.3 Appraisal of Savings Institutions Prevalent in the Study Area

The different institutional sources of savings mobilization prevalent in the study area are analysed in this section. This is pertinent since the type and number of savings institutions available to these rural women affect their choice of savings institution to patronize in no small way. The savings institutions prevalent in the area and their level of patronage by the rural women is shown in Table 4.8.

Table 4.8: Savings institutions prevalent in the study area and the level of patronage by the respondents

Types of savings Institution	Frequency	Percentage
Community/Commercial banks	28	15
Cooperative society	35	21
Women savings Associations	56	38
Isusu Clubs	41	21
Total	*160	100

*Multiple Responses were recorded

Source: Field Data, 1997 - 1998.

Table 4.8 shows the percentage of rural women saving with the various savings institution in the study area. It was seen that the highest number of women (about 38%) patronized the women's savings association.

This is closely followed by isusu club which has 26% of the respondent. Cooperative societies got the least patronage (about 15%) by these women. These savings institutions are discussed below.

4.3.1 Commercial and Community Banks

This covers the whole of the formal banking sector such as the people's banks, the community banks and other formal banks. Savings with these banks by the respondents was only 15 percent. This was attributed to the fact that most rural areas in the study area, had no banks and attimes, even in areas where these banks do exist, they are inaccessible to most rural women. The average distance most women had to travel to get to the nearest banks was about 30km.

The respondents, attributed their inability to save with the community/commercial banks to the following reasons (Table 4.9).

Table 4.9: Women's reasons for not saving with the Commercial/Community Banks

Reasons	Frequency	Percentage
No surplus to save	62	46
Too far away	49	35
Strange procedure	23	13
Low interest on deposits	9	2
Lost confidence on them due to their incessant strike action	12	4
Total	*155	100

*Multiple Responses were Recorded.

Source: Survey Data, 1997 - 1998.

About 92% of the respondents did not save with commercial/community banks in the study area. Their reasons varied from lack of surplus money to save to their having lost confidence in the banks due to the incessant strike actions of the workers. Forty six percent of the rural women in the study area could not save with commercial banks because they did not have surplus money to save. This was heightened by ignorance as most of them thought that one really needed to have a large sum of money before she could operate an account with a commercial banks.

Also, 35% of the respondents did not save with formal banks due to the long distances they have to travel before they could get to the nearest commercial banks. Other reasons given by the respondents for non-patronage of formal banks include strange procedure, loss of confidence. Low interest on deposit received the least share of the reasons for low deposit in formal banks. This findings agreed with Desai and Mellor (1993), the effect of interest rate on financial savings is weak and mixed.

4.3.2 Cooperative societies

These societies have not played a major role in mobilizing savings of the rural women in the study area probably because most of the respondents do not belong to them. This low patronage, stems from the fact that most of the rural women view the cooperative societies as being part of the Family Economic Advancement Programme (FEP) which may need another long procedure before one could belong.

The only form of cooperative society that the rural women still patronize is the farmer's cooperative societies. In about 95% of this type of cooperative society, the contributed amount is not shared among members at the end of the contribution period. Rather, the money is used to buy farm inputs such as fertilizers at a reduced cost from the government agency concerned. These products are later shared among the members according to the amount each person contributed.

4.3.3 Women's savings associations

Another important way of saving mobilization amongst rural women in the study area was through women's savings associations. There are three types of such associations in terms of membership status. These are:- savings association amongst married

women within the same compound or extended family (meeting ndi iyomdi) which is the commonest, savings association amongst women who are friends; and savings association amongst women from the same kindred but married elsewhere (meeting Umuada).

These different groups have different contribution periods which could be weekly, forthnightly, monthly or every market day. In about 64% of these associations, members contribute equal amounts with the subscription paid per meeting being within the range of ₦5 - ₦20. Here, savings are usually shared in rotatory manner according to pre-agreed sequence.

In the remaining 36% of the women's savings associations studied, members contribute unequal amounts depending on each person's capability. The contributed amount are usually shared among members at the end of the contribution cycle according to their individual contributions. The women's savings associations may also engage in other functions in addition to saving member's money.

4.3.4 Isusu contributions

This is generally referred to by the women in the study area as otu-na-for (interpreted as yearly contribution). It is operated and managed like the

women's savings association except that their membership is open to all and the members are not bound by either age, farming status or tribe. Only 16% of the respondents saved with the isusu clubs. This low patronage is attributed to the fact that most of these women preferred to belong to associations why they are bound by a common factor than this one that is open to all.

The amount of subscriptions paid by members of isusu clubs per meeting varied widely from club to club. In about 75% of the clubs studied, contributions were small with about two-third ($^2/_3$) of the members paying ₦20 or less at each meeting. It was only in about 25% of the clubs studied that members paid more than ₦20 weekly as savings. Reasons given by the respondents for belonging to these isusu clubs include the opportunity to save their money; possibility of obtaining loan; for social security and community expectations, and due to pressures from friends and relations who are members of such clubs.

From the discussion of the different savings ~~and~~ institutions prevalent in the study area they can be classified into two major groups. These are the

commercial banks, and traditional savings associations. The traditional savings association have about 64% of the total respondents. This high patronage is attributed to the fact that these associations are easily accessible to these rural women in addition to being able to meet up with their socio-economic needs.

Nevertheless, the research findings showed that about 27% of the respondents did not patronize any savings institutions at all. Their reasons for not saving with the formal banking sector as mentioned earlier include:- Lack of surplus money to save, distance, low interest on deposits, strange procedures, lack of confidence in them and ignorance. Table 4.10 presented below, gives the reasons why some of the respondents did not save with the traditional savings associations in the survey year.

4.10: Distribution of respondents according to reasons for not saving with the traditional savings associations

Reasons	Frequency	Percentage
Do not have surplus to save	68	47
Too old for such practice	26	12
Prefer to invest in my stock of trade	32	17
Against my religious belief	25	11
Do not trust them	22	8
Got disappointed with them from previous experience	18	5
Total	*191	100

*Multiple responses were recorded.

Source: Survey Data, 1997 - 1998.

About 47 percent of the respondents attributed their inability to save with the traditional savings associations to lack of surplus money. This can be explained by the fact that most of these women are "bread winner" in their various homes and they find it very difficult to meet up their immediate needs talkless of saving.

About 11% of the women that did not patronize the traditional savings associations, claimed that it was against their religious beliefs to belong to such associations. This group of women are member's of a particular religious whose religious doctrine did not

allow membership of any association whether socially, culturally and economically based.

Only about five percent of the women gave their reason for non-patronage to be because they got dissappointed from their previous encounter with there traditional associations.

4.4 Different Financial Savings in Formal and Informal Financial Institutions

Studies have shown that women patronize formal and informal financial institutions with different levels. In this present study, there is also different degree of patronage in formal and informal financial institutions in terms of financial savings which its towards informal financial savings (see table 4.11 and 4.12).

Table 4.11: Distribution of financial savings in different informal financial institutions

Institutions	Average amount per Woman in a year	Percentage
Isusu	1,800	24
Umuada	4,500	57
Churches	800	10
Friends/Relatives	735.50	9
Total	7,835.50	100

Source: Field survey 1997 - 1998.

The above table shows that averageamount of financial savings in different informal financial institutions by women was highest in Umuada representing 57% of average savings per women. This is closely followed by Isusu club (24%) while the least amount was saved with friends or relatives (9%). This result shows the firm confidence women had in their association (Umuada) and less confidence in friends and relatives.

Table 4.12: Distribution of financial savings in different formal financial institutions

Institutions	Average amount saved per woman in a year	Percent
Cooperatives	2,058.00	47
Community Banks	7,675.00	38
Peoples' Banks	329.50	8
Other Commercial Banks	297.00	7
Total	4,359.50	100

Source: Field survey, 1997 - 1998.

From table 4.12, the average amount of money saved per woman in different formal financial institutions shows that registered cooperative societies mobilized

the greatest amount of savings among women. This represents 47% of total savings mobilized in formal financial institutions. This may be attributed to the fact that cooperative societies has some common features as informal financial institutions. This followed closely by savings mobilized by community banks (38%).

The test of differences between means performed to test if there is any significant differences between physical savings mobilized and financial savings mobilized in financial institutions shows that the t-cal (18.75) is greater than the critical (1.96). Therefore we accept that there is a significant differences between the volume of financial and non-financial forms of savings mobilized.

4.5 Regression Results

The multiple regression result that captured objective (4) shows that double log model was accepted because of number of significant variables and value of coefficients of multiple determination (R^2). The result is presented as thus:

$$\text{Log } Y_1 = 2.5 + \underset{(0.29)}{0.34}\log X_1 + \underset{(0.20)}{0.86}\log X_2^{*} - \underset{(0.14)}{1.84}\log X_3^{*}$$

$$- \underset{(0.16)}{0.21}\log X_1 + \underset{(0.016)}{0.14}\log X_5^{*} - \underset{(2.67)}{3.45}\log X_6$$

$$- \underset{(0.33)}{0.32}\log X_7 + \underset{(0.31)}{0.39}\log X_8 - \underset{(0.92)}{0.97}\log X_9$$

$$- \underset{(1.36)}{2.73}\log X_{10}^{*} - \underset{(0.052)}{0.49}\log X_{11}^{*}$$

$R = 0.79$; $R^2 = 0.63$; $\bar{R}^2 = 0.59$; F-ratio = 19.0 values in brackets are standard errors; * = Significant at 5% probability level.

The result of the regression result shows that age of the respondent (X_1), level of education (X_2), Farm income (X_5) and farm size (X_8) were positively related to total financial savings (Y_1). This means that an increase in any of these explanatory variable will definitely resulted to an increase in total financial savings. Other factors, dependency ratio (X_3), household size (X_4), non-farm income (X_6), index of modern technology adoption (X_7), proximity to formal financial institutions (X_9), proximity to informal financial institutions (X_{10}) and total consumption (X_{11}) had negative relationship with total financial savings.

Level of education of the respondent (X_2), dependency ratio (X_3), farm income (X_5) and total consumption of the household (X_4) were statistically significant at 5% probability level. Level of education positively affected the total financial savings. This is consistent with a priori expectation because as the level of women's education increases, the person will be able to learn more about setting money aside for future expenditure (savings). The dependency ratio also agreed with a prior expectation because as the level of dependency increases, then more expenditure is made and hence low savings. This is also as a result of more expenses that is involved in setting the dependent.

Farm income's positive relationship with total financial savings could be attributed to the fact that as income of farmer increases more money is made and hence enhances savings because of almost constant consumption expenditure. The total consumption had a negative relationship with total financial savings. This may be attributed to the fact that as consumption increases more expenditure is made and hence low savings.

The 63% of the total variation in total financial savings was by the model. This means that major determinants of financial savings were included in the model. The overall equation was significant at 5% probability level because the F-ratio cal (19.0) is greater than critical F-ratio (1.88). Therefore we reject the null hypothesis (d) and accept that non-price factors has a significant influence on total financial savings.

The regression result that captured the effect of non-price factors on total savings is presented as thus.

$$\log Y_2 = 3.80 + \underset{(1.94)}{1.63}\log X_1 + \underset{(0.008)}{0.05}\log X_2^{*} - \underset{(0.13)}{1.43}\log X_3^{*}$$

$$- \underset{(0.21)}{0.35}\log X_4 + \underset{(0.50)}{0.91}\log X_5 + \underset{(0.11)}{0.16}\log X_6 - \underset{(0.09)}{0.10}\log X_7$$

$$- \underset{(0.17)}{0.68}\log X_8^{*} - \underset{(1.17)}{1.5}\log X_9 - \underset{(1.08)}{1.26}\log X_{10} - \underset{(0.067)}{0.64}\log_{11}$$

$R = 0.69$; $R^2 = 0.48$; $\bar{R}^2 = 0.42$; F-ratio - 9.09; values in brackets = standard errors; * = significant at 5% probability level.

The regression result shows that age of the respondent, level of education, farm income and non-farm income, had a positive relationship with total savings; while dependency ratio, household size, index of modern technology adoption, farm size, proximity to formal financial institutions, proximity to informal financial institutions, and total consumption had a negative relationship with total savings.

Level of education (X_2) significantly affected the total savings at 5% probability level. This may be attributed to the fact that literate mothers are more knowledgeable about the future uncertainty and hence were able to save more. It may also be attributed to the fact that educated mothers may have less of the dependency children, which means less family expenditure. The dependency ratio not only negatively affected the total savings but also was significant at 5% probability level. This has been explained in the previous model.

Farm size significantly affected total savings in positive terms. This could be attributed to the fact that as farm size increases, farm income also increases, all other things being equal, the farmer will be able to save more whether in physical terms

or in financial terms. Also total consumption affected the total savings in negative terms. The explanation has been given in the previous model.

Forty-eight percent of variation in total savings was explained by explanatory variables. Though this figure is low, the F-ratio which tests the overall significant of the equation shows that F-cal (9.09) is greater than critical F-ratio (1.88). Based on this fact, we reject the null hypothesis (c) and accept that non-price factors significantly influence total savings.

Regression result that captured the effects of interest rates on savings are presented as thus:

$$\text{Log } Y_1 = 4.97 - \underset{(0.398)}{0.69 \log X_1}$$

$$R = 0.08;\ R^2 = 0.006;\ \bar{R}^2 = 0.008;\ \text{F-ratio} = 0.65$$

The regression result shows that interest rate is positively related to total financial savings, but not significant. This confirms with Desai and Mellor (1993) findings that interest rate on financial savings is weak and mixed.

The regression result that captured the effect of interest rate on savings in formal financial institution are presented as thus:

$$\text{Log } Y_2 = 3.63 + \underset{(0.099)}{0.19 \log X_1}$$

$R = 0.09$; $R^2 = 0.009$; $\bar{R}^2 = 0.008$; F-ratio = 1.00

value in bracket is standard error.

The result shows that interest rate is positively related to financial savings in formal institutions but not statistically significant at 5% probability level. However the coefficient of multiple determination is higher than as in total savings.

The regression result that captured the effect of interest rate on savings in informal financial institution is presented as thus:

$$\text{Log } Y = 1.75 + \underset{(0.19)}{0.48 \log X_1}^{*}$$

$R = 0.48$; $R^2 = 0.23$; $\bar{R}^2 = 0.19$; F-ratio = 32.26

values in bracket is the standard error.

* = Significant at 5% probability level.

The result shows that interest rate is not only positively related to savings in informal financial institution but is statistically significant at 5% probability level. This means that interest rate is more sensitive to informal financial savings than any other types of savings. This may be attributed to the fact that majority of women save with informal financial institutions.

The coefficient of multiple determination (R^2) is .23. This means that 23% of variation in savings in informal financial institutions is explained by interest rate alone. Also overall regression equation is significant at 5% probability level.

Based on the first regression equation on response of interest rate on total savings, the F-ratio (0.65) is less than critical F-ratio (1.88), we therefore accept that interest rate has no significant effects on total savings at 5% probability level.

4.6 The Beta Coefficient Results

This test only considered the significant variables in the two multiple regression analysis. The table is presented in two parts as follows:

1) For total Savings

Variables	Beta	Rank
X_2	2.41	3rd
X_3	6.43	1st
X_8	-1.96	4th
X_{11}	-5.34	2nd

The result of beta coefficient test shows that the most important variable that affects the total savings is dependency ratio (X_3). This is followed by

total consumption (X_{11}), while the least is farm size (X_8).

The second beta coefficient test for total financial savings is presented below.

Variables	Beta	Ranks
X_2	2.01	4th
X_3	-7.73	1st
X_5	4.50	3rd
X_{10}	-2.00	5th
X_{11}	-5.67	2nd

The result of second beta coefficient test shows that the most important variable that affects the total financial savings is dependency ratio (X_3). This is followed by total consumption while the least is the distance to the informal savings institutions (X_{10}). This revealed that different factors determines different types of savings (financial and total savings).

The chow test performed to determine whether there is any significant difference between the determinants of financial savings and non-financial savings shows that F-cal (18.94) is greater than critical F-ratio

(1.88) at 5% probability level. This therefore led to rejection of null hypothesis (e). We therefore conclude that there is significant difference between the determinants of financial and non-financial savings among women in the study area.

CHAPTER FIVE

SUMMARY, RECOMMENDATIONS AND CONCLUSION

5.1 Summary

This study was designed to examine the response of women farmer's savings supply to interest rate and non-price determinants in Abia State, Nigeria and its implications for rural women productivity. This study was carried out as a result of persistent food shortage in Nigeria, despite introduction of various food production programmes in Nigeria. It was suspected that this situation might depend to some extent on the lack of credit to women farmers but more importantly on the low savings mobilization (both in physical and financial terms) in the rural areas where a reasonable percentage of food consumed, in Nigeria are produced. It is expected that this study will improve on the declining trend in the level of food production through increasing savings mobilization.

Abia State, which is one of the food nerves in Nigeria, apart from the fact that previous studies on savings offers limited help to policy makers.

It is also necessary to provide on up-to-date information on savings mobilization strategies among women in the area which will be a useful guide for effective policy planning and implementation.

Researcher's awareness of socio-economic characteristics, cultural practices, and the prevalence of formal and informal financial institutions in the area led to the choice of the state. Considering the type of information sought, random sampling was employed to select respondents. Altogether, 120 respondents and 36 financial institutions were selected. Data from the respondent were analysed to get desired answers for the specific objectives and hypothesis of the study.

The findings revealed that the most important cash forms of savings was cash at home and women savings association. Most respondents considered storing farm produce and purchase of farm inputs and implements as the most important forms of non-cash savings. The study also revealed that most women do not save because they had no surplus to save and savings institution too far from their homes. Specifically, savings in Umuada had the greatest

amount of savings (₦4,500 per woman) and cooperatives (₦2,058) in informal and formal financial institutions respectively.

The regression results shows that the major determinants of savings were level of education, dependency ratio, farm income, total consumption, proximity to informal financial institution and farm size. Interest rate factor only determines the savings mobilization in informal financial institutions.

It was also found that there is significant difference in the determinants of financial and non-financial savings and that there is significant difference between the values of financial and non-financial savings at 5% probability level.

5.2 Recommendations

With respect to the study, the following recommendations are made:

1) Informal saving institution such as women savings clubs, isusu among others should be readily available in the hintherland, high and stable interest rates on savings should be used to influence savings among women farmers.

Government should establish adult education programmes in the rural areas where these women will receive formal education. This will likely increase their level of awareness about the different income generating opportunities that are open to them, as well as the need to save part of their earned income with the savings institution available to them.

Traditional (informal) women savings association as a target group should be used by extension agents to disseminate new farm innovations and techniques and need for savings. This will enable the women to increase their scale of farm operation.

Government should as a matter of urgency endeavour to establish commercial banks in the rural areas. This is because, it is assumed that the presence of this bank in the rural areas, will induce the rural women who ordinarily would not have patronized any saving institution to save part of their income with them.

Women could be encouraged to patronize at least one financial institutions through aggressive campign to enhance their savings mobilized.

Government should lay more emphasis on the improvement of the ability to save than interest rate, since the non-price determinants enhances savings mobilization.

5.3 Conclusion

From the results of this study, non-price factors affects the savings among women than interest rate factor. Nigeria has a low savings rate. An increase in the average saving rate is therefore needed to enhance investment and economic growth. This work investigated some factors that determines rural savings among women. Women savings can be increased if appropriate recommendations is made and implemented. Therefore, since non-price factors affects women's savings more than interest rate, effort and appropriate recommendations must be made in other to enhance savings through non-price factors.

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