

**THE ROLE OF COOPERATIVE
SOCIETIES IN RURAL FINANCE:
EVIDENCE FROM OGUN STATE,
NIGERIA**

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DOCTOR OF PHILOSOPHY**

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**THE ROLE OF COOPERATIVE SOCIETIES IN RURAL FINANCE:
EVIDENCE FROM OGUN STATE, NIGERIA**

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ABSTRACT

The study assess the roles played by cooperative societies' savings and loans services on members' economic condition, standard of living and in meeting participants financial needs in rural locations where there is no bank nor other formal financial providers.

Using a combination of interview, focus group discussion and questionnaire techniques, the study covers the activities of cooperative societies located in rural communities and villages outside the state capital and local government headquarters where there is no electricity, water and tarred road in Ogun State, Nigeria. From its findings, this study identified and discussed potential areas for the improvement of cooperative societies that could be of benefit to rural finance providers and the cooperative members.

The study is the first empirical investigation in Nigeria that focuses on the relevance of cooperative societies on members' standard of living in rural communities and villages. The study shed light on how rural communities function – how their relationships develop, how individual esteem is increased, how interdependence grows, how hierarchies are maintained – and how this is facilitated in part by the loan-making of members promoted cooperatives. It has also provided more evidence on the importance of land ownership, and how this is enhanced when rural communities have access to cheap and affordable loans. It has also provided insights into the development of rural businesses, how complex they are, and how they require more input than the financing received through cooperative loans.

The study breaks new ground in informal cooperative functioning, community development and rural finance research by providing a distinction between standard of living and quality of life variables in measuring the economic

condition of rural dwellers, and the production of circle of social capital theory that the role of cooperatives to the members involve financial capital, physical capital and social capital which are interrelated. This helps to appropriately identify the roles of cooperative societies in rural finance to increase in household income, ownership of household assets and acquisition of enterprise assets. However, participation in the cooperative does not lead to enterprise profitability, while rural financial needs are more accessible from cooperatives than other sources.

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TABLE OF CONTENTS

Abstract.....	ii
Acknowledgements.....	iv
Table of Contents.....	v
List of Tables.....	xi
List of Figures.....	xiii
List of Abbreviations.....	xiv
List of Appendices.....	xv
Chapter One: Introduction.....	1
1.1 Introduction.....	1
1.2 The Research Aim.....	1
1.3 Research Objectives.....	2
1.4 Scope of the Study.....	4
1.5 Significance of the Study.....	5
1.6 The Structure of the Thesis.....	7
Chapter Two: Background to the Study.....	9
2.1 Introduction.....	9
2.2 Rural Finance	9
2.3 Rural Finance in Nigeria	10
2.3.1 Informal Rural Finance Providers	12
2.4 Informal Rural Finance Providers in Nigeria	13
2.4.1 Suppliers Credit.....	14
2.4.2 Money Lenders.....	14
2.4.3 Rotational Savings and Credit Scheme.....	15
2.4.4 Money Keepers.....	15
2.4.5 Trade and Input Supply Financing.....	16
2.4.6 Non Governmental Organisations.....	16
2.4.7 Esusu, Family and Friends.....	17
2.4.8 Cooperative Societies.....	17

2.5	Concept of Cooperative	18
2.6	Cooperative Practice	21
2.7	Patronage for Cooperative Societies.....	24
2.7.1	Ogun State at a Glance	26
2.8	Summary and Conclusion.....	27
Chapter Three: Literature Review.....		28
3.1	Introduction.....	28
3.2	Informal Rural Finance Providers and the Participants.....	28
3.3	Cooperatives and Individual Members.....	35
3.3.1	Cooperatives and Savings Mobilisation.....	35
3.3.2	Cooperatives and Loan Facilities.....	37
3.3.3	Cooperative Services and Members Satisfaction.....	40
3.4	Cooperatives and Household Performances.....	45
3.4.1	Effect of Cooperative on Household Income.....	45
3.4.2	Cooperatives and Household Asset Acquisition.....	47
3.5	Enterprise Activities with Cooperatives.....	48
3.5.1	Cooperatives and Members Enterprises Profitability.....	48
3.5.2	Cooperatives and Enterprise Assets.....	50
3.6	Effect of Cooperatives: Standard of Living vs Quality of Life.....	51
3.7	Theoretical Framework.....	55
3.7.1	The Social Capital Theory.....	55
3.8	The Emergence of Research Proposition and Hypotheses from the Literature.....	62
3.8.1	Development of Research Proposition: Cooperatives and Individual Members.....	62
3.8.2	Development of Research Hypotheses: Cooperatives and Determinant of Household Impact	63
3.8.3	Development of Research Hypotheses: Cooperatives and Enterprise Performance.....	67
3.9	Summary and Conclusion.....	72

Chapter Four:	Methodology.....	74
4.1	Introduction.....	74
4.2	Epistemology.....	74
4.3	Research Strategies.....	76
4.3.1	Research Strategies for Cooperatives Assessment.....	79
4.4	Research Proposition and Hypotheses.....	88
4.5	Research Design.....	91
4.5.1	Sample Selection Criteria.....	93
4.5.2	Research Method.....	93
4.5.3	Cooperative Membership.....	94
4.6	The Nature and Sources of Data.....	94
4.6.1	Control Group.....	96
4.7	Sample Size and Sampling Technique.....	97
4.7.1	Questionnaire Sample size.....	98
4.7.2	Qualitative Sample Size.....	101
4.7.3	Pilot Study.....	102
4.8	Data Instruments Design and Administration.....	103
4.9	Analytical Methods.....	108
4.10	Summary and Conclusion.....	109
Chapter Five:	Relationship Between Cooperative Societies and Individuals.....	111
5.1	Introduction.....	111
5.2	Demographic Information – Membership Duration.....	112
5.3	Interviewees Demographic Information – Loan and No-Loan members.....	114
5.4	Focus Group Discussion Participant Information.....	115
5.5	Impact on Individual.....	116
5.6	Impact Traceable to Savings.....	117
5.6.1	Interview Result.....	117
5.6.2	Focus Group Discussion Result.....	120
5.6.3	Discussion of Results on Savings.....	122

5.7	Impact Based on Loan.....	126
5.7.1	Interview Result.....	126
5.7.2	Focus Group Discussion Result.....	131
5.7.3	Discussion on Loan Results.....	134
5.8	Members Satisfaction.....	136
5.8.1	Interview Result.....	137
5.8.2	Focus Group Discussion Result.....	141
5.8.3	Discussion of Results on Members Satisfaction.....	143
5.9	Summary and Conclusion.....	146

Chapter Six: Understanding Cooperative Societies at

	Household Level.....	149
6.1	Introduction.....	149
6.2	Demographic Information – Membership Duration.....	149
6.3	Demographic Information – Loan and No-Loan Members.....	150
6.4	Household Basic Information.....	152
6.4.1	Key Demographic Statistic.....	153
6.5	Impact at Household Level.....	154
6.6	Impact on Household Income.....	155
6.6.1	Reasons for Decrease or Increase in Household Income.....	160
6.6.2	Summary Result – Household Income.....	163
6.7	Impact on Household Assets.....	164
6.7.1	Ownership of Automobiles.....	167
6.7.2	Ownership of Land and Building.....	171
6.7.3	Ownership of Household Equipment.....	177
6.7.4	Summary Result – Household Assets.....	190
6.8	Summary and Conclusion.....	194

Chapter Seven: The Role of Cooperative Societies on Members

	Enterprises	196
7.1	Introduction.....	196
7.2	Impact at Enterprise Level.....	196

7.3	Enterprise Profitability.....	197
7.3.1	Expansion of Business Facility.....	198
7.3.2	Addition of New Products/Business Diversification.....	200
7.3.3	Ability to Hire More Workers.....	203
7.3.4	Improvement in Quality of Products.....	205
7.3.5	Reduction in Costs – Buying Input in Greater Volume.....	207
7.3.6	Reduction in Costs – Cheaper Source of Credit.....	208
7.3.7	Development of New Enterprise.....	210
7.3.8	Making More Profit.....	211
7.3.9	Sold in New Market.....	213
7.3.10	Summary Result – Enterprise Profitability.....	215
7.4	Enterprise Assets.....	217
7.4.1	Changes in Business Assets.....	218
7.4.2	Purchase of Small Tools.....	219
7.4.3	Acquisition of Major Tools.....	220
7.4.4	Ownership of Means of Transportation.....	222
7.4.5	Investment in Storage Facility.....	225
7.4.6	Minor Investment in Marketing Site.....	227
7.4.7	Structures in Business Location.....	229
7.4.8	Use of Loan in Business.....	231
7.4.9	Summary Result – Enterprise Assets.....	232
7.5	Summary and Conclusion.....	236
Chapter Eight: Cooperative Societies and Rural Finance.....		238
8.1	Introduction.....	238
8.2	Cooperatives at the Household.....	239
8.2.1	Cooperatives Role on Household Income.....	239
8.2.2	Acquisition of Household Assets through Cooperatives.....	239
8.3	Cooperative and Enterprise Performance.....	243
8.3.1	The Role of Cooperatives on Enterprise Profitability.....	243
8.3.2	Effect of Cooperative Societies on Ownership of Enterprise Asset.....	246

8.4	Members Satisfaction from Cooperative Societies.....	249
8.5	Summary and Conclusion.....	251
Chapter Nine: Summary and Conclusions.....		253
9.1	Introduction.....	253
9.2	Overview of the Study.....	253
9.3	The Research Process.....	255
9.4	Major Findings from the Study.....	257
9.4.1	Cooperative and Members Financial Needs.....	257
9.4.2	Relationship Between Cooperative Societies and Household Income.....	260
9.4.3	Cooperative Participation and Acquisition of Household Assets.....	260
9.4.4	Relationship Between Cooperative and Enterprises Profitability.....	263
9.4.5	Relationship Between Cooperatives and Enterprise Assets.....	263
9.5	Major Findings and the Social Capital Theory.....	264
9.6	Contribution of Study to Knowledge.....	266
9.7	Implications of Findings.....	269
9.8	Limitations and Future Studies.....	272
References.....		274
Appendices.....		284

LIST OF TABLES

Table No.	Title	Page
Chapter Four		
4.1	Impact Assessment, Evaluation Questions and Tools Used.....	91
4.2	Impact Survey Participants.....	101
4.3	Personal Interview Participants.....	101
4.4	Focus Group Discussion Participants.....	102
Chapter Five		
5.1	Interviewees' Demographic Information.....	113
5.2	Membership Information of Interviewees'.....	115
5.3	Interviewees' Response on Savings Product.....	117
5.4	FGD Summary Results on Savings.....	120
5.5	Interviewees' Response on Loan Benefits.....	127
5.6	FGD Result on Loan.....	132
5.7	Interviewees' Result on Members Satisfaction.....	137
5.8	FGD Result on Members Satisfaction.....	142
Chapter Six		
6.1	Respondents' Individual Demographic Information.....	150
6.2	Loan and No-loan Members Demographic Information.....	151
6.3	Household Demographic Information.....	152
6.4	Test of Significance on Demographic Variables between Loan and No-loan Members (Chi-square).....	153
6.5	Tests of Significance on Demographic Variables between Loan and No-loan Members (t-tests).....	153
6.6	Household Overall Income.....	156
6.7	Reasons for Decrease in Household Income.....	161
6.8	Reasons for Increase in Household Income.....	162

6.9	List of Null Hypothesis Rejected and Fail to Reject on Household Income.....	164
6.10	Condition of Household Assets.....	166
6.11	List of Null Hypotheses Rejected and Fail to Reject on Household Assets.....	191
6.12	List of Null Hypotheses Rejected and Not Rejected at Household Level.....	194
Chapter Seven		
7.1	Improvement to Business Activity.....	197
7.2	Null Hypotheses Rejected and Fail to Reject on Enterprise Profitability.....	215
7.3	Investment in Business Assets.....	219
7.4	Use of Loan in Business.....	231
7.5	Null Hypotheses Rejected and Fail to Reject on Enterprise Assets.....	233
7.6	Null Hypotheses Rejected and Fail to Reject at Business Level.....	236

LIST OF FIGURES

Figure No.	Title	Page
Chapter Two		
2.1	Nigeria Rural Finance Providers.....	11
2.2	Map of Ogun State, Nigeria.....	26
Chapter Three		
3.1	Proxies for Economic Condition	53
3.2	Circle of Social Capital Theory	59
Chapter Four		
4.1	Cooperatives Impact Assessment Ideologies	86
4.2	Cooperatives Impact Assessment Methodologies.....	87
Chapter Seven		
7.1	Use of Business Loan.....	232

LIST OF ABBREVIATIONS

AIMS	Assessing the Impact of Microenterprise Services
ANOVA	Analysis of Variance
CBN	Central Bank of Nigeria
FGD	Focus Group Discussion
KWIC	Key Words In Context
MFB	Microfinance Bank
NACRDB	Nigerian Agricultural Cooperative and Rural Development Bank
NAPEP	National Agency for Poverty Eradication Program
NGO	Non Governmental Organisation
ROSCA	Rotational Savings and Credit Association or Scheme
SEEP	Small Enterprise Education and Promotion Network
SPSS	Statistical Package for Social Sciences
TISF	Trade and Input Supply Financing

LIST OF APPENDICES

No.	Title	Page
	Appendix 1: Interview Question Guide.....	284
	Appendix 2: Focus Group Discussion Guide.....	286
	Appendix 3: Impact Survey Questionnaire.....	287
	Appendix 4: Standard Effect Size Calculation on Household	291
	Appendix 5: ANOVA Test Results on Household – SPSS Output.....	292
	Appendix 6: Standard Effect Size Calculation on Enterprises.....	309
	Appendix 7: ANOVA Test Results on Enterprises – SPSS Output	310

Chapter One

Introduction

1.1 Introduction

The increase in the demand for financial services has brought changes to cooperative societies as a factor in financial, economic and social science disciplines to the extent that over the years, local and international organisations have continued to explore the best modalities in the application of cooperative concept to almost every area of the economic needs of individuals at urban and rural areas. This may have necessitated the declaration of the year 2005 as the international year of microcredit and the year 2012 as the international year of cooperatives by the United Nations General Assembly. This chapter provides direction for this study and it is divided into six sections. Section two explains the aim of the research while section three highlights the objectives of the study. Section four focuses on the scope of the study while section five explains the significance of the study. The structure of the thesis is presented in section six.

1.2 The Research Aim

The delivery of banking services in developing nations reaches less than 20% of the population (Rosenberg, 1994; Barenbash and Churchill, 1997; Robinson, 2001). The rest of the population may not have any access to a formal financial service provider and “the majority of low income households, in all parts of the world, historically have not had access to formal financial services” (Chiumya, 2006: 29) because most formal financial service providers regard low income earners and households in rural areas as too poor financially - having no access to surplus monetary funds - to either save with or borrow from their institutions. Several categories of people such as rural inhabitants, poor people and uneducated people are not served by formal financial institutions in developing countries (Adjei and Arun, 2009). Braverman and Guasch (1993) estimated that only 5% of farmers in Africa and about 15% in Asia and Latin America have had

access to formal credit. On average across developing countries, Braverman and Guasch (1993) found that 5% of borrowers received 80% of formal credit. To buttress this finding, Rosenberg (1994) asserted that 90% of the rural population in developing countries lacks access to financial services from formal financial institutions, either for credit or for savings. This 90% may have no better alternative than to either patronise or participate in informal finance programs.

Iganiga (2008) pointed out that the formal financial system provides services to about 35% of the economically active population of Nigerian citizens, while the remaining 65% are excluded from their services. In a country with a population of 140 million people, it suggests that about 91 million are served by informal finance providers. If the only available financial service providers to the rural people in Nigeria are informal sources such as the cooperative societies, money lenders, self-help groups and rotational savings associations, what is the hope for a possible reduction in poverty and improvement in standard of living in rural areas using these informal financial service providers especially the cooperative societies bearing in mind the amount of savings that they can mobilise and the value of loan that they can give? This question is essential because it provides a guide for the aim of this study. This study aimed at assessing the role of cooperative societies in rural finance to bring about improvement in members standard of living at the individual, household and enterprise levels.

1.3 Research Objectives

“For an impact assessment to be credible, it is important to have clearly stated objectives that indicate the type of impacts that will be examined” (Sebstad, 1998: i). Based on the aim of this study and the gaps identified in the literature in chapter three, five objectives were identified and adopted for the study. The objectives are to:

1. Assess the roles cooperative societies' savings and loan products play in meeting participants' financial needs.

2. Examine the part played by cooperative societies in increasing participants' household income.
3. Assess the relationship that exists between cooperative members and the acquisition of household assets.
4. Establish the relationship between membership of cooperative societies and business development that lead to profitability.
5. Analyse the impact of participation in cooperative societies' membership on enterprise assets.

The research objectives were distilled into five research questions as stated below.

- i. What is the role of cooperative societies in satisfying the financial needs of their members?
- ii. Does participation in cooperative loan services lead to increase in household income?
- iii. Does participation in cooperative loan services lead to ownership of household assets?
- iv. Does participation in cooperative loan services lead to changes in business development associated with profitability?
- v. Does participation in cooperative loan services lead to increase in acquisition of business assets?

The research objectives above were further restructured into one proposition and four hypotheses as stated below after the literature review which identify the gaps that currently exist.

Proposition:

Cooperative savings and loan services satisfy the financial needs of their members in that they make a contribution to improvement in standard of living.

Hypotheses:

- H1: There is no relationship between participation in a cooperative and increase in household income.
- H2: There is no relationship between participation in a cooperative and increase in the acquisition of household assets.
- H3: There is no relationship between participation in a cooperative and changes in business development associated with increased profitability.
- H4: There is no relationship between participation in a cooperative and increase in the acquisition of business assets.

1.4 Scope of the Study

The researcher has identified gaps in the literature in chapter three and also reveals the dearth of studies that cover the activities of both the registered and unregistered cooperative societies in Nigeria and especially in Ogun State. The identification of more than one hundred unregistered cooperative societies in the rural areas of Ogun State where there is lack of government provided drinkable water supply, electricity supply and tarred roads necessitates the scope of this study to cover only the activities of unregistered cooperative societies operating in the rural areas of Ogun State, Nigeria with the above infrastructural deficiencies.

A random sampling method was used to select the loan and no-loan members of the cooperative societies that participated in the study. The no-loan members are members of the cooperative societies, but they did not take loans as at the time of this study. The choice of loan and no-loan members is to enable the researcher to use the no-loan members as the control group for the loan members. This is because members of the two different categories live in the same community. This therefore gave room for the comparison of results as to the impact traceable to participation in cooperative societies as loan members. In all, 291 loan members and 101 no-loan members from 54 cooperative societies participated in the study.

1.5 Significance of the Study

This study is significant because it focuses only on members promoted cooperative societies in rural areas without support from donor and government, while none of the previous studies used only members promoted cooperatives. For example, Ghosh and Maharjan (2001) used government sponsored cooperative, while member/self promoted, government sponsored and programme promoted cooperatives were used by Simkhada (2004). Sharma et al. (2005) used two self promoted and two programmes promoted cooperatives, while the programme promoted cooperatives enjoy support in form of grants from donors. Wanyama et al. (2008) used multiple ownership cooperatives which include a donor funded cooperative. Ramotra and Kanase (2009) study does not provide the ownership type of cooperatives used. The cooperative used by Holmgren (2011) receives financial support from a Non Governmental Organisation (NGO) and the participants are not very poor.

The study provides a clear distinction between standard of living and quality of life variables in measuring the economic condition of rural dwellers. Hitherto, this has been combined in other studies (Edgcomb and Garber, 1998; Falaiye, 2002; Calkins and Ngo, 2005; Sharma et al, 2005; Allahdadi, 2011) which leads to the inability to properly report their findings on quality of life criteria - not because quality of life is more of a qualitative issue but because their studies cover too many parameters of both the standard of living and quality of life. Because of these, results for the standard of living and quality of life variables were not properly reported. This study concentrates on variables of standard of living alone. This helps to trace the role of cooperatives to ownership of household assets, enterprise assets, enterprise profitability and increase in household income to determine changes in members' standard of living. This is important because it enhances our understanding of the role of cooperative societies in rural finance to be concerned with improving standards of living of the members rather than quality of life such as health and family planning which rural cooperatives may not be financially adequately empowered to do.

The study attempts to be the first empirical investigation in Nigeria that focuses on the relevance of cooperative societies on members' standard of living in rural communities and villages outside the state capital and local government headquarters which are without government electricity, water and tarred road facilities.

Only four studies on cooperative societies (Larocque et al., 2002; Sharma et al., 2005; Enete, 2008; Wanyama et al., 2008) considered the impact of participation in cooperatives on members' ability to acquire enterprise asset. However, none of these studies provide a comparison data on members and non-members' performances on enterprise asset ownership. Furthermore, no statistical test was carried out by the studies. In addition, the component of enterprise assets used for their studies were not stated, while the studies also lacked any theoretical underpinning. This study is significant because it provided comparison data for both groups of respondents while statistical tests were carried out on the data including all the component of enterprise assets used. It is also underpinned by social capital theory which was missing in other studies on enterprise assets.

The study found an improvement upon the primitive and local ways of keeping money at home, on the roof and under the mattress, for a long period of time as a result of participation in cooperatives that provide financial intermediation to their members in form of savings and loans. The study documents evidence that supports social capital theory. This shows that satisfaction is derived by cooperative members through the inter-personal relationships that arise among them, such that members do help each other when in trouble because they see themselves as their sibling's keepers.

The study found evidence that participation in cooperative societies explains increases in household income and household assets. At the enterprise level, the study shows that access to cooperative loans for enterprise use does not translate into more profit. Evidence of increases in enterprise assets as a result

of participation in a cooperative society was found by the study. The cooperative societies are contributing to better standard of living in rural areas by increasing asset ownership.

The finding of the study is more robust as they are situated within the cooperatives and informal finance literature. This provides better understanding and clarity to the implication of the findings for comparison by future studies. The outcome of the study will be useful as reference materials for government, development agencies and rural development practitioners on the role of cooperatives in the provision of financial services to rural dwellers. It will also serve as base line data for other researchers and as basis for comparison with similar rural areas within and outside Africa.

1.6 The Structure of the Thesis

This thesis is organised into nine chapters. Chapter two provides background information to the study by reviewing various definitions of cooperatives. It also assists in providing contextual information on development and practices of cooperatives within and outside Africa, this includes a review of the cooperative and informal finance sector in Nigeria.

Chapter three reviews key literatures on the topic under investigation. The literature review focused on studies on informal rural finance, cooperatives and savings mobilisation, cooperatives and loan facilities, cooperative services and members satisfaction, effect of cooperatives on household income, cooperatives and household asset acquisition, cooperatives and members enterprises profitability, and cooperatives and enterprise assets. The chapter helps to identify the existing gap in the literature and possible areas where contributions to knowledge can be enhanced by the researcher and the theoretical underpinning for the study. In chapter four, the researcher presents the methods adopted for the study and the steps taken in conducting the research after evaluating different research strategies and designs suitable for the study.

Chapter five reports the results and findings of the qualitative tools used on members' satisfaction while chapter six presents the first empirical study of the thesis. It examines the relationship between participation in cooperative societies and household income and assets. In chapter seven, the researcher reports the second and the last empirical study of the thesis. This examines the relationship that exists between membership of cooperative societies and enterprises. Chapter eight focuses on the summary of the results presented in chapters five, six and seven. This is used to integrate all the findings in this study on individuals, households and enterprises together. The last chapter - chapter nine – concludes upon the major findings of the research and its limitations and suggests directions for further studies.

Chapter Two

Background to the Study

2.1 Introduction

The objective of this chapter is to create a clear understanding of some basic and essential aspects of cooperative and rural finance across the world. This is important to enable the researcher to explain and discuss basic issues and concepts related to the study. Discussion and clarification of contextual aspects of the study would enable the researcher to provide working definitions and explanations of different terms used for the research which may be different from the way they were used by other studies. This is so, to set the tone for the study for a proper review of related literature in the next chapter. The next section of this chapter examines rural finance. Section three focuses on rural finance in Nigeria while section four discusses the informal rural finance providers in Nigeria. Section five addresses definitions of the concept of cooperative while section six focuses on cooperative practice. Patronage for cooperative societies is explained in section seven while the chapter ends with the summary and conclusion in section eight.

2.2 Rural Finance

Rural finance is the provision of sustainable financial services in rural areas such that the services support different levels of income of rural dwellers (Richter, 2011). The providers of rural financial services can be formal, semi-formal or informal but their services should be able to support rural dwellers' income such that they are not technically excluded from patronising the formal financial providers in these areas because of low education and financial illiteracy among rural dwellers. Access to finance in rural areas creates opportunity for rural dwellers to increase their productivity and income through purchase of goods and services (Henry and Schimmel, 2011) with possibility of reduction in poverty and improvement in standard of living. According to Richter (2011), rural areas are highly underserved by formal financial services providers

because they either avoid such areas or fail to offer relevant sustainable financial services to the rural people.

The reluctance of banks to participate in rural finance and also lend to rural people aggravated the lack of access to financial services to rural enterprises (Lohlein and Wehrheim, 2003) which may hamper economic improvement of rural dwellers. Henry and Schimmel (2011) posit that formal financial providers neglect the rural areas because they find it too costly to operate in such areas and therefore anticipate low level of economic return in form of profit for the financial institution. The government is therefore expected to reduce distortion caused by formal financial institutions in rural finance.

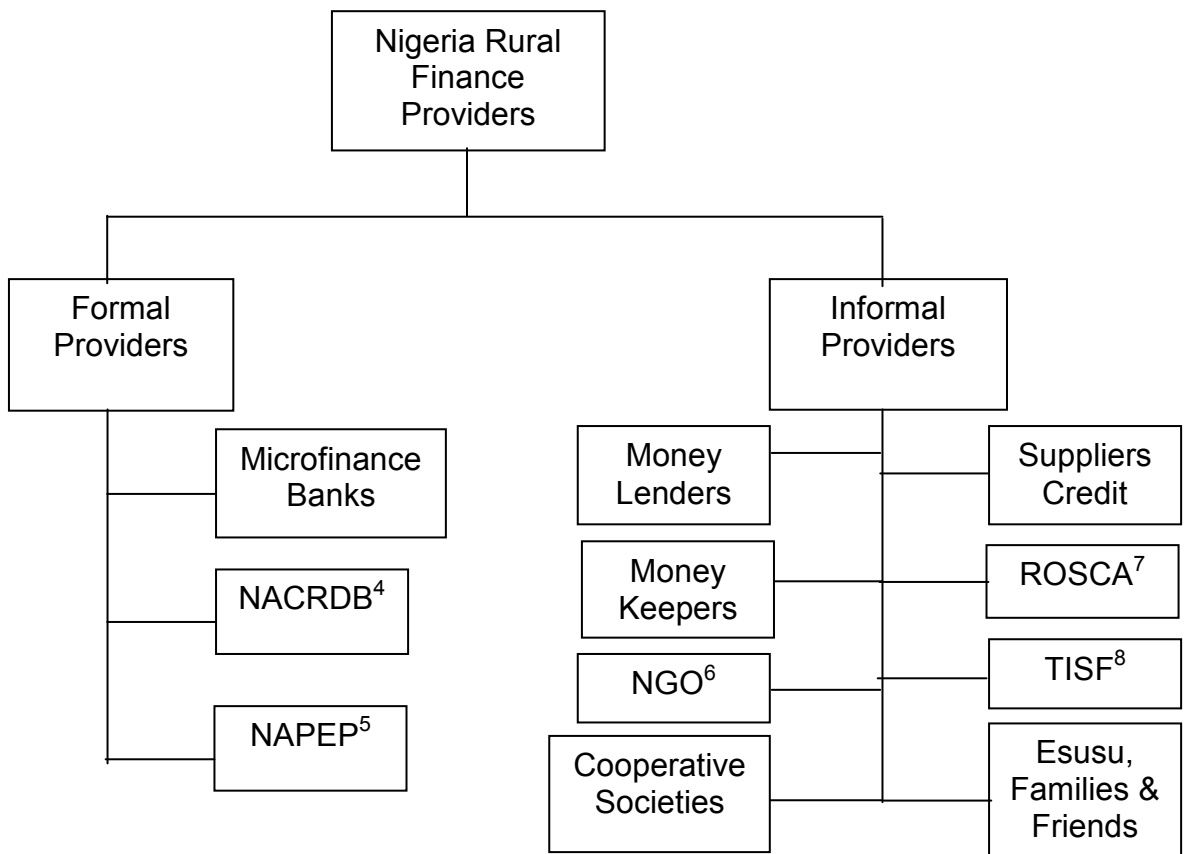
The rural areas are the largest unserved market for financial inclusion (Richter, 2011) and as such, there is the need to examine the role of cooperative in rural finance where majority lack access to formal financial providers, because financial inclusion of rural people may unlock the great economic opportunity that is available in rural areas. Due to the lack of formal financial providers in rural areas, semi-formal and informal financial providers such as cooperatives, rotational savings association, self-help group and money lenders are major providers of financial services to rural areas. The informal rural finance providers are the unregistered financial providers that operate outside the banking sectors because they are mostly unregulated (Oloyede, 2008). Cooperative societies as part of the rural finance providers “is a cost-effective model for providing financial services to those segments of the population that have little or no access to other formal financial services” (Sharma et al., 2005: vi).

2.3 Rural Finance in Nigeria

Nigeria is a country situated in the western part of Africa with thirty six states and one federal capital territory. The capital of Nigeria is Abuja, which is centrally located between the major tribes and geo-political zones of the country. Based on the result of the last national population census conducted in

2006, Nigeria has 71,345,488 male and 69,086,302 female. The total population of Nigeria is therefore put at 140,431,790¹ making her the largest populated country in Africa. Nigeria also occupies the eight highest position as at 2009² and the sixth most populated country as at 2011³ on the world population figure. The structure of the Nigeria rural finance consist of both the formal and informal finance providers as depicted by the researcher in figure 2.1 below.

Figure 2.1 Nigeria Rural Finance Providers



¹ <http://www.population.gov.ng/files/nationafinal.pdf>. Accessed Monday, 27 December 2010, 13.43 hours.
² http://www.un.org/esa/population/publications/wpp2008/wpp2008_text_tables.pdf and <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2119rank.html>. Accessed Monday, 27 December 2010, 13.49 hours.
³ <http://www.ngex.com/news/public/newsinfo.php?nid=9193> Accessed Saturday, 4 August 2012, 19.03 hours.
⁴ Nigerian Agricultural, Cooperative and Rural Development Bank
⁵ National Agency for Poverty Eradication Program
⁶ Non Governmental Organisation
⁷ Rotational Savings and Credit Association
⁸ Trade and Input Supply Financing

The formal providers are those financial institutions that are registered with, and regulated by the government. These comprise of microfinance banks (MFBs) which are owned by private individuals and/or communities, the Nigerian Agricultural Cooperative and Rural Development Bank (NACRDB) owned by the government and, the National Agency for Poverty Eradication Program (NAPEP) also owned by the government. However, these formal rural finance providers in Nigeria failed to provide solution to rural poverty which is multidimensional in nature (Adedayo and Yusuf, 2004) and also reduces rural people's access to loans because they do not have what it takes to access such loans. The informal rural finance providers are discussed below.

2.3.1 Informal Rural Finance Providers

Informal finance providers are non-registered groups such as rotating savings and credit associations, unregistered cooperative and self-help groups. They can be government owned, such as the rural credit cooperatives in China; member-owned such as the credit unions and cooperative societies in West Africa and profit maximizing shareholders such as the microfinance banks in Eastern Europe (Udejaja and Ibe, 2006). The informal rural finance providers are microfinance outlets that operate outside the regulatory and supervisory authorities of the financial system regulatory bodies. The informal providers are more than formal providers in rural areas and semi-urban centres as a result of the exclusion of poor people from financial services by government regulated financial institutions because of high transaction costs, high risk, lack of infrastructural facilities and lack of adequate/acceptable collateral (Oluyombo, 2007; Akingunola and Onayemi, 2010). The pattern and nature of informal finance providers in developing countries differs substantially, though similar in their operation. According to Buckley (1997), informal finance is multifarious and most entrepreneurs make use of the informal sector's financial intermediaries in Africa. The informal financial sectors are those financial providers that cannot be classified as a separate legal entity since they are neither controlled nor regulated by the government (Oluyombo, 2007). In most cases, they operate outside the financial system; hence the cooperative society can be regarded as

institutional finance provider for entrepreneurs in informal sectors of rural areas, while the individual arrangement for rural finance include friends, family, money collectors and money lenders (Falaiye, 2002; Oloyede, 2008).

The World Bank (2000) reported that in virtually every part of Nigeria, people have used their personal savings and small loans from family and friends and other informal associations, to carry out their businesses. The same report affirms that rural dwellers still patronise and show preference for the informal sector due to the high degree of certainty and flexibility in sourcing for, and repaying loans from informal lenders. It is easier and faster to source for credit from these informal financial service providers in Nigeria than the microfinance banks and commercial banks (Oke et al., 2007; Idowu and Salami, 2011). This is because a prospective borrower can access the lender and the financial deals completed within few days. With an average maturity of three months, the informal sector rules out becoming involved in the provision of the medium to long-term credit necessary for term investment in long gestation crops, livestock and agro-processing (World Bank, 2000).

2.4 Informal Rural Finance Providers in Nigeria

In developing countries, about 70% of adults have no access to financial service (Richter, 2011) and this could be higher in rural areas, while about 90% of the rural sector financial needs are satisfied by informal rural finance providers (World Bank, 1994). The report specifies that the informal sources provide the bulk of rural dwellers' financial needs for five active occupational groups, namely: farmers, artisans, market women, traders and local manufacturers. There are different types of informal finance providers in the world; some of these operate in groups as associations and unions within a particular community, profession, clan and companies. World Bank (2000) and Akingunola and Onayemi (2010) identified informal rural finance providers in Nigeria to include: trade and input supply financing, cooperative societies, non-governmental organisations (NGOs), *esusus*, families, friends and money lenders.

Informal finance providers identified by Buckley (1997) include supplier's credit, money lenders and rotational savings scheme. Iganiga (2008) identifies NGOs, money lenders, friends, relatives, savings collectors, rotating savings and credit association, credit unions and cooperative societies as main providers of rural finance in Nigeria. The informal finance providers in India are the traditional money lenders, pawn brokers and trade specific lender (Singh, 2004). Oloyede (2008) identify the informal financial providers as the rotating savings and credit association, money lenders, daily contribution scheme, social club and cooperative, thrift and credit association. Nathan et al. (2004) reported that the informal finance providers in Uganda include cooperative and credit societies, government credit scheme, NGO, money lenders, commercial firms employers, relatives and friends. These informal finance providers provide their savings and loan services on favourable terms and at cheaper cost (Oloyede, 2008). The informal rural finance providers in Nigeria are discussed below.

2.4.1 Suppliers Credit

This is an arrangement whereby goods are supplied to an entrepreneur on credit for a particular period of time. This is possible as a result of long time business relationship between the supplier and the buyer. The amount of goods supplied includes an element of interest that is neither disclosed to the buyer nor stated in his invoice. Suppliers' credit stands between the money lender and friends/relatives, and this is usually for a short term and flexible (Buckley, 1997).

2.4.2 Money Lenders

Money lenders are those individuals who spend a significant part of their time lending money, usually for short periods and sometimes unsecured by collateral (Buckley, 1997). The absence of collateral security for loans is one of the distinguishing features of informal finance from formal finance providers. Whereas the banks will seek tangible and adequate collateral that can compensate them in case of default, a money lender is not in a position to take collateral because the loan is expected to be paid in most cases within a few weeks or months. The money lender does not see the need to ask for collateral,

this is the main reason why the interest rate charged by money lenders is always higher than the bank interest rates (Singh, 2004; Sharma et al., 2005). The high interest rate is to compensate for the risks of default as an alternative to taking collateral. The interest rate is not uniform and the ability of money lenders to craft loan contracts that are unusual is one of the major advantages that money lender finance has over formal finance (Buckley, 1997). Interest charged by money lenders is a function of many parameters such as the amount, duration, purpose and season of the year such as harvesting time and festival period. It also includes the borrowers profile and the fund available to the money lender at that particular period.

2.4.3 Rotational Savings and Credit Scheme

A rotational savings and credit scheme or association (ROSCA) is an arrangement whereby people who know each other come together to form an economic team of providing savings and credit opportunity for each member of the group. The operation requires that each member is expected and committed to saving an agreed amount at a particular period for a fixed term (Iganiga, 2008). The savings by the members are given on a rotational basis to a member of the group until the last person in the group has benefited. ROSCA varies in size and practices, but the principles that define them remain fairly constant (Buckley, 1997). Participants in ROSCA are free to use their credit for whatever business they like and there is no restriction as to how the money can be used. Moreover, members are saved the burden of payment of interest on their credit since all members jointly raise the fund. It gives an opportunity for a lump sum of amount at a particular period which an individual may not be able to make up on his or her own.

2.4.4 Money Keepers

The money keeper's arrangement in developing nations including Nigeria has to do with a person serving as a financial intermediary between a saver and a financial institution (World Bank, 2000). The arrangement requires the money keeper to move from one house, store, shed, kiosk etc. to another to collect

individual savings on a daily basis. The record keeping is carried out by the money keeper in his ledger opened for each saver and a saving card held by the contributor which the money keeper endorses on a daily basis signifies that fund in terms of savings has been kept with him. Each saver is expected to contribute usually for a month and at the end of the month, the money keeper then gives the saver the total amount saved for the month less a day saving which serves as the benefit for the money keeper's services rendered (Singh, 2004). This type of arrangement is common in the rural and some semi urban areas where the dwellers find it extremely difficult to patronise commercial banks either as a result of their lack of education or the distance of banks to such communities. One of the outstanding benefits of the money keeper is that it encourages a saving habit among the rural poor (World Bank, 2000; Singh, 2004; Iganiga, 2008). Though the savers pay for the service, it reduces transaction cost of the savers transporting themselves individually to a commercial bank venue before they can save in or withdraw from their account. Some form of money saver allows contributors to borrow before the end of the month against the contributors accumulated savings.

2.4.5 Trade and Input Supply Financing

They are concerned with the provision of funds for the purchase, handling, transportation, processing, storage, and selling of various commodities. It involves short term funding to carry stocks of inputs and produce at various stages of production and marketing. This financing arrangement is common in the rural and urban areas among commodity traders (World Bank, 2000).

2.4.6 Non Governmental Organisations

The non-governmental organisations operate partly as a result of programs sponsored by development organisations and donor agencies to support poverty eradication and rural development (Singh, 2004). The mandate of most NGOs is to promote rural development and increase the standard of living of the poor in rural communities by providing credit and technical assistance.

2.4.7 Esusu, Family and Friends

The main informal lenders that mobilise deposits are the *esusus* and the money keepers, while money lenders are seldom involved in accepting deposits. In terms of volume and coverage, the savings collectors have the highest rates of savings mobilisation. Family and friends also provide small amount of loan with short term repayment duration as an informal finance (World Bank, 2000). Loan from friends and family are small, quick to get and for short period of time (Sharma et al., 2005) and very popular in rural areas without collateral and interest free.

2.4.8 Cooperative Societies

Sizya (2001) opines that cooperatives provide an opportunity for pooling financial resources of people of limited financial means together in order to achieve commonly identified development needs of their members. Cooperative societies constitute an avenue through which cheap credit is channelled to the rural areas and especially when it is supported by international donors and governments (Huppi and Feder, 1990). Cooperative societies are a major part by which developmental activities are carried out in rural communities via individual member's participation (Oke et al., 2007). Financial cooperatives are described by Larocque et al. (2002) as an avenue for those without access to commercial banking services to gain access to financial services that may include savings deposit, productive credit, consumer credit and loan. Sizya (2001) argued that cooperatives have been the leader in development interventions that aim to alleviate the poverty level of the poor in the rural areas. The rural people take solace in the little financial service that is provided by the cooperative. Sizya (2001) stated further that cooperatives are the most significant forms of participation in financial markets available to the rural Tanzanians. The importance of cooperatives have been identified by Larocque et al. (2002) as an avenue for the introduction of formal banking to rural areas in Burkina Faso. This shows that the rural people first have a good knowledge of the benefits of financial services by participating in financial cooperatives and

thus suggests that the failure of access to formal banking system in the rural areas is a major boost for the growth of cooperative societies.

2.5 Concept of Cooperative

Finding a universally acceptable definition for cooperative societies is difficult if not impossible because a cooperative society means different things to different people. Cooperative societies are community based, self controlled and self funded microfinance institutions (Simkhada, 2004) because they are meant to operate at the micro level in most cases to serve the low level strata of the economy, to people who in most cases lack access to formal banking system. Cooperatives are financial organisations that are owned and controlled by the members and they provide savings and credit services to their members in the community (Sharma et al., 2005). Cooperatives are a form of microfinance institutions owned by group of people who are the members and they provide small scale financial services – majorly savings and loans – just like any other microfinance institutions to their members. This is different from the formal microfinance institutions such as the microfinance banks (MFBs) in Nigeria which are meant to serve the general public. Cooperatives are voluntary association that are members owned, self managed and democratically controlled within a specific location (Adedayo and Yusuf, 2004). The existence of cooperative in a community suggests that they may be location bound or restricted which also apply to some formal microfinance institutions especially the MFBs in Nigeria with the microfinance policy delineating the operational locations of MFB (CBN, 2005) either as a unit MFB or a state-wide MFB.

Cooperatives are independent association of people who voluntarily unite to form a jointly owned and democratically controlled enterprise called cooperatives, to meet members' economic, social and cultural needs (Henry and Schimmel, 2011). Cooperative can be seen as an arrangement designed to improve the lot of individuals and enhance micro and small scale entrepreneurs both in the rural and urban areas in mobilising savings and accessing fund as loan as at when needed from the scheme. Cooperative societies are privately

organised association of individuals of like minds who come together to operate a savings and loan program among themselves (Oluyombo, 2010). Cooperatives are therefore owned and controlled by the members who voluntarily come together based on share value to meet members' needs. Cooperative is an association of individuals who voluntarily form a cooperative society (Lohlein and Wehrheim, 2003) who are united in their quest for the economic benefits of the members. Cooperative can be an intervention based on social intermediation in which poor people can mobilise their savings, link them with credit and finally become self employed (Singh, 2004). The social intermediation in cooperative societies includes training of members on different areas of vocations, health, literacy, business record keeping and management skills as found necessary. Social intermediation also include support for members in trouble such as sickness and those having essential social function to perform such as burials and weddings.

Cooperative is one of a range of financial arrangements designed to attract the poor as either borrowers and/or savers (Montgomery and Weiss, 2005). Cooperative is a microfinance arrangement to help the low income earners with financial services that will enable them to create wealth without any discrepancy as to the gender of such persons. Cooperative enables low income people to access financial and non financial services that are packaged in a manner that enable those who are unable to access formal financial services to access comparatively small loans, saving schemes and other services for working capital and income generation (Nathan et al., 2004).

Cooperatives are privately organised institutions that are owned and controlled by their members (Branch, 2004). One person, one vote is therefore applicable to cooperative societies because the association is jointly owned by the members. There is uniformity in membership class of cooperative members, unlike ownership of a limited company that can comprise of ordinary shareholders and preference shareholders. Cooperative is a voluntary group of people that work to meet members' common economic, cultural and social

needs, using a jointly owned and controlled enterprises (Allahdadi, 2011). “They appear to be the most standardised informal financial institutions with well organised savings mobilisation strategy in the informal market” (Oloyede, 2008: 47).

Cooperative societies, also know as credit cooperatives, credit unions, financial cooperatives, and savings and credit cooperatives could be government sponsored, members sponsored or program sponsored (Ghosh and Maharjan, 2001; Simkhada, 2004). Those names of cooperatives are used interchangeably in this study to mean the same. The government sponsored cooperatives are cooperatives established, owned and funded by the government to accomplish it economic objectives. Cooperatives that are established and owned by the individual members of the cooperatives are regarded as members sponsored cooperatives which are the focus of this study. Program sponsored cooperatives are established and owned by an existing organisation which may be an NGO, bank, donor etc. with specific purpose of poverty eradication, targeted towards a particular group of people in a specified location.

This study defines a cooperative as voluntary open association established and owned by people of like minds who come together to form an organisation called cooperative society without government or program funding primarily for the mobilisation of fund in form of savings from the members, which guarantee access to loan facility to such member who meet the minimum savings period requirement of the program, and also apply for a loan in order to improve the economic conditions of members of the association with little or no control from the government. As a voluntary association, a member is free to join or cease to be a member of the association at will based on the rules guiding the cooperative.

2.6 Cooperative Practice

Most people believe that cooperative is for the poor in rural areas of developing nations; this notion was debunked by Singh (2004) stressing that there is a high demand for cooperatives all over the world and that cooperative services is not limited to rural societies alone but is applicable to both the developed and developing countries. In some cases there could be male or female domination of cooperative participation (Develtere and Pollet, 2008). The members of cooperative such as females, head of households, pensioners, displaced persons, retrenched workers, small farmers and micro entrepreneurs, fall into four poverty levels: destitute, extremely poor, moderately poor and the vulnerable non-poor (Udeaja and Ibe, 2006). In developing countries, for example Nigeria, members of cooperative (either formal or informal) are not restricted to the illiterate and semi illiterate because employees of relatively large organisation do own and operate cooperative societies.

According to Ghosh and Maharjan (2001), modern cooperatives started in 1904 in British India when the cooperative societies act was enacted. The purpose of the cooperatives at inception was to provide cheap credit to the farmers. Cooperatives was introduced into Russia in mid 19th century from Germany (Lohlein and Wehrheim, 2003), but the exact year was not stated. However, Lohlein and Wehrheim (2003) reported that by 1883, there were about 981 cooperatives in Russia. Those in rural areas are called credit cooperatives while those in the urban centres are refer to as credit union. The early cooperative societies in Nigeria were established to facilitate cocoa farming which led to the establishment of the Cooperative Registrar of the Colonial Government in 1935. Later, these cooperative societies began providing financial intermediation to members (World Bank, 2000). Eventually, multi-purpose cooperative societies were designed to simultaneously solve several problems facing members, such as input supply, farming and marketing of farm produce. Consequently one could arguably state that the need to reduce shortage of loans to the low income farmers among the members brought about cooperative societies in Nigeria. The operation of cooperative within and outside Africa varies from one

nation to another. In some countries, there are rules and regulations guiding the operation of cooperatives which they are expected to comply with. The regulation may require the cooperative to be under the direct control of the central bank of such nation or a separate agency may be created to monitor and control the affairs of cooperative depending on what the country deems acceptable to do.

The survival of cooperative societies in any country depends largely on the overall political and economic environment of such nation because cooperative exists within the wider economy of the particular country where it operates. The practice of cooperative has grown over the years across the globe either as formal or informal institutions. The regulation of financial cooperatives is a function of the roles they are expected to perform in such economy vis-a-vis the level of economic development and poverty in such a nation. When purchases increase in volume or value, traders often approach their informal thrift and savings associations for loans. Cooperatives with track records of prudent management and cohesive membership stand to play a major role in the development of rural financial markets in Nigeria (Oluyombo, 2010). Cooperative includes the provision of savings opportunity for the members which may not occur in all situations because some cooperatives are financed by NGO or by the government exclusively to alleviate the economic condition of the participants. Cooperative societies may not be totally restricted to the poor people in rural areas alone because as there are poor people in the rural areas, so there are in the urban centres. Though this group of people in the city may not be easily identified, they are poor and may need to participate in cooperative since the conventional or commercial banks do not have any product or service to benefit them as identified in Central Bank of Nigeria - CBN (2005). The establishment of cooperative societies and the provision of financial services by the cooperative is not restricted to a particular group of people living in a particular location, but it is all about the availability of financial services that are beneficial to the poor people irrespective of where they live or what they do to earn a living in as much as it is intended to serve as a financial leverage out

of poverty and for better standard of living. Any attempt to force the low income earners into the formal banking system may fail because they do not have what it takes to be the clients of commercial banks.

The existence of employee cooperatives in some organisations reduce the burden of loan request from their employers and also serve as a common platform for owning household equipment and other assets at a reduced interest rate spread over a particular period of time (Oluyombo, 2010). A study by Oke et al. (2007) reveals that more clients of microfinance institutions in South Western Nigeria are members of cooperative societies. Cooperative members in other microfinance organisations believe that the cooperative is a very good alternative source of finance in form of saving and loans for them (Oloyede, 2008). Oke et al. (2007) found that improvement in payment of loans in microfinance program by 7.05% is caused by cooperative society's members. Cooperatives mobilise large numbers of voluntary small savings (Branch, 2004) from their members. Cooperatives are formed to mobilise savings from the members which is also used to access loan and other wealth creation opportunities. This afford members the advantages to improve their economic condition. Cooperatives are strategy for poverty alleviation for rural dwellers (Adedayo and Yusuf, 2004) and they are based on some values which include equality, self-help, equity, self responsibility, democracy and solidarity among members (Henry and Schimmel, 2011). These values are the driving force of cooperative societies as an association of people of like minds with intention to elevate the economic position and wealth of individual members. Cooperatives are therefore not primarily established to make profit, but they balance the economic needs of members with profitability of the program.

The inability of the markets and governments to provide social goods and services efficiently led to the establishment and expansion of cooperatives (Calkins and Ngo, 2005). Cooperatives are based on the members' ideology and need; hence there is a need to reduce government intervention in cooperatives to the barest minimum especially in areas where financial demand

is placed on them since the formation and funding of the cooperatives are from the members with or without government subvention or grant.

2.7 Patronage for Cooperative Societies

Rural dwellers may not patronise formal finance providers as much as they participate in informal finance because formal finance providers may not find the patronage of the rural people profitable enough for their business (World Bank, 1994; World Bank, 2000). The commercial banks could find it difficult to understand the economic pattern of rural people and may be unable to develop products and services that will effectively meet their needs. The educational attainment of rural poor may be another impediment in having formal finance providers in rural areas. Haque and Yamao (2008) observe that rural poor are largely neglected by formal financial institutions because they have no access to institutional credit due to collateral requirements, complex procedures, poor communication and inadequate banking network in the rural areas. Montgomery and Weiss (2005) argue that from the outset, most financial institutions probably do not accept the mission to serve the poor, while Nathan et al. (2004) opine that to minimise transaction costs, the formal finance providers in Uganda tend to be urban based leaving the poor in the rural areas underserved. In Tanzania, Sizya (2001) found that heavy government involvement through the appointment of cooperative executives and manipulation in the affairs of cooperatives gradually eroded and diminished the poverty reduction potential of cooperatives in the country.

Micro entrepreneurs in Nigeria have been underserved by the commercial banks (World Bank, 2000) and there is no evidence to contradict this. Banks hardly lend to the rural people because they lack the collateral they could offer as security for loans (Nathan et al., 2004). Larocque et al. (2002) reported that the rural people are unable to patronise the formal banking system due to requirements for opening an account which most rural dwellers are unable to meet. Hence, they are cut off from the banking system. Banking services are majorly targeted at the high valued end of the market in urban centres due to

financial viability considerations of the banks that can be achieved in such locations (Sizya, 2001). Poor people depend more on informal sources of credit in order to meet major household expenses and basic livelihood support because about 36% of the rural households are outside the fold of institutional credit (Singh, 2004). Micro loan from commercial bank is not easily available due to collateral requirements, complex legal and operational procedures, and because majority of the poor depend on informal finance providers for their credit needs.

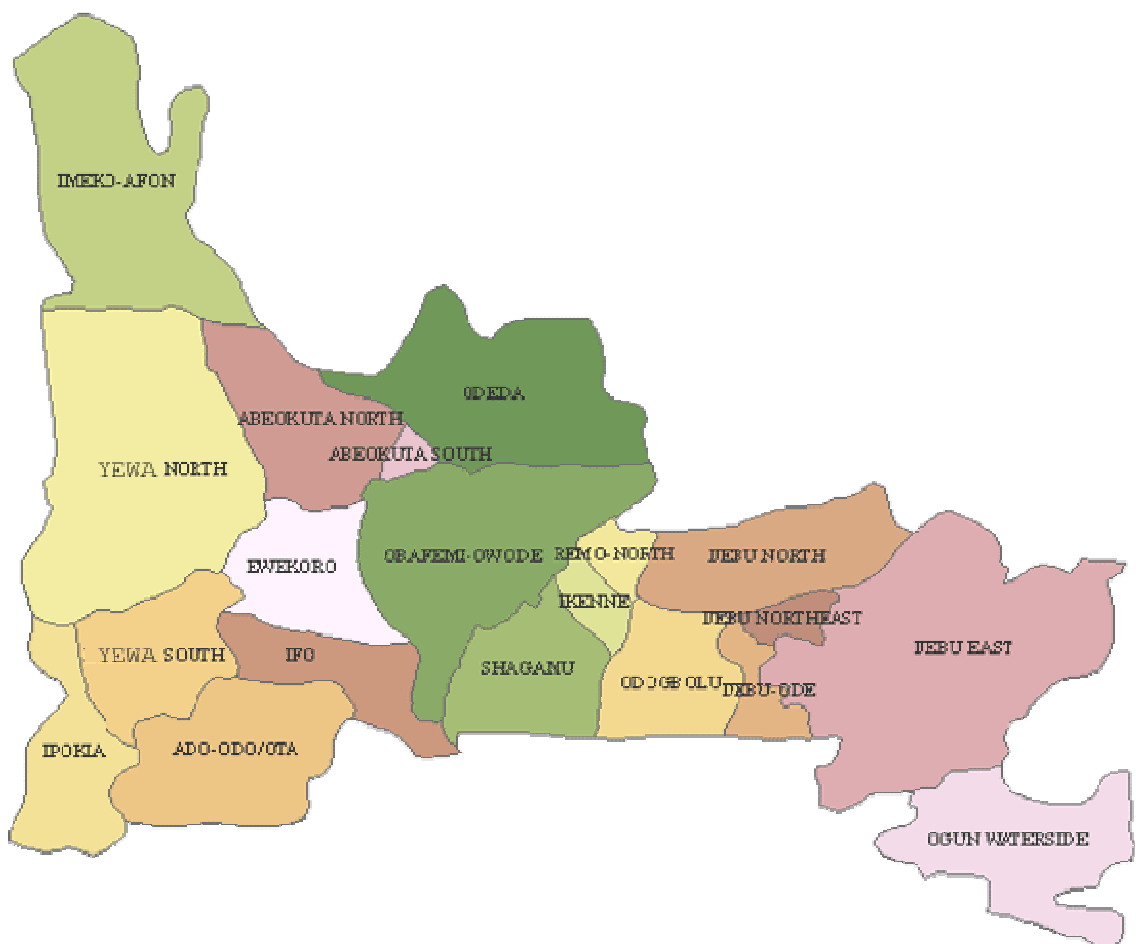
“Majority of cooperatives are found in rural areas of most countries and they are often the only provider of services in rural communities” (Henry and Schimmel, 2011: 1). The researchers supported their claim with data from India, where 67% of financial needs of rural people are provided by cooperatives. This suggest that cooperatives are indispensable companion in most rural areas of developing nations for the economic and social upliftment of rural people which include social integration and financial services mostly in savings and loans. Iganiga (2008) pointed out that the formal financial system provides services to about 35% of the economically active population of Nigerian citizens, while the remaining 65% are excluded from their services. In a country with 140 million population, about 91 million are served by the informal finance providers. In an economy with the above scenario, the poor are left with two options: they either patronise the informal finance providers with all their stringent conditions or decide to stay away from the financial system entirely.

The discussions in sections 2.5 and 2.6 above, and this section suggest the key role of cooperative societies on their members as improvement in economic condition, poverty reduction, better standard of living, improvement in members wealth, social integration, economic upliftment and better social, financial and physical conditions.

2.7.1 Ogun State at a Glance

Ogun State is a state located in South-western Nigeria. It borders Lagos State to the South, Oyo and Osun States to the North, Ondo State and the Republic of Benin to the west. Abeokuta is the state capital and the largest city in the state. Ogun state was created in February 1976 and it is divided into three senatorial districts - Ogun East, Ogun West and Ogun Central - and consists of twenty local governments areas. The population of the state from the last national population census conducted in 2006 is 3,728,098 which consist of 1,847,243 males and 1,880,855 females. Figure 2.2 below is the map of the state.

Figure 2.2 Map of Ogun State¹, Nigeria



¹ http://ogunstate.gov.ng/eGovernment/images/stories/ogun_map.gif accessed, March 10, 2009. 14.27hrs

2.8 Summary and Conclusion

Different definitions of cooperative were considered, thereafter, cooperative definition for this research was stated. The chapter discussed rural finance in Nigeria and the types of informal rural finance providers in Nigeria. The researcher identified three formal rural finance providers (MFB, NACRDB and NAPEP) and eight informal rural finance service providers in Nigeria as suppliers credit; money lenders; rotational savings and credit scheme; money keepers; trade and input supply financing; NGO's; *esusus*, families and friends; and cooperative societies. Cooperative society was chosen as the focus of this thesis from the eight informal rural finance providers that were identified as operational in Nigeria because it's the most common form of informal finance arrangement among the rural dwellers. It also has a cultural background of involving people of like minds and it is widely practised across Nigeria. Moreover, the impact of cooperatives on members' poverty reduction and improvement in their standard of living has not been studied in a cohesive manner (Develtere and Pollet, 2008).

The next chapter is on the review of existing literature on key areas relating to the study.

Chapter Three

Literature Review

3.1 Introduction

This chapter is devoted to the review of existing bodies of knowledge on related studies that have been carried out in areas of informal rural finance with main emphasis on cooperatives in different nations. The chapter is also used to highlight gaps that are available in the literature and a portion to be filled by this work. The next section commences with review of studies on informal rural finance providers and the participants. Impact of cooperatives on individual members is discussed in section three. This includes cooperatives and savings mobilisation, loan facility and members' satisfaction. Section four focuses on the effect of cooperatives on household performances, while section five examines enterprises activities with cooperative societies. Section six focuses on effect of cooperatives variables for standard of living and quality of life. Section seven explains the theoretical framework for the study, while section eight focuses on the development of research proposition and hypotheses from the literature. The last section is the summary and conclusion of this chapter.

3.2 Informal Rural Finance Providers and the Participants

Studies that used any of the eight informal rural finance providers identified in section 2.3 and explained in section 2.4 of the last chapter with the exception of cooperative societies are reviewed in this section. Specifically, studies that used any of the seven informal rural finance providers namely, money lenders, money keepers, NGO, suppliers' credit, ROSCA, trade and input supply financing, and Esusu, families and friends are reviewed below. This is to enable the researcher situate his findings within the literature on informal rural finance providers as well as the cooperative societies that are reviewed in section 3.3, 3.4 and 3.5 of this chapter

A longitudinal study in Kenya, Malawi and Ghana by Buckley (1997) examined the role of informal finance providers in meeting the credit needs of micro enterprises. Its results indicated that 3%, 9% and 10% out of 140, 160 and 150 respondents in Kenya, Malawi and Ghana respectively have used money lenders to source for credit. The use of money lenders by micro entrepreneurs is real but very small. Those who had patronised the money lenders in Malawi did so for consumption and distress purposes such as funeral, medical expenses and payment of school fees. The amount involved is relatively small with short term maturities, but they regard the money lenders as being exploitative and should be avoided if possible. The results from Malawi revealed that none of the respondents had obtained commercial bank loans, but the few who received formalised loans did so from an NGO program. The findings shows that 13%, 20% and 50% for Kenya, Malawi and Ghana respectively have obtained formalised credit. It implies that 87%, 80% and 50% of the respondents in Kenya, Malawi and Ghana respectively never received loan from formal financial institutions. This is an indication that Africa and other developing nations may not be able to do without the services of the informal finance providers and it also reveals how important the informal finance providers are to the economic well-being of the rural people.

Edgcomb and Garber (1998) conducted a study in Honduras to determine the impact on informal finance program at individual, household, enterprise and community levels. The researchers developed some hypotheses at the four levels of impact if participation in the program leads to increase in: household income, assets and welfare; business net worth, net cash flow and differentiation between the micro enterprise and household; paid employment by client households; and self-esteem, control over resources and paid labour. The study found that existing clients have more profits than new clients and clients enterprises improve as a result of changes in business development. More clients than new clients increase the scale of their business, employ more workers, improve the quality of their products, and source cheaper credit to increase their profitability. The researchers document 66% and 47% for clients

and non-clients respectively on expansion of business facility with a statistical significance of $p=0.03$. 34% of clients and 17% of non-clients had addition of new products. Clients were significantly able to acquire storage facilities than new clients. Existing clients significantly ($p=0.007$) increase in the acquisition of enterprise tools and equipment. At the household level, they reported that more clients than new clients increased their savings, household income and assets over a year period but no significant difference ($p=0.12$) was documented in fridge ownership.

Edgcomb and Garber (1998) findings on individuals reveal that clients have more self esteem through their participation in the program than new clients. At the community level, they reported that assessing impact at that level is difficult and they could not document any findings on the community traceable to the program. The study reported that the clients were happy with the savings not withdrawn until they leave the program and the interest on loan is less expensive than other sources of credit available to them. The acceptance of guarantees that is easy to provide for loan and compulsory savings were also reported as satisfaction to the clients. The study documented that clients that engage in the program savings products develop a good savings habit which they found difficult to do before joining the program. The pitfall of Edgcomb and Garber (1998) is the use of both individual informal finance program and village banking clients for the study which affected the statistical analysis of the questionnaire negatively because they were unable to calculate t-test set out for the study for some criteria. The study neither focuses on the standard of living nor the quality of life of the participants. Indicators used as proxy for poverty covers both and this made them to report most of their findings in percentage instead of the t-test earlier planned for the study. Only very few results were statistically reported for variables that relate to standard of living such as enterprise assets while indicators that have to do with the quality of life such as food consumption were not reported statistically. The result of the study would have been further enhanced if the effect of participants demographic variables are considered on their findings.

Basargekar's (2010) study was on the effect of self-help group financing on empowerment underpinned by social capital theory among 215 women members of the group in urban areas of India through survey. The study used 14 variables to measure the effectiveness of social capital due to changes in participants' life before and after joining the program. Its results indicated that 13 variables namely education and training, healthcare, family planning, girl's education, son's education, expenditure decision, physical mobility, other household decision, family social status, social status in the neighbourhood, participation in gender issue, social empowerment and participation in social issues are statistically significant to creation of social capital in the scheme. However, participation in electoral system was not significant to creation of social capital. The use of participants experience before and after joining the program is a novelty. However, data analysis method was not stated and the study considered only female program.

Falaiye (2002) studied an NGO finance program to determine the changes that the program savings and loans services has brought to the beneficiaries business activity, assets accumulation, consumption, nutrition, level of income and household expenditure. She found that more of the existing clients than new or incoming clients own the house they live in but no significant difference was noticed in the accumulation of household assets and household income. Increase in household income and assets are not statistically traceable to membership of the program. The reasons given for reduction in household income include sickness, poor sales, death and loss of job. More clients (6.1%) reported an increase in total employees than new clients (5.6%). Clients' performance was higher than incoming clients on quality of product, bulk purchase, business expansion and ability to sell in new market as proxy for business profit. Results on enterprise assets show that clients own 50% of small tools while incoming clients have 31%. Major tools for clients are 22% and incoming clients 14%, while marketing structure is 21% for clients and 8% for incoming clients. Falaiye (2002) found that 23% of clients used their profit on education of household member while client satisfaction arises from loan

received with ease, group solidarity, lower interest rate and easier guarantee for loans which lead to self esteem among clients. The study suggested that clients are happy with their ability to accumulate savings in the program. The reason for choosing the three states used for the study was not mentioned despite that the program operates in 32 states. The use of urban centre in the study is contrary to the title of the study that indicates rural area. She also covers many parameters of standard of living and quality of life, while the result on quality of life was not properly documented nor reported. It also failed to utilise any theoretical framework.

A study carried out by Shaw (2004) examined the causes of income related impact gap and the reasons for differences between earnings of micro enterprises among poor and less poor clients. The study suggested that, financial support for rural entrepreneurs helps to alleviate ill-effects of poverty. The poor in semi-urban locations have a better opportunity to exit poverty via any micro enterprises than their rural counterparts. The researcher reported that 25% of households that were initially below poverty line came out of poverty after joining the program. The study concluded that it is harder for poor people in rural areas to get out of poverty than other areas. Adjei and Arun (2009) examine the depth of an NGO program that used group lending method in the provisions of savings, credit, insurance and training services to the clients in Ghana, using human resources, food security and vulnerability, dwelling and related indicators, and ownership of household assets as the four dimensions of poverty with the aid of a standardised poverty assessment tools. The researchers found significant difference ($p=0.000$) between clients and non-clients with respect to ownership of sewing machine, refrigerators, radios, beds and mattresses, and expenditure on clothing and footwear. No significant difference was found in acquisition of televisions ($p=0.155$) and gas/electric cookers between the clients and non-clients. They reported that clients have better ownership of accommodation, source of water supply and toilet facility than non-clients. But no difference was noticed in energy for cooking, roofing materials and level of education. In conclusion, the study stated that clients

have better standard of living than non-clients. The discussion in the paper suggests a quantitative research in data gathering but the researchers do not specify this. The researchers do not mention if the tool used was quantitative, qualitative or combination of both.

Another related study carried out by Jainaba et al. (2005) used the social capital theory to determine the impact of group program on women's decision making and empowerment in Senegal. They found that loans are used to purchase business input and to pay for business associated fees. Their result suggested that the lives of the participants have not been impacted considerably. The study concluded that microcredit does not lead to social capital at the community level because of lack of social amenities and other deprivation by rural communities. Oke et al. (2007) examined the factors that influence repayment of microcredit among members of Country Women Association of Nigeria (COWAN) and Federal Agricultural Development Unit (FADU) in Ondo and Oyo States of Nigeria respectively. They found that 88% of COWAN members repaid more than 70% of their loans on or before the due date while 90% of FADU borrowers paid their loan as and when due. They reported that a kilometre increase in the distance of bank to the clients reduces repayment of loans by 0.92%. This is significant and the closer a bank is to a client; the quicker it is for loan repayment to be made. The study found that loan repayment increased by 0.27% based on additional naira loan, indicating that the programs clients have more capacity to accommodate more loans to increase their productivity and earnings. They suggested that any delay in disbursing credit also reduces a client's ability to repay loans to the extent that any disbursement delay for a day may result to 0.98% reduction in repayment. Their conclusion is that members of FADU are credit worthy and COWAN members had easy access to loan facilities but the poorer a client is, the more difficult it is for him/her to repay. The reasons for selecting COWAN in Ondo State and FADU in Oyo State was not stated. The researchers also forgot the importance of mentioning their data collection methods. Park and Ren (2001) studied the performance of Chinese rural finance program and found that the

majority of the respondents 63%, 71% and 97% in government, mixed and NGO programs respectively reported that the program has brought an increase to their household consumption.

The effectiveness of informal financial sector in attracting rural finance for rapid rural development is the focus of a study by Oloyede (2008). The study hypothesis is that the informal financial sector has not made significant impact on savings and investment and the overall development of the rural economy. Its results indicated that 51.36% of the participants belong to daily contribution scheme, 23.64% to ROSCA, 17.73% in cooperatives and 1.09% to money lenders, while others accounted for 6.18%. Preference for informal finance shows that 48.36% participate because of easy access to borrow, easier to operate 34.18%, kinship/family ties 6.73%, safer than bank 3.27%, and closeness and personal relationship 7.45%. Oloyede (2008) found that where 49 rural dwellers applied for bank loan, only five applicants (10.20%) were successful. Among the 209 that applied for informal finance loan, 205 applicants (98.09%) were successful. The study documented four key areas – business support 25.96%, trading 25.25%, farming 12.20%, and education support 9.79% - where loans are invested. The research was not specific if the study locations are rural, urban or both. The type of informal finance used was not stated in the methodology and their justification. The paper appears to have mixed the five informal providers in the study without consideration for their distinctive characteristics and operations. The literature review was void of previous empirical studies. Hence, all the findings were not compared with any literature and the study was not underpinned by any theory. This raises concern over the result of the study in relation to the body of knowledge. Consequently, fifteen pages (46-60) of the paper had no reference to any literature. Interview was not stated as one of the data collection tools, however, some findings refers to oral interview conducted.

Adjei et al. (2009) explored the role an NGO program plays in asset building and poverty reduction among rural and urban poor. Their result suggests that

established clients were more able to sponsor their children to private school than new clients. They discovered strong association between the loan amount given and acquisition of household assets. They reported that participation in the program leads to ownership of refrigerator (45%) and that marital status ($p=0.000$), level of education ($p=0.000$) and household size ($p=0.008$) are statistically significant to fridge ownership. More of the clients own television than non-clients and this is statistically significant ($p=0.000$). They found no difference between the two groups on acquisition of sewing machine, and much difference was not found in ownership of electric cookers. The study reported that participation in the program reduces clients' vulnerability to crises such as sales of assets and illness, and also helps clients to cultivate savings habit which causes significant improvement in established clients living standards, assets building and reduction in poverty. The use of participants' demographic variables to explain their result was a major contribution to literature and a novelty.

3.3 Cooperatives and Individual Members

This section reviews studies that relate to individual members of the cooperative. This is examined in three sub-sections that cover the role of cooperatives on savings mobilisation, loan facilities and members' satisfaction. These are covered one after the other below.

3.3.1 Cooperatives and Savings Mobilisation

The impact of four savings and credit cooperative societies which consists of two self promoted, one program promoted and one government sponsored cooperatives located in both the rural and urban areas of Nepal was carried out by Simkhada (2004). The study was underpinned by social capital theory. The sample consists of members and non-members to determine the impact of the cooperative at individual, household, enterprises and community levels. The researcher reported that the cooperatives used compulsory savings to develop thrift among members and as a result, the members develop capacity to save and repay their loans. Nathan et al (2004) found in Uganda that savings help

rural finance clients to determine their loan amount and how they save in the program. The findings suggest that the poor people are not only interested in credit but they are also interested in how to save their money at regular intervals. It is not the credit obtained that raises the poor out of poverty but their ability to save from income generated from the use of credit given (Buckley, 1997). A person that finds it very difficult to save may eventually consume both his capital and income because credit alone is not enough to deliver the poor from poverty.

Eisenhauer (1995) longitudinal study among an employee and a community based cooperatives in Malawi evaluated the impact of the program on the members and found that the number of members that keep savings in a postal savings account decline within two years while savings in the cooperative was on the increase. 54% save in order to qualify for loan while 20.4% save to benefit from life and debtors insurance. 8% save because it is convenient, 3.5% for safety and 3.5% because of higher rate of interest. The study considered more of what the people want from the cooperative in the future and not the impact of the program. The sample for 1993 and 1995 survey defer significantly and constitute an unmatched panel, while the 1995 sample is smaller than 1993 sample. The study also lacks any theoretical underpinning. Larocque et al. (2002) found that cooperative members are willing to save and that 49% actually save to provide security against theft, 28% to avoid useless expenses, while 15% save against fire. 13% save in order to have access to loan. These results suggest that savings platform is useful for any cooperative that wants to enjoy maximum participation from the rural dwellers because savings help the members to fulfil many purposes such as provision of security against theft, avoidance of useless expenses and access to cooperative loan. Larocque et al. (2002) concluded that savings deposits added an important dimension of risk reduction to the participants. This is because their result shows that cooperative members save to avoid theft. Financial intermediation is therefore not complete with availability of credit without the platform to mobilise savings from the poor because cooperatives mobilise large numbers of voluntary small savings

(Branch, 2004) from their members. A study in Russia by Lohlein and Wehrheim (2003) reported that instead of savings, members increase their equity in the scheme and this has effect on the loan that members can access based on the equity balance. This is important because cooperatives in Russia are forbidden from accepting savings. Wanyama et al. (2008) used qualitative data from eleven African countries to determine the impact of cooperatives on poverty reduction among households. The research found that the program enables members to accumulate savings. Most cooperatives in their study are formal in nature and they are based in urban centres, owned by educated people who are employees of educational institutions such as University of Ghana Cooperative Credit Union, Maseno University Savings and Credit Cooperatives in Kenya and Jinga Teachers Savings and Credit Society in Uganda. Sharma et al. (2005) reported an increase in savings habit among members between three years when the first study and the last study were conducted.

3.3.2 Cooperatives and Loan Facilities

A cross sectional study by Adedayo and Yusuf (2004) examined the structure and poverty reduction activities of cooperative societies with the use of nine anticipated benefits of cooperatives such as frequency of borrowing, loan amount, use of loan, consumer goods purchased and assets acquired as variables for poverty reduction and better standard of living condition. The study found that the amount of loan given to the members is significant when compared with the low standard of living in rural areas. Their findings on use of loan shows that 64.17% was used for trade and investment, 4.62% on children education, 8.46% on purchase of business inputs while 6.03% was deployed in acquisition of assets. However, the results of the study would have been further strengthened if non-member had been included in the sample. This would have provided a better understanding of impact of the cooperatives for comparison. The study lacked theoretical framework. Simple percentage was used for most of the result, while multiple regression was not carried out on all the nine criteria

used for poverty and standard of living. This was contrary to the methodology stated for the study.

Adebayo et al. (2010) focus on the impact of cooperatives on rural development and poverty reduction in Rwanda. Data was sourced through questionnaire, observation and oral interview. They reported that 93% of the members assert that the loan taken is adequate while 7% disagree. The use of loan reveals 46% for construction of houses, 31% for children education and 23% for family use. 92% of the members pay their loan as and when due while 8% finds it difficult to pay the loan. The justification for the choice of study locations was not stated. Empirical analysis was not carried out while the results were not compared with previous studies. The study therefore seems to be an orphan among other literature. The study by Idowu and Salami (2011) found that female entrepreneurs use more of cooperative loan (8%) than the formal microfinance bank loan (6%). This was due to lower interest rate charged by cooperative societies and their flexible loan repayment structure. The findings of Larocque et al. (2002) reveal that access to cooperative loan raises the beneficiaries and the household above the poverty level because members have access to cheap loan from the cooperative and the loan came as at when needed.

Oke et al. (2007) reported that the interest paid on a cooperative loan is lesser than those charged by the formal finance providers. Larocque et al. (2002) documented that it is not possible to get a low interest rate in the banking system as it is available within the cooperatives societies. The judicious use of credit coupled with an outstanding financial discipline may transform a poor person from one level of poverty to another until he or she emerges from the poverty circle. Tsekpo (2008) found that cooperative members frequently accessed loans from the scheme to support their businesses. Simkhada (2004) reported that instalment loan repayment in cooperatives is flexible because it is designed according to the loan purpose while the cooperative loan interest of between 15% and 20% per annum is on reducing balance method. The loan use result reveals that 67% was for productive activities, asset purchase and

repair (11%), 13% for social activities and 3% for repayment of previous loan. The study concluded that cooperatives build social capital, because money lenders had to reduce their interest on loan from 60% per annum before the introduction of cooperatives to 24% after cooperatives were established.

The qualitative desk study by Lohlein and Wehrheim (2003) used social capital theory to explore the potential role of cooperatives in rural areas in Russia. They found that participation in rural cooperatives lead to closer relationship in the community where the cooperatives are located. The study noted that this relationship may provide an explanation for creation of social capital which helps to improve the rate of loan repayment as a result of peer pressure from fellow members of the cooperative. The study reported that interest on loan compete favourably with those charged by other financial providers because the cooperatives charge 28% per annum while the banks charge between 27-32% per annum interest on loan. Wanyama et al. (2008) found that interest on loan is between 12 and 18% per annum on reducing balance in Kenya, Ghana, Nigeria, Cape Verde and Uganda. In terms of social capital, the study documented that emergency loans are given with shorter repayment period and higher interest rate for health related matter and for burial expenses. Sharma et al. (2005) found that most members used their loan for agricultural production (23.6), animal husbandry (22.3%) and business investment (20.8%), while cooperatives loan interest is lower than other informal providers. The study concluded that the expansion of trade through the cooperatives loan leads to social capital for the communities. Calkins and Ngo (2005) found that banks in Ghana charge interest on loan of about 40% per annum while banks loan take too long period with more administrative details before it is disbursed.

Enete (2008) studied the cooperative sectors and found that beneficiaries of cooperative loans use such funds for businesses such as petty trading or payment of their children's school fees. Eisenhauer (1995) reported that the proportion of members that took loan from the cooperative increases which suggests that the cooperatives has improved their lending capacity. 61% of the

members feel that it is easier to get loan from cooperative than from the bank. 43.6% said that cooperative loan interest is higher than that of the banks while 36.2% agrees that bank interest on loan is higher than that of the cooperative. 20% do not know which of the interests is higher than the other. 45.3% agrees that cooperative loan takes a long time to approve and disburse, while 49% disagree. 33.7% agrees that the program lends loan to members with connections to staff and the committee, while 61.3% disagree. Its result on loan collateral shows that 73.3% agrees that cooperatives do not require much collateral as banks do, while 19.8% have contrary opinion. Loan repayment period was found to be long enough to allow members to pay their loan. Wanyama (2008) study in Kenya found that cooperative members used loans to meet other family obligation to ensure reduction in their poverty level.

3.3.3 Cooperative Services and Members Satisfaction

Lemma (2008) assessed the growth of cooperatives in Ethiopia using qualitative data derived from interview and review of published and unpublished documents of cooperative unions and the regulatory body. The study found that cooperatives are major supporters of self employment in the urban and rural areas which help the income of the members to increase. The researcher reported that members care about the well-being and economic problems of one another and also provide opportunities for casual labourers to be gainfully employed in order to reduce poverty. The use of regulatory authorities in the study may not produce the real impact because the authorities may give more of positive effects of cooperative to support their role. Tsekpo's (2008) study in Ghana found that the absence of social protection schemes in the informal sector of the country makes people in the urban and rural areas to look up to cooperatives societies as a source of solidarity in times of need.

The objective of Larocque et al.'s (2002) two years study in Burkina Faso is to demonstrate the social and economic impact of cooperatives on their members. The researchers found that cooperative was the first avenue for the people to have access to an organised savings and credit system. The study reveals that

the rural people participate in cooperatives because of transparency and participation in equity which makes them happy with the process of ownership. The study reported that equal treatment of members, lower costs for products and services offered by the cooperatives distinguish the cooperatives from other formal and informal financial providers. This thus guarantees continuous support from cooperative members to the detriment of other financial service providers, because the cooperative arrangement is more transparent as members participate fully in managing the cooperative and this is not possible with conventional banks (Oluyombo, 2010). They therefore determine their own future and take responsibility for their actions and the outcome of the cooperative financial performance. Larocque et al. (2002) found that 34% of members used consumer credit in financing education. The study reported that financial cooperative members were able to acquire services, goods and properties which they found difficult to acquire before the establishment of the cooperatives.

Larocque et al.'s (2002) study used one region of the country – central plateau – and this may not necessarily reflect the opinion of cooperative members in other regions because of differences in socio-economic environment of each region. Moreover, cooperative members in rural and urban areas and rural bank clients were combined without considering the peculiarity of each area. As a result, their findings may not represent the opinion of either the rural or urban dwellers and cannot be used as a basis for nationwide analysis. The study does not make use of any control group which could have been non-members in the programs in the same location or members that do not have loan from the programs. If the control group was included, it could have been useful to trace the exact impact to participation in the programs. The study also lacked any theoretical underpinning. The implication of the above lapses on this study is that the title of the thesis is captioned to reveal the region – Ogun State – studied and not to present it as if the entire country – Nigeria – was studied. The delineation between the urban and rural areas is taken into consideration since the dwellers in these areas do not have common socio-economic conditions. In

addition, a control group that was not used by Larocque et al. (2002) will be used in this study and they are cooperative members who have not accessed loan from the cooperative within the same community.

A study by Wanyama (2008) reported that cooperative members used their income to address long term poverty reduction measures such as the education of children with the hope that the children will soon be gainfully employed after education. A study in Uganda by Mrema (2008) found a significant supportive effect of cooperative loan on employment, increase in salaries and establishment of surviving businesses. The cooperative also helps members and their families to be lifted out of poverty because members were able to send their children to school.

Allahdadi (2011) conducted research on the role of male organised cooperative on poverty reduction in Iran using focus group discussion (FGD) among the members. The study indicated that the cooperative managers lack knowledge of cooperative management, and lack of collaboration among members was responsible for failure of the program on poverty alleviation. The study claims to be a quantitative method of investigation, but this was not reflected in data collection and analysis tools used, and no specific variable was used to determine poverty. The FGD process was not documented while the FGD result was scantily reported, and most findings were not directly related to the study objectives. None of the findings highlighted FGD response that is traceable to the outcome of the study. Adebayo et al. (2010) found that 70% of the members experience improvement in their standard of living, 20% reported reduction while 10% had stagnation. Wanyama et al. (2008) reported that services provided by cooperatives help members to improve on their living condition and thereby pull some members out of poverty. They also educate their children from the income generated from the use of cooperative loan. The cooperative also leads to training of members in their chosen trade. Enete (2008) found that elected officials sometimes hijack the affairs of cooperatives for their selfish interest.

Simkhada (2004) found improvement in involvement of female members in decision making because 71% of members and 61% of non-members take decisions on family planning, 84% and 43% for members and non-members respectively for community development and 29% of members, 15% of non-members were in participation for community meetings. The study traced social capital build-up to the availability of financial services among cooperative members, which is hitherto better than that of money lenders. The social capital also includes the establishment and expansion of markets due to the existence of cooperatives. Lohlein and Wehrheim (2003) study reported that cooperatives reduce transaction cost in accessing financial services in form of savings and loan. It also reduces the distance to formal financial providers' office in urban centres, while giving opportunity to those without credit history to receive loans.

Sharma et al. (2005) longitudinal study was underpinned by social capital theory. The research on socio-economic impact of four cooperatives in Nepal on their members reported that the feeling of ownership of the program was high among members. The study reveals that non-members expenditures on health are higher than members because the program gives their members the knowledge of preventive health. Members were more able to send their children to school than non-members. Better toilet facilities was reported by members (52.5%) than non-members (24%). 64.5% of members improved their diet, 34% stayed the same, and 0.5% was worsened. Social capital was documented by Sharma et al. (2005) because group solidarity, as a result of participation in cooperative, increases members' confidence to move against social vices, and enhanced unity and cooperation were noticed among members. Specific comments and concern raised during the FGDs were not reported in the study. One of the purposes of interview and FGD which would enable the researcher to quote the respondents verbatim was not achieved by the researchers. This takes away major benefit of using the tools in such study. The result of the individual member case studies was not integrated into the paper, but they were reported as appendix which negatively affects the results because the findings

from both the qualitative and quantitative tools were not integrated to form a decision on the research objectives.

A study in Cote d'Ivoire and Ghana by Calkins and Ngo (2005) measure quantitatively and evaluate qualitatively the roles, impacts, and relative importance of cooperatives in the improvement of the productivity, market power, management ability and socio-economic well-being of members and their households. The study indicated that members are more satisfied with the services received than those offered by other alternative providers. The quality of service delivery is on the increase while there is a sense of self responsibility among members. Decision making role of female cooperative members does not improve more than non-members and the control group. But the quality of residential house of members is better than other groups in Cote d'Ivoire, while other group performance is better than cooperative members in Ghana. Analytical tool for the qualitative data was not stated while direct comment from the FGD and interview were not reported, this take away the actual need for the qualitative tools used.

How cooperative membership imparts on the well-being of the individual was the focus of Holmgren (2011) underpinned by social capital theory. Its result on members' satisfaction shows that 3.5% were not satisfied, 43% were satisfied, 47% were somewhat satisfied while 7% were very satisfied. Family health was fair for 56%, those with good family health were 38%, 4% were bad while 2% were very good. Negative relationship was found between membership length and family health, while better education has a positive impact on health and life satisfaction. The study reported an increase in the community well-being level because members were well educated. The researcher concluded that cooperative improves members' well-being. Eisenhauer (1995) reported that 76.1% agrees that cooperative is friendlier than bank, while 21.8% disagree. 75.9% agrees that cooperatives are more conveniently located while 5.5% disagree. 67.59% support it that cooperatives have more convenient hours to attend to their members than banks, while 29.7% disagree. 22% of the

members took loan to purchase stocks while 33% used their loans for raw materials.

Torfi et al. (2011) analyse the factors that are responsible for social capital among cooperative members through the members' demographic variables with five variables namely trust, social cooperation, exchange of information, rate of awareness and mutual comprehension and life satisfaction. The first two variables were examined based on what happens between cooperative members, and what happens between a member and other non-cooperative issues. They found that members who are married and educated have higher social capital likewise those with long membership period.

3.4 Cooperatives and Household Performances

This section considers studies that relate membership of the cooperative with household performances. The household performances are based on the role of cooperative societies towards household income and household assets.

3.4.1 Effect of Cooperative on Household Income

Ghosh and Maharjan (2001) study in Bangladesh assessed the role of government sponsored cooperatives in improving the socio-economic conditions of their members. They collected data through questionnaire, observation and case study from both cooperatives and non-cooperative members. They reported that household income for members was higher than non-members, and much higher than the national figure, but it was not tested statistically. Larocque et al.'s (2002) found that the total household income for cooperative member was 2.9 times higher than the poverty line.

A cross sectional study by Ramotra and Kanase (2009) examined the impact of cooperatives on members' standard of living with the aid of interviews among cooperative members located in twelve villages in India. Sixteen variables were used for the standard of living criteria such as household income, female literacy, educational attainment, land ownership and condition of toilet facilities.

The study found a positive correlation ($r=0.71$) between income and household condition which signify positive changes among members after the establishment of cooperatives. They reported that per capital income of the members is on the increase, and cooperatives bring improvement into toilet facilities in members' houses. The study used interview which was reported quantitatively without information on how this was achieved, neither do they specify the numbers of members that formed the sample for the study. Findings at each village were scantily reported individually and were not consolidated in the study. As such, the researchers were unable to provide a particular outcome and conclusion of the study at the village or community level.

Simkhada (2004) used cooperatives that offer savings, loans and micro insurance services to their members and found that 62% of members and 20% of non-members increase their income. Adebayo et al. (2010) reported that 70% of the members' income increases but without comparison figure for non-members. The findings of Wanyama et al. (2008) reveal that participation in cooperatives leads to increase in members' household income and more employment. They found in Ghana that members obtain loans for informal business to support their wage income. Sharma et al. (2005) documented that members' reported higher increase in household income of 61.7% as against 20% by non-members. The non-members performance was traced to a spill-over effect of the activities of the cooperative. However, their results were not tested statistically. The study covered too many variables that include savings, health, family planning, human capital, quality of life (toilet and house), food consumption and nutrition, children education, income, assets and enterprise profit. Calkins and Ngo (2005) found that members' income increases more than non-members and control group. Significant difference between members and other group was found in Ghana, while the result in Cote d'Ivoire was not significant. Torfi et al. (2011) reported a direct and meaningful relationship between income and social capital. Early members have better income than others who joined the scheme later (Holmgren, 2011).

3.4.2 Cooperatives and Household Asset Acquisition

Ramotra and Kanase (2009) studied the impact of cooperatives on members' standard of living and reported that 67.57% of the members have telephone facility while 81.01% own two-wheelers. They concluded that participation in cooperatives lead to increase in the acquisition of household assets with a positive correlation of 0.67 between per capital income and household assets. However, the use of two assets at the household level is too small as a basis for deciding ownership of household assets in rural areas where there are different types and classes of assets such as television and refrigerator. The choice of only two household assets for the study was not justified because the researchers identify more than five household assets in study locations. The gender of the participants was not stated likewise their membership period. The non inclusion of non-members in the sample as control group does not help in understanding the actual effect of the scheme on the members.

Simkhada (2004) reported that cooperative members acquire more of the following household assets - land, house, vehicles, motorcycles and jewelleryes - than non-members, but no data was given to support the result. The sample population, instrument of data collection and analytical tools used were not stated. Adedayo and Yusuf (2004) found that the actual assets acquired by cooperative members are: house 0.6%, motor car 1.5%, motorcycle 16%, radio 18.5%, television 18.8%, video 20.9% commercial vehicle 0.9%, grinding machine 9.7% and 5.8% on sewing machine. The study concluded that membership of cooperative enhances assets acquisition within a short period, but the period used to assess asset ownership was not stated in the study. Cooperatives help members to increase their ownership of assets which enable members to save more and borrow less as their assets increases over time (Branch, 2004). Adebayo et al. (2010) result on asset acquisitions are: houses 96%, radios 93% and land 80%. They concluded that cooperative improve members standard of living as a result of ownership of household assets.

Wanyama (2008) study in Kenya found that cooperative members used loans to build houses but no data was given to support the result. Larocque et al. (2002) found that 21% of members used loan in financing housing. Sharma et al. (2005) found that members acquired more of jewellery, houses and vehicle than non-members, but non-members own more of land with a mean value of 4.1 than members with mean of 3.8. Statistical test was not carried out on the result. The ratio of assets acquired to total expenses was 4.22 and 10.58 for non-members and members respectively. Calkins and Ngo (2005) found that members have larger living areas and total possession value than non-members. Ownership of computer increases members' satisfaction by 14.5% (Holmgren, 2011).

3.5 Enterprise Activities with Cooperatives

Cooperatives is useful in increasing access to credit in rural areas for small and medium scale enterprises (Lohlein and Wehrheim, 2003) they therefore provide opportunity for rural people to participate in financial services. Studies that examined the effect of cooperatives on enterprise profitability and asset ownership are considered in this section.

3.5.1 Cooperatives and Members Enterprises Profitability

A study to ascertain the role of government sponsored cooperatives in improving the socio-economic conditions of their members was undertaken by Ghosh and Maharjan (2001). Data was collected from cooperatives and non-cooperative members in the same village through questionnaire, observation and case study. Their result on expansion of business activity shows that the members reported an increase of 89%, decrease of 8% while those whose business remained the same were 3%. Members generate more income from their enterprises as a result of participating in the program loan. Data analysis method was not stated, but only simple average and percentages were used, and the study does not provide answer to the research objective. Comparative result for members and non-members was not carried out at the enterprise

level, which is contrary to their methodology. Case study and observation results were omitted in their results.

Enete (2008) studied the cooperative sectors using qualitative structured questionnaire and some unstructured interviews with key informants in the sector. He examines the impact of the cooperative on poverty reduction, employment generation and social protection. The researcher found impact of cooperatives on the employment market positive and improving. Larocque et al.'s (2002) found that more of members' businesses yield surpluses that are about 15.7% of their net income because they have access to cheap loan from the cooperative. However, the surplus recorded in urban areas was 30 times higher than the rural areas.

Study by Simkhada (2004) that used mixed cooperatives program in rural and urban areas found that 53% of members made profit in their enterprises. The study documented that social capital also includes the establishment and expansion of markets made possible by the cooperative. However, the result was not compared between members and non-members which is contrary to the reason for using non-members as control group in the study. Statistical test was not conducted on any of the variables. Adedayo and Yusuf (2004) found that loans are used for productive purpose by cooperative members which yielded profit that eventually leads to increase in income and business diversification. Cooperatives create employment and income generation through self employment by members with the program loan that produces income from such enterprises (Wanyama et al., 2008). Sharma et al. (2005) found that 62.5% of members reported more profit in their enterprise which was significant with F value of 9.831, and the expansion of trade through the cooperatives loan leads to social capital for the communities. Comparison between members and non-members was not carried out for enterprise profitability. This does not show if the results documented for the variable was higher than non-members or not. The methods adopted in the use of qualitative and quantitative tools - mixed method - for data collection was not stated. Most variables in the study, such as

household income, household assets and enterprise assets were not tested statistically, while t-test was scantily used and documented in the study.

Calkins and Ngo (2005) reported that as a result of access to cooperative loans, members in Ghana used more of modern production input which leads to higher enterprise profitability than non-members and the control group. However, contrary result was found in Cote d'Ivoire. Members in both countries experience higher enterprise income than the control group and non-members. The study covers too many variables across quality of life and standard of living. As such, only few data was analysed statistically. Majority of their decisions and discussion of result were based on simple percentage in most cases instead of the few statistical analysis carried out.

3.5.2 Cooperatives and Enterprise Assets

Wanyama et al. (2008) found that members used the cooperative loan to buy motorcycle in Rwanda which helps to increase their income. The researchers documented that participation in cooperative leads to ownership of enterprise assets in South Africa and Egypt. Similar result was found in Kenya but with support from donors. However, the duration and component of enterprise assets used for the study was not stated. Sharma et al. (2005) reported that non-members acquired fewer enterprise assets than members, but this was not tested statistically. Enete (2008) documented that cooperatives have been used successfully to establish small-scale industries, health care centres, poultry farm and food processing plants. The study was not specific on the actual enterprise assets acquired through the cooperative loans by the members. Larocque et al. (2002) found that 27% of members used cooperative loans in financing means of transportation.

3.6 Effect of Cooperatives: Standard of Living vs. Quality of Life

A review of the variables and criteria used in previous studies to assess the effect of cooperative societies on economic conditions of the members suggest either the measurement of standard of living, quality of life or both. The

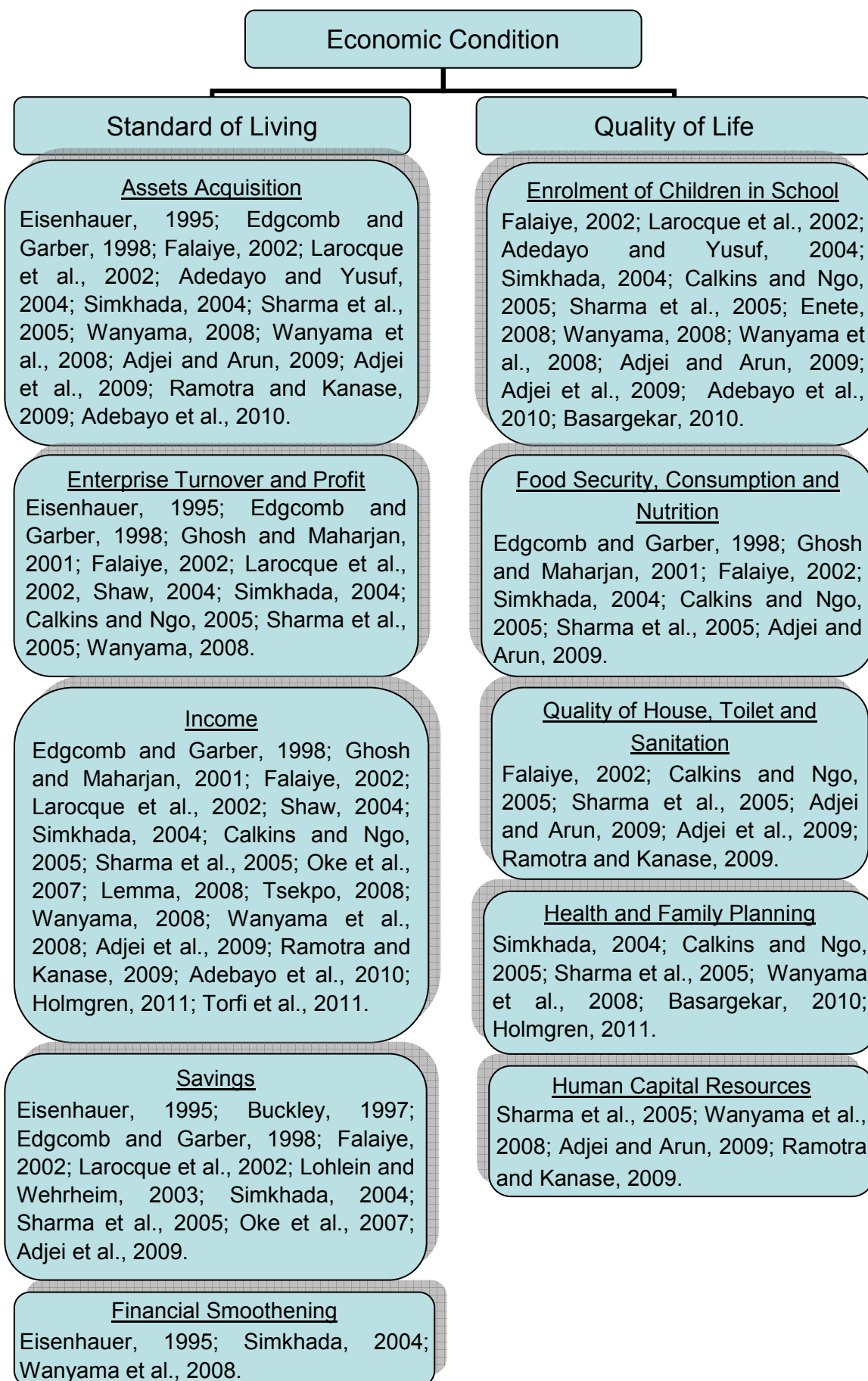
standard of living is the totality of household wealth and material goods that are directly and immediately related to an individual and the household (Harayama, 2008). This can be considered in relation to accumulation of income that is available to acquire material goods. Standard of living is the improvement in the level of daily life with the exception of food and clothing because food and clothing are the lowest level on individual needs (Bandyopadhyay, 2008). The variables used as proxy for standard of living such as asset acquisition, household income, enterprise income, turnover and profit, savings pattern, loan and other financial parameters are usually those that measure tangible and material assets that can be used with numeric data or values. The ownership, acquisition or increases of these variables suggest an improvement in the standard of living of the participants and a reduction in their poverty level (Adedayo and Yusuf, 2004; Adjei et al., 2009). The purpose of standard of living is to allow individuals to derive material satisfaction with mental fulfilment or happiness (Harayama, 2008) because “the most important drive for happiness is the upliftment of the living standard of the rural population, especially the poor” (Bandyopadhyay, 2008: 249).

The quality of life relates to parameters that are linked to freedom and health which can be measured using social and economic factors (Harayama, 2008). The variables used for quality of life may include some financial parameters. In most cases, the variables are non-financial indicators relating to the welfare of the program participants such as food security, consumption and nutrition, quality of their house, toilet and sanitation, health and family planning, human capital resources and enrolment of children in school. An improvement in these variables is an indication of a better quality of life which implies a reduction in poverty level (Falaiye, 2002). Access to a loan may provide a higher level of income or income substitute, but not necessarily a better quality of life. It depends on what the income is spent on and what the outcome of that spending may be. An overview of previous studies reveals ten main variables or indicators used to depict both the standard of living and the quality of life. The variables for standard of living are asset acquisition, income, savings, financial

smoothing and enterprise turnover and profit. While the indicators for quality of life are enrolment of children in school, food security, consumption and nutrition, quality of house, toilet and sanitation, health and family planning; and human capital resources. Studies considered in this thesis that used any of the above variables as proxy for participants' economic condition are stated in figure 3.1 below.

Justification for the choice of proxy varies among the studies. These include the use of savings as the ability to manage money for productive use and savings also played a critical role in development process (Nathan et al., 2004). Cooperative members who find it difficult to save are likely to default in loan repayment (Buckley, 1997) and cooperative serves as an alternative to banks to provide financial transactions in form of savings and loans. Household income is used because almost every other thing that happens at household level depends on income pattern because increase in income serves as additional investment and a contributory factor to poverty reduction, better economic position and improvement in standard of living. Moreover, "it is believed that credit boosts income levels, increases employment at the household level and thereby alleviates poverty" (Nathan et al., 2004: 3).

Figure 3.1 Proxies for Economic Condition



The income of individuals and household determines their standard of living (Ramotra and Kanase, 2009). Higher income may enable individuals to buy comfort and luxuries at the household and enterprise levels depending on their social status and the economy strata such person belong to. Lower income may imply a low standard of living where more income is spent on basic needs such as food and clothing. Those with lower standard of living than country specified poverty line are the poor (Adedayo and Yusuf, 2004) who are largely found in rural areas, and they are likely not to have what it takes to improve their conditions unless they are incorporated into rural finance programs.

The reason for using household assets as a proxy to measure economic condition is to identify changes in family wealth that is traceable to participation in the programs (Nelson, 2000; Adebayo et al., 2010). Ability to acquire more household assets implies an enhanced living standard, better economic condition and an indication that cooperative members have overcome lack of food, clothing and shelter which are synonymous with poverty (Larocque et al., 2002; Bandyopadhyay, 2008). The asset based indicators for poverty reduction and economic condition are easy to measure compared to expenditure pattern (Adjei et al., 2009) and increase in household assets can be used as proxy for measuring household wealth level (Adebayo et al., 2010) and standard of living. Income-smoothing implies a way of determining how cooperative members were able to cope and survive a period of reduced cash flow in their enterprises (Eisenhauer, 1995). This is to ascertain how income has been among rural entrepreneurs who are more vulnerable to financial shocks, have limited alternative sources of credit and are more exposed to other economic and business challenges. Enterprise criteria such as hiring of more workers, expansion of business facility, improvement in quality of products/service, reduction in cost and ability to sell in new markets/location serves as proxy indicators to likely increase in enterprise revenue and profitability (Edgcomb and Garber, 1998; Falaiye, 2002; Sharma et al., 2005; Wanyama, 2008) which may lead to economic upliftment. Acquisition of enterprise assets is the ability to

invest the program loan in the enterprise rather than for consumption purpose (Falaiye, 2002; Wanyama et al., 2008).

The proxies for economic condition in figure 3.1 above can be interchanged between the standard of living and quality of life depending on the objective of the study. However, some studies (Edgcomb and Garber, 1998; Falaiye, 2002; Calkins and Ngo, 2005; Sharma et al, 2005; Allahdadi, 2011) that used variables related to both the quality of life and the standard of living experienced some drawbacks as identified in sections 3.2, 3.3, 3.4 and 3.5 of this chapter. This includes inability to properly report their findings on quality of life criteria, not because quality of life is more of a qualitative issue that cannot be statistically measured or assessed but, because their studies cover too many parameters. Hence, it does not allow detailed research into the quality of life of the members. They were unable to carry out statistical analysis on such variables and this was contrary to the purpose of their studies. Because of these, results on either the standard of living or quality of life variables were not properly reported. The importance of living standard variables to measure the effect of participating in cooperative program on the poor has been summarised by Bandyopadhyay (2008: 270) that “without improvement in the living standard of the poorest class, gross national happiness cannot meaningfully gain a foothold in our world”.

3.7 Theoretical Framework

Evidence obtained from the literature (Lohlein and Wehrheim, 2003; Simkhada, 2004; Sharma et al., 2005) shows that the social capital theory is relevant to this study. This study considers the theory and adopts it as theoretical framework, useful for our understanding of the role of cooperative societies in rural finance.

3.7.1 The Social Capital Theory

The social capital theory emanates from social capital which the World Bank (1998: 2) defined as “the institutions, the relationships, the attitudes and values that govern interactions among people and contribute to economic and social

development". Social capital has to do with the relationship that exists among people which is expected to lead to social and economic development. According to Basargekar (2010: 27), social capital is "the abilities of people to work together towards resolving community/social issue and promote equitable access to benefits of development". Social capital can therefore be considered as a tool of economic development among people which also affects their environment and community (Anderson et al., 2002; Rankin, 2002; Basargekar, 2010) either positively or negatively based on their "collective action for mutual benefit" (Basargekar, 2010: 26) of a group of people or a community.

According to Rankin (2002: 6) "Individuals do not generate social capital and are not the primary unit of analysis" in the use of social capital theory to measure a phenomenon. Although, it can be argued that the developmental progress of a community or a group, cannot be accomplished without the individuals that made up the group and the community. Hence, the individuals cannot stay aloof from the social, financial and physical development of a group and/or a community. "Social capital is the effect of people's relations in social groups that often unknowingly results in fulfilment of their goals" (Torfi et al., 2011: 5513). Social capital also relate to the promotion of cooperation and unity among members of the same association which leads to trust in the network.

The social capital theory covers various aspects of social capital which include the type of social networking, relationship and interaction which comprises the rules, regulations and norms that govern social actions and the trust among members including the benefits that accrue to them (Anderson et al., 2002; Jainaba et al., 2005; Basargekar, 2010) either as an individual, for the community or for the association that they belong to. The theory focuses also on collective responsibility that enhances better loan repayment (Basargekar, 2010). The social capital theory postulates that when people act or function in a group as in a cooperative society or self-help group, it leads to the economic and social development of the group, individuals in the group and the immediate community where such group operates from (World Bank, 1998; Anderson et

al., 2002). Social development is the improvement in relationship between people while the economic development is divisible into two parts as improvement in financial condition and physical progress such as material acquisition. This is significant because economic development does not take place without increase in physical material acquisition and financial resources (Jainaba et al., 2005; Holmgren, 2011). The economic development in social capital includes improvement in economic condition of the people which may be physical and financial. Relating this to the standard of living criteria in figure 3.1 above suggest that assets acquisition is physical economic development while enterprise profit, savings and income are financial economic development. The interaction of the economic developments in social capital theory to standard of living is an indication that participation in an association such as a cooperative can lead to physical capital and financial capital (Anderson et al., 2002).

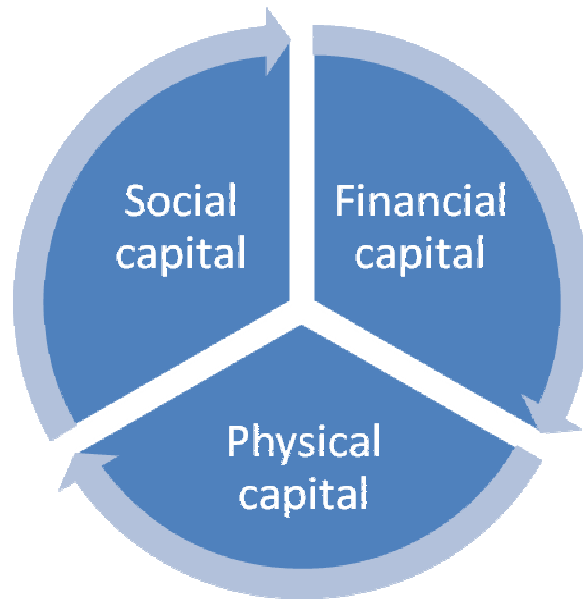
The theory also recognises healthy social and political environment which should help the social group to act and meet their personal and group interest without which economic development potentials will not be achieved (Bastelaer, 2000; Rankin, 2002). The focus of the social capital theory is to use social network, association and relationship for the social and economic development of individuals, the group and the community. The application of the social capital theory to the role of cooperative societies in rural finance to assess the contribution of the cooperatives to members' standard of living which basically examines household income, household assets, enterprise profitability and enterprise asset condition is expected to lead to social, financial and physical benefits. The three benefits were suggested in Henry and Schimmel (2011) conclusion that cooperatives are meant to meet members' financial, economic and social needs. The economic needs can be met through the financial and physical benefits derived by the members, while social needs relate to social benefits.

The social, financial and physical contribution of cooperative to the members may include easy access to loans, ability to accumulate savings and acquisition

of physical assets. Financial benefit or capital can arise in a cooperative because “improved interpersonal relations and trust can increase efficiency and reduce the costs of working together, thus creating financial capital” (Holmgren, 2011: 8). Financial capital can also arise where participation in an association leads to increase in investment and income. Improvement in household income and enterprise profitability is a form of financial capital provided the increase can be associated to membership of an association or program. All forms of financial security such as savings and access to loan are financial capital including other opportunity to generate or improve income. Increase in savings is therefore a financial capital, and the acquisition of financial capital can be a possible motivation for joining a cooperative. Financial capital is important because it can be converted into other forms of capital that could generate income or bring more satisfaction. Access to adequate financial capital is very useful to generate physical capital and may reduce worry and stress. Physical capital are those material things, items and products that can be seen and touched which shows an improvement in standard of living (Calkins and Ngo, 2005). These include assets and other household and enterprise durables that make life worth living. Physical capital is also needed and useful to support livelihoods (Holmgren, 2011). Enterprise durables and goods include tools and equipment, while household durables include fridge, television and generator. The ability of cooperative societies to meet the financial, physical and social needs of their members was referred to by Allahdadi (2011) as meeting members’ economic, cultural and social needs.

The use of the social capital theory in explaining the role of cooperative societies in rural finance which are cooperative contributions to social capital, physical capital and financial capital as discussed above is conceptualised in figure 3.2 below as circle of social capital theory by the researcher. This depicts the flow of the three capitals within the social capital theory. These assets - financial capital, physical capital and social capital - that are expected to be found among cooperative members are interrelated.

Figure 3.2 Circle of Social Capital Theory



The use of the theory relates to the development of social, financial and physical capital of individuals who are members of a group such as a cooperative. This is perceived to enhance the social capital of the community where people participate in financial services in group and the individual members of the group. However, Anderson et al. (2002) notes that social capital is not the real focus of rural finance providers but, a by-product of their services which may be attained or not. Why then is the theory useful to analyse cooperative performances on their members? Anderson et al. (2002) and Basargekar (2010) provided the reasons as stated below.

Anderson et al. (2002) identified three main reasons for the use of social capital theory in rural finance as where loan is given to poor people in order to improve their business activities; where services are deployed through group; and where program focused and served female alone. Basargekar (2010) offers four reasons why researchers use social capital theory to determine the theoretical implication of rural finance program. Where the program is used basically for female; where the program operates in group; to be able to relate and analyse impact of the program on a community; and where loans are given for enterprise use. The use of social capital theory will be appropriate for any rural

finance program that focuses on female, enterprise activities and operate in a group. This can be put in the proper context of the circle of social capital theory in figure 3.2 above that credit extension to entrepreneurs is both financial and physical capital because the loan as financial capital helps to generate physical capital, while the focus on female and in group helps to achieve social capital.

An analysis of the factors that are responsible for social capital among cooperative members by Torfi et al. (2011) found that members who are married and educated have higher social capital likewise those with long membership period. The study by Simkhada (2004) concluded that cooperatives build social capital, because money lenders had to reduce their interest on loan from 60% before the introduction of cooperatives to 24% after cooperative societies were established. Social capital build-up was also traced to the availability of financial services to the people which is better than that of money lenders. The social capital also includes the establishment and expansion of markets. Sharma et al. (2005) reported that the expansion of trade through the cooperatives loan leads to social capital for the communities. The findings of Simkhada (2004) reported above further strengthens the circle of social capital theory in figure 3.2 above that explicitly revealed that the social capital theory consist of social capital, physical capital and financial capital, and that the application of the theory to cooperative societies is expected to lead to the creation of financial, physical and social capital among the members.

Lohlein and Wehrheim (2003) found that participation in rural cooperatives lead to closer relationship in the community where the cooperative is located. This bounds and ties probably provide an explanation to the creation of social capital which helps to improve the rate of loan repayment as a result of peer pressure from fellow members of the cooperative. Social capital was documented by Sharma et al. (2005) because group solidarity as a result of participation in cooperative increases members' confidence to advocate against social vices. The impact of small loans to poor borrowers on common pool resources was the focus of Anderson et al. (2002). The results of the study indicated that social

cohesion and cleanliness of public places is one of the important impacts of the program on the participants. The study suggested that physical capital is created by the program.

A critique of the use of social capital theory claimed that trust in a group can neither be ascertained nor can a common future of the group be guaranteed. The social capital theory assumes that, what happens to a group will affect the community. However, where the majority people in the community do not belong to such group, this assumption may not hold. Anderson et al. (2002) affirm that the ability of finance program to create new social capital is less understood, but financial providers build on existing social capital among the participants through the group. Societal ties are already in existence before the delivery of rural finance services and as such, the social capital that comes from community social ties may not be the effect of the program. The theory is applicable to this study because part of the research objectives is on access to loan to promote enterprise activities which is included in the reasons given by Anderson et al. (2002) and Basargekar (2010) that necessitate the use of social capital theory for rural finance as discussed above.

The variables used for this study can better be understood in the standard of living sphere of economic condition criteria which is covered in the social capital theory as amplified in the role of cooperative societies to the financial, social and physical capital development of the members. This study focuses on financial and physical capital that is made possible by participating in cooperative societies savings and loan. It also extends to social capital which has to do with interaction among members of the cooperative. The implication of social capital theory to cooperatives implies the existence of physical, financial and social benefits that accrue to people when they participate in an association or network. The relationship that exists in the association influences individual performances which may not be attainable by a person without his or her membership of the network.

3.8 The Emergence of Research Proposition and Hypotheses from the Literature

This section discusses how the research proposition and hypotheses to be tested are developed from the existing literature. This section is divided into three parts – individual, households and enterprises – for each segment of impact level of the research questions. The research proposition relates to cooperative role at individual level while the research hypotheses are considered for the role of cooperatives at household and enterprise level.

3.8.1 Development of Research Proposition: Cooperatives and Individual Members

The provision of loan service by cooperatives is not in contention, but there are mixed conclusions if cooperatives should offer savings services to their members or not, and the satisfaction derived from both the savings and loans services, and their effect on the members. The linking of loan to savings helps to inculcate a culture of saving among the clientele and savings plays a critical role in the development process for financing investment (Nathan et al., 2004). An individual who does not cultivate a saving habit may not be prudent enough to manage loans from cooperative societies. A poor person who cannot save cannot be guaranteed that loan would be the best method of overcoming his/her poverty (Buckley, 1997; Larocque et al., 2002). Wanyama (2008) indicated that cooperatives help members to accumulate savings.

Larocque et al. (2002) suggested that savings by cooperative members added an important dimension of risk reduction to the participants, while financial intermediation by cooperatives is not complete with availability of credit without the platform to mobilise savings from the members. Edgcomb and Garber (1998) and Falaiye (2002) studies indicated that clients are happy with their ability to accumulate savings and this reduces the number of clients that keep their money at home. It is not the credit obtained that raises the poor out of poverty but the ability to save from income generated from the use of credit given (Buckley, 1997). Larocque et al. (2002) reported that access to

cooperative loan that came when needed raised the beneficiaries above the poverty level, while Lemma (2008) documented that cooperative members care about the well-being and economic problems of each other. Falaiye (2002) argued that members satisfaction arises from loan received, group solidarity and low interest rate which lead to self esteem among clients. Edgcomb and Garber (1998) posited that the members were happy with the restriction on the withdrawal of their savings until they leave the program and the interest on loan which is less expensive than other sources of credit available to them. These studies are an indication that the judicious use of credit, coupled with an outstanding financial discipline may transform a poor person from one level of poverty to another until he or she emerges from the poverty terrain.

It is noteworthy that none of the previous studies above was underpinned by any theory. The findings on the effect of cooperative savings and loans service on the members from the past studies summarised above are inconclusive and therefore requires further investigation. This study seeks to update the contribution of cooperative societies savings and loans to members' standard of living. The only proposition for this study will investigate the relationship that exists between participation in cooperative societies and the individual members' standard of living. This is stated below.

Proposition: Cooperative savings and loan services satisfy the financial needs of their members in that they make a contribution to improvement in standard of living.

3.8.2 Development of Research Hypotheses: Cooperatives and Determinant of Household Impact

The household impact domain to explain the effect of cooperatives on the economic condition of the members has been used in the literature (Adedayo and Yusuf, 2004; Sharma et al., 2005; Adebayo et al., 2010) because "household frameworks provide a basis for studying impacts on micro enterprises and individual household members" (Sebstad, 1998: 10). The most

common household elements to access economic condition for studies that are designed to use the standard of living criteria are the household income and household assets.

Cooperative, Economic Condition and Household Income

Shaw (2004) analysis on changes in income reported that 25% of households that were initially below poverty line exit poverty after joining an informal finance program and the household income of frequent clients is more than new clients'. The income of members increased when compared to their income level before joining the cooperative and helps to fight poverty (Ghosh and Maharjan, 2001). Simkhada (2004) reported that members experience better household income (62%) than non-members (20%). Edgcomb and Garber (1998) suggested that more clients than new clients increased their household income over a year period, while Sharma et al. (2005) recorded that household income of members (61.7%) was higher than non-members (20%).

The above studies were not empirical in nature but they all reported an increase in members' household income more than non-members. However, the findings from empirical studies are inconclusive. For instance, Falaiye (2002) reported insignificant difference between existing clients and new clients in household income and increase in household income is not statistically ($p=0.074$) traceable to membership of the program, but Oke et al. (2007) documented a significant result ($p=0.01$) on the effect of program loan on members household income. Ramotra and Kanase (2009) result indicated a positive correlation ($r=0.71$) between members income and household condition.

The inconsistency in the findings of previous empirical studies provides a basis for further examination of the effect of participation in cooperative societies on household income of the members. The first null hypothesis of this study will investigate the relationship that exists between access to cooperative loan and household income of the members. The null hypothesis is stated below.

H1. There is no relationship between participation in a cooperative and increase in household income.

Cooperatives and Enhanced Economic Condition through Household Assets

Falaiye (2002) reported that more of the existing clients than new clients own the house they live in. Adjei and Arun (2009) documented significant difference ($p=0.000$) between clients and non-clients with respect to ownership of sewing machine, refrigerators, radios, beds and mattresses, while insignificant difference was found in acquisition of televisions ($p=0.155$) and gas/electric cookers. Adjei et al. (2009) indicated strong association between the loan amount given to established clients and acquisition of household assets. They reported that participation in the program lead to ownership of television ($p=0.0000$) and refrigerator (45%), while marital status ($p=0.000$), level of education ($p=0.000$) and household size ($p=0.008$) are statistically significant to fridge ownership. They found no difference between the clients and non-clients on acquisition of a sewing machine, and much difference was not found on ownership of electric cookers.

Larocque et al. (2002) found that 21% of members used loan in financing housing. Adedayo and Yusuf (2004) documented that members own house 0.6%, motor car 1.5%, motorcycle 16%, radio 18.5%, television 18.8%, video 20.9% commercial vehicle 0.9%, grinding machine 9.7% and 5.8% on sewing machine. The study concluded that membership of cooperative enhances assets acquisition within a short period. Simkhada (2004) reported that cooperative members acquire more land, house, vehicle, motorcycle and jewellery than non-members. Sharma et al. (2005) indicated that members acquired more of jewellery, house and vehicle than non-members, but non-members own more of land than members. Wanyama (2008) found that cooperative members used loans to build houses. Ramotra and Kanase (2009) reported that 67.57% of the members have telephone facility while 81.01% own two-wheelers with a positive correlation of 0.67 between per capital income and

household assets. Adebayo et al. (2010) result on asset acquisitions are: houses 96%, radios 93% and land 80%.

It is clear from the summarised studies above that only Adjei and Arun (2009), Adjei et al. (2009) and Ramotra and Kanase (2009) are empirical in nature. However, their works were devoid of theoretical framework even though, part of their conclusion agrees with the social capital theory. The empirical studies above, with the exception of Adjei et al. (2009) do not test for the effect of participants' demographic variables as contributory factors to ownership of household assets in addition to the program loan. None of the studies considered the ownership of generator as part of their household assets because locations used for all the previous studies are connected to electricity supply and they do not need to generate their electricity supply through a generator.

The passage of time between this study and the previous two inductive studies (Simkhada, 2004; Sharma et al., 2005) that used the social capital theory requires the assessment of the contribution of cooperative to members' household assets using collected data to ascertain if the same conclusion will be reached. The gaps identified above require that the role of cooperatives to ownership of household assets among members, especially in rural areas be examined. This will be accomplished by testing the null hypothesis stated below.

H2. There is no relationship between participation in a cooperative and increase in the acquisition of household assets.

The accomplishment of the null hypothesis above requires that individual household assets should be tested for statistical significance on an individual basis as used by Adjei et al. (2009). The null hypotheses for these assets are stated as.

- H2i. There is no relationship between participation in a cooperative and acquisition of motorcycle/tricycle.
- H2ii. There is no relationship between participation in a cooperative and acquisition of car/lorry.
- H2iii. There is no relationship between participation in a cooperative and acquisition of plot of land.
- H2iv. There is no relationship between participation in a cooperative and ownership of building.
- H2v. There is no relationship between participation in a cooperative and ownership of generator.
- H2vi. There is no relationship between participation in a cooperative and ownership of television.
- H2vii. There is no relationship between participation in a cooperative and acquisition of radio.
- H2viii. There is no relationship between participation in a cooperative and ownership of video/CD.
- H2ix. There is no relationship between participation in a cooperative and ownership of fan.
- H2x. There is no relationship between participation in a cooperative and ownership of fridge.

3.8.3 Development of Research Hypotheses: Cooperatives and Enterprise Performance

This section examines enterprise performance in two segments covering enterprise profitability and enterprise assets. Enterprise impact is measured through changes in business development with increased profitability and increase in ownership of business assets (Edgcomb and Garber, 1998; Nelson, 2000). Acquisition of enterprise assets is the ability to invest the program loan in the enterprise rather than for consumption purpose (Nelson, 2000; Falaiye, 2002).

Cooperatives, Economic Condition and Enterprise Profitability

Edgcomb and Garber (1998) indicated that existing clients have more profits than new clients, and clients enterprises improve as a result of changes in business development. In addition, more clients than new clients increase the scale of their business, employ more workers, improve the quality of their products, source cheaper credit and acquire new products to increase profitability. The study found more clients than non-clients selling in new markets, and a statistical significance of $p=0.06$ between program loan and increase in enterprise profit. Ghosh and Maharjan (2001) reported that cooperative members have an increase of 89% in enterprise profit. Falaiye (2002) documented that clients (6.1%) had an increase in total employees than new clients (5.6%), 14.3% of clients and 8.3% of incoming clients reduce business cost by buying input in large volume. Clients' performance was higher than incoming clients on quality of product, bulk purchase, business expansion and ability to sell in new market as proxy for business profit. Larocque et al.'s (2002) found that more of members businesses declare surpluses that are about 15.7% of their net income but the surplus from urban areas was 30 times higher than the rural areas. Adedayo and Yusuf (2004) indicated that loans are used for productive purpose which yielded profit that eventually leads to increase in income and business diversification. Calkins and Ngo (2005) reported that members in Ghana had higher enterprise profitability than non-members and the control group, but contrary result was found in Cote d'Ivoire.

It is worthy of note that none of the summarised studies above on the impact of cooperatives on members' enterprises profitability is placed within any theory. However, studies that are placed within the social capital theory (Simkhada, 2004; Sharma et al., 2005) reported partially different results. Simkhada (2004) found that 53% of members made profit in their enterprises, and that social capital also includes the establishment and expansion of markets. Sharma et al. (2005) found that 62.5% of members reported more profit in their enterprise and it was significant with F value of 9.831. The conflicting results between the last two studies (Calkins and Ngo, 2005; Sharma et al., 2005) on enterprise

profitability, and the multiple ownership structure of the cooperative societies used for the above studies required a further work. This study will examine which of the results is applicable to only members promoted cooperatives in rural areas with the aid of collected data. The null hypothesis to explain the relationship between participation in cooperative and enterprise profitability is stated as:

H3: There is no relationship between participation in a cooperative and changes in business development associated with increased profitability.

Many variables are required to determine enterprise profitability as explained above. The null hypotheses stated below are to test the individual component of enterprise activities that relate to profitability.

H3i: There is no relationship between participation in a cooperative and expansion of business facility.

H3ii: There is no relationship between participation in a cooperative and addition of new products.

H3iii: There is no relationship between participation in a cooperative and hiring more workers.

H3iv: There is no relationship between participation in a cooperative and improvement in the quality of products.

H3v: There is no relationship between participation in a cooperative and reduction in cost by buying input in greater volume.

H3vi: There is no relationship between participation in a cooperative and reduction in cost with cheaper source of credit.

H3vii: There is no relationship between participation in a cooperative and development of new enterprise.

H3viii: There is no relationship between participation in a cooperative and making more profit.

H3ix: There is no relationship between participation in a cooperative and selling in new markets.

Cooperatives and Better Standard of Living through Enterprise Assets

Edgcomb and Garber (1998) reported 33% and 16% for clients and non-clients respectively on ownership of storage facility with a statistical significance of $p=0.03$. On acquisition of small tools, the study reported 40% for clients and 19% for non-clients, while Falaiye (2002) documented 50% for clients and 31% for incoming clients. Edgcomb and Garber (1998) and Falaiye (2002) indicated that clients were able to acquire major tools than non-clients, and also invest in minor assets in their marketing site more than non-clients. Clients were able to acquire a means of transportation for their business more than non-clients (Edgcomb and Garber, 1998). On investment in structures in business locations, Edgcomb and Garber (1998) reported that clients own 55% and non-clients 54% which is statistically significant with $p=0.03$, while Falaiye (2002) documented 21% and 8% for clients and incoming clients respectively. Edgcomb and Garber (1998) and Falaiye (2002) reported that existing clients increase their enterprise assets more than new clients.

Larocque et al. (2002) reported that 27% of members used cooperative loan in financing means of transportation. Sharma et al. (2005) indicated that non-members acquired fewer enterprise assets than members. Enete (2008) posited that cooperatives have been used successfully to establish small-scale industries, health care centres, poultry farm and food processing plants. Wanyama et al. (2008) reported that members used the program loan to buy motorcycle in Rwanda which helps to increase their income. It also leads to ownership of enterprise assets in South Africa, Egypt and Kenya, but the result in Kenya was made possible because the cooperative received financial support from donors.

It is clear from the results of previous studies summarised above that it is only Edgcomb and Garber (1998) that is empirical. While all the studies examine the effect of cooperatives on ownership of enterprise assets, it is only Edgcomb and Garber (1998) and Falaiye (2002) that provided the components of enterprise assets used. However, both studies were conducted among female program

located in rural and urban areas, and they were not placed within any theory. The passage of time between this study and the last empirical study (Edgcomb and Garber, 1998) and other gaps identified above required that their conclusion be reassessed if they are still tenable in spite of the development in rural finance using empirical data from cooperative societies with membership of both sex in rural areas alone.

The null hypothesis to examine the relationship between participation in cooperative and ownership of enterprise assets is stated as:

H4: There is no relationship between participation in a cooperative and increase in the acquisition of business assets.

The individual enterprise assets need to be tested for statistical significance as used by Edgcomb and Garber (1998). The null hypotheses for the individual assets are stated below.

H4i. There is no relationship between participation in a cooperative and ownership of small tools.

H4ii. There is no relationship between participation in a cooperative and ownership of major tools.

H4iii. There is no relationship between participation in a cooperative and acquisition of means of transportation.

H4iv. There is no relationship between participation in a cooperative and ownership of storage facility.

H4v. There is no relationship between participation in a cooperative and minor investment in marketing site.

H4vi. There is no relationship between participation in a cooperative and building structures in business location.

3.9 Summary and Conclusion

The existing literature reviewed above shows that the criteria used to determine the role of cooperative on the members is based on the effect of the program on individuals, enterprises and households. The ability of any cooperative society to affect the members positively at any of the three levels (individual, household and enterprise) signifies an improvement in standard of living and better economic condition at different levels. Some of the previous studies (Edgcomb and Garber, 1998; Falaiye, 2002; Jainaba et al., 2005; Enete, 2008; Basargekar, 2010) focus on female program only. Sample selection in some cases (Edgcomb and Garber, 1998; Larocque et al., 2002) comprises cooperative society members and rural bank customers.

The literature revealed that cooperative societies are set up to bring about poverty reduction, better standard of living and improvement in economic condition among the members. Evidence from the literature (Lohlein and Wehrheim, 2003; Simkhada, 2004; Sharma et al., 2005; Holmgren, 2011) reveals that this study is best underpinned by the social capital theory which comprises of social capital, financial capital and physical capital. The need to know why membership of cooperatives might improve a person's opportunity to overcome poverty with improvement in standard of living in urban and rural areas necessitates the conduct of cooperative impact assessments. However, "knowledge about the achievements of such initiative remains only partial and contested" (Adjei et al., 2009: 266). Moreover, the role of cooperatives societies on members' standard of living and poverty reduction has not been studied in any systematic way (Develtere and Pollet, 2008). The role of cooperatives should be measured and analysed at different levels of the economy, especially among the rural dwellers in developing countries where there is paucity of accurate secondary data such as Nigeria. The competing view and the gap already identified in the literature require an organised research to determine the role of cooperative societies in rural finance as a pathfinder for other researchers that may be interested in studying the effect of cooperative

societies on participants' socio-economic well-being at either rural or urban centres in Nigeria and other developing countries.

The next chapter focuses on the research methodology which explains the steps taken in conducting this study.

Chapter Four

Methodology

4.1 Introduction

This chapter discusses the research philosophy, the methods adopted and the steps taken in conducting the study. Section two discusses the important subject of epistemology while section three considers different research strategies suitable for this study and also identifies users of these methods and the reasons for their choice. Section four focuses on the research proposition and hypotheses for the study. Section five examines the research design which includes the criteria for selecting communities and villages used for the study and the distinguishing features of rural people in Ogun State. Section six focuses on the nature and sources of data in empirical investigations. This examines longitudinal and cross sectional studies, secondary and primary data, taking into cognisance their merits, demerits and the conditions for their usage. The researcher's choice between a longitudinal and cross sectional study, primary and secondary data as well as the justification for such a choice are also considered. In section seven, the researcher examines sample size and sampling techniques which identify the sampling method appropriate for the study. Section eight focuses on the design of the research instruments and their administration. This includes an assessment of the reliability and composition of the instruments, steps taken to avoid bias and so ensure the credibility of the research and the confidentiality of respondents. Section nine explains the techniques used in the analysis of the data which include the statistical tests conducted. The chapter summary and conclusion is presented in the last section.

4.2 Epistemology

Epistemology relates to the type of knowledge that exist in a field of study and the ways they are acquired by researchers (Saunders et al., 2009). Ontology is the nature of social world based on the researcher's perspective or assumption

on what needs to be known about the social world (May, 2001). Ontology refers to the nature of reality while the study of epistemology refers to research philosophies that can be used in any study. This is quite large that the diverse debates and opinions on research philosophy and strategies cannot be fully covered in this thesis. However, two research philosophies – the interpretivists and positivists approaches; and the inductive and deductive research strategies that are relevant to this thesis are discussed below.

The positivists approach in research is based on the feeling of the natural scientist (Saunders et al., 2009). Investigations of phenomena are usually carried out with scientific methodologies traceable to the natural science. This requires the use of scientific methods based on a laid down and well thought hypothesis that are likely to be developed from existing theory (Saunders et al., 2009) to determine the causal relationship between two or more variables. The result of this process is assumed to be generally applicable and can be used to predict likely occurrence of an event, if certain conditions as stated in the hypothesis are met. Positivists approach allows for independent gathering of data in the research process, such that the researcher is not able to influence either the research or its outcome. This makes research to be objective because the researcher is detached from the issue being investigated (May, 2001). This approach, it is assumed, will help in the explanation and prediction of the phenomena under study, which leads to generalisation of result such that the outcome of sample can be used to determine the result of the population.

The positivists use 'cause and effect' to explain human behaviour based on existing theories. Positivists are set out to test theory and this determines how they collect or gather their data. This approach may involve the use of either primary data or secondary data or both. However, where primary data is used, many respondents are asked the same questions via a questionnaire and/or survey. This requires the collection of quantitative data that are subject to statistical analysis (Saunders et al., 2009) which enables the researcher to interpret the answers in the same way and leads to consistency.

The interpretivists argued that research cannot be subject completely to a laid down theory because of changes in human behaviour and complexity of the world (Ghosh, 1992). Researchers have to give room for different shades of opinions that cannot be assumed to be fixed or regimented alongside existing theories. The interpretivists tend to lead to development of grounded theory but not always – this is an unnatural divide between the two philosophical stances. The interpretivists require “entering the social world of our research subjects and understand their world from their point of view” (Saunders et al., 2009: 116). Research should be used for gathering facts which also speak for themselves and do not require the test of existing theories (May, 2001) but to build a new theory. This may require the use of interview, focus group discussion and other qualitative methods of data collection. The interpretivists lend their work to the inductive strategies.

4.3 Research Strategies

Research strategy refers to the methods adopted in data collection and in the analysis. The two main strategies that are identified in the literature are called quantitative and qualitative methods (May, 2001; Saunders et al., 2009).

The quantitative method is also called the deductive approach and this usually involves a predetermined theory before the research (May, 2001; Saunders et al., 2009). The deductive approach to research uses quantitative data and is mostly used by the positivists. The research is therefore carried out to either reinforce or refute the existing theory depending on the outcome of the study. This is carried out by considering the result of the research with the theory which enables researchers to accept or reject the usefulness of the theory with the research result using empirical evidence. Deductive approach requires a more formalised method of research which requires the use of testable hypothesis. This is to ensure that the researcher is independent of the study, and where the phenomenon under study is true, it should be supported by the data. Data collection is determined by considering the theory to be used in testing the hypothesis. The deductive approach enables generalisation of

research finding as a result of reasoning, and studies that are conducted with deductive approach can either have valid or invalid results (Ghosh, 1992). This is because the research hypothesis can either be rejected or not. There is no allowance to have research result that is either valid or invalid.

The five steps stated below were identified by Robson (2002) which quantitative research should pass through.

1. Deducing a hypothesis that comes out of theory and testable.
2. Expression of the testable hypothesis in terms that should be made operational.
3. Testing the operational hypothesis.
4. Examination of the specific outcome of the enquiry.
5. Modification of the theory based on the findings, if necessary.

The deductive research strategy tends to explain the causal relationship that exists between variables that are measured; this may include interrelationships among many variables which provides a link for better understanding of phenomena. As a result, facts that are measured quantitatively are used for such research. The quantitative method may be more accurate and precise (May, 2001) because of the formal way of data collection and the use of statistical analytical tools in testing pre-determined hypothesis. The research seems to be more rigorous through the use of verifiable data subjected to empirical test. The drawback of quantitative approach is that some theories may take some aspects of social life for granted and as such, deductive strategy may not be the best approach. Problems of validity may arise where the assumptions upon which the research is based are not true or met. The use of rigid scientific methodology may not permit the use of alternative explanation beyond the hypothesis.

The inductive approach requires the use of qualitative data in considering a social life or phenomena to either derive theories or find out what is happening. Research may be carried out without a predetermined theory while data

collection takes place first after which a theory is developed based on data analysis. Inductive research may also be motivated by theory which could inform the design of the research instruments. The outcome of the study enables the researcher to come up with theories that may be entirely new or as an extension/addition to existing theories that were not determined or considered before the commencement of the research. The inductive approach is another name for the qualitative method and the process leads to generation of theoretical propositions from the data (May, 2001) and is often related to the interpretivists philosophy. It involves the collection of factual data to arrive at theories after the fact/data must have been linked with existing literature. This would then be differentiated from researchers' interpretation. Inductive research strategy is used to discover facts of social actor and the relationship that exists between the facts. Researchers that want to know why something is happening may be more interested in using the inductive approach.

The theoretical framework using inductive approach may require observation and generalisation (Ghosh, 1992). The generalisation is achieved based on facts from observation of social phenomena. The qualitative method enables researchers to understand how events are interpreted by individuals and the meaning given to it. It is more flexible to accommodate necessary changes to the research process while the study is going on. However, generalisation of result may be difficult for qualitative method because a uniform pattern of research cannot be achieved by two individuals in their research since emotion, feeling and other individual behavioural trait differ. Uniform data collection may not be possible in all situations especially when the research has to do with some personal sensitive issues in which an individual may not want to divulge the correct data. Furthermore, Ghosh (1992) and May (2001) argue that, it may not be easy to appropriately separate the researcher from the research process.

The above does not mean that a particular research philosophy and research strategy is better than the other. However, a research philosophy may be more relevant for a particular research than the other depending on the aims of the

study. Furthermore, a research question may also fall into both philosophies and it should be treated as such. The use of appropriate strategy may be determined by the objective of the study and the methodological evidences gathered from the literature.

4.3.1 Research Strategies for Cooperatives Assessment

The need to conduct an assessment of the role of cooperative societies is not in contention among researchers, practitioners, governments, and local and international donors. "The question of impact and how to assess it is generally agreed to be important" (Sebstad, 1998: 1) and this position has been supported in the literature (Park and Ren, 2001; Adedayo and Yusuf, 2004; Wanyama et al., 2008). This part of the thesis concentrates on the research methods used by previous studies and to present the researcher's choice based on the literature.

Eisenhauer (1995) longitudinal study among an employee and a community based cooperatives in Malawi evaluate the impact of the cooperatives on the members. 302 members participated in the survey in 1993, while 246 took part in 1995. A cross sectional study by Edgcomb and Garber (1998) used the Assessing the Impact of Microenterprise Services/Small Enterprise Education and Promotion (AIMS/SEEP) impact survey questionnaire, in-depth interview, ex-clients survey and focus group discussion tools. Random sampling technique was used and their sample comprises 143 for survey questionnaire (70 new clients and 73 existing clients). 23 ex-clients participated in the client exit questionnaire. 16 existing clients took part in the loan use interview, 6 female members were interviewed on empowerment and six focus group discussions were held. Quantitative data analysis was by chi-square test, t-test and cross tabulation. Simple content analysis, 'in their word' and key words were used to analyse qualitative data.

Ghosh and Maharjan (2001) ascertain the role of government sponsored cooperatives in improving the socio-economic conditions of their members

using purposeful sampling method to select 40 households each from both members and non-members. Data were analysed with simple average and percentage. Park and Ren's (2001) study in China used household survey data collected from sample size consisting of 305 clients and 144 non-clients in 18 villages. Data were analysed using ordinary least square estimates, F-statistics and correlation of coefficient. Falaiye (2002) cross sectional study was conducted using mixed methods. Data collection was through AIMS/SEEP survey questionnaire, focus group discussion and in-depth interview. Random sampling technique was used to determine the sample size. The impact survey sample comprises 165 clients. 129 existing clients and 36 new clients as the control group. 16 clients participated in the interview and three focus group discussions took place which comprises 22 discussants. Quantitative data was analysed for cross tabulation and independent sample t-test between the groups of respondents. Content analysis and 'in their word' was used to analyse the qualitative data from interview and FGD.

Larocque et al. (2002) longitudinal study drew their sample from cooperative members and rural bank clients in rural and urban areas of Burkina Faso. 163 clients were used for the study relating to productive credit. The consumer credit sample consists of 48 individuals, while 60 members of the cooperative were used for the saving deposit sample. The community impact involves 233 individuals that were divided into 37 discussion groups using random sampling. AIMS/SEEP structured questionnaire and empowerment interview tools were used to collect quantitative and qualitative data. The quantitative approach was used to assess the impact of cooperatives on business, individual and household living conditions. The qualitative method was used to assess the impact of the cooperative on female empowerment and the community using participatory rapid appraisal techniques. Part of the data analysis was carried out to arrive at averages, median, measurement of central tendency, dispersion, frequency rate and percentages. Comparison analysis was carried out using chi-square test and t-test while linear regression was used to determine the relationships between certain characteristics of the participants. Adedayo and

Yusuf (2004) cross sectional study focuses on the structure and poverty reduction activities of cooperative members with the use of questionnaire administer on 330 randomly selected members. Data was analysed with simple percentage and multiple regression. Shaw (2004) study used random sampling techniques from member list with outstanding loan from which a sample size of 253 respondents that completed the questionnaire was drawn. This was followed by focus group discussion and in-depth interview with 87 respondents among the initial 253, and a further interview with members of staff of the program. Data were quantitatively and qualitatively analysed with the use of median, frequency, mean and simple percentage.

A cross country study in Cote d'Ivoire and Ghana by Calkins and Ngo (2005) used 212 cooperative members, 119 non-members who are immediate neighbour of the members and 122 control group who lived in villages without cooperatives to measure quantitatively and evaluate qualitatively the roles, impacts, and relative importance of cooperatives in the improvement of the productivity, market power, management ability and socio-economic well-being of members and their households. The study combined quantitative and qualitative techniques of data collection and analysis. 229 and 224 questionnaires were administered in Cote d'Ivoire and Ghana respectively to test the ten hypotheses on variables used to represent members' standard of living. Head-and tail-group comparisons, t-test and ANOVA were used for data analysis. 12 Focus group discussions (FGD) comprising of 15 members, 15 non-members and 15 control group, and semi-structured interview with cooperative leaders were used as qualitative tools for the study. Jainaba et al. (2005) collected data through survey and semi-structured interviews from microcredit institutions, and analysed qualitatively through direct quotation of respondents. Sharma et al. (2005) longitudinal study underpinned by social capital theory examined the socio-economic impact of four cooperatives in Nepal on their members. Two of the cooperatives are self promoted and the other two are program promoted. They used mixed methods which consists of standardised AIMS/SEEP questionnaire, observation, informal conversation and

focus group discussion for data collection among members and non-members of the cooperatives. The 400 members and 200 non-members sample from both genders were selected randomly for questionnaire administration while 12 FGDs were conducted. Data was analysed through percentages, means, t-test and simple linear regression. A cross sectional study by Oke et al. (2007) collected data from 100 respondents each from two NGO's using multi-stage random sampling method. Data were analysed using frequency table, percentage, mean, median, standard deviation, t-test and coefficient of variation.

The effectiveness of informal financial providers in attracting rural finance for rapid rural development by Oloyede (2008) used random sampling to select 1100 people from both genders that participated in the questionnaire administration while data were analysed with simple percentage and frequency. Adjei et al. (2009) used multi-stage sampling and random sample methods with cross sectional study to select 547 respondents which comprises 316 established clients and 231 new clients who completed their questionnaire. Data were analysed quantitatively with the use of Heckman and ordinary least square regression models. A cross sectional study by Ramotra and Kanase (2009) examined the impact of cooperatives on members' standard of living in India. They used personal interview among cooperative members located in twelve villages. Stratified sampling technique was used to select both the villages and the households used for the study while David Smith's 'Z' score method and co-efficient of correlations were employed to measure the standard of living variables. Adjei and Arun's (2009) cross sectional study in Ghana used 231 clients with the aid of multi-stage and random sampling methods. Random walk technique was used to select the 305 non-clients that participated in the study. Data were analysed using chi-square test and t-test.

Adebayo et al. (2010) focus on the impact of cooperatives on rural development and poverty reduction in Rwanda using random sampling to select 75 members from both genders that participated in the study. Data were sourced through

questionnaire, observation and oral interview, while data were analysed in frequency and percentage. The objective of Allahdadi (2011) is the role of male organised cooperative on poverty reduction in Iran. The study used focus group discussion as the qualitative tool for data collection from 84 members in 12 villages. How cooperative membership impacts on the well-being of the individual was the focus of Holmgren (2011). The study investigates the effect of the program on members' health and life satisfaction through questionnaire among 138 members that were selected purposefully. Data was analysed through an ordinary least square regression. Client satisfaction was measured at the individual level while health was measured at the family level. The social capital theory was used as theoretical framework. Torfi et al. (2011) analyse the factors that are responsible for social capital among cooperative members through the members' demographic variables. Data was sourced through questionnaire from 100 members of both genders with five variables. Percentage and perceptive analysis were used to analyse the data.

A review of previous studies above reveal that some studies (Edgcomb and Garber, 1998; Falaiye, 2002; Oke et al., 2007; Adjei and Arun, 2009) that used either the chi-square or t-test in data analysis adopted a cross sectional design using primary data in form of questionnaire and/or interview on clients and non-clients. Those who used t-test did so to ascertain the differences in mean score of members/clients and non-clients/non-members to be able to determine the impact of the program on members. The use of t-test by Adjei and Arun (2009) enable the researchers to conduct statistical test on all the types of household assets used on an individual basis. T-test was used for most studies conducted in developing nations especially in sub-Saharan Africa such as Falaiye (2002), Calkins and Ngo (2005) and Adjei and Arun (2009). Studies (Park and Ren, 2001; Sharma et al., 2005) that used linear regression model and Pearson correlation coefficient for data analysis either used longitudinal design with primary data or secondary data with cross sectional design. This approach enables the researchers to have large sample size that could fit in into their analytical tools. For example, Anyanwu (2005) used secondary data of 14,395

respondents from the national household living survey data. The use of linear regression, ANOVA or perspective analysis by previous studies (Adjei et al., 2009; Torfi et al., 2011) enabled the researchers to determine the statistical relationship that exists between demographic characteristics of the participants such as age, gender and marital status.

The different research methods adopted by previous studies are related to the research strategies in section 4.3 above and they are discussed below as it relates to the choice of method for this study.

The “positivists” are of the view that quantitative methods using a prepared survey questionnaire or secondary data are necessary to enable explanation of the reason for changes among program beneficiaries. This is achieved by having assumptions upon which hypotheses are developed and tested statistically, using statistical tests such as, chi-square, independent samples test, regression, co-efficient of correlations and analysis of variance. Usually, their sample size consists of cooperative members and control group (Ghosh and Maharjan, 2001; Simkhada, 2004).

The “interpretivists” believe that meaningful impact cannot be determined by using quantitative methods of data collection and analysis. Rather, a coherent and useful impact should be based on qualitative methods. They argue that this method enhances researchers’ ability to collect data directly from program beneficiaries either through personal interview, focus group discussion or participatory rapid appraisal methods. They contend that listening to people will afford the researcher the means to document facts from what they say or from their body language and also enable investigators to probe further into grey areas during the interview process. Furthermore, report writing can be carried out by quoting the respondents; this makes the process a true replica of the programs effects on the participants. The use of qualitative analyses in determining the impact of cooperative societies has been supported by some studies (Rankin, 2002; Jainaba et al., 2005; Lemma, 2008; Wanyama et al.,

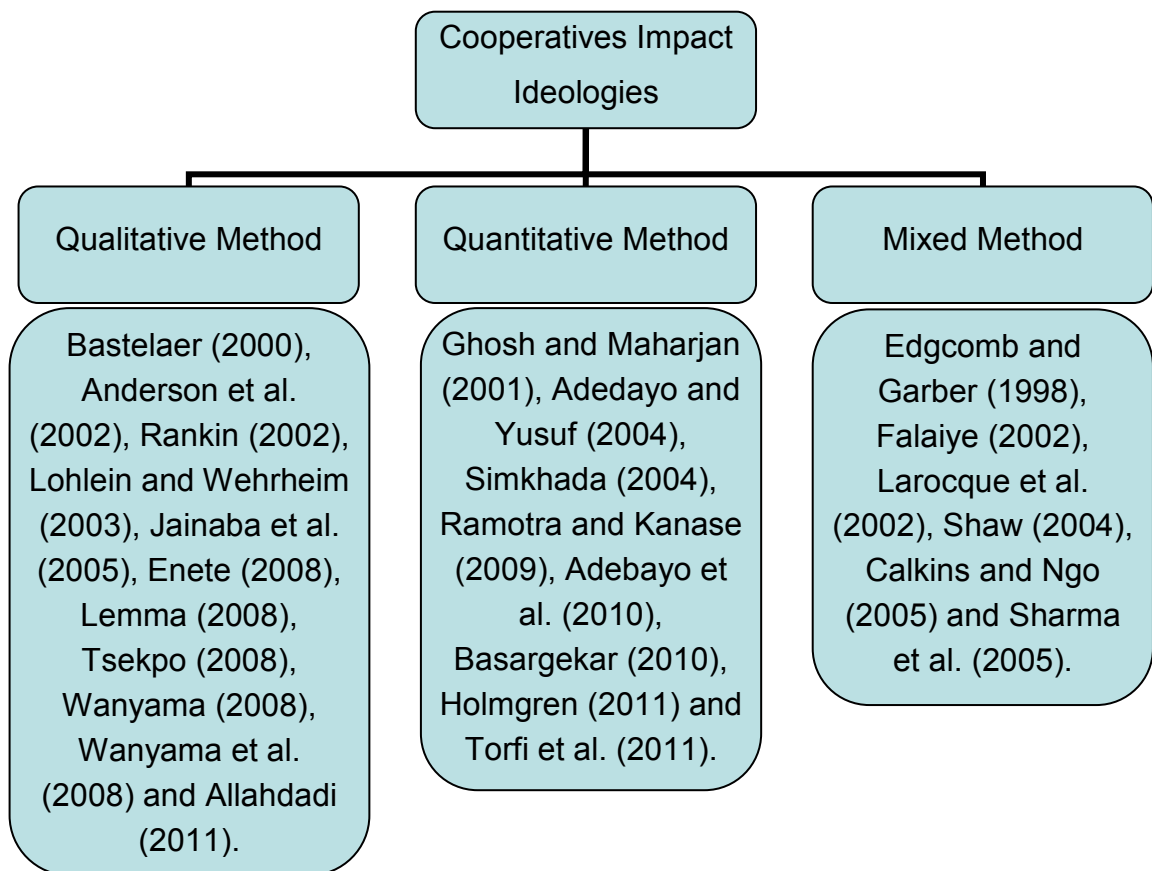
2008; Allahdadi, 2011). They clamour for the use of qualitative methods because they believe that it will help to assess the effect of cooperative societies on the members. Copestake et al. (2002) argues that qualitative approach offers a greater rigour whereby peer reviewers are able to determine the process through which conclusions are reached based on different assumptions and available documents. The qualitative approach reduces the possibility of information imbalance that may be covered up in some quantitative analysis.

The last group is the “mixed methods ideologies”. The mixed method is a combination of both quantitative and qualitative methods of data collection and analysis (Saunders et al., 2009). Ghosh (1992) asked for the combination of both deductive and inductive approaches in some social sciences research in order to enable the best use of rich data collection process. The mixed method ideologies postulate that a meaningful impact assessment should involve the use of both qualitative and quantitative data. They argue that there are data that cannot be derived by using any of the single methods of the positivists or interpretivists. “If you use quantitative techniques, don’t forget the great value-added of qualitative ones” (Pawlak and Szubert, 2004: 3). Consequently, this school of thought explains the need to mix both methods whereby result for one method may be confirmed by the application of the other method. Literature that recommends or uses a mixed methods approach to cooperative impact assessment includes Larocque et al. (2002), Calkins and Ngo (2005) and Sharma et al. (2005).

Figure 4.1 below is the list of some of the studies conducted with the use of the three research ideologies discussed above. This has led to the need to fulfil impact assessments based upon the peculiarity of each study. Moreover, the use of a single method may not provide all the needed data but a “combination of words and numbers can bring us closer to the complexity of developmental change by providing divergent as well as convergent data” (Yoshikawa et al., 2008: 345). The dynamic nature of cooperative societies has necessitated the

use of multiple methods in measuring their impact. Hulme (2000: 89) notes that the central methodological question is no longer, “what is the optimal method for this study?” but “what mix of methods is most appropriate for this study and how should they be combined?” The use of the mixed method for cooperative assessment research is a welcome development. Moreover, while assessing various impact assessment methodologies for finance providers, Hulme (2000: 87) concluded that, “in future dealing, attribution by multi-method approach seems the way forward”.

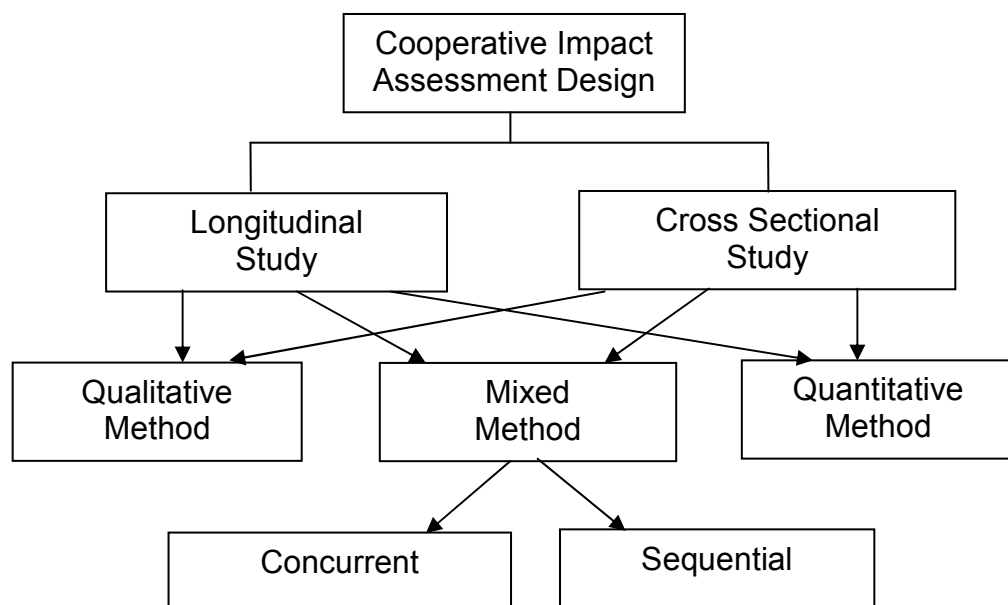
Figure 4.1 Cooperatives Impact Assessment Ideologies



The use of the mixed methods require the determination of how the quantitative and qualitative methods will be combined. This may be carried out either concurrently – where data gathering for both methods are carried out at the same time period or sequentially – where one method comes before the other, which means that one method is dependent on the other method. Since there are evidences of both qualitative and quantitative approaches in the literature as

identified in figure 4.1 above, the researcher opted for the mixed method by using concurrent design for this study. The choice of the mixed methods aimed to benefit from the advantages of both the qualitative and quantitative methods which will reduce the disadvantages of using a single method. The advantages of mixed methods include the production of complementary data, the ability to obtain richer data, the result of which can be applied easily and the validation of findings in terms of accuracy. Mixed methods “can also make a study more acceptable to a broader audience, because they represent the world more completely” (Yoshikawa et al., 2008: 345) and “data generated by mixed methods can help to establish the validity of the data and the reliability of the measures of change through triangulation” (Sebstad, 1998: 12). The benefits of mixed methods have been summed up by Pawlak and Szubert (2004: 3) that “a mix of methods will provide a complete picture” and by Nelson (2000: 3-4) “given the relative strengths and weaknesses of the two methods and the varied purposes they serve, good quality impact assessments increasingly employ both methods”. The review of methods adopted by previous studies which is shown in figure 4.2 below revealed that cooperative impact assessment can be undertaken using either the longitudinal or the cross sectional approach depending on the nature of the data and objectives of the study.

Figure 4.2 Cooperative Impact Assessment Methodologies



A longitudinal study involves the collection of baseline data that will enable the researcher to capture trends over time and to compare the effect of cooperative societies before, during and after a particular scenario so that changes over time can be measured or determined. A cross sectional study is a collection of data at one particular period only and it may make comparisons between two or more different groups within the cooperative possible. This involves comparing cooperative members with non-members, or those that have left the program. Calkins and Ngo (2005) used concurrent design for the FGD and questionnaire administration, while satisfaction was measured at individual level by Holmgren (2011) and this can be determined by asking individual members with option to explain themselves. Sharma et al. (2005) used interview and FGD to determine satisfaction among members while quantitative tools were used for household and enterprise impact levels.

4.4 Research Proposition and Hypotheses

Studies on cooperatives such as Bastelaer (2000), Lohlein and Wehrheim (2003), Jainaba et al. (2005), Tsekpo (2008), Wanyama et al. (2008) and Allahdadi (2011) are qualitative and based on research propositions without any statistical test. Adjei and Arun (2009) and Adjei et al. (2009) were complete empirical study based on research hypotheses with statistical tests. Other studies (Edgcomb and Garber, 1998; Falaiye, 2002; Shaw, 2004) are more of quantitative but with few statistical tests based on research hypotheses. However, Edgcomb and Garber (1998) and Falaiye (2002) used research proposition to determine the effect of the program on the participants through interview and focus group discussion at individual level while research hypotheses were used at household and enterprises levels through questionnaire. The two studies therefore combined research proposition and research hypotheses.

The choice of research proposition in addition to research hypothesis is to give room for different shades of opinions that cannot be assumed to be fixed or regimented which is beyond what a standardised questionnaire can be used to

accomplish. The proposition based on qualitative data, is to understand how the role of cooperative societies in rural finance are interpreted by individual members and the meaning giving to their participation in the program. The use of interview and FGD as data collection instruments for the proposition will enable the researcher to probe further into grey areas during the data collection process, while research findings can be carried out by quoting the respondents verbatim. This approach was used by Larocque et al. (2002), Calkins and Ngo (2005) and Sharma et al. (2005). The proposition enables the researchers to draw information from the participants which describe their personal experiences with the cooperative. The use of research proposition for research question one at the individual level and research hypotheses for research questions two to five at household and enterprise levels conforms with the research approaches used by Edgcomb and Garber (1998) and Falaiye (2002). Similar approach was employed by Larocque et al. (2002) that used cooperative society's members and rural bank clients. Related studies on cooperative societies by Calkins and Ngo (2005) and Sharma et al. (2005) also combine research proposition and hypotheses in their studies. The proposition was to derive additional information that cannot be covered in structured questionnaire on the activities, experience and perception of members about the cooperative "because many factors can hardly be fully and quantitatively captured through direct measure" (Calkins and Ngo, 2005: 64).

The qualitative question for research question one is to understand the past challenges and successes of the program on the members which is beyond the issue of quantification or a stereo-type answer because the research question involve why and how of the program based on members opinion. Furthermore, the use of both the research proposition and hypotheses is to enable the researcher place the study and its results within the cooperative and informal finance literature. This will help in proper comparison of research findings with relevant studies and also enhance the quality of the study among other literature. The research objectives stated in chapter one were examined and reviewed based on the gaps identified from the literature review in chapter

three. These objectives were distilled into one research proposition and four research hypotheses that are germane to this study to enable the researcher contribute to knowledge. The research proposition and hypotheses were developed from the literature in section 3.8 of the last chapter, and they are grouped into three areas as it relates to individuals, households and enterprises as stated below.

i. Cooperative societies and individuals

Proposition: Cooperative savings and loan services satisfy the financial needs of their members in that they make a contribution to improvement in standard of living.

ii. Contribution of cooperative societies to households

Hypotheses:

1. There is no relationship between participation in a cooperative and increase in household income.
2. There is no relationship between participation in a cooperative and increase in the acquisition of household assets.

iii. Relationship between cooperative societies and enterprises

Hypotheses:

3. There is no relationship between participation in a cooperative and changes in business development associated with increased profitability.
4. There is no relationship between participation in a cooperative and increase in the acquisition of business assets.

The research proposition and hypotheses were further divided into five research questions as stated in chapter one (page 3) and contained in table 4.1 below.

Table 4.1 Impact Assessment, Evaluation Questions and Tools Used

Level of Impact	Impact Domain	Questions to be Answered	Tools Used
Individual	Client satisfaction	What is the role of cooperative societies in satisfying the financial needs of their members?	Interview Focus group discussion
Household	Household income	Does participation in cooperative loan services lead to increase in household income?	Impact survey questionnaire
	Household assets	Does participation in cooperative loan services lead to ownership of household assets (e.g. televisions, videos, buildings, fridges, land etc)?	Impact survey questionnaire
Enterprise	Enterprise profitability	Does participation in cooperative loan services lead to changes in business development associated with profitability?	Impact survey questionnaire
	Enterprise assets	Does participation in cooperative loan services lead to increase in acquisition of business assets?	Impact survey questionnaire

4.5 Research Design

Haque and Yamao (2008) argued that the opinions of the clients/members are critical in an effective assessment of informal finance providers and to determine the benefit of the program on their income, employment, consumption, nutrition, housing, health, sanitation and land ownership. As program participants, they are in the best position to appraise the cooperatives based on their own expectations from the program. This however depends mostly on the population of the study, the time available for the work, funding of the study, resources available and the purpose of assessment. Sebstad (1998)

and Copestake et al. (2005) suggested that the methodological approach for assessment of rural finance programs should be undertaken by collecting relatively small and easily observed sets of indicators with small numbers of key hypotheses that can be easily analysed and yet remain more meaningful. This view is consistent with Hulme's (2000) and Imp-act's (2005) suggestions that impact assessors should limit the variables they measure to a manageable number that will not bring any adverse effect on the quality of data and the relevance of their findings. For example, Edgcomb and Garber (1998) tried to assess impact at the community level in Honduras, but they reported that "assessing impact at this level is difficult" (Edgcomb and Garber, 1998: 35). However they were able to measure impact at individual and household levels. An impact study that is simple and well focused tends to produce better results than a larger study. With this in mind, the variables measured in this study cover the role of cooperatives on individuals, households and enterprises in rural areas using the standard of living variables. This approach is different from those of Falaiye (2002) and Sharma et al. (2005) who measured several variables of standard of living and quality of life at the same time. They were unable to provide statistical results for most of the variables as explained in section 3.2 and 3.4 of the last chapter.

The research design for this work is determined by focusing on the operation of cooperative societies in Nigeria given the unique economic environment of rural dwellers in the country. This study examines the role of cooperative societies that are fully funded by the members without any form of assistance from donors and government on the economic well being of the participants in the rural areas of Ogun State, Nigeria because "in Africa, the majority of the poorest households live in rural areas which lack basic infrastructure" (Chiumya, 2006: 33). "In Nigeria and in some African countries, low population density, predominance of agricultural related livelihood and poor infrastructural services are criteria for identifying rural areas" (Yusuf and Ukoje, 2010: 76). World Bank (1994) identified poverty in rural areas in Nigeria with poor physical facilities, little access to savings and credit, irregular electricity and water supply.

4.5.1 Sample Selection Criteria

Different areas of a given state can be categorised as either rural or urban at any particular time based on several parameters and issues under consideration. For this study, a rural area is defined by the researcher as any community and/or village located within Ogun State of Nigeria without any of the following basic facilities or amenities:

- i. A government provided drinkable water supply.
- ii. A Power Holding Corporation electricity supply.
- iii. Tarred roads - the closest tarred road to such communities should not be less than two kilometres away.

The above criteria form the basis for selecting the communities and villages used for this study and also afford the researcher the opportunity to reach out to the real rural dwellers that can be referred to as the rural poor because “85% of people without electricity live in rural areas of developing countries in sub-Saharan Africa” (Henry and Schimmel, 2011: 1).

4.5.2 Research Method

This study is a mixed method assessment of the role of cooperative societies in rural areas of Ogun State, Nigeria. It examines the effect of cooperative savings and loan services on individuals, households and enterprises. Most rural locations visited were not easily accessible by road and where this is possible, bus services are not regular or reliable because these services are only offered very early in the morning and late in the evening. At times, these buses do experience break-down on such trips. During the rainy season, the majority of roads are in a deplorable condition and thus become impassable because the roads are not tarred and the absence of drainage facilities lead to flooding on such roads. Moreover, some communities, villages and local settlements are cut off from other semi-urban areas for days depending on the intensity of the rain and the topography of the area. During this period, access to the affected communities is mainly by foot, bicycle and motorcycle depending on the distance from the nearest access road which in most cases is more than a

kilometre away. This is a major predicament in reaching the rural poor at particular times of the year.

4.5.3 Cooperative Membership

The membership of the cooperatives for the study is open to all members of the community, provided such persons are recommended by existing members as being honest, hardworking and reliable. Members are expected to participate in the compulsory saving for at least six months before they can access loan from the scheme. The savings are not accessible to the members under any condition except on withdrawal of membership or death. This forms the corporate assets of the program. This is the pool from which loans are granted to deserving members. The motive behind this is that the savings will stand as collateral needed for the loan being granted in case of default. Members are also expected to obtain guarantors within the cooperative who will guarantee the repayment of the loan. Such guarantors are called upon to redeem their obligations in case of default. All loans are expected to be repaid between six to twelve months depending on the capacity of the borrower. However, those who wish to repay the loan within a shorter duration are allowed to do so, thus reducing the amount of interest payable.

4.6 The Nature and Sources of Data

Copestake et al. (2005) believe that when assessment is to be carried out, the cost of such impact assessments can be reduced by relying on public data. Studies in Nigeria (Anyanwu, 2004; Anyanwu, 2005) have focused on the use of secondary data made available by formal finance providers to the regulatory authorities. These data do not represent the opinion of the program beneficiaries. Moreover, the focus of this work is on cooperative societies which are neither recognised nor controlled by the government; hence they are not required to submit any report to the government. The majority of these cooperatives hardly prepare financial statements that could be relied upon as a basis on which to make meaningful decisions. This research cannot rely on such secondary data for analysis and this is one of the reasons why the

researcher decided to use primary data by sourcing data directly from the rural dwellers using a cross sectional study. Primary data are valuable because of the richness of the data, the directness of information from participants and the opportunity of accessing the silent but salient reactions during interviews which are not present in secondary data collection approach. The distinctive nature of this study which focuses on people that otherwise are not taken care of by overall government provision and systems justifies the use of primary data. The review of literature in chapter three shows that many studies (Ghosh and Maharjan, 2001; Lohlein and Wehrheim, 2003; Calkins and Ngo, 2005; Wanyama et al., 2008; Ramotra and Kanase, 2009; Allahdadi, 2011) used primary data since it is better to obtain such information from users and beneficiaries of the program rather than relying on secondary sources.

The researcher has to make do with cross sectional data derived at one point in time directly from cooperative members since this is the only ideal way to collect the data needed in view of the characteristics of the population – poor and rural based – for the study. It has been observed by researchers (Sebstad, 1998; Hulme, 2000; Nelson, 2000) that it is not possible in all cases to use longitudinal design. Moreover, “the problem of response increases significantly if longitudinal data are collected, as second and third interviews have much less amusement value” (Hulme, 2000: 90). For example, Eisenhauer (1995) that used longitudinal study was able to have 246 respondents at the second visit instead of 302 that took part in the initial visit. Sebstad (1998: ii) suggested that “assessment should concentrate on variables for which recall data is easily obtainable and generally reliable”. This approach was also recommended by Hulme (2000) and Nelson (2000) that recall methodology should be used where baseline data or studies are not available or possible. Apart from the advantage of collecting data firsthand from respondents, the choice of the cross sectional method becomes imperative since it may not be economically justifiable to conduct a longitudinal study due to lack of baseline data. Cross sectional design will also make the study more relevant with rapid analysis of responses, while

timely reporting of results, and data collected will serve as baseline data for future use.

4.6.1 Control Group

The determination of the role of cooperative societies in rural finance using a cross sectional study requires the use of a control group as identified in the literature in section 4.3.1 above. The main reason for using a comparison or control group is to find out whether members who have participated in the cooperative have been able to use it to improve their standard of living compared to those who have not taken part. The responses of the control group will be used to compare with those of program participants because the “meaningful positivist requires a critical minimum sample size, as well as inclusion of a control group”. (Copestake et al., 2002: 14). A worthwhile research on the role of cooperatives should be able to consider members and non-members or loan and no-loan members in order to determine the impact of such programs on the participants. This brought to light the possible weaknesses of sample selection in Eisenhauer (1995), Larocque et al. (2002), Adedayo and Yusuf (2004) and Adebayo et al. (2010) that used only program members without any control group. The control group is necessary in order to trace changes to participation in the program. However, the control group should be similar to program beneficiaries on key variables (Sebstad, 1998; Hulme, 2000; Imp-act, 2005).

The ability to establish a control group with the same socio-economic conditions with cooperative members may not be possible. As an alternative, members of the same program – new clients or incoming clients - who are yet to benefit from the program loan have been argued by Edgcomb and Garber (1998), Sebstad (1998), Hulme (2000) and Nelson (2000) to be an effective control group. Moreover, using new or “incoming clients as the comparison group helps to minimise the self selection bias since they also elected to join the program” (Nelson 2000: 4A-6). In this case, cooperative members that have not received loans are chosen as the comparison group for both qualitative and quantitative

methods. In other words, the two groups are members of the same cooperative societies, those who have received loans and those who have not taken loans. Using a control group in a qualitative study has the potential to help the researcher to maximise his understanding of phenomena (Onwuegbuzie and Leech, 2007). Moreover, since the control group (no-loan members) is included in the quantitative aspect of the study, it is therefore consistent that the control group should be included in the qualitative aspects, if the findings are to be comparable and credible.

4.7 Sample Size and Sampling Technique

Where the population is large and the researcher cannot cover it, that part of the population will be used as representative of the population. This concept is called sampling (May, 2001; Saunders et al., 2009). Two major types of sampling method - probabilistic or random sampling and non-random or non-probabilistic sampling - have been identified in the literature (Ghosh, 1992; May, 2001; Robson, 2002; Saunders et al., 2009) for use in research work. The choice of the right sampling method depends upon the objectives of the study. Where the objective "is to generalize the quantitative and qualitative findings to the population from which the sample was drawn (i.e. make inferences), then the researcher should attempt to select a sample for that component that is random" (Onwuegbuzie and Collins, 2007: 285). In trying to make effective prediction about the population, the researcher has to find an optimal sample size to which to administer the research instruments. This is necessary since it is not possible to collect the opinions and views of all the elements in the population. Moreover, the optimal sample size will be useful in making valid predictions, minimising costs and the time required to reach the entire population. The choice of an optimal sample size, depends upon factors such as the objectives of the study, the size and nature of the population, the research questions, the location of program study sites, the time available and the allocated budget for the research (Sebstad, 1998; Barnes and Sebstad, 2000; Hulme, 2000; Imp-act, 2005; Onwuegbuzie and Collins, 2007; Onwuegbuzie and Leech, 2007).

This study uses a random sampling technique whereby each individual in the population has an equal opportunity of being selected for either the quantitative or qualitative aspect of the study because of the different locations of the population and the large sample required. "Given a large enough sample, of all sampling schemes random sampling offers the best chance for a researcher to obtain a representative sample" (Onwuegbuzie and Leech, 2007: 242). "Random sampling guarantees that every client has an equal chance of being selected" (Pawlak and Szubert, 2004: 4). An individual cannot participate in more than one of the three methods of data gathering - questionnaire, interview and focus group discussion - used for this research. It means that all have equal chances in each of the methods if they are part of each of the population.

4.7.1 Questionnaire Sample Size

A quantitative assessment of informal finance program that will prove useful, should have a large sample size that will ensure the effective use of control variables and indicators, be able to account for refusals and program drop outs and allow for issues relating to invalid data, while remaining small enough to fit the evaluator's budget (Edgcomb and Garber, 1998; Sebstad, 1998; Barnes and Sebstad, 2000; Hulme, 2000). To accomplish the task of selecting an appropriate sample size, "trade-offs are required between the number of variables, the margin of error, the confidence interval and the budget "(Sebstad 1998: ii).

Since the sample size should be large, there is a need to determine the number of participants that can be referred to as large enough to make the research meaningful. As a result, Imp-act (2005: 6) suggests that a researcher "should plan to have not less than 30 respondents in each group". Moreover a researcher should "allow for at least 30 in any sub-sample of interest in the study" (Sebstad, 1998: 13). If this principle is followed, the sample size for this study would have been 60 since there are two groups of respondents. "While 30 is often considered the minimum number of respondents for statistical significance, a good analysis often requires more than that, especially when the

analysis relates to subgroups of the population” (Edgcomb and Garber, 1998: 48). Onwuegbuzie and Collins (2007: 288) argue that if the “recommended sample size of 30 for both correlation and causal-comparative design is followed, it would lead to statistical tests with inadequate power because they (sample size of 30) are not based on power analyses”. To buttress their opinion, they went further to calculate the statistical power of 0.51 for a one tail test and 0.38 for a two tailed test of moderate relationship using a 5% level of statistical significance for a minimum sample size of 30. Despite Onwuegbuzie and Collins’ (2007) postulation, the determination of sample size from the findings of Sebstad (1998) (after considering the results of some impact assessment undertaken in Africa - Mali and Uganda, Asia - Bangladesh and Philippines, and Latin America - Honduras) concludes that “the studies that had survey samples of less than 200 all reported limitations in analysing the data” (Sebstad, 1998: 23). A trade off is therefore needed since Onwuegbuzie and Collins (2007: 288) recommend a minimum sample size of “82 participants for two tailed hypotheses” and Sebstad (1998) notes that a sample size of less than 200 cannot provide meaningful statistical results.

Ogun State consists of 20 local governments grouped into three senatorial districts, namely: Ogun East, Ogun West and Ogun Central. The population for the study are cooperative societies that are not registered with the Ogun State government. The choice of unregistered cooperative societies is based upon the fact that they are mostly found in rural areas and that they also function more like financial institutions for rural dwellers. Moreover, relatively large numbers of informal finance providers in sub-Saharan Africa operate as savings cooperatives (Chiumya, 2006). Two local governments that are more rural - based on Nigeria's poverty index - were selected in each senatorial district for study. Stratified and random sampling techniques were used as follows: Based on a preliminary survey carried out between June and July 2009, there is an average of fifteen (15) unregistered cooperative societies in each local government area with an average membership of 43 individuals. This implies the existence of 90 cooperative societies within the six local government areas

used for this study. The sample population is made up of 90 cooperatives multiplied by 43 individual members, which equals 3,870 individuals.

Five cooperatives were randomly selected in each local government area to make a total of 30 cooperatives out of the 90 cooperatives within the six local governments. Thereafter, a random sampling of eleven individuals from the membership list of the 30 chosen cooperatives were selected to participate in the impact survey questionnaires. For the focus group discussion (FGD), two cooperatives from the 6 local governments were selected randomly while 6 members from each cooperative were randomly selected to participate. Samples for the interview were drawn from two cooperatives from the six local government area selected with four members randomly selected from each cooperative. In all, 54 cooperative societies were used for the study. Therefore, the proposed sample prior to the field work is 330 for questionnaire, 72 for FGD and 48 for interview making a total of 450 selected individuals as sample. This sample size fulfils Sebstad's (1998) and Onwuegbuzie and Collins' (2007) criteria. The sample meets the statistical two tailed test hypothesis requirement and the analytical implications of obtaining reliable results since the quantitative research instrument was subjected to quantitative analysis and interpretation after the field study.

It was not possible to determine accurately the number of no-loan members prior to the field work because cooperative members who were not eligible for loans during the familiarisation period may have become loan members during the survey exercise. However, because participation in the study is voluntary, the researcher was able to receive responses to the questionnaire from only 302 people (91% of total sample). The remaining 28 people include the few who withdrew their participation and those who had to leave while administering the questionnaire because of other commitments they considered more important. Table 4.2 below show the breakdown of the 302 participants based on their senatorial districts, membership condition (Loan and No-loan) and gender. The detailed analysis of the participants which explains more of the demographic

information based on membership condition and period of membership is covered in sections 6.2 and 6.3 of chapter six.

Table 4.2 Impact Survey Participants

Senatorial District	Loan Members		No-loan Members		Total
	Male	Female	Male	Female	
Ogun Central	28	42	15	13	98
Ogun East	35	40	10	15	100
Ogun West	46	32	12	14	104
Total	109	114	37	42	302

Compiled by the author: Field study (2010)

4.7.2 Qualitative Sample Size

The researcher conducted interviews with 48 individuals as indicated in table 4.3 below. Sixteen individuals were interviewed in each senatorial district which comprises loan and no-loan members.

Table 4.3 Personal Interview Participants

Senatorial District	Loan Members		No-loan Members		Total
	Male	Female	Male	Female	
Ogun Central	6	6	2	2	16
Ogun East	4	8	0	4	16
Ogun West	6	8	0	2	16
Total	16	22	2	8	48

Compiled by the author: Field study (2010)

The reasonable number of participants for a focus group discussion panel has been put at 6-9 by Krueger (2000), 6-10 by Morgan (1997) and Langford et al. (2002) and 6-12 by Bernard (1995), Nelson (2000) and Johnson and Christensen (2004). 3-6 participants were suggested by Krueger (1994) and

Onwuegbuzie et al. (2007). The references on focus group size were cited on page 289 of Onwuegbuzie and Collins (2007) with the exception of Nelson (2000). With this in mind, and after considering the study locations and the group of respondents, this study decided to use a minimum of 6 and a maximum of 9 participants in each focus group. However, the actual number of participants ranged from 6 to 8. This is because two groups (loan and no-loan members) were involved, in order to accommodate both genders so that the survey may be of interest to the participants and also be useful as a means to derive more data than where the participants were smaller in number and less diverse in outlook. The initial plan was to hold two focus group discussions in each local government area, but this was not possible because of the variation in market days of either the communities used or neighbouring villages where the selected participants trade. As a result, six FGDs took place with 42 participants as shown in table 4.4 below.

Table 4.4 Focus Group Discussion Participants

Senatorial District	Local Government	Loan Members		No-loan Members		Total
		Male	Female	Male	Female	
Ogun Central	Obafemi-owode	3	2	1	1	7
	Ifo	2	2	1	1	6
Ogun East	Odogbolu	2	3	0	2	7
	Sagamu	2	3	1	1	7
Ogun west	Yewa North	3	2	1	1	7
	Ipokia	3	3	1	1	8
Total		15	15	5	7	42

Compiled by the author: Field study (2010)

4.7.3 Pilot Study

“Obtaining help with undertaking a pilot study can also help researchers to uncover problems in the survey instrument and inform the data analysis process

about what data is likely to be most/least useful” (Imp-act, 2005: 3). “Wherever possible an impact assessment methodology should be piloted before full implementation” (Hulme, 2000: 91). Given that pilot studies are a well known phenomenon, and bearing in mind the above, a pilot study was carried out in three villages in Obafemi Owode local government area of Ogun State to test the response to each of the questions and the questionnaires as a whole.

A total of 60 questionnaires were administered and responses to 57 questionnaires led to further corrections and modifications of the research instrument. For example, as a result of the pilot test, questions that were intended to record the actual income of the participants were changed to inquire into changes in income because respondents were unable to recall their actual income a year before the study. But they were able to answer a question on whether their income had increased, decreased or remained the same. Such modifications were carried out on the questionnaire in order to make it easier for respondents without losing sight of the purpose of the study.

4.8 Data Instruments Design and Administration

The data collection instrument for this study comprises of an in-depth personal interview guide, a focus group discussion guide and an impact survey questionnaire because the mix of tools allows the researcher to have a wider picture of an issue (Pawlak and Szubert, 2004). The impact survey questionnaire instrument is one of the five tools (three qualitative and two quantitative) that were created by Nelson (2000) and which have been useful in assessing the impact of informal finance programs. The instruments have been recognised as one of the few influential materials that have been very useful in carrying out informal finance impact assessments (Barnes and Sebstad, 2000). It is sometimes referred to as AIMS/SEEP impact tools. Moreover, the instruments have been used by other studies (Edgcomg and Garber, 1998; Falaiye, 2002; Larocque et al., 2002; Sharma et al., 2005). Different criteria were taken into consideration in determining whether to use these instruments or not. To make this decision, the researcher reviewed previous works –

including those cited above – that had used the instruments and also took special cognisance of Nelson’s (2000: 1-2) suggestion that users should “choose the tools and adapt them to meet your need because each tool must be adapted to the specific circumstances in which it will be applied”. The comment above led to the modification of the impact survey questionnaires for this study to capture the peculiar conditions of the respondents with special emphasis on the very low educational background of the rural dwellers and the definition of rural areas in section 4.5.1 above in determining the study areas.

The issue of confidentiality was taken very seriously during the field work since the majority of the interviewees are illiterate and all of them reside in the community. As a result, the personal integrity of the interviewee has to be protected to avoid any leakage of information to a third party. For this reason, the interviews were conducted on a one-on-one basis in line with Copestake et al.’s (2002) suggestion because the presence of a third party could influence the interviewee’s response in various undesirable ways. This one to one approach enables interviewees to feel free in responding to the interview questions based on their own personal opinions and experience with the cooperative society. The benefit of this is that it assures the interviewees of the confidentiality of their responses. Data for the study was sourced using survey questionnaires, personal in-depth interview and focus group discussion as shown in table 4.1 above. These required the translation of the questionnaires, interview and focus group discussion guides into the local language (Yoruba) of the respondents in order to gather accurate responses to the questions. For example, cooperative societies are called “egbe alaje seku” in the local language of the respondents. This approach has been suggested by Imp-act (2005: 5) to emphasise that a researcher “needs to think about how to translate the questions into local languages and make sure the meaning remains the same”. A similar process was used in Kenya where “all questions were printed in Swahili as well as English” (Copestake et al, 2002: 9) and in Mali where impact survey questionnaires were written in French and Bambara (Nelson, 2000).

The interviews were conducted in Yoruba, the local language of the respondents. Likewise the focus group discussions (FGDs) were conducted in Yoruba to ensure full and maximum involvement of the participants since the majority of group discussants were illiterate. This is made possible because the researcher is equally fluent in the local language of the respondents and discussants. The interview comprised structured open ended questions, to allow participants to describe their personal experiences with the cooperative and to enable them to speak without any restriction using their own words. Both the interviews and the FGDs were jointly documented using a tape recorder and interview guide record sheets. The recorded discussions from the interviews and the FGDs were transcribed and later translated into English. These transcriptions and translations were then compared and reviewed with the interview notes. The interview and FGD is to enable the members to respond to questions relating to why and how of challenges and successes in the program that cannot be reflected directly through quantitative data with limited options which may not capture all there is in the program from the participants perspective.

The impact survey questionnaire tests the hypotheses on household and enterprises levels. It was divided into seven sections comprising of twelve groups of questions covering individual basic information, household level basic information, income and assets, enterprise income, profit and assets. The data collection instrument was translated into Yoruba - the local language of the study areas and respondents - because "translation of both quantitative and qualitative tools into local languages spoken by the clients is critically important for some program sites" (Nelson, 2000: 3-21). Moreover, successful "questionnaires also require translation into local languages and then reverse translation to cross check the accuracy of the translation" (Sebstad, 1998: 15). The translation was undertaken due to the respondents' low level of education and in order to enable respondents to communicate fluently with the researcher and for them to feel comfortable in providing answers to the questions asked without being easily distracted in the course of the research.

The study made use of two field assistants in addition to the researcher in each local government area in administering the questionnaire because of the magnitude of the study and the need to cover all designated research areas within the available time without compromising the quality of the study. The researcher and a field assistant conducted the personal interviews and focus group discussions. The questionnaires were personally administered by the researcher and the field assistants directly to the respondents by reading out the questions to the respondents and they in turn provided their answer which was then recorded in the appropriate space on the questionnaire. Moreover, the field assistants were restricted to one local government area within a senatorial district for their services, meaning that, a field assistant who had participated in administering the questionnaire in one local government area was then excluded from assisting during the interview and focus group discussions in the same local government area, though he could still function in that capacity in another local government area. The researcher therefore used twelve field research assistants who are university graduates with either a first or second degree¹ for the survey questionnaire, while six field research assistants were employed for the interviews and focus group discussions. Edgcomb and Garber (1998) made use of a highly qualified post graduate interpreter². Prior to the collection of data, the field assistants were trained by the researcher as suggested by Hulme (2000) and Imp-act (2005) and they were required to administer the instruments to the researcher and other field assistants on a one-on-one basis. The result of this exercise led to a further briefing and guidance on areas that required additional understanding and input from them. This training eventually proved useful during the data gathering process as it helped in the proper administration of the instruments and documentation of responses.

¹ Appendix 2 page 1 of Edgcomb and Garber (1998) shows that 7 out of the 11 personnel used for microfinance impact assessment in Honduras holds a second degree. They were recommended by a colleague based on their previous experience in similar field work.

² Cited in Appendix 2, Page 4 of Sebstad (1998).

The researcher was introduced to the cooperative members, in most cases during their meetings by the executives, because “motivation can be enhanced by having interviewers introduced by program officers” (Hulme, 2000: 90). This allows for acceptance which enables the researcher to introduce himself, his mission, the data to be collected, its purpose and its usage. In a few communities, the researcher was first introduced to the village head and thereafter sought and received the permission of the village head in compliance with their culture and as a seal of authority to conduct the study because such villages had never had visits from researchers in the past. To avoid bias in completing the questionnaires, officials of the cooperative societies were excluded from working as field assistants to the researcher because “using program staff introduces the risk of biased responses and of compromising the validity and reliability of the data” (Barnes and Sebstad, 2000: 44 and 45)¹. Moreover, “their links with the institution may influence the way respondents answer the questions” (Pawlak and Szubert, 2004: 6). The officials were neither allowed to respond to the survey questionnaire nor participate in the interviews and focus group discussions. These precautions were undertaken to avoid bias and to enhance the validity and reliability of the study by reducing subjectivity and third party interference.

The researcher encounters some challenges during the field work that are worth mentioning. The cost of data collection was higher than the budget because of shortage in the supply of fuel which led to increase in the prices of petroleum products. The fuel scarcity also led to changes in data collection period in few locations. More days were therefore used for data collection. The response rate in some locations was slow in terms of availability of the respondents and response to the research questions. This also increased the number of days for data collection. In few cases, the participants became emotionally aggrieved of the perceived neglect of their community by the government and its agencies.

¹ In a 1993 survey of microfinance clients in two programs in Egypt, half of the enumerators were program staff and half of the enumerators were not. In analyzing the results, the research team established through statistical analysis that there was a clear bias in the responses given to the program staff (Barnes and Sebstad, 2000: 45).

Such people were allowed to decide if they wanted to continue or withdraw their participation. Most of the participants affected decided to continue with the survey based on their further conviction that the researcher does not represent the government or its agencies.

The field work in rural areas of Ogun State took eight months - October 2009 to May 2010 – instead of the six months earlier projected because of the above challenges. During this period, eight personal in-depth interviews and one focus group discussion were held in each local government area. In all, forty eight interviews were conducted (table 4.3 above) and six focus group discussions were held in the six local government areas. The minimum size of each focus group was six with the largest being eight with each group comprising of both loan and no-loan members (table 4.4 above). During the field work, 223 questionnaires were administered to loan members and 79 to no-loan members. 42 people participated in the six focus group discussions comprising 12 no-loan members and 30 loan members. Out of the 48 participants that took part in the in-depth interviews, 38 were loan members while 10 were no-loan members. In all, 392 individuals from 54 cooperative societies participated in this study.

4.9 Analytical Methods

The literature is divided on the most appropriate analytical methods for studying - qualitative, quantitative and mixed - the role of cooperative societies in urban and rural areas across the globe. Some researchers support a particular method more than the others. However, the researcher has earlier justified the use of the mixed methods for this study in section 4.3.1 above. As a result, data collection was based on this premise and analysis was carried out using the mixed method which combines both qualitative and quantitative analysis. The adoption of the appropriate technique for analysis is based on the source and methods of gathering the data. Since this study made use of cross sectional data derived at one point in time through interview, focus group discussion and impact survey questionnaire, this could be analysed using any or all the

methods – qualitative, quantitative and mixed – identified in the literature. The use of quantitative and qualitative methods (mixed methods) is adopted for the analysis but with more emphasis on the qualitative approach since Yoshikawa et al. (2008: 351) noted that “divergent findings from quantitative and qualitative methods do not necessarily represent a “problem” with the data”. However, a qualitative approach allows participants to tell their stories in their own words.

The responses from the survey questionnaires are presented using simple percentages in tables. Further quantitative analysis was carried out using the SPSS statistical package for chi-square tests for independence - used in comparing the relationship between two categorical variables based on cross tabulation tables. An independent sample t-test was used to evaluate statistically significant differences in means between the two groups. One way analysis of variance (ANOVA) was computed where the t-test result is statistically significant. The ANOVA is to determine the demographic variables that contributed significantly to the result while the standard effect size was used to determine the relationship that exists between the dependent and independent variables from the t-test result. Furthermore, the data derived from the interviews and focus group discussions were reported and analysed qualitatively using tables, content analysis and quotation – in their words – as necessary.

4.10 Summary and Conclusion

This chapter has evaluated the research methods used for this study, data collection techniques and the process of data analysis. It explained the steps taken in conducting the research which included the ways and manner in which the study was undertaken with special emphasis on the actions taken before, during and after the field work. Qualitative, quantitative and mixed methods were identified as appropriate methods for conducting impact assessments of the role of cooperative societies on the members. However, the mixed methods was adopted for this study because it entails the use of quantitative and qualitative methods: it therefore combines the advantages of both methods and

reduces the limitations of using any of the single methods. The data collection tools used for this study was adopted from the AIMS/SEEP assessment tools developed by Nelson (2000). This was achieved using cross sectional data with concurrent study – where the qualitative and quantitative aspects of the study were undertaken simultaneously. Data collection for this study was made possible through personal interviews, impact survey questionnaires and focus group discussions. These data were analysed using simple percentages, content analysis, quotations, chi-square test, independent sample t-tests, ANOVA and standard effect size.

The next three chapters – chapters five, six and seven – contain the results and findings of this study. Since more than one tool was used to determine the role of cooperative societies in rural finance, the following chapters are devoted to each level of impact so that the results, findings and discussions on each impact level are examined within the same chapter. Impact at the individual level is determined qualitatively with the use of FGDs and interviews which are reported in chapter five. Chapter six and seven focus on household impacts and enterprise level impacts respectively based on quantitative methods as they contain the results, findings and discussion of the impact survey questionnaires.

Chapter Five

Relationship Between Cooperative Societies and Individuals

5.1 Introduction

Qualitative research analysis in conjunction with quantitative analysis is expected to bring about holistic understanding of human beings in the subject area. Issues such as comment, feeling and emotion that may not be fully covered quantitatively can be examined qualitatively. The qualitative analysis “captures what people have to say in their own words and describe their experience in-depth” (Nelson, 2000: 3-4). The qualitative tools for this study were in-depth interview and focus group discussion (FGD). They focused on how members have used savings and loans services provided by the cooperative over the years. This includes individual comments on what they like and dislike about the program.

In order to report the result of the interview vis-à-vis FGD as accurate as possible, the researcher makes use of two main qualitative analytical tools. The key words-in-context (KWIC) and classical content analysis as used in previous studies (Falaiye, 2002; Larocque et al., 2002). Both methods do not require specialised software, but they are based on the interview and FGD notes and transcription of tape recording of issues discussed during the field work. The “KWIC is a helpful tool to utilise when there are specific words that are of interest to the researcher” (Leech and Onwuegbuzie, 2007: 566-567). The classical content analysis shows the number of times some key words are used during the interview and FGD. Classical content analysis “is most useful when the researcher is interested in the frequency of the theme” (Leech and Onwuegbuzie, 2007: 576). The researcher modifies this approach to show both the frequency and percentage of respondents that used the key words during the study. The responses are reviewed and grouped into common categories for clarity of ideas and easy presentation of results. The researcher provides some key words as used by the respondents in addition to the “in their own

word” comments (in italics) that provide statements credited to the respondents. The use of more than one analytical methods for the analysis will enable the researcher to enrich the quality of data by triangulating the result. This will enhance the researcher’s efforts and eventually bring credibility and acceptability to the research findings. Discussion of result made use of both the FGD participants and interviewees’ view to draw conclusion on the proposition. These conclusions are discussed in the light of the study’s theoretical underpinning. This is further compared with previous studies and in relation to the implication of the result for rural finance. The fifty four unregistered cooperative societies used for this study offer two types of services namely savings and loan. The savings cannot be withdrawn unless if a person ceases to be a member of the cooperative. Savings is an integral part of the program because it serves as the basis for which loans are given. Loans are given to qualified members in multiples of their savings.

This chapter is the first of the three chapters that present the results, findings and discussions on the research objectives. It is divided into nine sections. The next section explains the demographic information of the interviewee using membership duration. Section three covers interviewees’ demographic information using the two types of members (loan and no-loan) as the basis. Section four focuses on focus group discussant demographic information, while section five discusses the impact of participating in a cooperative on individuals. Impacts traceable to savings are considered in section six. Section seven contains impact based on loan. General impact as to members’ satisfaction is covered in section eight, while the last section is the summary and conclusion of the chapter.

5.2 Demographic Information – Membership Duration

The personal in-depth interview guideline provided an opportunity to capture and document interviewees’ data such as gender and marital status based on three different membership periods that range from a day to a year; two to five years; and six years and above as shown in table 5.1 below. Among the forty-

eight interviewees', ten participants have been with the cooperative for more than six years, while twenty six members have put in between two and five years into the program. Those within one year membership are twelve. The majority of the interviewees' are female (62.5%) while males accounted for 37.5%. 66.67% are married, 8.33% are either separated or divorced, while the widowed and the single are 12.5% each.

Table 5.1 Interviewees' Demographic Information

		Membership Duration			Total	
		0-1 year	2-5 years	6 years and above	No	%
Gender	Male	4	10	4	18	37.5
	Female	8	16	6	30	62.5
	Total	12	26	10	48	100
Marital Status	Married	8	18	6	32	66.67
	Separate/Divorce	0	2	2	4	8.33
	Widowed	2	2	2	6	12.5
	Single/Never Married	2	4	0	6	12.5
	Total	12	26	10	48	100
Educational Background	Non-Formal	2	6	4	12	25
	Primary	4	12	2	18	37.5
	Secondary	2	4	2	8	16.67
	Technical/Vocational	2	2	2	6	12.5
	University/Polytechnic	2	2	0	4	8.33
	Total	12	26	10	48	100
Family Type	Monogamous	10	22	8	40	83.33
	Polygamous	2	4	2	8	16.67
	Total	12	26	10	48	100

The educational attainment shows that 25% of them do not possess any formal education while 37.5% hold a primary school certificate. 16.67% have secondary school education while those with technical/vocational education are 12.5%. 8.33% have tertiary institution qualification, while 62.5% of the participants are core illiterate based on Nigeria's minimum educational

attainment for classification of the illiterate. The result is not surprising because the study was conducted among rural dwellers who may not find it easy to improve their educational attainment. Moreover, the study locations with lack of access to basic amenities (see section 4.5.1) could be used to support the result of the low level of educational qualification of the participants and the reason for conducting the study in the local language (Yoruba) of the participants as discussed in section 4.8 of the last chapter. This study found out that 83.33% practise monogamy while 16.67 belong to the polygamous family set up.

5.3 Interviewees' Demographic Information – Loan and No-loan Members

The interviewees' information based on the two groups - those with loan and those without loan - that participated in the qualitative study is discussed in this section using their data in table 5.2 below. Out of the 48 interviewees', 10 have not received loan from the cooperative. This includes 60% of those within two and five years of membership while those with a year and below and those with six years and above are 20% each.

Thirty-eight loan members took part in the interview, 42.11% represents the male and 57.89% represents the female. The membership period among the loan members shows that 26.32% are not more than a year in the program, while 52.63% are between two and five years old in membership. Those with six years and above accounted for 21.05%. The majority of the participants for both groups are between two and five years of membership. This is a good period of time for the interviewees to be able to determine if there has been any tangible impact or not on their individual live, household and enterprises. The family type shows that minimum of eighty percent of the interviewees from both groups are monogamous while polygamous account for 20% and 15.79% for no-loan and loan members respectively. Other results on marital status, gender and educational attainments are evenly distributed among the two groups.

Table 5.2 Membership Information of Interviewees'

		No-loan Members n=10	Loan Members n=38
Gender	Male	20%	42.11%
	Female	80%	57.89%
Marital Status	Married	60%	68.42%
	Separated/divorce	20%	5.26%
	Widow	0%	15.79%
	Single/never married	20%	10.53%
Educational Background	Non-formal	20%	26.32%
	Primary	40%	36.84%
	Secondary	20%	15.79%
	Technical/vocational	0%	15.79%
	University/polytechnic	20%	5.26%
Family Type	Monogamous	80%	84.21%
	Polygamous	20%	15.79%
Membership Duration	0 to 1 year	20%	26.32%
	2 to 5 years	60%	52.63%
	6 years and above	20%	21.05%

5.4 Focus Group Discussion Participant Information

This research deals with human beings and is therefore expected to respect the self esteem of individuals that participated in the study especially, the interviewees', discussants at the FGD and respondents to the impact survey questionnaire. Prior to conducting the field work, the researcher signed and undertook to keep ethical value in place for this research and that includes keeping secret the identity and other basic information of the participants so that no other person would be able to identify the participants based on the result of the study.

With the above in mind, the researcher does not see any reason to justify the collection of demographic information such as educational qualification from the focus group discussants because doing so may expose any of the discussants

to shame and ridicule. The discussants are selected based on their membership of the cooperative irrespective of their membership position - loan and no-loan - and duration in the program. However, 42 individuals comprising of six groups took part in the FGD as stated in table 4.4 under section 4.7.2 (page 102) of chapter four of this thesis. Discussants include 20 males and 22 females among whom 30 participants are loan members and 12 are no-loan members. The minimum number of persons that made up a group was 6 with a maximum of 8. Each group comprises a minimum of two no-loan members and this made the discussions lively and as truthful as possible.

5.5 Impact on Individual

Membership of cooperative is basically meant for individuals who in turn can use the cooperative services to benefit themselves, their households and businesses. As a result, the cooperative should be a source of attraction to an individual before her services can be channelled to other areas. In the light of the above, this chapter will answer the first research questions that: "What is the role of cooperative societies in satisfying the financial needs of their members?" This will be accomplished in line with the research proposition for this study as stated below.

Proposition: Cooperative savings and loan services satisfy the financial needs of their members in that they make a contribution to improvement in standard of living.

In order to answer the above question, the researcher used the combination of in-depth personal interview and focus group discussion to generate necessary data. The findings and discussions are reported in the three preceding sections. The first section is the impact traceable to savings product. Impact of loan service is covered in section 5.7, while section 5.8 deals with the general response about satisfaction on the individual.

5.6 Impact Traceable to Savings

In a cooperative society, savings has to do with putting aside a fixed or flexible sum of money into the program at intervals in favour of the member. Savings also played a critical role in development process (Nathan et al., 2004) which may lead to a better and improved savings habit and ability to manage money for productive use. The experiences of the interviewees and focus group discussants based on their involvement in savings product of the cooperative are stated below.

5.6.1 Interview Result

The interview result in table 5.3 below shows that 30 out of 48 participants like the compulsory savings of the program because it has helped them to improve their savings habit because they find it easier to save now than when they first joined the cooperative.

Table 5.3 Interviewees' Response on Savings Product

	No. n=48	Percentage
Compulsory savings helps to inculcate saving habit into my life and I find it very easier to save now than when I newly joined the cooperative.	30	62.5
None withdrawal of savings when in financial need except on cessation of membership.	28	58.33
The use of savings as a prerequisite for accessing loan.	32	66.67
The use of savings as determinant for loan amount made me to increase my savings and reduce unimportant expenses.	26	54.17
Savings makes me to be a true "part owner" of the cooperative hence I'm free to express myself on any area of discussion on the program at our meetings	34	70.83

28 interviewees which constitute 58.33% are delighted with none withdrawal nature of their savings when in financial needs except if they want to withdraw their membership from the cooperatives. This may be possible because cooperative serves as an alternative to banks to provide financial transactions in form of savings and loans (Larocque et al., 2002). 66.67% of the interviewees' are better off from the savings product because savings is used as prerequisite

for accessing loan. They were delighted that they save; hence they are qualified to take loans from the program when needed. 26 of the 48 (54.17%) respondents experience the positive impact of savings because the amount saved determines the amount of loan to be given. This conforms with Nathan et al. (2004) that rural finance clients are requested to save in advance an amount as a proportion of loan to be taken. The result suggests that the higher the savings the higher the amount of loan that can be given. This is an example of equality and it can encourage those with meagre fund to save since the reward of such savings is higher amount of loan when needed. Interviewees' opinions are stated below.

A 51 years old man with four children said that:

*“Cooperative encourages a low income earner to save and increase his/her savings over a period of time because every increase in the volume of his/her saving serves as a means of getting a bigger value of loan in future”
(Interviewee Q).*

This is what a 58 years old widow said concerning the program on savings.

“It encourages savings habit and also helps business to grow” (Interviewee F).

The benefits of savings to 70.83% of the interviewees are that it makes them to be “joint owners” of the cooperative. This affords them the privilege to freely express themselves on any issue about the scheme at the cooperative meetings. This brings about self esteem and sense of belonging among members. This could also lead to less default on loan since members see themselves as “joint owners” and as such would not want the scheme to collapse because their savings may be lost if the cooperative ceases to exist. This supports the social capital theory as postulated by Basargekar (2010) that the effect of membership of financial association such as cooperatives is the collective responsibility that helps for better loan repayment. This impact has a way of protecting the cooperative from external influence because the members have equal voting right and there would likely be no special importance attached to any member or office. Impact of savings is emphasised by these statements from the members.

A 27 years old no-loan member explains that:

“I have been saving in the cooperative for the past two years so that in the next two months, I may take loan to continue my education on part-time basis at the polytechnic” (Interviewee DA).

A male member who has spent about five years in the program said that:

“I was unable to save for the past one year because of the unfavourable economy of the nation and the high cost of living. But I pray that things will get better so that I can continue to save again” (Interviewee VA).

A female member who is two years old in the scheme commented that:

“The savings is good because it has helped me to take loan once from the cooperative. During the loan repayment, I needed money for personal use but I was not allowed to withdraw part of my savings and I was not happy at all because the savings is my money. I wish I can collect part of the savings I have with the cooperative to solve my financial problems” (Interviewee EA).

54.17% of the interviewees said the use of savings as determinant for loan amount made them to increase their savings and reduce frivolous spending such as leisure drinking, acquisition of more wives and lavish entertainment of guests. A relative result was documented by Eisenhauer (1995) that cooperative members reduce their savings in postal savings account and increases their savings with the cooperative, while Larocque et al. (2002) reported that 28% of members saved to avoid useless expenses. A 32 years old woman who has been a member for four years commented that:

“My experience is that the cooperative is a good means of savings for the future and curtails unnecessary spending on some occasions such as naming, birthday and burial ceremonies, while giving room for future expansion through loan” (Interviewee C).

A middle age woman of about 40 years who has been a member for three years said:

“Since loan received is based on savings, it has helped me to save more and reduce my expenses on non-important things such as jewelleries, expensive cloth and flamboyant life style. Now I have to account for every kobo I used because it helps me to save more and also repay my loan” (Interviewee K).

5.6.2 Focus Group Discussion Result

The results of the FGD on the impact of savings product are stated in table 5.4 below. The FGD result in this chapter only summarises what the discussants mentioned and agreed upon.

Table 5.4 FGD Summary Results on Savings

66.67 percent (4 of 6 groups)	Disliked the	None withdrawal of savings in emergency situations when in financial need
83.33 percent (5 of 6 groups)	Liked the	Use of savings as condition for accessing loan
66.67 percent (4 of 6 groups)	Liked the	Amount of savings being used as a determinant for the size of loan that may be obtained
83.33 percent (5 of 6 groups)	Liked the	Savings because it makes them to be “joint owners” of the cooperative and they are free to express their opinion on any issue of the program.

From the FGD result above, four consequences of savings to individuals' well-being were discovered. 66.67% frown at the inability to withdraw from savings when in financial need. The cooperative has no provision for emergency loan and this has militated against majority of their members during the period of emergencies such as illness, accidents and burial rites for immediate and extended family members. This contradicts Wanyama et al. (2008) that emergency loans are given by cooperative with shorter repayment period. 4 out of the 6 groups wish they could access part of their savings to meet the aforementioned emergencies rather than recourse to other informal sources such as friends, families and neighbours. Comments by few participants at the FGD's are stated below.

A 26 years old single mother who has been a member for about three years raises concern that:

“The savings does not assist in solving multiple household financial responsibility that arises at a particular period of the year because the savings cannot be withdrawn unless someone cease to be a member” (FGD 2).

Another female participant of about 45 years old who is about seven years in the scheme responded immediately:

“If we want to withdraw part of our savings, how would members get loan from the program? The loan given to members is as important as the savings contributed. If we begin to withdraw from our savings, the poverty level in this village will increase beyond what it used to be before we started the cooperative” (FGD 2).

A male participant who is currently repaying his second loan shows his concern on the savings below:

“It is very unfair for us not to withdraw part of our savings because there is no difference between the cooperative and the bank. Is it because there is no bank in this community? That is why I always think twice before I save” (FGD 5).

The discussants believed that savings does not allow members to either be pushed aside or underrated when issues about the scheme is discussed at their meetings. This should discourage dormant membership since everybody contributed to the funding of the program in form of savings. Although this may not be possible at all times because other factors such as consistency of savings may warrant members being addressed in a way he or she may not like. But a member is certain that his personal ego cannot be undermined when issues are raised. This could help to checkmate the executives when directing the affairs of the society in order not to subvert the program to the detriment of the members. This is captured with the statement by one of the participants at the FGD who has been a member for about six years that:

“We own this cooperative together and no member is more important than me, even if the person has more money than me. It is not by stature; we all contributed money either small or big as savings to ensure that the scheme is in existence. How can anyone think that he is important than others in the scheme? It is not possible. We are equal” (FGD 1).

33.33% wish they could access more loans to meet other financial needs, their savings notwithstanding. This is a natural desire when opportunities for investments are available especially for short duration where such loans can be repaid with ease. The use of savings as determinant for loan is acceptable to 66.67% of the discussants. This may mean that members have to save and more importantly the savings must be done in a proper order in case the

member needs a loan. This also depicts the ability to develop a good savings habit which may entail the reduction of spending on non-important things in order to save more. A FGD participant of about 50 years old said that:

“Many people found it difficult to save from their businesses before joining cooperative, but cooperative has helped us to plan for our tomorrow by encouraging savings habits among members and basically it considers how the future of the members can be better than what it is today” (FGD 3).

A corroborative statement made by a female participant at the FGD is stated below:

“When I first joined the program, I found it very difficult to save because I don't have money. But after about a year, I saw my friend, who became a member with me at the same period of time collected a loan for her business. So I started saving more regularly and as at today, I have taken loan twice. The first was used to start a business, while the second was used to improve my business and paid my daughter's school fees. I save regularly now because I want my business to grow better by taking loan from the cooperative” (FGD 4).

A 25 years old orphan at the FGD who has been a member for three years after the demise of his parents commented that:

“Membership of cooperative influences members to become prudent with money” (FGD 6).

The effect of this is that members who are financially disciplined enough to save are likely to show more sense of responsibility in loan repayment and this goes a long way to show maturity in the way money is managed. The cooperative might have imparted on individuals positively in the way they manage their money to achieve essential needs while maintaining a sizeable savings with the program.

5.6.3 Discussion of Results on Savings

The result of both the interview and FGD identified the major role played by cooperative to individual members. The impact of savings is self esteem because the members see themselves as part owners of the cooperative and cannot be bluffed when issues affecting the cooperative are discussed. This will make the members to protect the interest of the cooperative and ensure the continual existence of the scheme. In spite of Huppi and Feder (1990) opinion

that failure of cooperative society in India, Philippines and Thailand is due to lack of sense of ownership among the members, this study indicated that savings in the cooperative made the members to be part owners and lead to self esteem. But for Falaiye (2002), self esteem arose because the clients have easier guarantee for loans, while Edgcomb and Garber (1998) found self esteem in their study because the program leads to female members empowerment. This study result thus lead to social capital as found in the social capital theory which is achieved through the self esteem derived from being a member of the cooperative. The social capital through self esteem is the effect of participating in the cooperative which results in fulfilment of other non-financial goals that may not be known before a person enrol with the cooperative. Such result is not attainable by a person without membership of the cooperative.

The savings serves as the major condition for accessing loan from the cooperative. Actualisation of individual financial goals through the scheme is enhanced by the amount of money saved in the program. This result is contrary to the findings of Oke et al. (2007) where clients had ready access to loan facilities and Eisenhauer (1995) where 54% of the cooperative members save to qualify for loan. However, Adjei et al. (2009) found a positive relationship between loan amount and savings deposit even when only 10% of loan amount is expected to be in the beneficiary savings account. The more a member saves the better for such a person when seeking a loan which propels members to save more especially when they are futuristic in the amount of loan they will require to improve their economic condition for better standard of living. The role of the cooperative in helping members to accumulate savings helps members to fulfil financial capital which is found in the social capital theory. One can draw the conclusion that cooperative savings provides opportunity to accumulate financial capital which members found difficult to do before joining the cooperative. This finding supports the social capital theory and also tally with Holmgren (2011) that financial capital is achievable when the social capital theory is applied to informal finance programs where the participants are

members of an association or group such as cooperative societies. This benefit is closely related to the self esteem explained earlier because with members' savings, it will be very difficult, if not entirely impossible for their loan application to be rejected. The savings grants them confidence when in need of loan facility because, the basic requirement has been met. This result is contrary to Larocque et al.'s (2002) finding where only 13% save in order to have access to credit. The difference in result may be due to the use of longitudinal study and the combination of village banks and cooperative societies' clients in their study because the village banks used do not operate compulsory savings scheme, or use the amount of savings as a condition for accessing loan.

If the finding of this thesis is compared to other formal financial institutions such as a bank, the maintenance of savings does not guarantee the availability of loan to a bank customer. But for cooperative members, the contrary is the case. This approach gives members a good level playing field that enables individuals to determine the amount of loan he may receive based on the amount of savings he has in the cooperative which is cumulative in nature since the savings cannot be withdrawn except on cessation of membership. This conforms with findings of previous studies (Nathan et al., 2004; Adjei et al., 2009) that loan amount determines how the participants save. Moreover, the use of savings as part of collateral for loan reduces the risk in default of payment of loan whereby the savings is first used to reduce defaulters' liability before recourse to the guarantor.

Compulsory savings system of the cooperative that does not specify the minimum or maximum amount to be saved or the pattern of savings such as daily, weekly or monthly, this is another impact of savings on individuals. This has helped to inculcate a good saving habit into majority of the members. They find it very easy to save now, irrespective of the amount and the timing, than when they first joined the cooperative. Similar finding was reported by Edgcomb and Garber (1998) and Falaiye (2002). This cause significant improvement in clients living standards (Adjei et al., 2009). This result suggests that rural people

save despite their meagre income by participating in cooperative society. Larocque et al. (2002) reported that cooperative members are willing to save. Cooperative also leads to increase in savings habits among members (Sharma et al., 2005). The savings also increase the amount of loan that members can obtain from the cooperative. This also reduces unnecessary spending such as acceptance of chieftaincy title and acquisition of more wives.

The mandatory savings draw more members to the scheme first to learn and develop a savings habit, which eventually may become consistent when the members realise the potential benefits of increased savings. The drawback is that, some members may save because it is compulsory for them to save in order to obtain the needed loan not because they are interested in cultivating a savings habit. Despite this, one stands to reason that over time, some of the members may have a change in savings habit that may propel them to save not because of the loan they are expecting but because they are partners in progress in the cooperative. This arrangement enables members to accumulate savings (Wanyama et al., 2008). Simkhada (2005) result suggested that compulsory savings help members to develop capacity to save.

Another impact is prevention of withdrawal of member's savings when in financial need except on cessation of membership. Members can visualise what awaits them if they withdraw their membership after a particular period of time and what will be given to their family in case of death which made the savings a form of social protection and a way of militating against the effect of risk of death which is inevitable. Cooperative as a form of social protection for members reduces their vulnerability in time of crisis which prevents them from selling their properties and falling further into poverty. This is possible because membership of the cooperative will cease on death of the member with his savings paid to a named beneficiary who may be the spouse of the deceased, the children or a close family member. This implies that any member who needs his savings can voluntarily withdraw from the program. This is contrary to the Nigeria banking system whereby an account holder is free to withdraw from his

savings account at will without ceasing to be a customer. However, this impact should be noted in the light of the operational modalities of the cooperative society used for this study because members' savings is the major source of funding available to the program. The payment of savings after death which reduces worry and stress for the members and the immediate family is in line with the social capital theory that the cooperative is used to build social security for the members.

5.7 Impact Based on Loan

Loan is given for different purposes without the conventional demand for tangible assets as collateral. The cooperative only expects a member of the cooperative to stand as a guarantor for another member loan in the spirit of the program slogan "all for each and each for all". The role of cooperative in rural finance through cooperative loan at individual level is more of the distinguishing features of the loan that makes individual to borrow from the cooperative instead of other alternative sources available. To establish if there is any impact of loan on individuals, the result of the interview and FGD are presented below.

5.7.1 Interview Result

The interview consists of forty eight members which include eighteen members without loan. The no-loan members choose to participate in this segment because they believe that they have all the necessary information to do so based on the cooperative regulations which they are familiar with. The summary result of the interview in tabulated form is in table 5.5 below.

32 out of 48 interviewees (66.67%) agree that the amount of loan given by the cooperative is adequate. They are more comfortable with the loan amount and they will not hesitate to take loan from the program. Adebayo et al. (2010) reported higher percentage of 93% on the adequacy of the loan amount.

Table 5.5 Interviewees' Response on Loan Benefits

	No.	Percentage
Adequacy of loan amount being given	32	66.67
Interest on loan is low and justifiable compared to banks and money lenders	36	75
Loan repayment period is long enough and adequate for complete refund to be made	34	70.83
Access to loan without collateral except personal guarantee of members	42	87.5
Duration of loan processing is not too long and is short enough to meet loan disbursement when actually needed	28	58.33
Methods of loan repayment is flexible, easy to meet and does not allow accumulation of loan repayment	32	66.67
Inadequacy of loan monitoring and supervision	28	58.33

The cooperative loan gave some members hope as stated below.

A young man of about 30 years who has been a member for about three years commented below.

"I was attracted to the cooperative because I heard that I can take a loan after some time and I have enjoyed it twice" (Interviewee G).

A member of about two years in the scheme said:

"I depend less on family members because I have a stable income now after taking the cooperative loan" (Interviewee BA).

This study was not able to determine the actual amount of loan collected by the participant, but it does suggest that the amount must have been adequate compared to their economic level. They may be satisfied with the loan amount because they know that they cannot get more than double of their savings as loan at any particular period, hence they might have been used to the system. Those in need of higher amount of loan must endeavour to increase their savings to meet their financial needs. Otherwise, they have to seek funds from alternative sources to satisfy their financial requirements. The alternative sources such as money lenders may not be as relaxing and economically favourable as that obtained from the cooperative societies. The statements below show the impact of loan on the members.

A member reported that:

“I take loan from the cooperative when in need of money to do some certain things that will improve my life” (Interviewee V).

A 47 years old female member who has been with the program for about seven years have this to say about her experience:

“I continue my education to the university on part-time basis through cooperative loan, rent a house and meet all my marriage expenses from them. I’m preparing for my father’s burial and I’m relying on loan from the cooperative to meet the needs of the occasion” (Interviewee LA).

Another impact is the low interest charged on loan collected by the scheme compared with other sources such as the banks and money lenders. 36 out of 48 interviewees are in support of this as major advantage of the cooperative scheme that attracts them to take loan. A further enquiry reveals that the cooperatives charge between 12% and 18% per annum interest on loan. Nathan et al. (2004) reported that informal finance services provider charge between 2.5 and 4 percent per month as interest rate on loan which is higher than what the cooperative charges. Some loan members have this to say regarding the interest rate. This is what a male member who is a business owner/part-time student at the polytechnic said:

“The loan I took is sufficient for the level of my business and the interest of 1.25% per month is on reducing balance method” (Interviewee O).

The above was corroborated by a 43 years old married woman who has been a member for about three years as follows.

“The interest rate is affordable (not too much). It enhances the stability of my business and train people how to manage their resources” (Interviewee CA).

Similar view was expressed by a male member who has been a member for five years and had taken a bank loan before.

“The interest on cooperative loan cannot be compared with the banks. I have taken loans from both the bank and cooperative and I found that interest rate on bank loan is higher than that of the cooperative. Moreover, my experience shows that the bank interest keep increasing based on the changes in the economy within the life’s span of the loan but cooperative interest is the same from the start to the end of the loan” (Interviewee I).

The low interest rate charged by the cooperative can be traced to the fact that they are not under compulsion to pay high dividend to members unlike banks that need to declare a reasonable dividend to her shareholders on yearly basis. Cooperative loan interest is lower than that of the bank (Larocque et al., 2002; Idowu and Salami, 2011) and other informal finance providers (Sharma et al., 2005) because bank charges 40% per annum (Calkins and Ngo, 2005). Another reason is that the banks are involved in many administrative tasks that are costly but cooperatives do not need this for them to operate successfully.

70.83% of the participants traced the impact of the cooperative loan to the repayment period that is adequate for complete repayment of the loan. Because of this, Adebayo et al. (2010) reported that 92% of members pay their loans as and when due. This does not mean that longer repayment period may not be needful to some members but the source of fund available to the cooperative would determine the acceptable period of repayment so that misallocation of funds may be avoided. It is in the light of this that the average of six to twelve months repayment period used by the cooperative is deemed to be beneficial to the individuals especially since no collateral is given and the interest rate is lower than bank and money lenders' rates.

42 out of 48 interviewees see the access to cooperative loan without having to give any collateral except the personal guarantee of any of the cooperative members as one of the benefits they enjoy for taking the program loan. This makes the process of accessing loan easier. The process with a bank is contrary to this because a bank would want an asset such as land, house, share certificate and bond certificate as collateral for loan. Cooperative members have no constraint in applying for loan from the program provided they could get a guarantor among other members. This demands that members should be those of high integrity and of proven character within the community in order to access loan and guarantee other loan seekers from the scheme. Members' comments on loan accessibility and repayment are stated below.

A female interviewee who has been a member for four years reported that:

“A member is entitled to loan after six months of continuous savings to the cooperative and the loan amount is usually a double of the savings of the individual. The repayment varies but it does not exceed one year so that other members can also borrow” (Interviewee X).

The comment below is from a 34 years old man who is two years in the scheme.

“The issue of looking for collateral such as lorry, house and land in case of bank loan does not apply to our cooperative. You only need one or two members of the cooperative to stand as guarantor for you depending on the amount of loan you want” (Interviewee RA).

A young lady of about 30 years who is repaying her first loan said that:

“The loan is easily accessible when a member is of good character. You can access the loan in less than three days” (Interviewee N).

Unlike the commercial banks that require a lot of time for appraisal, documentation and processing of loan before it is disbursed if found viable. 58.33% of the interviewee agrees that the processing of cooperative loan is not too long, but short – less than five days - enough to meet the time when members actually need the money. An earlier study by Eisenhauer (1995) found that 49% agrees that borrowing from cooperative is faster and shorter than from the bank, while 45.3% think otherwise. The short period required may enable members to take advantage of opportunities that may bring a financial turn-around to their personal life within a short period of getting such information since the fund can be obtained from the cooperative as loan.

The result also revealed that the method of loan repayment is flexible and this makes it easy for members to meet each loan obligation based on the nature of their income. This arrangement does not allow for accumulation of repayment because the seasonal nature of individual loan members' income is put into consideration to determine the repayment pattern. This is done to ensure that members are not forced to make repayment at the same time, though the loan duration is the same. Members (28 out of 48) identified inadequacy of loan monitoring and supervision as a major setback to cooperatives in the use of

loan. The executives do not monitor how members used their loan, but they are only concerned about the loan repayment. As such, few members may not be sincere in the use of loan which leads to loan diversion contrary to the purpose stated in the loan application. Some members express their concern during the interview as follows.

A man who has been a member for four years said that:

“Dedication of members to meeting is very poor and communication for loan recovery by the executives to the members is very slow” (Interviewee FA).

A female member of about five years in the program notes that:

“Long process in taking loan and inadequate loan to members because of the increase in the membership and less commitment to savings by members” (Interviewee QA).

Another woman who is three years old in the scheme said that:

“The low loan recovery process is due to the leaders’ selfishness and rigidity which also include lack of timely communication between the executives and the members” (Interviewee T).

5.7.2 Focus Group Discussion Result

The main impacts of loans, based on the result of the FGD in table 5.6 below reveal that the low interest on loan is an attractive feature that motivates members to obtain loan. The interest is lower than what is charged by money lenders and banks. This finding tally with those obtained by Edgcomb and Garber (1998) and Falaiye (2002). This may encourage members to be loyal to the cooperative since the closest alternative - money lender - with all its challenges is more expensive. Members may take loan because the interest does not relatively appear burdensome to the loan taken. Consequently, members pay low interest on one hand and derive the aftermath benefit in terms of income it generates for the program.

Table 5.6 FGD Result on Loan

50 percent (3 of 6 groups)	Liked the	Loan amount being given
83.33 percent (5 of 6 groups)	Liked the	Low interest on loan compared to money lenders and banks
66.67 percent (4 of 6 groups)	Liked the	The current duration of loan repayment
83.33 percent (5 of 6 groups)	Liked the	Non usage of personal properties as collateral for loan
50 percent (3 of 6 groups)	Liked the	Duration of loan processing
83.33 percent (5 of 6 groups)	Liked the	Flexible repayment of loan in small instalments
66.67 percent (4 of 6 groups)	Disliked the	Current low level of loan monitoring and supervision

4 out of the 6 groups frown at the low involvement of the cooperative in monitoring the utilisation of loan granted to members. This may be because members are the guarantors and if such loans are not utilised for the purpose for which they were granted, the burden of repayment in case of default will fall on the guarantor. It seems that what is more important to the executives of the scheme is the timely refund of loan. However, loan diversion could have a negative effect on members who stood as personal guarantor where such loan is not repaid as and when due. Accessibility to loan without mortgaging personal properties such as land, house and household equipment as collateral gives cooperative members a great level of satisfaction since they are able to maintain ownership of their assets as loan members because only personal guarantee of any cooperative member is required for taking loan. The use of guarantor instead of asset is a psychological issue that relieves the member from the pain and agony of losing their properties to the cooperative in case of default. Falaiye (2002) result suggested that easy loan guarantee as found in this study lead to self esteem among members.

The FGD revealed that in case of default, the defaulter's savings in the scheme would be used to liquidate or off-set part of the loan while the guarantor is called upon to repay the balance. The discussions indicate that this rarely occurs because defaulters are persuaded by other members of the program to repay. In most cases, this usually yields positive result because of the negative

implication of default on the member's profile in the scheme and the community. It seems that cooperative members detest being labelled as not being credit worthy because of the social stigma attached to such label in the area. Calkins and Ngo (2005) refer to this as self responsibility among members. Excerpt from the FGD stated below reveals the position of the discussants.

A male participant who is about three years old in the program comment thus:

"The interest on loan is cheaper compared to money lender because the money lent is our money and we are happy with it" (FGD 2).

A female discussant who is about 50 years old and has been a member of the cooperative for about five years said:

"A man in the community committed suicide because the proceeds from the sales of his house and car were unable to fully repay the loan he took from the bank. We learnt later that the bank interest was cumulative and it was more than double the amount of the loan he took at the end of a year" (FGD 5).

A married woman among the discussant said that:

"The loan is available and there is no limit to the number of time members can borrow as far as the previous loan is completely repaid" (FGD 1).

The members are happy with the flexibility of loan repayment in terms of the instalments and amount repaid at intervals. There is flexible repayment plan based on individual cash flow and there is no restriction on the amount to be paid. This may be accomplished because compulsory savings help cooperative members to repay their loans (Simkhada, 2005). The cooperatives recognise seasonal variation in income and therefore structure their loan in a way that is convenient and comfortable to members whereby the income level and its flow determines what a member repays and the interval of such repayment. Half of the FGD participants are satisfied with the amount of loan given. Others are of the opinion that there is need to increase the amount because income generated is a function of the capital invested. However, this cannot be met in the interim because of the constraint of funds available to the cooperatives.

A female discussant who is about four years in the program shows her concern that:

“I think the cooperative executive should think of increasing the loan from double of the savings balance to triple so that we can have more money for our business” (FGD 3).

A man of about 50 years old who has been a member for three years raises his concern that:

“The executive committee members are consider first in granting loan and it has almost turn the program loan to a family affair whereby a prospective borrower need to pay homage or allegiance to either the president, the secretary or any other members of the executive” (FGD 4).

A female discussant at the FGD who is about five years in the scheme replied that:

“Favouritism is restricted to very few cooperatives and for special emergency situation such as ill-health that requires immediate attention. Otherwise, members loan applications are considered on first come, first serve basis provided the member can provide the guarantor as required by the cooperative” (FGD 4).

5.7.3 Discussion on Loan Results

The interview and FGD result reveals that the interest on loan is low and not a “cut throat” rate that jeopardises the interest of members. This agrees with Lohlein and Wehrheim (2003) that cooperative interest compare favourably with other financial institutions because cooperative charge 28% per annum while banks charge between 27-32% per annum. Contrary result was documented by Eisenhauer (1995) longitudinal study with 43.6% reporting higher interest rate on cooperative loan than banks. 36.2% are contrary while 20% don't know which is higher. However, this study found that cooperative loan interest is between 12 and 18% per annum. The use of employee and community based cooperatives by Eisenhauer (1995) may justify the reason for difference in results with cross sectional study of Lohlein and Wehrheim (2003) and this study. Loan repayment in small instalments with flexible repayment plan depending on the borrower's income pattern help members to plan and match their income with the best repayment structure. Simkhada (2004) result

suggested that this is possible because cooperative loans are designed according to loan purpose.

The use of co-member of the cooperative as a guarantor for cooperative loan should help an individual who is starting life or business without any asset to access loan and this can be useful to bridge the gap between the rich and the poor. A similar result was documented by Falaiye (2002) while Eisenhauer (1995) reported that cooperative take less collateral than banks. This arrangement can lead to the development of more personal relationship among members and thereby foster mutual cooperation and social interaction among individuals. Collective action for mutual benefit in the social capital theory is found in this study because of the use of personal guarantor among members for cooperative loan instead of financial and physical assets. This implies that the social and economic development benefit in the social capital theory (World Bank, 1998) is also attainable among the cooperative members.

If the above is related to the low interest rate that is computed on reducing balance method as identified earlier in this chapter, members are likely to maintain consistent loan repayment to reduce their interest since each repayment directly determines the amount of interest payable. This pattern was documented by Simkhada (2004) that cooperative charge between 15 and 20% interest rate per annum on reducing balance method. The study concluded that cooperative build social capital because the low interest rate at reducing balance method forced money lenders to reduce their interest from 60% per annum, before the commencement of cooperative, to 24% after cooperatives were established. This study result of 12 to 18% per annum interest on reducing balance tallies exactly with Wanyama et al. (2008) finding of same percentage on reducing balance. This implies that there is possibility of uniform interest rate on cooperative loans among many cooperatives in Africa. These impacts show the inter-relational effect of loan features on individuals and the use of guarantor instead of personal assets to encourage members to borrow and remove discrimination among participants. The low interest is also an attraction to

encourage new members to participate in the program and consequently help them to secure loan, instead of patronising money lenders.

The flexible repayment in small instalments enhances sincerity to loan repayment schedule because members are not forced to pay certain amounts their income cannot accommodate at a particular time. Ability to meet repayment schedule by the members is very important for cooperatives that relied solely on members' savings such as those considered in this study. Such cooperatives "achieve higher repayment rate" because "it is members' fund that is at stake" (Huppi and Feder, 1990: 199). The current duration of loan repayment is acceptable to members may be because of the loan amount involved. Adedayo and Yusuf (2004) found that loan amount is significant when compared with low standard of living in rural areas. If loan amount is increased, it may not be possible to accomplish some repayment within the current loan duration. The loan processing period is still shorter than bank loan but longer than that of money lenders who may not need to consult anyone before giving loans to people within the community. In Eisenhauer (1995) study, 61% reported that it is easy to get loan from the cooperative than the bank while 32.5% think otherwise. However, banks loan take too long period with more administrative details before it is disbursed (Calkins and Ngo, 2005), while delay in loan disbursement reduces borrowers' ability to repay loans (Oke et al., 2007). This may further explain the reason why cooperative loan is faster to access than banks loan.

5.8 Members Satisfaction

This section covers the totality of what the members like and dislike about the program. These include the reasons why members decided not to quit the cooperative, program management and other things that they experience in the cooperative. This is important because members can draw close relations to the scheme if satisfied. Oloyede (2008) found that 7.45% participate in informal finance because of closeness and personal relationship. The result of both interview and FGD are presented separately below.

5.8.1 Interview Result

The satisfaction level of individuals varies at one time or the other and this explains the diverse views expressed during the interview about the program. These views were harmonised as presented in table 5.7 below which shows that 79.17% are more at ease with the non-usage of collateral as condition for obtaining loan. Members may introduce new members based on this criterion because “a committed client recommends the institutions to relatives or friends” (Pawlak and Szubert, 2004: 1). The low interest rate charged by the cooperative brought satisfaction to 77.08% of the interviewees’. This shows that borrowers are also mindful of the cost of the loan since they are likely to patronise the source of loan with lowest interest rate. The use of cooperative as a means for saving for the future helps to reduce unnecessary spending among members for better economic condition.

Table 5.7 Interviewees’ Result on Members Satisfaction

	No.	Percentage
Access to loan without collateral	38	79.17
Loan system is easy which enable members to invest and meet other financial needs	28	58.33
Readiness by members to help other members of the cooperative when in trouble	31	64.58
A good means of savings for the future, prevent unnecessary spending and exposure to thieves	32	66.67
Low interest on loans compared to banks and money lenders	37	77.08
There is love and good relationship among members	30	62.5
Honest and trustworthy executives with transparent policy in managing the cooperative	24	50
Dividends are given to members as declared by the executives yearly	14	29.16
High commitment of members to attending meetings – low lateness and absenteeism	22	45.83
Allowing executives to stay longer on the post help in consistency	20	41.67

Financial discipline is therefore entrenched among the members and this enables them to curtail their expenses on some things that do not have

immediate economic value to them. Excerpt of comment by members are stated below.

A married woman who is four years in the program said that:

“I have introduced the cooperative to my family members because my business has grown since I started taking the loan” (Interviewee B).

Another woman who is a widow and has been a member for more than six years commented that:

“I was able to send my children to school from cooperative loan, now one of them is working and our household income has increased because I spend less on children education while the one that is working has joined the cooperative” (Interviewee JA).

A similar report below was given by a 47 years old man who is about six years in the cooperative.

“It encourages me to go for developmental issues and also helps to save in order to achieve something important in life such as taking loan for house construction” (Interviewee D).

A 51 years old man of about five years in the scheme said that:

“I took cooperative loan to buy land and build the house gradually till my family moved in to the house and we are delivered from shylock landlord forever” (Interviewee OA).

The statement below was given by a 22 years old man who became a member about three years ago.

“I took the loan because of the low interest to pursue my career as a student by paying school fees for my diploma programme. My parents are poor so I work every weekend and during the holidays to ensure that the loan repayment is met” (Interviewee E).

A 42 years old man who has two wives and has been a member for about three years comment that:

“I use the first cooperative loan to buy a land and the second to buy a motorcycle after repaying the first loan” (Interviewee P).

An elderly woman of 60 years old and a member for more than four years captures the effect of the cooperative as follows:

“The cooperative helps to build human life, promote love and unity, and encourage young couples to save and plan for their future” (Interviewee A).

Willingness of members to assist others who are in problem was identified by 64.58% of the participants as a source of delight to them. Social intermediation aspect of cooperatives relates to loan and other assistance to help members in time of emergency. This helps members in responding positively to the emergencies of socio-economic problems. This finding is in harmony with the finding of Tsekpo (2008) that the absence of social protection schemes in the informal sector make people to look up to cooperatives societies as a source of solidarity in times of need. Adjei et al. (2009) found that clients reduce vulnerability to crises such as illness due to the responsive support of other members. Other things that brought satisfaction are the cordial relationship among members, and their ability to invest and yet meet other financial needs. The sincerity and trustworthiness of the program executives also brought satisfaction to the members. This result contradicts Enete (2008) findings that executives often hijack the affairs of the cooperative for selfish interest while Allahdadi (2011) found that cooperative officials lack management skills to run the affairs of the cooperatives.

Some reservations noted from the respondents are, irregular yearly dividend payment (70.84%), low commitment of members to meetings as revealed in the number of lateness and absenteeism (54.17%). 28 respondents (58.33%) do not agree that the long tenure of the executives is of help to the cooperative. They believe that the position should be rotated among members regularly. Most of them see two years as an acceptable tenure of office for the executive team. However, the result has shown that the benefits identified outweigh the reservations and as such, members are more satisfied with the program than otherwise. The effects and limitations of the program on client satisfaction are captured in the responses below.

A female widow from a polygamous marriage who is 35 years old and a member for about three years said that:

“The cooperative is supportive, united and loving, well focused and objective in their decisions” (Interviewee TA).

A similar comment was given by a man who has been a member for about two years.

“Apart from taking loan from the cooperative, they seek for member’s welfare and business growth” (Interviewee H).

Similar view was expressed by the women market leader who is a member for more than five years:

“I thank God for the honesty and sincerity of our able executives. They are managing our money well with the cooperation of members who are responding well” (Interviewee GA).

A young lady of about 30 years who has been a member for four years raises her concern below.

“The executives should ensure that dividends are given yearly and it should be something reasonable. Gifts should also be given at the end of the year to motivate other people to join the cooperative” (Interviewee Z).

Another woman who has been a member for about three years and on her second loan said that:

“I don’t like the keeping of someone savings in the cooperative while paying interest on loan. At least, we should be allowed to use our savings to repay part of the loan” (Interviewee HA).

A man who has been a member for three years said:

“Instead of giving double of the savings as loan, it should be increase to triple of the savings so that members can have large amount of money for their businesses” (Interviewee S).

The comments below on what the interviewees’ have done with their previous and current loans show how satisfied they are with the scheme. A single parent who has been a member for about three years said:

“It helps me to diversify my business and it has changed the lives of my family” (Interviewee W).

The statement below is by a 55 year's old married man who has been a member for about five years

"I love to go to school, but I couldn't because my parents were very poor. I do whatever it takes by taking loan to send my children to the polytechnic and secondary school because they are my tomorrow" (Interviewee MA).

A 48 years old woman who is divorced and has been a member for about three years said that:

"Sending my children to school through the loan is a must. Other children in school do not have two heads. Without sending the children to school, this village will remain more backward in few years to come than what it is today." (Interviewee J).

A married man who is about seven years in the program comment thus:

"I took cooperative loan and was able to invest in landed properties and it is very lucrative with reasonable monthly rent payment from the tenants" (Interviewee PA).

A 42 years old man who has been a member for five years said:

"It gave my family what we needed to start the business as our source of livelihood. It has added to me and has not reduced. The first loan was used to start our first business about four years ago – rent a shop and sell food. This gives us daily income which has been on the increase" (Interviewee M).

The statement below is by a 51 years old widow with three children.

"It helps my business to grow. I now have two shops as a result of the loans I took from the cooperative" (Interviewee IA).

5.8.2 Focus Group Discussion Result

The findings of the FGD in table 5.8 below show that satisfaction among members occur both from the savings and loan products. The satisfaction derived from savings revealed that 83.33% (5 of the 6 groups) liked the cooperative savings because it helps them to curtail unnecessary exposure to thieves. It also reduces the amount spent on irrelevant things but promotes better management of fund. Two main areas of satisfaction were identified from the loan product. Access to loan without collateral made the program participants happy as well as the low interest charged on cooperative loan. The interest is lower than those charged by banks and money lenders as earlier reported for the interview result in section 5.8.1 above.

Table 5.8 FGD Result on Members Satisfaction

66.67 percent (4 of 6 groups)	Liked the	Availability of loan without collateral
50 percent (3 of 6 groups)	Liked the	Way members rally round each other when anyone is in problem or having social functions such as marriage, burial and naming ceremony to attend to.
83.33 percent (5 of 6 groups)	Liked the	Savings product because it helps to curtail unnecessary spending, reduces exposure to thieves and discourages mismanagement of money.
83.33 percent (5 of 6 groups)	Disliked the	Non-giving of dividends and gifts to members at the end of the year
66.67 percent (4 of 6 groups)	Liked the	Low interest paid on loans
50 percent (3 of 6 groups)	Disliked the	Long tenure of executive members on the post

One of the FGD participants' who has been a member for about five years said that:

“Many members used cooperative loan to build houses and businesses while young people in the community take loan to further their study at higher institutions on part-time basis. Others use the loan to train their children in educational areas” (FGD 4).

An elderly woman of 61 years old who participated in the FGD and a member for more than six years commented that:

“My friend who would have died about six months ago survives her health problem by taking cooperative loan for medical attention in the city. She is back in the village and able to continue her businesses” (FGD 6).

A female participant who is four years in the scheme put the effect of the program in a broader perspective as stated below.

“The commercial banks have failed many of us who are poor people including the so called microfinance banks because they are located in the cities. The cooperative is the last and only hope of the poor in this community and neighbouring villages. It is ours and we are happy with it. Since the government cannot help us, we can help ourselves” (FGD 2).

5.8.3 Discussion of Results on Members Satisfaction

The interview and FGD results were presented above in sections 5.8.1 and 5.8.2 respectively which revealed what drives the members to invite new people to the program. The nature of the saving product was seen as part of financial intermediation of the cooperative. Savings help in proper management of fund among members which can be referred to as financial discipline with the task of monitoring every amount of money they raise. This finding agrees with Nathan et al.'s (2004) result. Very small amount of money that people don't regard as useful for their financial upliftment are now counted and used as useful funds to improve their economic condition for better standard of living.

Satisfaction also occurs through delayed gratification whereby unnecessary spending is curtailed. The immediate personal enjoyment that does not add value to the members are either reduced or ignored, in order to improve their savings, which relatively lead to increase in the amount of loans obtainable. This eventually improves their earnings which brings a gradual lifting from poverty. Larocque et al. (2002) reported that 28% saved to avoid useless expenses. This is good for the program because members who are able to delay immediate personal gratification such as acceptance of chieftaincy title with its costs are more likely to be prudent in the use of cooperative loan to enhance their economic position and the timely repayment of the loan. Majority of the participants (66.67%) of the interviewees and 5 of the 6 FGD groups said that satisfaction was attained because savings in the cooperative help members to avoid theft. The interviewees' see cooperative more like a bank for safe keeping of their money, though the savings cannot be withdrawn. This is an unexpected finding, but it is not unique because Larocque et al. (2002) reported that 49% of cooperative members save to provide security against theft. This is a major improvement on the local and primitive way of keeping money at home, under the chairs or inside mattresses for a long period of time. This is similar to what Wanyama et al. (2008) found that cooperatives enable members to accumulate savings. The effect of cooperative which lead to members' ability to save in the scheme is financial capital because it is the members savings that is

used to determine the loan amount accessible by each member. This result further confirms the use of social capital theory in explaining the role of cooperatives in rural finance which leads to financial capital as a result of membership of the program.

This result shows an improvement in savings habits of rural dwellers. This can serve as an avenue for the introduction of formal banking system to the rural people in future. If members can save in cooperatives to avoid theft, they can also save with the banks where the savings can be withdrawn provided such banks are located nearer the rural dwellers. This finding supports Larocque et al.'s (2002) result that savings in cooperative societies contribute to the introduction of banking to rural communities. Loan availability without giving of collateral such as house, land and other properties brought happiness to the members. Oloyede (2008) found that 48.36% participate in informal finance because of easy access to loan. The study reveals that 98.09% of applicants loan were successful from informal finance providers, while 10.20% were successful from the bank. Banks can hardly give loans without collateral in form of financial assets – shares, bond and debenture certificates – or fixed assets such as house and machineries. Edgcomb and Garber (1998) and Falaiye (2002) reported that the acceptance of guarantors that made it easy to provide loans brought satisfaction to clients.

Cooperative members have equal opportunity to access loan from the scheme since the collateral requirement does not apply to any of them. The significant impact of this finding may imply that members are more likely to get out of poverty, improve their economic position and have better standard of living if loans are properly utilised. Any attempt to introduce the use of collateral for loan by the cooperative will be resisted or lead to decline in member's participation and commitment to the program. The non-usage of collateral by cooperatives is expected to reduce rural dwellers participation in other forms of informal finance providers especially, the money lenders. The low interest charged on cooperative loan was identified as a source of satisfaction especially if this is

compared to the rates charged by money lenders and banks. This agrees with Park and Ren's (2001) finding that the clients were happy with the interest on loan which is less expensive than other sources of credit available to them. The low rate should be able to reduce the interest of members in patronising money lenders. Consequently, the low interest will reduce the number of loan default since it may not be possible to avoid loan default completely, but it could be minimised by the low interest rate payable on loan. The loan members do not see themselves as over burdened by the cooperative while servicing their loans. Contrary result was documented among formal finance providers by Idowu and Salami (2011).

This study results strengthen the social capital theory as potent theoretical framework to explain the role of cooperatives in rural finance because easy access to loan should lead to the economic development of the members which Basargekar (2010) refers to as benefit of membership as a result of social relationship in a group or association. This also provide basis for the use of personal guarantor as collateral for loan. This explains and strengthens responsibility for better loan repayment postulate in the social capital theory.

Client satisfaction is also derived by the inter-personal relationship that occurs whereby members see themselves as their siblings' keepers in many areas of life because members are ready to help each other when in trouble. Similar result was documented by Lemma (2008) that members care about economic problems of other members while Sharma et al. (2005) found more unity and cooperation among members. Allahdadi (2011) reported contrary result that lack of collaboration among members was responsible for failure of cooperative on poverty alleviation. The inter-personal relationship could take any form – financial, physical and emotional - depending on the need of the member. This has brought love and good relationship to the cooperative which enables members to stick to the cooperative motto "all for each and each for all". The creation of social capital as discussed in the social capital theory is supported by this finding because the members promote the scheme for the benefit of

other member by helping each other in time of need. Social capital found in this study includes bonding which is an improvement in relationship among individual members of the cooperative.

Amidst of the benefits of the role of the cooperatives found in this study, there are agitations among few members for opportunity to withdraw part of their savings while still retaining their membership which is unacceptable in the scheme. However, there may be need for emergency loan which can be repaid over a longer period of time to ease the financial burden of the members because social and financial capital can be further enhanced through emergency loan. The concern raised to access more loan and withdrawal from savings without ceasation of membership, and the inability of the cooperative to provide emergency loan as found in this study which has militated against members during the period of emergencies such as illness and accidents are possible threat to the building of better social and financial capital in the program. The provision of emergency loan documented by Wanyama et al. (2008) was found to lead to better social capital.

5.9 Summary and Conclusion

The discussion made use of the results from both the interviews and FGDs by relating this with other information that emerged during the field study. Impact was expected to occur from savings and loan services and this in conjunction with other internal management of the cooperative is expected to form the general impact as to members' satisfaction.

Access to cooperative loan has positive impact on the lives of members. There is also positive relationship between the loan given and improvement in standard of living among the members because members are satisfied with the core elements of the cooperative which is financial intermediation of mobilising savings and giving of loan to members at reduced interest rate without the giving of fixed and financial assets as collateral, but personal guarantee of one or two members depending on the loan amount. Cooperatives therefore help in

conversion of individual members risks to collective risk of the association. This has greatly enhanced the inter-personal relationship among members which enables them to provide support to members in trouble and reduce their individual poverty level.

The findings reveal that members are satisfied with the features and services offered by the program savings and loan products because it meets their needs at various levels not because there are no alternatives, but the alternative financial service providers are more expensive to them compared with the benefits they would derive. More so, they are not within their immediate reach. Study by Adebayo et al. (2008) found that 70% experience improvement in standard of living while Wanyama et al. (2008) reported that cooperative help members improve on living condition and pull some out of poverty. This agrees with Buckley (1997) that those who have used money lenders regard them as being exploitative and should be avoided if possible. The role of cooperative societies is to affect members positively by making life more comfortable, by encouraging meaningful utilisation of savings and loan, which eventually brings improved standard of living to the members. This agrees with Larocque et al. (2002) that cooperative loan raises the members above the poverty level. Contrary result by Jainaba et al. (2005) suggest that lives of participants have not been impacted positively while Shaw (2004) documented that it is difficult for poor people in rural areas to get out of poverty than other areas. However, Holmgren (2011) found that cooperative improve members' well-being and members are satisfied with the program.

The study therefore upholds the research proposition that cooperative savings and loan services satisfy the financial need of their members in that they make a contribution to improvement in standard of living. The program also leads to social and financial capitals which are two of the three components of the social capital theory. This can be explained further that cooperative societies lead to the creation of financial capital and social capital for individual members because they participate in and enjoy the benefits of the program savings and

loan services. The study result further enhanced the use of social capital theory as theoretical underpinning for members sponsored informal rural finance provider especially, the cooperative societies that offers savings and loan services to their members in rural areas.

The next chapter - chapter six - is the first chapter that contains quantitative method research based on the results and findings of the impact survey questionnaire which are discussed therein at household level. It is used to provide statistical test on the hypotheses on household income and assets, and to determine if the role of cooperative societies in rural finance includes contribution to standard of living through increase in household income and acquisition of household assets.

Chapter Six

Understanding Cooperative Societies at Household Level

6.1 Introduction

The role of the cooperatives at the household level is expected to occur on household income and household assets. The research questions to be answered in this chapter are to ascertain if participation in a cooperative society leads to increase in household income and ownership of household assets such as television, fridge, land and building. This chapter is divided into eight sections. Section two covers demographic information of the respondents based on membership duration. Respondents' demographic information based on loan members (those who have taken loan) and no-loan members (members who have not taken a loan) classification are discussed in section three. Section four focuses on household basic information such as household headship and household mean age. Section five is on impact at household level which explains areas of impact covered. Section six examines impact of participating in a cooperative society on household income. Impact on household assets considered important to rural people is examined in section seven. The results in sections six and seven are discussed in line with the theoretical framework identified for this study in each sections. The last section is the summary and conclusion of issues raised in this chapter.

6.2 Demographic Information – Membership Duration

Table 6.1 below provides demographic information on the 302 individuals who responded to the survey questionnaire using number and simple percentage where necessary. Questions 1c, 2, 4, 5 and 7b of the questionnaire were used to derive the information in the table. Classification by gender shows that 156 and 146 of the respondents were female and male respectively. This did not show a major difference between the sexes but it revealed an equal representation of the gender. Majority are married (80.13%), 5.3% are widowed while those that are single and separated are almost equally represented.

35.76% of the respondents have never attended any formal educational institutions. Those that finished primary school are 41.39% while 10.60% went to secondary school. 37 respondents (12.25%) attended university, polytechnic, technical or vocational institutions but only 5.63% (17 respondents) hold a first degree from either a university or polytechnic. The educational information is not a threat to the research since the respondents are rural dwellers. The family type shows that 257 are monogamous while 45 are polygamous.

Table 6.1 Respondents' Individual Demographic Information

		Membership Duration			Total	
		0-1 year	2-5 years	6 years and above	No	%
Gender	Male	20	68	58	146	48.34
	Female	43	68	45	156	51.66
	Total	63	136	103	302	100
Marital Status	Married	47	105	90	242	80.13
	Separate/Divorce	8	8	5	21	6.95
	Widowed	4	6	6	16	5.30
	Single/Never Married	4	17	2	23	7.62
	Total	63	136	103	302	100
Educational Background	Non-Formal	22	51	35	108	35.76
	Primary	28	51	46	125	41.39
	Secondary	7	14	11	32	10.60
	Technical/Vocational	3	11	6	20	6.62
	University/Polytechnic	3	9	5	17	5.63
	Total	63	136	103	302	100
Family Type	Monogamous	48	113	96	257	85.10
	Polygamous	15	23	7	45	14.90
	Total	63	136	103	302	100

6.3 Demographic Information – Loan and No-loan Members

This section is devoted to respondents information based on the two groups - those with loan and those without loan - examined. The comparison of data for

members and non-members has been used in the literature (Ghosh and Maharjan, 2001; Simkhada, 2004; Sharma et al., 2005). The information presented in table 6.2 below was compiled from the completed survey questions 1b, 1c, 2, 4, 5 and 7b. 79 respondents have not received loan from the cooperative and this include 11.4% of those who have engaged in the program for six years and above, 36.7% of those within two and five years of membership while those within a year and below accounted for 51.9%.

Table 6.2 Loan and No-loan Members Demographic Information

		No-loan Members n=79	Loan Members n=223
Gender	Percent – male	46.8	48.9
	Percent – female	53.2	51.1
Marital Status	Percent – married	68.4	84.3
	Percent - separated/divorce	8.85	6.3
	Percent – widow	8.85	4.0
	Percent - single/never married	13.9	5.4
Educational Background	Percent - non-formal	37.97	34.98
	Percent – primary	40.51	41.7
	Percent – secondary	10.13	10.76
	Percent - technical/vocational	6.33	6.73
	Percent - university/polytechnic	5.06	5.83
Family Type	Percent – monogamous	78.5	87.4
	Percent – polygamous	21.5	12.6
Membership Duration	Percent - 0 to 1 year	51.9	9.9
	Percent - 2 to 5 years	36.7	48.0
	Percent - 6 years and above	11.4	42.1

48.9% of the loan members are male while 51.1% are female. The loan beneficiaries are spread between new members (9.9%) and 48% for those between two and five years membership period while program participant of six years and above accounted for 42.1%. All other information including gender, marital status and educational attainment are evenly represented among the two groups.

6.4 Household Basic Information

Table 6.3 below summarises the basic information about the respondents' household. Questions 2, 3, 6, 7a and 7c were used to derive the information about age, size of household and household headship. The definition of household is those individuals who live together and share the same food at least once a day. This is necessary to ensure that those who are economically related are considered as part of the household and this is differentiated from other people that may be living there. "Household frameworks provide a basis for studying impacts on micro enterprises and individual household members" (Sebstad, 1998: 10). In the study centres, a typical household comprises majority of nuclear family members and in few cases the extended family members who reside fully with the respondents such as grandchildren and their relatives who are included. The household have 3 to 4 adults and a mean total of 5 to 6 people. 40 households are headed by female while 262 households have male as their heads.

Table 6.3 Household Demographic Information

	No-loan Members n=79	Loan Members n=223
Mean number of adults (person > 18 years)	3.26	3.78
Mean number of children (persons < 18 years)	1.99	2.19
Mean number in household	5.25	5.97
Mean age of respondents	38.02	40.75
Percent female headed household	16.46	12.11
Percent male headed household	83.54	87.89
Percent house ownership – self	17.7	35.0
Percent house ownership – rent it	63.3	53.8
Percent house ownership – parent/family	19.0	11.2

92 respondents (30.5%) own their houses, while 170 respondents (56.3%) are living in rented apartments and the remaining 40 respondents (13.2%) live in houses that are either owned by their parents or family. A larger proportion of members with loan than those without loan own their houses: 35% and 17.7% respectively. 63.3% of households without loan live in rented houses as against 53.8% for households with loan. 19% and 11.2% of members without loan and

those with loan respectively either live in houses owned by their parents or family. Table 6.2 and 6.3 above indicates that the two groups are similar in individual and demographic information.

6.4.1 Key Demographic Statistic

This section is to determine if there is a significant difference between the two groups on demographic variables such as gender and marital status. To accomplish this, chi-square test of significance was applied to variables measured on ordinal or nominal scale while t-test was applied on ratio and interval data as reported respectively in table 6.4 and 6.5 below.

Table 6.4 Test of Significance on Demographic Variables between Loan and No-loan Members (Chi-square)

	Value	Df	Asymp. Sig (2-sided)
Marital Status	10.565	3	.014*
Gender	.033	1	.856
Educational Background	.264	4	.992
House Ownership	9.297	2	.010*
Family Type	3.023	1	.082
Family Headship	.527	2	.769

* Significant at five percent

Table 6.5 Tests of Significance on Demographic Variables between Loan and No-loan Members (t-tests)

Levene's test for equality of variance ¹	T-test for Equality of Means						
	F	Sig	T	Df	Sig. (2-tailed)	Mean Difference	Standard Error Difference
Age	.780	.378	2.306	300	.022*	.27150	.11773
Membership Duration	1.412	.236	8.453	300	.000*	.72793	.55846
Household Size	4.994	.026	2.338	300	.020*	.71993	.30787
Number of Children	13.403	.000	.938	300	.349	.20548	.21905

* Significant at five percent

¹ Equal variances are assumed for each variable

The statistical tests results in table 6.4 and 6.5 above reveal that the groups are similar in gender ($p=0.856$), educational background ($p=0.992$), family type ($p=0.082$), family headship ($p=0.769$) and number of children ($p=0.349$). There are significant differences between loan and no-loan members on five variables namely marital status ($p=0.014$), house ownership ($p=0.010$), age ($p=0.022$), membership duration ($p<0.001$) and household size ($p=0.020$). These criteria are used to further test the result of the hypotheses in the study to ascertain if any of the variables have significant effect on the results in addition to the loan.

6.5 Impact at Household Level

The household impact analysis is examined under two main categories as impact that occurs on household income and household assets. The study seeks to know if participation in a cooperative loan services can lead to an increase in household income and acquisition of household assets over a specific period of time. In order to accomplish this, two main hypotheses stated below were tested to determine the role of cooperatives at household level.

- H1. There is no relationship between participation in a cooperative and increase in household income.
- H2. There is no relationship between participation in a cooperative and increase in the acquisition of household assets.

The analysis and interpretation of data for this chapter and the next chapter make use of simple percentage, chi-square test, independent samples test, one way analysis of variance (ANOVA) and standard effect size (*Cohen d*) depending on the nature of the data. ANOVA was computed where the t-test result is statistically significant. The ANOVA is to determine the demographic variables that contributed significantly to the result. The standard effect size was used to determine the relationship that exists between the dependent and independent variables from the t-test result. Decision on the strength of association between dependent variable such as asset and income that is predictable in the independent variable - the loan - generated through the

standard effect size¹ for this chapter and the next is based on the following criteria.

			<u>Relationship</u>
0.01 to 0.20 ²	Small effect	=	Weak positive.
0.21 to 0.49	Medium effect	=	Average positive.
> 0.50	Large effect	=	Strong positive.
- 0.01 to - 0.20	Small effect	=	Weak negative.
- 0.21 to - 0.49	Medium effect	=	Average negative.
> - 0.50	Large effect	=	Strong negative.

The positive effect size is interpreted to mean that the independent variable, which is the loan given to the treatment or experimental group (loan members) help them to perform better than the control group based on the dependent variables been measured such as income and asset. The negative effect size implies that the independent variable does not assist the loan members to accomplish the dependent variables. The first category of household impact to be examined is household income, followed by household assets.

6.6 Impact on Household Income

This study was not intended to know the amount of income available to each household surveyed, because we “don’t expect respondents to remember facts from some time ago” (Imp-act, 2005: 5). Sebstad (1998: ii) argued that it is appropriate for “measuring the direction or pattern of change rather than the amount of change in most variables and using recall data”. Income is measured at the household level because household income is “of greater importance than individual income, since resources are expected to be shared among family members” (Holmgren, 2011: 21). This study elicits information on the financial situation of the household, comparing their current income with what

¹ This is the difference between the two means, divided by the pooled estimate of standard deviation. It shows the accurate difference between the experimental and control groups (i.e. the effect of the intervention) in terms of the standard deviation. <http://www.cemcentre.org/evidence-based-education/effect-size-calculator>. Accessed, Monday, 10 October 2010. 16.54

² See Pallant, 2007: 207-208

they earned a year earlier. The respondents were more comfortable to report if their income reduced or reduced greatly, remained the same, increased or increased greatly since what they earn is not revealed to the researcher. One of the reasons for asking for the position of household income is because almost every other thing that happens at household level depends largely on income. Increase in income gives room for additional investment and also serves as contributory factor to fight against poverty (Haque and Yamao, 2008). “It is believed that credit boosts income levels, increases employment at the household level and thereby alleviates poverty” (Nathan et al., 2004: 3).

Question 8a “*Compare to a year ago, what is the position of your household overall income?*” was used to elicit data on the changes that had occurred to household income. The respondents were given five options namely “decreased greatly”, “decreased”, “stayed the same”, “increased” and “increased greatly”. In analysing the data, the five options were collapsed into three as “decreased” for those who reported “decrease greatly” and “decreased”. Increase was used for responses to “increase greatly” and “increase” why those who reported “stayed the same” is left intact (Nelson, 2000; Falaiye, 2002; Pallant, 2007). The result of this question as stated in table 6.6 below shows that the higher percentage of respondents (87%) whose household income have increased in the past one year are loan members.

Table 6.6 Household Overall Income

<i>Compare to a year ago, what is the position of your household overall income?</i>	No-loan Member n=79		Loan Member n=223	
	No.	%	No.	%
Decreased	13	16.5	29	13
Stayed the same	6	7.6	0	0
Increased	60	75.9	194	87

Those whose income decreased is 13% for loan members and 16.5% for no-loan members. No-loan members are likely to suffer from reduction in household income more than loan members which may have negative effect on the no-loan members’ standard of living. 7.6% of no-loan members’ household

income stayed the same but there was no report of stagnation in income among loan members. Simkhada (2004) found 62% and 20% increases in household income for members and non-members respectively as against 87% and 75.9% for loan and no-loan members respectively found in this study. The loan members are able to increase their household income more than no-loan members. This suggests a possible increase in loan members' economic condition and standard of living.

In order to conduct a t-test based on the result stated in table 6.6 above, a new variable "total decrease" was created in the statistical software whereby all respondents who reported that their income had "decreased" and "stayed the same" were merged and assigned a number. These steps are necessary to determine if there is any relationship between participation in the program and increase in household income (Nelson, 2000; Ramotra and Kanase, 2009) as stated in the hypothesis below.

H1: There is no relationship between participation in a cooperative and increase in household income.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Numbers with increase in household income	Yes	223	.8700	.33711	.02257
	No	79	.7595	.43012	.04839

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Numbers with increase in household income	Equal variances assumed	19.121	.000	2.320	300	.021	.11046	.04760	.01678	.20414
	Equal variances not assumed			2.069	113.748	.041	.11046	.05340	.00468	.21625

The Sig. (2-Tailed) value is .021 which indicated significant relationship between participation in cooperatives and increase in household income. There is a significant difference ($p=0.021$) between the mean score of loan members ($M=0.8700$, $SD=0.33711$) and no-loan members ($M=0.7595$, $SD=0.43012$) that increase their household income. Similar finding was documented by Ramotra and Kanase (2009) while Idowu and Salami (2011) found that loan does not increase the borrowers' income. Likewise, Falaiye (2002) reported insignificant result of $p=0.074$, while Oke et al. (2007) documented a significant result of $p=0.01$.

Participation in a cooperative as a loan member is associated with increase in household income. The standard effect size (see appendix 4) of loan on increase in household income is 0.30. The effect of cooperative loan on increase in household income is moderate with an average positive relationship. The more loans are given, the better for the members to increase their household income and reduce their poverty level. The researcher interprets this to mean that any effort to hinder rural people from accessing loans from the cooperative without any similar alternative may make them vulnerable to low income, reduction in standard of living, increase their poverty level and plunge them into a perpetual financial hardship. This may be due to the low interest rate charged on cooperative loan vis-a-vis other available sources of loans as found in section 5.8.1 (page 137) of the last chapter. An increase in rural household income may lead to more investment in rural areas with a positive linkage effect on other areas of rural economy for better household economic condition.

The study result of increase in household income provides the basis to support the social capital theory. This is because, the social capital theory explains that membership of an association or a group leads to increase in economic condition of the participant because of lower cost of managing the common pool resources of the group (Anderson et al., 2002). This lower cost enhances members ability to borrow and also use the loan to improve their household

income. A one way ANOVA was conducted (see appendix 5) to determine if any of the demographic variables is significant to increase in household income. The result suggests that there was no significant difference in increase in household income based on age ($p=0.094$), educational background ($p=0.473$), household size ($p=0.909$) and number of children ($p=0.174$). Those with disparity in any of these four variables (age, educational qualifications, number of children and household size) have equal opportunity to increase their household income. There was a significant effect of house ownership ($p<0.001$), membership duration ($p=0.002$) and marital status ($p=0.048$) on cooperative members with increase in household income. The contributory demographic variables are discussed below.

House Ownership

The ANOVA result indicates that the type of house ownership - self, rent it and parent/family - influences household income. Those in rented houses have the highest performance ($M=0.8941$, $SD=0.30860$) in increase in household income compared to other groups who reside in their own houses and those living with parent/family. House building projects may be in progress for those who reside in their houses and they may have to pay more to complete their houses and thereby divert some of the income on the project with fewer funds left for their enterprise.

Membership Duration

The ANOVA test suggests that members who have been with the program for 6 years and above performed better ($M=0.9417$, $SD=0.23537$) in their household income than other groups. The order of increase in household income is for those with 6 years and above, two to five years and 0-1 year. Being a cooperative member for a longer period of time was a significant contributory factor towards increase in household income. This finding agrees with Holmgren (2011) result that early members have better income than those who joined later. The longer a member stays with the scheme the more likely it is for the person to have more income. Those within 2-5 years and 6 years and above might have developed different skills from previous loan cycle on the proper

way to manage their enterprises. These members could easily provide guarantors within the scheme and also have access to large loan because of their accumulated savings. They appear more mature in the program to explore other means of managing cooperative loans for better household income.

Marital Status

The ANOVA result revealed that the marital status (married, separated/divorce, widowed and single/never married) of the members did not reflect in their contribution, as no one contributed more than the others to bring about increase in household income. Cooperative members have equal opportunity to increase their household income and experience better standard of living irrespective of their marital status. It was expected that those who are married should have higher household income since they are likely to have more sources of income, but the result is the contrary. This can be interpreted to mean that all cooperative members in rural areas irrespective of their marital status have equal opportunity to increase their household income. House ownership, membership period and marital status are significant to the creation of financial capital among cooperative members through increase in household income which supports the social capital theory.

6.6.1 Reasons for Decrease or Increase in Household Income

It is necessary to know the reasons why rural dwellers' income either increase or decrease. The questionnaire contains two questions that were used to elicit the data in order to provide answers to the questions.

i. Reasons for Decrease in Income

The respondents were given seven options on why their income decreases with opportunity for multiple answers where necessary. This was allowed in order not to limit them to a choice which may not necessarily reflect the reasons why their household income decreased, because reduction in income could be a function of more than one variable. Table 6.7 below shows the result on why household income decreases.

Table 6.7 Reasons for Decrease in Household Income

<i>Why did your income decrease?</i>	No-loan Member n=79	Loan Member n=223
Household member fell sick or died	8.75%	10%
I have been sick	5.25%	7.5%
Loss to natural disaster	0%	0%
Unable to get stock	0%	4.5%
Poor sales	22.25%	24.75%
Could not collect credit sales	0%	0%
Lost job	0%	3.25%

Natural disaster and inability to collect proceeds on credit sales do not constitute reasons why household income decreases. Reasons for reduction in household income reveal how vulnerable the poor are to unfavourable conditions and circumstances. The major reason for reduction in household income from the responses is poor sales. This is common to the two groups with 24.75% and 22.25% of loan members and no-loan members respectively. Sickness or death of household members was identified as the second reason for reduction in household income. 8.75% of no-loan members and 10% of loan members reported reduction in their household income due to death or sickness of household members. This may imply an increase in the cost of taking care of deceased or sick family members since such people cannot be left uncared for. This event is enough to erode the meagre capital of the rural people especially if it is the head of the household that is ill and the sickness lingers over a longer period of time. This may eventually introduce poverty into such household as a result of reduction in income due to inability to engage properly in business activities during sick period.

The actual amount spent on illness is not known, but it could be much for such expenses to have affected household income negatively for both groups. Sickness is a phenomenon that is common in depleting the income of rural dwellers especially loan and no-loan members of cooperative society. Trying to find out if there is public health facility in the communities where this study was conducted or the amount expended on health related issues is not within the research objectives. Another reason given for income reduction is respondent

sickness. Those who reported to have been sick are 7.5% and 5.25% for loan and no-loan members respectively. This could be interpreted that few of the respondents have alternative plans such as engaging the service of responsible employees, to stabilize their household income even when they are sick. Ill health affected the two groups, which suggest that the poor are vulnerable to unfavourable incidents and if this persists, it could lead to reduction in consumption, investment and difficulty in repaying loan from the cooperative. This may affect other contributors' opportunity to borrow from the cooperative since program funds may be tied down to some individuals when they are sick as their income reduces during such period. This result tally with that of Adjei et al. (2009). Other conditions that affected the household income negatively are inability to get stock and loss of job which is peculiar to loan members alone. This is very minimal to other factors causing reduction in household income.

ii. Reasons for Increase in Income

The respondents were given five options of likely reasons why their income increased and they were allowed to report multiple reasons for the increase. The five options and the responses to them are reported in table 6.8 below.

Table 6.8 Reasons for Increase in Household Income

<i>Why did your income increase?</i>	No-loan Member n=79	Loan Member n=223
Expansion of existing business	24.1%	39.5%
Started new business	34.2%	27.4%
Got a job	25.3%	25.1%
Bought stock at cheaper price	21.5%	23.8%
Opened a new shop	20.3%	21.1%

The results from the above table identify expansion of existing business and commencement of new enterprise as the two predominant reasons for increase in income of loan and no-loan members. 39.5% of loan members and 24.1% of no-loan members reported the expansion of existing business as the reason why their household income increased. More of the no-loan members (34.2%) reported that they started a new business and that led to an increase in their

income. Other factors such as opening a new shop, purchase of stock at cheaper prices and getting a job also contributed to an increase in household income but there is no major difference in the result of both groups as their responses range between 20.3% and 25.3%. Participation in business activity is the driving force of rural economy in Ogun state which brought increase in household income with possibility for better standard of living. The combined result for loan and no-loan members revealed that a total of 35.43% reported expansion of business as the reason for the increase in their household income within a year while 29.14% started new business and eventually led to their household income being on the increase within the same period. Any policy that affects the rural business negatively will significantly reduce rural dwellers' ability to increase household income and improve their economic condition.

6.6.2 Summary Result – Household Income

Only one null hypothesis was tested in this section, and the result is stated in table 6.9 below. The statistical result using t-tests, ANOVA and standard effect size signify that participation in a cooperative is associated with increase in household income. This finding matches that of Calkins and Ngo (2005) result that members' income increases more than non-members' and control group. The study found that membership duration, house ownership and marital status are the three variables that contributed significantly to the increase in household income reported by loan members in addition to the loan. The result indicates specifically that being a cooperative member for a longer period of time and living in rented houses were significant contributory factors towards increase in household income. But there was no difference in the number of increase in household income reported based on marital status of the members. The reasons for decrease in household income revealed that the poor are more vulnerable to unfavourable factors such as sickness and death in the family which has negative impact on their household income and may probably reduce their consumption pattern and investment. This may lead to increased poverty and low standard of living if the situation does not get better on time. This may be the reason for the indirect inclusion of social aspect to cooperatives in rural

areas whereby members support each other financially during difficult periods of sickness and death of household members as identified in section 5.8.1 of the last chapter which validate the creation and existence of social capital through membership of cooperative societies and strengthens the use of social capital theory to explain the outcome of this study. Two main reasons – expansion of business and commencement of new business – were identified for increase in household income.

Table 6.9 List of Null Hypothesis Rejected and Fail to Reject on Household Income

No	Null hypothesis	Rejected	Fail to Reject
H1	There is no relationship between participation in a cooperative and increase in household income.	X	

The finding shows that the use of cooperative loan increases household income level of the borrowers because the loan serves as additional investment and therefore helps to improve economic position for better living standard of the members. Access to cooperative loan that leads to increase in household income which is a financial capital further support the social capital theory to explain the role of cooperatives in rural finance at the household level

6.7 Impact on Household Assets

Asset building by the poor is important for poverty reduction because asset ownership plays a critical role in changing the economic position and livelihood of the poor (Edgcomb and Garber, 1998; Falaiye, 2002). The reason for using household assets as a proxy to measure members standard of living is to identify changes in family wealth that is traceable to participation in the cooperative. Ability to acquire more household assets implies an improvement in economic level and an indication that participants have overcome lack of food, clothing and shelter which are synonymous with poverty (Nelson, 2000). Moreover, the asset based indicators is easy to measure compare to expenditure pattern (Adjei et al., 2009) and increase in household assets can be used as proxy for measuring increase in household wealth level over a given

period. This approach has been used in previous studies (Edgcomb and Garber, 1998, Simkhada, 2004; Adjei et al., 2009; Ramotra and Kanase, 2009). The standard effect size calculation and one way ANOVA test for household assets are in appendix 4 and 5 respectively. The aim of this section is to test the second household hypothesis which is stated below and the implication of the result to social capital theory.

H2: There is no relationship between participation in a cooperative and increase in the acquisition of household assets.

This will provide evidence to either justify or deny increase in household assets as a result of participating in cooperative as loan members. To accomplish this, the researcher identifies ten main items of assets - motorcycle/tricycle, car/lorry, plot of land, house, fridge, television, generator, radio, video/CD and fan - that are valuable and appreciated in rural areas as a result of the pilot test conducted. These assets are classified into three groups namely: Automobiles (motorcycle/tricycle and car/lorry), Land and Building (plot of land and building) and Household Equipment (fridge, television, generator, radio, video/CD and fan) as reported in table 6.10 below. Data gathering for household assets includes information as to ownership of assets, assets in good condition and assets acquired within the last two years prior to the study. This is necessary in order to differentiate between assets that are owned and those that are still working since some assets may be in the household but are out of use. Loan members are to report if the assets acquired in the last two years were made possible by the cooperative loan or not.

Table 6.10 Condition of Household Assets

Assets classification and type	Household ownership of assets (%)		Assets in good condition (%)		Assets acquired in last two years (%)	
	No Loan Member n=79	Loan Member n=223	No Loan Member n=79	Loan Member n=223	No Loan Member n=79	Loan Member ¹ n=223
Automobile						
Motorcycle/Tri-cycle	15.2	11.2	12.7	11.2	7.6	9.0
Car/lorry	12.7	18.8	10.1	16.6	5.1	8.5
<i>Mean score</i>	<i>13.95</i>	<i>15</i>	<i>11.4</i>	<i>13.9</i>	<i>6.35</i>	<i>8.75</i>
Land and Building						
Plot of land	45.6	57.4	40.5	55.6	20.3	33.2
Building	36.7	46.2	24.1	38.6	17.7	27.8
<i>Mean score</i>	<i>41.15</i>	<i>51.8</i>	<i>32.3</i>	<i>47.1</i>	<i>19</i>	<i>30.5</i>
Household Equipment						
Generator	39.2	47.1	32.9	42.6	24.1	39.5
Television	24.1	30.9	19.0	28.7	12.7	26.0
Radio	75.9	80.3	75.9	71.3	41.8	27.8
Video/CD	16.5	17.5	15.2	17.0	8.9	14.3
Fan	39.2	47.1	39.2	44.4	19.0	22.9
Fridge	20.3	35.0	17.7	28.3	11.4	26.9
<i>Mean score</i>	<i>35.87</i>	<i>42.98</i>	<i>33.32</i>	<i>38.72</i>	<i>19.65</i>	<i>26.23</i>

The mean scores reveal that loan members own more assets than no-loan members in automobiles, land and building and household equipment. The difference between the score for loan and no-loan members on automobile is less than two percent. The result shows higher mean percentage on land and building acquisition for both groups. The rural people are passionate about increasing assets on land and building more than other classifications of assets. Acquisition of household equipment is second with a mean score of 35.87% and 42.98% for no-loan and loan members respectively. Household wealth and standard of living in rural areas may be measured by land and building owned, followed by investment in household equipment while automobiles come last.

¹ These are results of assets made possible through cooperative loan.

The mean score of assets in good condition is relatively substantial to assets owned. For example, 13.9% out of the 15% of loan members' automobiles and 33.32% out of 35.87% of no-loan members' household equipment are in good working condition. This may be an indication that the rural people are mindful of their financial situation and therefore ensure that their assets are properly used to avoid being plunged into financial difficulty that may be associated with replacing such assets within a short period. Rural dwellers place a high premium on their assets to ensure that it serves them for a longer period of time. This becomes tenable when the result of assets acquired in the last two years is compared with assets owned. This reveals in some cases that about half or less than half of these assets were acquired within the last two years. For example, only 19.65% of no-loan members and 26.23% of loan members' household equipment were acquired in the last two years. Land and buildings acquired within the same period was 19% for no-loan members and 30.5% for loan members. Automobile classification also shows that 6.35% and 8.75% were actually purchased within the last two years for no-loan and loan members respectively.

Previous studies by Edgcomb and Garber (1998) used assets acquired within 12 months while Falaiye (2002) used two years. The respondents for this study were asked to indicate assets acquired in the last two years to be able to trace changes that might have occurred in standard of living through asset ownership. Their responses are then used in conducting t-tests on the null hypotheses for the individual assets in order to determine if participation in cooperative leads to increase in specific assets.

6.7.1 Ownership of Automobiles

The word 'automobile' is used to cover ownership of motorcycle, tricycle, car and lorry. These assets are grouped into two (motorcycle/tricycle and car/lorry) and they are discussed as such below.

6.7.1(i) Acquisition of Motorcycle/Tricycle

Motorcycle/tricycle is a means of transportation in urban and rural areas of Nigeria, but its ownership and use is more prevalent in the rural areas and so brings some sense of comfort and enjoyment to households. In India, two-wheeler is an important asset of mobility in rural areas (Ramotra and Kanase, 2009) just as motorcycle and tricycles are in rural Nigeria. The owners are also considered to be better off economically than those without any means of transportation. A null hypothesis stated below is to test if there is any significant difference between loan and no-loan members who acquired motorcycle/tricycle using t-test.

H2i. There is no relationship between participation in a cooperative and acquisition of motorcycle/tricycle.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number of Motorcycle/Tri-cycle owned	Yes	223	.0897	.28637	.01918
	No	79	.0759	.26661	.03000

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Number of Motorcycle/Tri-cycle owned	Equal variances assumed	.566	.452	.373	300	.710	.01374	.03684	-.05876	.08623
	Equal variances not assumed			.386	146.211	.700	.01374	.03560	-.05662	.08410

The t-test result of 0.710 is not significant and therefore fails to reject the null hypothesis that there is no relationship between participation in a cooperative and acquisition of motorcycle/tricycle. There is lack of statistical significant relationship between participation in a cooperative and ownership of

motorcycle/tricycle among rural households. There is no association between being a loan member and better standard of living through the acquisition of motorcycle/tricycle. Simkhada (2004) reported that cooperative members own more motorcycle than non-members, while Adedayo and Yusuf (2004) found that 16% of members purchase motorcycle with cooperative loan but none of these results was tested statistically. The effect size result of 0.05 suggests a weak positive relationship between cooperative loan and ownership of motorcycle/tricycle.

6.7.1(ii) Acquisition of Car/lorry

The use of cars and lorries may not be common in rural areas and especially with the deplorable conditions of the access roads to and within the communities and villages used for this study. The ownership of car and lorry to a certain level is needful if not for personal comfort but for the purpose of trade and services to connect the community with other villages and towns. In the study locations, ownership of car/lorry suggests that the owner is wealthy and so confers a special status on such household because only a handful of them within the community have it. Though, the car/lorry is not new, they are well-used bought at “second hand value”. Testing this statistically with the null hypothesis below will provide the answer if the cooperative is in any way helpful to her members to acquire this “enviable” asset.

H2ii. There is no relationship between participation in a cooperative and acquisition of car/lorry.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number of Cars/Lorries owned	Yes	223	.0852	.27981	.01874
	No	79	.0506	.22065	.02482

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Number of Cars/Lorries owned	Equal variances assumed	4.156	.042	.994	300	.321	.03457	.03479	-.03389	.10303
	Equal variances not assumed			1.111	172.517	.268	.03457	.03110	-.02682	.09596

The t-test result of 0.321 implies that the result is not statistically significant and therefore fails to reject the null hypothesis that there is no relationship between participation in a cooperative and acquisition of car/lorry. There is no statistical significant difference between the score of loan members (M=0.0852, SD=0.27981) and no-loan members (M=0.0506, SD=0.22065) in respect of ownership of car/lorry $t(300)=0.994$, $p=0.321$. Previous studies (Simkhada, 2004; Sharma et al., 2005) documented that members acquire more of vehicle than non-members, but without any data or statistical test to support their findings.

The result implies that the number of loan members that owned car/lorry is not statistically different from the no-loan members. This may be the effect of the amount of loan that is accessible from the scheme which may not be big enough to acquire car/lorry because the standard effect size of 0.13 of loan on ownership of car/lorry suggests a weak positive relationship. The ability of cooperative to improve members' standard of living through the acquisition of car/lorry is weak and not significant. The duration of six to twelve months for loan repayment as found in this study in section 5.7 of the last chapter may be too short for rural dwellers to be able to repay such a big loan for the purpose of car/lorry acquisition. This is not a surprising result given that the study was conducted in communities without tarred roads and the fact that the roads are bad, vehicles get bogged down in the rainy season with expected high cost of repairs and maintenance. The results in this section do not reveal any statistical

significant difference between the groups, subjecting the result to ANOVA test was therefore not necessary.

The implication of the insignificant results documented on ownership of motorcycle/tricycle and car/lorry as discussed above does not support the social capital theory. This is because the results imply that participation in the cooperative does not lead to better standard of living and ownership of physical capital which is part of improvement in economic position of individual members of a group or association in the theory which the cooperative is expected to achieve among the members as one of the cooperative role to improve members economic condition and living standard. Although, the cooperative provide loan to the members, which serves as financial capital in the social capital theory, but this has not been translated to generate physical capital in the theory in form of ownership of motorcycle/tricycle and car/lorry by the members.

6.7.2 Ownership of Land and Building

This segment focuses on the analysis of result relating to land acquisition and house ownership. The responses and t-test on plot of land and building owned are presented and discussed below in order to determine any statistical significance of the data to participation in a cooperative.

6.7.2(i) Acquisition of Plot of Land

Land ownership as used in this thesis refers to land that are owned within the community or village township where majority of activities and trade take place. But not the expanse of land used for farming or other agricultural purposes that is located several kilometres from the community. The piece of land is such that has economic value based on the economic profile of the community. "Increase in land ownership is an important indicator of improvement in economic condition of a poor family" (Haque and Yamao, 2008: 668). This means that the owner could sell such land in future, with easy access to prospective buyers. Having a piece of land in such "developed" parts of the community signifies

better living standard and a sense of belonging to the community. Expansion in land acquisition has a direct relationship to increase in income while land ownership contributes positively to poverty reduction (Haque and Yamao, 2008). It also suggests a high level of financial security that implies ability to overcome poverty because land acquisition is considered very important by rural dwellers after they have been able to provide food, clothing, shelter and other basic needs for their household.

H2iii. There is no relationship between participation in a cooperative and acquisition of plot of land.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number of Lands owned	Yes	223	.3318	.47193	.03160
	No	79	.2025	.40445	.04550

Independent Samples Test

	Levene's Test for Equality of Variances	t-test for Equality of Means								
							95% Confidence Interval of the Difference			
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Number of Lands owned	Equal variances assumed	25.103	.000	2.169	300	.031	.12931	.05962	.01198	.24663
	Equal variances not assumed			2.334	158.439	.021	.12931	.05540	.01988	.23873

The t-test result of 0.031 is significant and the null hypothesis that there is no relationship between participation in a cooperative and acquisition of plot of land is rejected. There is a statistical significant association between participation in cooperatives and acquisition of plot of land. Cooperative loan members (M=0.3318, SD=0.47193) are likely to be more willing to acquire plots of land than no-loan members (M=0.2025, SD=0.40445). The study result is different from that of Sharma et al. (2005) which state that non-members own more land than members. The finding agrees with Simkhada (2004) findings that members

own more land than non-members. A similar result that 80% of members acquired land was reported by Adebayo et al. (2010), but statistical test was not carried out by these studies. Loan members are more likely to spend the loan on land to improve their economic position, for better standard of living and reduction in poverty than, say automobiles because the land does not require maintenance cost to keep it in proper condition unlike automobiles.

The effect size of loan on ownership of land is 0.28 which is an average positive relationship with moderate effect on the ability of members to acquire land through cooperative loan. Cooperative loan plays an important role in the lives of members because about 28% of loan members experience improved standard of living through cooperative loan by acquiring land. This is significant because the rural dwellers rely on the cooperative to provide financial intermediation for them as found in the last chapter. The more land that is acquired shows that more members are progressing in their economic condition because land ownership may be important after the basic needs have been fulfilled. Any regulation that will forbid the rural cooperatives from providing loan services at low interest rate will increase the poverty level of the rural dwellers with negative influence on their socio-economic well-being.

From the ANOVA result, there was no significant contribution based on marital status $p=0.308$, educational background $p=0.207$, house ownership $p=0.166$ and number of children $p=0.130$ towards ownership of land. The variables which played significant roles in ownership of land in addition to the loan are membership duration $p<0.001$, age $p=0.007$ and household size $p=0.026$. They are discussed below.

Membership Duration

Membership duration in the cooperative played a significant role on members' ability to acquire plots of land. The result suggests that members in the program for 6 years and above ($M=0.3689$, $SD=0.48487$) performed better in land ownership than other groups. The results indicate that the longer a person stays

with the cooperative the easier it is to acquire land through the program loan. This result was anticipated because of the loan condition that makes it compulsory for members to access loan as a percentage of their savings in the program. The more savings a member has with the scheme, the more loans that can be accessed. This would ordinarily be in favour of mature members who have been in the program for more than a year. This may be the outcome of accessing the loan several times which enables them to focus on the higher need of land acquisition which is an indication of an enhance economic condition.

Age

The ANOVA result indicates that members within 21-30 years ($M=0.5143$, $SD=0.50709$) owned more land compared to the other groups. Members whose ages are between 21 and 30 years have the likely potential of being land owners as a result of participating in cooperatives. This may be possible because these young people (21-30 years) have more strength to engage in different kinds of work than the elderly. This may give them more income to enable them increase their savings and also meet loan repayment. It could also be assumed that majority of them have less family responsibilities since most are likely to be single without financial commitments towards a spouse or children's education. They may not also show much desire for household assets because they can visit older people's houses to enjoy the benefits of some of the assets such as television and fridge. It is possible for some of them to have a re-think in dealing with poverty issues which their parents might have experienced. They are therefore ready to break out from the vicious cycle of lack and shortage early in life through cooperative loan before other important and inevitable family responsibilities begin to crop up.

These people may also acquire land because they have more years to live ahead of them than the older members. They may want to position themselves economically for the future by either building a house for rental income or use the land for enterprise purpose. Members between the ages of 21 and 30 years

are futuristic and do not take the desire to be economically viable for granted hence, they invest their loan in acquiring land in the communities.

Household Size

The size of the participants household was found to be statistically significant ($p=0.026$) to ownership of land. The ANOVA test reveals that there is no significant difference in the number of people in each household. Irrespective of the number of people in a household, it does not influence the ability of members to acquire land. Consequently, a household size being large, medium or small may not help to boost land acquisition. Although, the demographic data in section 6.4.1 shows that the loan and no-loan members are statistically different in household size but the ANOVA result has shown that such difference does not translate to ownership of land to the advantage of those with small family size.

6.7.2(ii) Ownership of Building

House ownership could be taken for granted that majority of rural dwellers own their houses. The result shows that 36.7% of no-loan members and 46.2% of loan members own their houses. 17.7% and 27.8% of no-loan and loan members houses respectively were built or acquired within the last two years. Studies by Adedayo and Yusuf (2004) and Adebayo et al. (2010) documented 0.6% and 96% respectively on members with houses, but corresponding data for non-members were not provided. For the purpose of this study, no distinction was made between the type of buildings such as bungalow, room or set of rooms. The null hypothesis used to carry out t-test is stated below.

H2iv. There is no relationship between participation in a cooperative and ownership of building.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number of Buildings owned	Yes	223	.2780	.44903	.03007
	No	79	.1772	.38429	.04324

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Number of Buildings owned	Equal variances assumed	15.498	.000	1.778	300	.076	.10081	.05671	-.01079	.21241
	Equal variances not assumed			1.914	158.661	.057	.10081	.05266	-.00320	.20483

The t-test statistic result of 0.076 is not significant and therefore fails to reject the null hypothesis that there is no relationship between participation in a cooperative and ownership of building. Being a loan member in a cooperative does not lead to better standard of living through ownership of building for the household because there was no significant difference in the score for loan (M=0.2780, SD=0.44903) and no-loan (M=0.1772, SD=0.38429) members $t(300)=1.778$, $p=0.076$. However, Simkhada (2004) and Sharma et al (2005) reported that cooperative loan lead to house construction for members than non-members but their result was not subjected to any test. The effect of cooperative loan on ownership of building is average (0.23) but not significant.

The implication of the mixed results found in this section on acquisition of land and building do not provide the same interpretation for the theoretical application. The social capital theory is supported where the cooperative loan leads to higher ownership of household assets for loan member. The increase in acquisition of plot of land by members indicates that participation in the cooperative leads to physical capital among members and support the theoretical underpinning. Contrarily, the insignificant relationship between cooperative membership and ownership of building challenge the assumption of the social capital theory that membership of an association lead to economic development of the members. This result does not support the social capital theory. This implies that it is not in all cases that economic development of individuals in an association can be improved upon because they belong to the association. The result suggests further, that individual members' economic

development desire may differ from that of the association, as a group of individuals.

6.7.3 Ownership of Household Equipment

Six items were identified (generator, television, video/CD, radio, fan and fridge) during the pilot test to constitute household equipment among the respondents. They are examined one after the other below.

6.7.3(i) Generator Ownership

Due to non-availability of government electricity supply in the study locations, ownership of generator becomes important for personal and economic survival of many households since it is the main source of power generation available to them. Out of the other nine items considered in assessing the role of the cooperatives in the acquisition of household assets as evidence of improved standard of living, four of them (fridge, television, video/CD and fan) that need to be powered with electricity depend on the use of generator.

Some economic activities such as grinding and milling may not take place without the use of grinder and milling machine that has to be powered with generator. The rural people usually refer to the portable generator in a disjointed English as “I beta pas my nebor”. The correct expression is “I am better off than my neighbour”. The importance of household ownership of generator to measure the standard of living of rural dwellers can be supported with the result in table 6.10. This shows that generator is the number one item (among the ten assets) with 39.5% that the loan members acquire within the last two years. The no-loan members’ acquisition was 24.1% making it number two on their list. How significant these results are is tested with the null hypothesis stated below.

H2v. There is no relationship between participation in a cooperative and ownership of generator.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number of Generators owned	Yes	223	.3946	.48987	.03280
	No	79	.2405	.43012	.04839

Independent Samples Test

	Levene's Test for Equality of Variances	t-test for Equality of Means								
								95% Confidence Interval of the Difference		
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Number of Generators owned	Equal variances assumed	35.397	.000	2.478	300	.014	.15411	.06220	.03171	.27651
	Equal variances not assumed			2.636	154.678	.009	.15411	.05846	.03862	.26960

The t-test statistic result of 0.014 is significant and therefore rejects the null hypothesis that there is no relationship between participation in a cooperative and ownership of generator. There is a statistical significant relationship between participation in a cooperative and ownership of generator. Those who took loan from the cooperative (M=0.3946, SD=0.48987) own more generators than no-loan members (M=0.2405, SD=0.43012), $t(300)=2.478$, $p=0.014$. The researcher was unable to compare this result with previous studies because the definitions of rural areas in those studies exclude communities and villages where there is lack of functional electricity supply.

The effect of loan on acquisition of generator is 0.32. This signifies an average positive relationship with medium effect between access to cooperative loan and generator acquired. It's likely therefore that about 32% of loan members may acquire generator as an improvement in their economic level using the loan if they want to. Access to loan is likely to bring about 32% increase in members living standard if the beneficiaries prefer to acquire generators rather than spending the loan on non-essential things such as celebration of chieftaincy title. The ownership of a generator indicates that such a member is economically stable because of the additional cost of fuelling the generator. The

fuel cost will add to the household expenditure and thus suggest that such members' income has increase whereby they could take loan to acquire a generator and also afford the cost of fuelling and maintenance of the generator. The ANOVA result revealed that the only criterion that complemented the loan which made the loan members to own generator was the house ownership ($p=0.004$). Membership duration $p=0.251$, age $p=0.201$, marital status $p=0.78$, educational background $p=0.062$, household size $p=0.147$ and number of children $p=0.071$ are not significant to ownership of generator.

House Ownership

The ANOVA result indicates that those in rented houses ($M=0.4353$, $SD=0.49726$) have the highest result in generator ownership compared to the other groups. This could have been possible because those in their houses might have reached their loan limit in the program which they might have used to either acquire the land, the building or both.

6.7.3(ii) Ownership of Television

The ownership of television allows the rural people to hear and see what is happening within their state and the nation. This they do by watching television probably in the evening after the day's activities. Having a television is essential to each household since there are no public viewing centres such as cinema and theatre halls in their community where they could pay to watch the local artistes perform, but this they can do if they have their own television. But people may visit each other's homes to view television. The result from table 6.10 for those that acquire television shows 12.7% for no-loan members and 26% for loan members.

H2vi. There is no relationship between participation in a cooperative and ownership of television.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number of Televisions owned	Yes	223	.2601	.43967	.02944
	No	79	.1266	.33463	.03765

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Number of Televisions owned	Equal variances assumed	31.817	.000	2.458	300	.015	.13351	.05433	.02660	.24042
	Equal variances not assumed			2.793	179.050	.006	.13351	.04779	.03920	.22782

The t-test statistic value of 0.015 implies that the result is significant and the null hypothesis that there is no relationship between participation in a cooperative and ownership of television is rejected. There is a link between being a loan member and owning a television in rural areas as a result of the difference in the mean score of loan (M=0.2601, SD=0.43967) and no-loan (M=0.1266, SD=0.33463) members $t(300)=2.458$, $p=0.015$ which was significant. Adjei et al. (2009) reported similar result that clients own television more than non-clients and this is significant at 0.05 level. But Adedayo and Yusuf (2004) found that 18.8% of the members own television but without comparison data with non-members, and the result was not tested for statistical significance.

The effect size of loans on acquisition of television is 0.32 which indicates that there is an average positive relationship between cooperative loan received and television owned. Ownership of television which signifies an enhanced standard of living through cooperative loan enables members to acquire the asset which no-loan members may not find easy to purchase. The loan members are progressing economically because ownership of television enhances the social status of the rural dwellers. This also suggests that such members own generators to power the television and as a result, the member may earn good reputation in the community. It also shows the ability to provide for one's household whereby members of the household are not subjected to ridicule and shame for not having television. The ANOVA result revealed that age $p=0.016$,

educational background $p < 0.001$ and household size $p < 0.001$ are contributory variables to ownership of television. Membership duration $p = 0.213$, marital status $p = 0.355$, house ownership $p = 0.780$ and number of children $p = 0.284$ are not statistically significant to ownership of television. Adjei et al. (2009) found that membership duration is not statistically significant to ownership of television just as found in this study. The variables that are statistically significant to ownership of television are discussed below.

Age

Members within 51-60 years ($M = 0.3704$, $SD = 0.49210$) own more television than those in other age group. The elderly people (51-60 years) need more time to relax and are likely do this by watching television, hence the likely reason for highest score by them. For example, the 21-30 years old members are youths and may not consider the ownership of television as important because they can watch television at their friend's houses and other neighbours. They may also use their loan for educational purpose rather than acquiring television that has an alternative. Moreover, the youth may not have much time to watch television by engaging their time in other tasks that could increase their income. In addition, the result of ownership of land discussed earlier in section 6.7.2(i) shows that the youths (21-30 years) own more of land than the elderly. This probably gives a direction on what the youth considered to be important to them in reducing their financial hardship.

Educational Background

The result reveals that those with primary education own a higher number of televisions than others with a mean score of 0.3440. The fact that a member is educated does not guarantee ownership of television above others with less academic qualification especially, between those with university/polytechnic degrees and those with only primary and secondary school education. It was expected that members with university/polytechnic certificate should own more television sets than others because of their higher educational attainment which should encourage them to listen to news and be abreast of new developments

in and around the nation. The above result that primary school certificate holders own more television than other members is an unexpected finding. This may be justified because majority of the respondents (125 out of 302) are with primary education. There is likelihood that there are more programs in the local language that appeal to the core illiterate than the educated ones among them.

Household Size

The ANOVA result indicates that the size of a household does not contribute more than the others to ownership of television. Cooperative members have the same opportunity to own televisions irrespective of the number of people in their households. A household of five people is not different from another household of eleven people in the number of television sets owned. This could be interpreted that a television may be enough for a household since it is not a consumable item that depends on numbers of people. The only challenge in large households is that there may be contention on the choice of programs to watch on the television at a particular period.

6.7.3(iii) Ownership of Radio

The ownership of radio is considered as part of the household assets because it affords those who cannot acquire a television an alternative means of listening to news and events directly instead of being told – which may include distorted information. The researcher realised that there are certain types of radios that can be powered using dry cell battery without recourse to electricity. However, for the purpose of this study, no difference was made between them. 41.8% of no-loan members and 27.8% of loan members reported to have acquired radios. This shows that no-loan members bought more radios than loan members. A null hypothesis stated below is to test the statistical implication of the result using t-test.

H2vii. There is no relationship between participation in a cooperative and acquisition of radio.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number of Radios owned	Yes	223	.2780	.44903	.03007
	No	79	.4177	.49634	.05584

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Number of Radios owned	Equal variances assumed	13.535	.000	-2.310	300	.022	-.13969	.06046	-.25868	-.02071
	Equal variances not assumed			-2.203	126.067	.029	-.13969	.06342	-.26521	-.01418

The t-test statistic value is 0.022 which suggests that the result is significant and the null hypothesis that there is no relationship between participation in a cooperative and acquisition of radio is rejected. The result shows that participation in cooperatives can be associated with acquisition of radios for loan members. Similar result was documented by Adjei and Arun (2009) with statistical significance of 0.000, while Adedayo and Yusuf (2004) and Adebayo et al. (2010) reported that 18.5% and 93% of members respectively bought radio but without any statistical result. The effect size of loan on ownership of radio is -0.30. There is an average negative relationship between loan and ownership of radios.

The ANOVA result revealed that none of the demographic variables: membership duration (p=0.091), age (p=0.068), marital status (p=0.147), education (p=0.067), house ownership (p=0.121), number of children (p=0.357) and household size (p=0.119) contributed to ownership of radio. The low cost of radio when compared with other household equipment may not require the use of loan in some situation except such member prefers to use a loan in acquiring radio to smoothen his or her cash flow. The effect size of -0.30 is interpreted to mean that about 30% of the members who used loan to acquire radio are likely

to acquire same radio without cooperative loan. It's only the effect of loan on radio that is negatively related in all the criteria used for ownership of household assets in this study. Access to more cooperative loan may lead to reduction in number of members that are likely to use their loan to acquire radios. It also signifies that ownership of radio is valuable to rural areas but using loans to do this is likely not to be important to them and may not be their priority if compared to acquiring other assets such as television, fridge and generator through cooperative loan.

6.7.3(iv) Ownership of Video/CD

The use of video/CD is relatively new to rural areas of the study locations; however the cost of purchasing it is lesser than that of television. The actual need for owning a video/CD is on the increase because production of local movies and music are now recorded on CDs. A typical household that can afford it would like to enjoy the beauty of viewing and listening to their favourite artistes and comedians at the same time and as often as they want. The result of the study shows that 14.3% of loan members and 8.9% of no-loan members bought video/CD. This result is tested statistically below.

H2viii. There is no relationship between participation in a cooperative and ownership of video/CD.

Group Statistics

		Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number of Video/CDs owned	Yes		223	.1435	.35137	.02353
	No		79	.0886	.28599	.03218

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Number of Video/CDs owned	Equal variances assumed	6.814	.010	1.249	300	.213	.05489	.04394	-.03158	.14136
	Equal variances not assumed			1.377	166.949	.170	.05489	.03986	-.02381	.13359

The t-test result is 0.213 which implies that the result is not statistically significant and therefore fails to reject the null hypothesis that there is no relationship between participation in a cooperative and ownership of video/CD. Although, the loan members have a higher percentage in table 6.10 on acquisition of video/CD, but the t-test result has revealed that it cannot be proved statistically that loan members (M=0.1435, SD=0.35137) acquire more video/CD than no-loan member (M=0.0886, SD=0.28599) $t(300)=1.149$, $p=0.213$. Adedayo and Yusuf (2004) reported that cooperative helps members to increase ownership of video/CD by 20.9%. The effect size of loan on acquisition of video/CD (0.16) is small with weak positive relationship. This result suggests that access to cooperative loan in rural finance only contributes in a small way to ownership of video/CD which is not significantly different from no-loan members that acquire the same asset. The loan members may be conscious of their loan repayment to the scheme and therefore choose to use more of their loan for productive purposes and also repay existing loans to avoid default.

The finding in chapter five that members prefer to delay spending on non-essential things could also be the reason why loan members' result is not statistically significant. This is important because they are likely to be more familiar with the program loan and know what it takes when loan is being repaid. As a result, they are likely not to use cooperative loan extensively to buy video/CD so that default rate to the program with its negative effect in the community is reduced to the minimum if not completely avoided.

6.7.3(v) Ownership of Fan

Having a fan in a household is necessary in a country such as Nigeria where the weather is relatively harsh - hot and sunny - which leads to heat for the most part of the year. The household may have ceiling fan, standing fan and table fan. However, the researcher was interested in the ownership of fan and not the type used. The relative importance of fan is seen in the result among those who own a fan and those in good working condition. 39.2% of no-loan members own fans and the same percentage is still working, while 44.4% of loan members fan is working out of the 47.1% owned. The result further revealed that 19% and 22.9% of no-loan and loan members respectively acquire their fan within the last two years. The null hypothesis below is used to conduct t-test for fan owned.

H2ix. There is no relationship between participation in a cooperative and ownership of fan.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number of Fans owned	Yes	223	.2287	.42094	.02819
	No	79	.1899	.39471	.04441

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
		Number of Fans owned	Equal variances assumed	2.194	.140	.716	300	.475	.03883	.05424
Equal variances not assumed				.738	145.233	.462	.03883	.05260	-.06513	.14278

The t-test result of 0.475 is not statistically significant; hence the null hypothesis that there is no relationship between participation in a cooperative and ownership of fan cannot be rejected. The result shows that loan members

(M=0.2287, SD=0.42094) are not better off than no-loan members (M=0.1899, SD=0.39471) $t(300) = 0.716, p=0.475$ in fan acquisition. The effect size of loan on fan ownership is 0.09. This implies a small effect with weak positive relationship. The cost of fan is lesser than the cost of video/CD, hence it may be easy for members to acquire fan without accessing loan from the cooperative. Those with fan are likely to have generators to power it and members have to consider this before acquiring fans. The choice of members on fan ownership may depend on other equipment in the household that the use of generator is considered more important than the fan. Moreover, the study locations are not congested areas such as the cities in the urban centre and the rural people may survive without fan unlike in the cities.

6.7.3(vi) Acquisition of Fridge

The ownership of fridge will afford the household the opportunity of having something cold to drink to cushion the effect of harsh weather and also help in food preservation. This may mean that the owners of fridge must have been able to meet the basic need of food because one of the functions of the fridge is to preserve food. It could also be used as income generating tools for the sales of iced block, cold water and drinks. The respondents may not acquire fridge without owning a generator, and the capacity of the generator determines the type of fridge that would be purchased. The fridges owned by the respondents are not new and they are usually referred to as “tokunbo fridge” because they are well-used fridges imported into the country. 26.9% and 11.4% of loan members and no-loan members respectively acquire fridges. The fridges are cheaper to acquire for the rural dwellers because the price of the fridge is about one quarter of the price of new fridge. Since the fridge meet the needs of the respondents, it suggests that they are using cooperative loan to improve their standard of living. The null hypothesis stated below was used to conduct t-test on acquisition of fridges.

H2x. There is no relationship between participation in a cooperative and ownership of fridge.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number of Fridges owned	Yes	223	.2691	.44447	.02976
	No	79	.1139	.31975	.03597

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Number of Fridges owned	Equal variances assumed	45.453	.000	2.851	300	.005	.15513	.05442	.04804	.26223
	Equal variances not assumed			3.323	190.045	.001	.15513	.04669	.06303	.24723

The p value of 0.005 from the t-test is significant and the null hypothesis that there is no relationship between participation in a cooperative and ownership of fridge is rejected. There is a statistical significant relationship between participation in cooperatives and the acquisition of fridges. Those who participate in cooperatives as loan members (M=0.2691, SD=0.44447) are able to increase their standard of living through the acquisition of fridges more than no-loan members (M=0.1139, SD=0.31975) $t(300)=2.851$, $p=0.005$. Edgcomb and Garber (1998) reported no significant difference of $p=0.12$ in fridge ownership. But Adjei and Arun (2009) found a statistical significant difference of $p=0.000$ on fridge ownership. The effect of the association between the two variables determined from the standard effect size is 0.39. This suggests that the effect of being a loan member in the cooperative is moderate in acquiring fridge with average positive relationship. These results imply that the cooperative loan helps members to acquire fridges as an indication of better economic condition.

The ANOVA result suggests that education ($p=0.001$) and household size ($p<0.001$) are statistically significant to ownership of fridge in addition to the loan. Adjei et al. (2009) found that marital status ($p=0.000$), educational level

($p=0.000$) and household size ($p=0.008$) contribute to ownership of fridges. There is no statistical significance between membership duration $p=0.713$, age $p=0.131$, marital status $p=0.348$, house ownership $p=0.274$ and number of children $p=0.166$ and ownership of fridge. Adjei et al. (2009) also found that membership duration ($p=0.054$) does not contribute to owning fridges. The two variables that contributed to ownership of fridge are discussed below.

Educational Background

The F-statistic result revealed that members with primary education ($M=0.3520$, $SD=0.47952$) recorded highest number of fridge owned than other groups. The educated members may not take much loans to acquire fridge like members with primary education. Hence, ownership of fridge cannot be used to discriminate against the less and uneducated members of the cooperative. This may be possible because the highly educated members are more likely to enrol their children in schools while the less educated members may engage their children in the sales and hawking of cold water, iced block, drinks and frozen foods especially on village market days instead of allowing them to go to school on such days. This will increase their income and possibly motivate them to acquire more fridges which have the tendency to eradicate poverty since more income will be generated in the household to buy food in bulk, with possible reduction in cost.

Household Size

The ANOVA result shows that there is no statistical significant difference between the numbers of people that constitute a household. Irrespective of the number of people in a household, it does not have a direct relation on the number of fridges owned. A fridge may be adequate for a household but it depends on what the fridge is used for. If it is used mainly for household use, a fridge may be adequate. Otherwise, more than one fridge may be required if used for business – sale of drinks, cold water and iced block. Whichever way it is used, participation in cooperatives contribute positively to higher standard of

living because loan members own fridge more than no-loan members and it is used to generate income and also uplift members' economically.

The improvement in cooperative members' standard of living through the use of cooperative loan in acquiring household equipment provide a platform for ownership of physical capital such as generator, television and fridge. The result indicates that social capital theory is supported by the study since cooperative members are able to own more of physical assets because they have access to the cooperative loan.

6.7.4 Summary Result – Household Assets

Ten assets were identified to be important to assess the role of cooperative societies in rural areas in order to find out if participation in a cooperative leads to better standard of living through the acquisition of household assets. These assets are classified into three groups as automobiles, land and building and household equipment. Independent samples test was carried out on the ten null hypotheses for the individual assets. The summary of their results are stated in table 6.11 below.

Table 6.11 List of Null Hypotheses Rejected and Fail to Reject on Household Assets

No	Null Hypothesis	Rejected	Fail to Reject
H2i.	There is no relationship between participation in a cooperative and acquisition of motorcycle/tricycle.		X
H2ii.	There is no relationship between participation in a cooperative and acquisition of car/lorry.		X
H2iii.	There is no relationship between participation in a cooperative and acquisition of plot of land.	X	
H2iv.	There is no relationship between participation in a cooperative and ownership of building.		X
H2v.	There is no relationship between participation in a cooperative and ownership of generator.	X	
H2vi.	There is no relationship between participation in a cooperative and ownership of television.	X	
H2vii.	There is no relationship between participation in a cooperative and acquisition of radio.	X	
H2viii.	There is no relationship between participation in a cooperative and ownership of video/CD.		X
H2ix.	There is no relationship between participation in a cooperative and ownership of fan.		X
H2x.	There is no relationship between participation in a cooperative and ownership of fridge.	X	

The results of the ten null hypotheses above were the steps taken in order to be able to provide answer to one of the two hypotheses on household impact - there is no relationship between participation in a cooperative and increase in the acquisition of household assets - considered in this chapter. These results looked at different types of household assets that are found in rural areas one after the other to establish the role of cooperative societies in rural finance as a prelude to the final decision. To achieve this, the responses to ownership of all

the ten assets identified were collapsed and used to conduct an independent sample test using the null hypothesis below.

H2: There is no relationship between participation in a cooperative and increase in the acquisition of household assets.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number of household assets	Yes	223	3.3632	1.90965	.12788
	No	79	2.6835	1.21470	.13666

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Number of household assets	Equal variances assumed	24.142	.000	2.957	300	.003	.67968	.22986	.22734	1.13203
	Equal variances not assumed			3.631	216.161	.000	.67968	.18716	.31078	1.04858

The t-test result of $p=0.003$ indicates that there is a statistical significant difference between the mean score of loan members and no-loan members that acquire household assets. The difference in ownership may be that the no-loan members had sold their assets to raise fund instead of acquiring loan. The null hypothesis that there is no relationship between participation in a cooperative and increase in the acquisition of household assets is therefore rejected. Members that took loan were able to significantly acquire household assets more than no-loan members. This result contradicts Falaiye (2002) that found no significant difference in accumulation of household assets, but tally with Ramotra and Kanase (2009) that cooperative leads to increase in household assets with a positive correlation between income and household assets. This study shows that better standard of living through the following assets - land,

generator, television, radio and fridge - were more likely to be acquired by loan members compared to no-loan members.

Conclusion can be drawn that the more of assets owned by a household, the better and bigger is the varieties of options available to such household to improve their economic conditions with better sense of financial security and living standard. Cooperative therefore helps their members to have positive livelihood because they increase the members' access to assets acquisition through the program loan. Social capital through membership of cooperative which grant access to cooperative loan plays a positive role in asset acquisition at the household. This conclusion further strengthens the social capital theory as a potent theory for explaining the role played by cooperative societies in rural finance and especially at the household level.

The standard effect size of loan on ownership of household assets is 0.39 which implies that the effect of cooperative loan on ownership of household assets among members is moderate with an average positive relationship. The result is partially different from Adjei et al. (2009) that found a strong association between loan and ownership of household assets. The more loans are given, the better for the members to acquire more household assets provided it's needed in the household. The F-statistic reveals that membership duration ($p=0.021$), education ($p=0.005$) and household size ($p=0.023$) are statistically significant to acquisition of household assets for cooperative members in addition to the loan. Adjei et al. (2009) documented the significant effect of education on increase in ownership of household assets.

The ANOVA result further revealed that members between 2-5 years with the cooperative own more household assets than other membership groups. Members with primary education own more household assets than those with non-formal, secondary, vocational/technical and university/polytechnic education. The household size result from the ANOVA indicates that there is no statistical significance at 0.05 level on the number of people in the respondents

household and assets owned. The size of the household is not likely to affect the number of household asset acquired in individual families.

The results in this section show that members improve their standard of living because they use the cooperative loan to acquire more household assets. They also have access to loan at lower interest rate. This enables them to increase their household income which may have encouraged them to use cooperative loans to acquire household assets and meet the loan repayment from the increased income. Cooperative improve members standard of living because the members were able to acquire more of household assets through cooperative loan. These physical assets help in household economic development and the actualisation of financial capital in the social capital theory.

6.8 Summary and Conclusion

Two main hypotheses tested in this chapter were used to determine the role of cooperative society at household level. The study found a statistical significant and positive relationship between participation in cooperative and increase in household income. It also documents a statistical significant and positive relationship between cooperative membership and increases in the acquisition of household assets. Table 6.12 below shows the results of the null hypotheses on household income and assets.

Table 6.12 List of Null Hypotheses Rejected and Not Rejected at Household Level

No	Null Hypothesis	Rejected	Fail to Reject
H1	There is no relationship between participation in a cooperative and increase in household income.	X	
H2	There is no relationship between participation in a cooperative and increases in the acquisition of household assets.	X	

Participation in cooperative societies lead to better standard of living because the cooperative assists members to increase their household income, and also acquire household assets such as land, television, generator, radio and fridge. In most cases, the effect of cooperative loan on household income and assets is 30% and above except for land acquisition that was 28%. The cooperative therefore contribute to the improvement of rural economy among different households who choose to participate in the program because their income increases and they also acquire more household assets. The result indicates support for the social capital theory in that the cooperative help members to achieve financial capital and physical capital in form of increase in household income and household assets respectively.

In the next chapter, the researcher presents the last empirical chapter of the thesis. This examines the role of cooperative societies on enterprises.

Chapter Seven

The Role of Cooperative Societies on Members Enterprises

7.1 Introduction

The role of cooperative societies on household was discussed in the last chapter. This chapter is a continuation of the previous chapter because all the demographic information in sections 6.2, 6.3 and 6.4 of chapter six and the survey questionnaire are used to determine the role of cooperative societies on rural enterprises in this chapter. The analysis and interpretation of data involve the use of simple percentage, t-tests, one way ANOVA and standard effect size. The standard effect size calculations and the ANOVA test for this chapter are in appendix 6 and 7 respectively. This chapter is divided into five sections. Impact at enterprise level is in section two while section three examines enterprise profitability and the implication for theory. Section four focuses on enterprise assets which assess the role of cooperatives based on ownership of business assets relevant to rural enterprises with theoretical framework. The last section is the summary and conclusion of issues discussed in this chapter.

7.2 Impact at Enterprise Level

Enterprise impact is measured through changes in business development with increased profitability and increase in business assets over a year period. In order to determine the role of cooperatives on business activities of the members, the study tested two hypotheses developed from the literature in chapter three and stated below.

H3: There is no relationship between participation in a cooperative and changes in business development associated with increased profitability.

H4: There is no relationship between participation in a cooperative and increase in the acquisition of business assets.

Each hypothesis is treated separately below by examining different parameters – things that are constituted in each hypothesis - that are useful in testing the hypothesis in rural areas. For example, nine parameters were identified for the first hypothesis (H3) above as developed in the literature in section 3.8.3 of chapter three.

7.3 Enterprise Profitability

The ability to determine if there have been changes to earn more income or profit in the respondents' businesses over the last twelve months prior to the survey requires the use of nine criteria that are covered in question 10a to 10i of the questionnaire. This is to determine if loan members are better off than no-loan members in improving their business activities with more profit. The criteria used, such as hiring of more workers, expansion of business facility (Ghosh and Maharjan, 2001; Enete, 2008) addition of new products, sales in new market and reduction in cost through bulk purchase serves as proxy indicators for possible increase in enterprise revenue and profitability (Edgcomb and Garber, 1998; Nelson, 2000; Falaiye, 2002, Adedayo and Yusuf, 2004). The results are first presented in table 7.1 below. These results were further tested for statistical significance using t-test for equality of means, one way ANOVA and standard effect size.

Table 7.1 Improvement to Business Activity

<i>During the last 12 months, did you make any of the following changes to your business activity so that you could earn more income or be more productive?</i>	Percent No-loan Member n=79	Percent Loan Member n=223
i. Expanded size of business facility.	35.4%	49.8%
ii. Added new products or diversify their business.	13.9%	27.4%
iii. Hired more workers.	10.1%	27.4%
iv. Improved quality or desirability of product (added value).	31.6%	22.9%
v. Reduced costs by buying inputs in greater volume or at wholesale prices,	29.1%	27.8%
vi. Reduced costs with cheaper source of credit.	21.5%	14.8%
vii. Developed a new enterprise.	21.5%	28.3%
viii. Made more profit.	49.4%	40.4%
ix. Sold in new markets or locations.	15.2%	22.9%

7.3.1 Expansion of Business Facility

Expansion of business facility is an increase in the scale of business from a lower level to a higher level to be able to meet an increase in sales (Edgcomb and Garber, 1998). This represents the ability to increase or expand business facilities to generate more income as an evidence of business expansion. Those that were able to expand the size of their business facility are 49.8% of loan members and 35.4% of no-loan members. This conforms with Falaiye (2002) that documented 60.2% and 55.6% for clients and incoming clients respectively, and Edgcomb and Garber (1998) finding of 66% for clients and 47% for non-clients. However, Ghosh and Maharjan (2001) reported 89% for members without comparison result for non-members. The responses are tested statistically with the null hypothesis below.

H3i: There is no relationship between participation in a cooperative and expansion of business facility.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number that expanded size of business facility/farm	Yes	223	.4978	.50112	.03356
	No	79	.3544	.48140	.05416

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Number that expanded size of business facility/farm	Equal variances assumed	20.491	.000	2.207	300	.028	.14333	.06495	.01551	.27114
	Equal variances not assumed			2.250	142.027	.026	.14333	.06371	.01738	.26928

The t-test result of 0.028 implies that there is a statistical significant difference between the mean score of loan members (M=0.4978, SD=0.50112) and no-loan members (M=0.3544, SD=0.48140) that expanded their business facilities. Cooperative members that took loans were able to significantly expand the size

of their business facility for better economic condition more than no-loan members. The result is statistically significant and the null hypothesis that there is no relationship between participation in a cooperative and expansion of business facility is rejected. The effect of loan on expansion of business facility is 0.29. Loan given by the cooperative has an average positive relationship with moderate effect on expansion of business facilities by the members. This tallies with Edgcomb and Garber (1998) findings of a positive relationship and statistical significant of $p=0.03$. Loan helps cooperative members to move out of poverty and improve their standard of living by enlarging their business facility which may not be possible without the loan.

The F-statistic reveals that the four variables that are statistically significant to the expansion of business facilities in addition to the cooperative loan are membership duration $p<0.001$, age $p=0.001$, education $p<0.001$ and house ownership $p<0.001$. Marital status $p=0.057$, household size $p=0.086$ and number of children $p=0.289$ do not have statistical significant contribution to expansion of business facilities. The variables that are statistically significant to the result are discussed below.

Membership Duration

The ANOVA result suggests highest number of business facility expansion for members between 2-5 years in the cooperative ($M=0.5000$ and $SD=0.50185$). The longer a person stays in the cooperative as a loan member, the more likely for such member to expand his/her enterprise facilities as an indicator for enhanced living standard. This may be due to access to loans repeatedly, with a higher amount of loan obtainable than those who are relatively new in the scheme. The above can be achieved if a member is consistent in his/her savings and also committed to regular loan repayment. The more savings a member has, the possibility of obtaining a higher loan. And how regular loans are repaid, determines the ease of accessing repeated loans.

Age

The ANOVA result reveals that the age group of 41-50 years ($M=0.6170$, $SD=0.48872$) expanded business facilities more than other age groups. Those between 41-50 years old may have more exposure to life issues and are therefore able to plan their life based on their business experience. They are likely to have faced more financial deprivation in form of unavailability of loan or capital before the commencement of cooperative societies, and possibly experience severe poverty than those below their age group. These may have propelled them to go the extra mile by devoting more time to their business to reduce their financial constraint as a result of access to cooperative loans and thereby expanded their business facilities. The maturity of the 41-50 years old member could also be an added advantage for their performances.

Educational Background

The ANOVA test reveals that members with technical/vocational certificate reported highest result ($M=0.7500$, $SD=0.44426$) more than others. Improved standard of living links to expansion of business facilities is likely to be on the increase among members with vocational/technical education than those with primary, secondary and non-formal education. Having a technical/vocational education contributes to the ability of members to expand business facility in addition to the loan which helps to achieve economic upliftment.

House Ownership

Members residing in their houses reported higher number of facility expansion ($M = 6413$, $SD=0.48225$) than other groups who either reside with parent/family or in a rented apartment. These members do not pay house rent and are also at liberty to use their houses for their enterprise if possible. They are therefore not restricted in their ability to increase the scale of their business.

7.3.2 Addition of New Products / Business Diversification

Product and service diversification is an indication of positive change that shows that such member is responding positively to enterprise opportunities in

order to reduce risk and possibly make more profit. 13.9% of no-loan members consented to have introduced new products to their business while 27.4% of loan members have carried out the same. This is similar to Edgcomb and Garber (1998) finding of 34% for clients and 17% for non-clients, but contradicts Falaiye (2002) who reported 30.6% for both clients and incoming clients. This result could probably be linked to team spirit among members and especially the ability of members to take advantage of business opportunities due to accessibility and availability of back-up funding from the cooperative. However, business diversification has to be proportionate to the experience of individuals in the chosen area of business. Otherwise, business expansion can erode the capital of rural entrepreneurs which may bring about an increase in poverty level. The null hypothesis to carry out the t-test on the responses is stated below.

H3ii: There is no relationship between participation in a cooperative and addition of new products.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number that added new product/diversify crops	Yes	223	.2735	.44678	.02992
	No	79	.1392	.34841	.03920

Independent Samples Test

	Levene's Test for Equality of Variances	t-test for Equality of Means								
				T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		F	Sig.						Lower	Upper
Number that added new product/diversify crops	Equal variances assumed	31.056	.000	2.423	300	.016	.13430	.05544	.02521	.24340
	Equal variances not assumed			2.724	174.536	.007	.13430	.04931	.03698	.23163

The t-test statistic result of 0.016 suggests that loan members were able to significantly add new products or diversify their businesses more than no-loan

members. The null hypothesis that there is no relationship between participation in a cooperative and addition of new products is rejected. This result is similar to Adedayo and Yusuf (2004) finding that cooperative loan leads to more enterprise profit which members used for business diversification. The association between cooperative loan and addition of new products determined through the standard effect size is 0.32. This implies an average positive relationship with moderate effect between the loan and addition of new products or business diversification. There is a positive contribution of cooperative loan to enterprise development because it helps members by about 32% in adding new products or diversifies their enterprises. This may enable the members to reduce their business risk because they have investment portfolio with the advantages of more earning and less sudden loss due to enterprise problems that those with single line of business may encounter. This signifies an improvement in standard of living because as more income is earned, possible business loss is reduced because of the diversification.

The ANOVA test result indicates that age $p=0.379$, marital status $p=0.571$, education $p=0.517$, house ownership $p=0.167$, household size $p=0.578$ and number of children $p=0.210$ are not statistically significant to addition of new products or diversification. Members have equal opportunity in business diversification because there was no statistical disparity in the above six variables for the cooperative members. There was a significant effect of membership duration $p=0.001$ on members that added new products or diversified their enterprise. The effect of membership duration is discussed below.

Membership Duration

The ANOVA result reveals that members with 6 years and above in the cooperative added new products/diversified their business ($M=0.3398$, $SD=0.42682$) more than other groups. The longer a member stayed with the cooperative, the easier for such a member to experience business diversification/addition of new products because of access to the cooperative

loan. The role of the cooperative for better living standard through business diversification/addition of new products occurs to those who have been in the program for a longer period more than those who are relatively new in the scheme.

7.3.3 Ability to Hire More Workers

When a rural enterprise is able to accommodate more hired workers, it signifies that the enterprise is doing well compared to other businesses in the same community. The result of a question to know those that hired more workers produced 27.4% and 10.1% for loan and no-loan members respectively. This is partially different from Falaiye (2002) that documented 6.1% for clients and 5.6% for incoming clients. Loan members are able to create more employment opportunity for the people than no-loan members. This will likely bring improvement to the economic well-being of the employees since loan members are 2.71 times better off than no-loan members in increasing the number of their employees. If this information is known to the community, it could lead to a drift in workers from no-loan members' business to loan members. The determination of statistical significance of the above is carried out by performing t-test using the null hypothesis below.

H3iii: There is no relationship between participation in a cooperative and hiring more workers.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number that hire more workers	Yes	223	.2735	.44678	.02992
	No	79	.1013	.30361	.03416

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Number that hire more workers	Equal variances assumed	59.436	.000	3.176	300	.002	.17228	.05425	.06552	.27903
	Equal variances not assumed			3.794	201.844	.000	.17228	.04541	.08274	.26181

The null hypothesis that there is no relationship between participation in a cooperative and hiring more workers is rejected because of the statistical significance ($p=0.002$) between participation in cooperative and hiring of more workers. Cooperative members that took loan were able to significantly hire more workers in their enterprise more than no-loan members. This agrees with Enete (2008) findings that the effect of cooperatives on employment is positive. It can be interpreted that loan members would find it easier to pay their employees' remuneration compared to no-loan members since they have access to loan facility. They are also expanding business facilities and adding new products. So ability to hire more workers may be a cumulative effect. The effect size of cooperative loan on hiring new workers is 0.42, which implies an average positive relationship and moderate effect of loan on hiring new workers. This is an indication that if more loans are given, members are likely to employ more workers in their enterprises as the need arises. The effect size result implies that about 42% of new workers hired by the members were likely made possible because they have access to cooperative loan.

The ANOVA test shows that some variables play contributory role to the result documented above in addition to the cooperative loan. These variables are membership duration $p=0.003$, marital status $p=0.050$ and house ownership $p=0.006$. Age $p=0.222$, education $p=0.945$, household size $p=0.235$ and number of children $p=0.199$ are not statistically significant to loan members

ability to hire more workers. The three variables that are significant to hiring new workers are discussed below.

Membership Duration

Members who have been with the cooperative for 6 years and above hire more workers ($M=0.3204$, $SD=0.46891$) in their enterprises than those within 0-1 and 2-5 years. They are more able to improve their economic condition more than others. The role of cooperative loan on the rural entrepreneur's ability to hire more workers can be enhanced when a member has been in the program for about 6 years or more. This enables such members to grow from one level of performance to another over these periods of years.

Marital Status

Loan members' marital status played a significant role on their ability to hire more workers in their business in addition to the cooperative loan. The ANOVA tests reveals that members that are married ($M=0.2521$, $SD=0.43510$) hire more workers than those that are single, widow and separated/divorced.

House Ownership

The mean score from the ANOVA result for those in their houses ($M=0.3043$, $SD=0.04823$) is higher than other groups. Loan members living in their houses hire more workers in their enterprise than those who live in parent/family and rented houses. Standard of living measured by numbers of workers employed occurs among members that reside in their houses. This may be possible because those in their houses may not pay rent for their enterprise location and yet have access to larger space for their businesses.

7.3.4 Improvement in Quality of Products

The response to the question on how cooperative members were able to improve the quality or desirability of their products was in favour of no-loan members with 31.6% as against 22.9% for loan members. No-loan members may be more diligent in their business to the extent that they give special

consideration to improve quality delivery of their products and services more than loan members. Since the no-loan members reported engagement of fewer employees in the last result (see section 7.3.3), they may be able to personally supervise their businesses. The result is tested statistically using null hypothesis below.

H3iv: There is no relationship between participation in a cooperative and improvement in the quality of products.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number that improve quality/desirability of product/add value, improved seed	Yes	223	.2287	.42094	.02819
	No	79	.3165	.46806	.05266

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Number that improve quality/desirability of product/add value, improved seed	Equal variances assumed	8.033	.005	-1.545	300	.123	-.08776	.05678	-.19950	.02399
	Equal variances not assumed			-1.469	125.481	.144	-.08776	.05973	-.20597	.03045

The p value of 0.123 from the t-test implies that there is no statistical significant difference between the loan and no-loan members that improve the quality of their products. This corroborates the null hypothesis that there is no relationship between participation in a cooperative and improvement in quality of products. The number of loan members that improve the quality of their products are not significantly different from the number of no-loan members who improve the quality of their products. Study by Edgcomb and Garber (1998) does not support this finding because they used programs located in rural and urban centres. Falaiye (2002) also reported contrary result of 9.2% for clients and

5.6% for incoming clients for a female program located in rural and urban areas. The effect of loan on improvement in quality of product is -0.20 which suggest a weak negative relationship between cooperative loan and improvement in quality of product with small effect. Access to more loans may not increase the number of members that will improve the quality of their products or services.

7.3.5 Reduction in Costs – Buying Input in Greater Volume

29.1% and 27.8% of no-loan and loan members respectively responded positively to the ability to have reduced business costs by buying inputs in greater volume or at wholesale prices. This contradicts Falaiye (2002) that documented 14.3% for clients and 8.3% for incoming clients. The null hypothesis to test this statistically is stated below using t-test.

H3v: There is no relationship between participation in a cooperative and reduction in cost by buying input in greater volume.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number that reduce costs - buying inputs in wholesale price/greater volume	Yes	223	.2780	.44903	.03007
	No	79	.2911	.45719	.05144

Independent Samples Test

	Levene's Test for Equality of Variances	t-test for Equality of Means								
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Number that reduce costs - buying inputs in wholesale price/greater volume	Equal variances assumed	.191	.662	-.222	300	.824	-.01311	.05907	-.12936	.10313
	Equal variances not assumed			-.220	134.885	.826	-.01311	.05958	-.13095	.10472

There was no significant difference (p=0.824) in the score for loan and no-loan members. Being a loan member is not statistically significant to reduction of

cost by buying inputs in wholesale price or in large volume. The role of cooperative societies towards economic development through purchase of inputs in wholesale price does not occur significantly among loan members. Access to loan may not guarantee the ability to reduce cost by buying input in greater volume. Edgcomb and Garber (1998) reported a different result that clients experience reduction in transaction cost more than non-clients through bulk purchase. This may be because their study consists of program in urban and rural areas. This study differs because only rural cooperative societies were used. The result is not significant and the null hypothesis that there is no relationship between participation in a cooperative and reduction in cost by buying input in greater volume cannot be rejected. The cooperative loan has a weak negative relationship (-0.03) with small effect on buying input in greater volume.

7.3.6 Reduction in Costs – Cheaper Source of Credit

Reduction in costs with cheaper source of credit which measure the way entrepreneurs were able to negotiate and receive credit purchase from their supplier which is different from taking loan from another source has 21.5% for no-loan members and 14.8% for loan members. It may be a sign of some weaknesses on the part of the loan members to avail themselves of credit suppliers since they have access to cooperative loan. Alternatively, the loan repayment burden on loan members may also have discouraged them from seeking credit suppliers considering their ability to meet both obligations within a time frame. The null hypothesis to test the data is stated below.

H3vi: There is no relationship between participation in a cooperative and reduction in cost with cheaper source of credit.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number that reduce cost with cheaper source of credit	Yes	223	.1480	.35588	.02383
	No	79	.2152	.41358	.04653

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Number that reduce cost with cheaper source of credit	Equal variances assumed	7.020	.008	-1.381	300	.168	-.06721	.04867	-.16299	.02857
	Equal variances not assumed			-1.286	121.353	.201	-.06721	.05228	-.17071	.03629

The t-test result of 0.168 is not significant and the null hypothesis that there is no relationship between participation in a cooperative and reduction in cost with cheaper source of credit is not rejected. Members that took loan were not able to significantly reduce their cost with cheaper source of credit more than no-loan members which can help in poverty reduction. Falaiye (2002) found a contrary result of 10% and 5.6% for clients and incoming clients respectively while Edgcomb and Garber (1998) findings also revealed that clients reduce their enterprise cost more than non-clients by accessing cheaper source of credit from credit suppliers.

No-loan members are likely to be more passionate and determined to get credit suppliers due to their inability to access loan from the cooperative than the loan members. They may see the credit suppliers as a good alternative to borrowing from the cooperative. The continuous availability of credit supplies for their business may not easily encourage no-loan members to seek loan in as much as the loan is meant for their enterprise. However, there is a limit to what can be received on credit supplies and the facility may be withdrawn on short notice which is contrary to cooperative loan. The effect size of -0.18 between loan given and reduction in cost through cheaper source of credit implies that cooperative loan has a weak negative relationship with small effect on standard of living as determined by the score of those that reduced their enterprise cost as a result of cheaper source of credit. Additional loan will likely reduce the number of loan members seeking credit suppliers in order to reduce their enterprise cost.

7.3.7 Development of New Enterprise

The study seeks to know if the respondents were able to develop an entirely new business as a result of their membership of the cooperative. The intention is to find out if accessibility to loan assists members to go into a new business that is completely different from their usual line of business before taking the loan as a mechanism for better income. 28.3% of loan members gave positive responses and those from no-loan members were 21.5%. It therefore seems that loan members have more advantages and are able to start new businesses than no-loan members even though the difference is less than 7% in favour of the loan members. A similar result of 10% for client and 5.6% for incoming clients was found by Falaiye (2002). The responses are tested with the null hypothesis stated below.

H3vii: There is no relationship between participation in a cooperative and development of new enterprise.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number with new enterprises	Yes	223	.2825	.45123	.03022
	No	79	.2152	.41358	.04653

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Number with new enterprises	Equal variances assumed	6.214	.013	1.164	300	.245	.06732	.05784	-.04650	.18114
	Equal variances not assumed			1.213	148.385	.227	.06732	.05548	-.04232	.17696

The t-test result of 0.245 implies that access to cooperative loan is not statistically significant to development of new enterprise. Loan members were not able to significantly develop new enterprises more than no-loan members.

Since the result is not significant ($p=0.245$), the null hypothesis above cannot be rejected. There is a weak positive relationship between cooperative loan and establishment of new enterprises as a result of the standard effect size result of 0.15.

7.3.8 Making More Profit

Profit is usually considered as the difference between revenue and cost within a particular period of time. It was not possible to get the actual profit realised by rural enterprises in this study, but the respondents were able to answer the question that seeks to elicit information from them if they were able to make more profit from their enterprise or not. The result to this question shows 49.4% and 40.4% for no-loan members and loan members respectively. No-loan members made more profit than loan members. Simkhada (2004) reported that 53% of cooperative members made profit in urban and rural areas. The finding of this study may be corroborated by the percentage of previous results on improved quality of products; reduced cost by buying inputs at wholesale prices and reduced cost with cheaper source of credit where no-loan members took the lead. More profit by no-loan members than loan members can be linked to the ability to buy input in large volume and at wholesale price, which reduces cost and increases profit. The previous result that no-loan members have more access to cheaper sources of credit by buying from suppliers on credit means that they don't pay interest on loan unlike the loan members. This may reduce their cost of trading and enhance profit making. The t-test result is determined with the null hypothesis below.

H3viii: There is no relationship between participation in a cooperative and making more profit.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number that make more profit	Yes	223	.4036	.49172	.03293
	No	79	.4937	.50315	.05661

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Number that make more profit	Equal variances assumed	3.000	.084	-1.391	300	.165	-.09008	.06477	-.21755	.03738
	Equal variances not assumed			-1.376	134.308	.171	-.09008	.06549	-.21961	.03944

The p value of 0.165 suggests that cooperative members that took loan were not able to significantly make more profit than no-loan members. The possibility of making more profit as a loan member cannot be statistically supported. This is an unexpected finding but it agrees with Falaiye (2002) that incoming clients had more profit than clients. The result is however different from Edgcomb and Garber (1998) finding of a statistical significance of $p=0.06$ between the program loan and increase in enterprise profit and Larocque et al. (2002) result that suggested that more of members business declares profit but actual data was not given. This study differs from the above studies because only members of cooperative societies were used as respondents without rural banks clients which Edgcomb and Garber (1998) and Larocque et al. (2002) used.

The result is not significant and the null hypothesis that there is no relationship between participation in a cooperative and making more profit is not rejected. The effect of cooperative loan on profit making is -0.16. This is a weak negative relationship. Increase in cooperative loan may lead to reduction in enterprise profit. Other things that may contribute to the finding of this study can be identified from the result in table 7.1 above on the quality of products and services offered by the two groups. This shows that no-loan members (31.6%) are better than loan members (22.9%) at providing better quality products and services. This also supports the result gotten as to why no-loan members were able to earn more profit than loan members. A conclusion may be reached using the results in percentage and t-test that the ability to make more profit between no-loan and loan members which the no-loan members enjoyed is a function of providing better quality service, buying enterprise input in large

volume and in wholesale price. The ability of no-loan members to reduce costs more than loan members from table 7.1 above with cheaper source of credit which measure the way entrepreneurs were able to negotiate and receive credit purchase from their supplier which is different from taking loan from another source seems to be cheaper than the perceived low interest rate by the cooperative.

7.3.9 Sold in New Market

The last question on improvement to business activity was to ascertain if the respondents were able to sell in a new market/location. Loan members have 22.9% for those selling in a new market as against 15.2% for no-loan members. This result could be justified since those who developed new enterprises are more among loan members than no-loan members. Having access to business loan from cooperatives ordinarily could be linked to ability to expand business into new locations and markets. Study by Edgcomb and Garber (1998) found more clients than non-clients selling in new markets. If selling in a new market will lead to more profit for loan members in the nearest future, doing so may be justified. But if not, expansion into a new market must be properly evaluated before it is pursued because it may even lead to accumulation of more cost for the business since presence in more locations does not literally translate to economic growth of the enterprise. The result is tested statistically with the null hypothesis stated below.

H3ix: There is no relationship between participation in a cooperative and selling in new markets.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number that sold in new markets/locations	Yes	223	.2287	.42094	.02819
	No	79	.1519	.36122	.04064

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Number that sold in new markets/locations	Equal variances assumed	9.592	.002	1.444	300	.150	.07680	.05319	-.02787	.18148
	Equal variances not assumed			1.553	158.236	.122	.07680	.04946	-.02088	.17449

The t-test result of 0.150 implies that there is no statistical significant difference between the loan members (M=0.2287, SD=0.42094) and no-loan members (M=0.1519, SD=0.36122) that sold in new markets. Being a loan member in a cooperative is not statistically sufficient for an entrepreneur to sell in new markets. This study found a weak positive relationship between access to cooperative loan and entrepreneurs' ability to sell in a new market as a result of the standard effect size of 0.19.

The result is not significant and the study fails to reject the null hypothesis that there is no relationship between participation in a cooperative and selling in new markets. This may be due to the limited number of markets available in rural areas. There may be a limit to the value of sales that can be made in such locations which may not encourage the opening of new sales outlets. The restricted varieties of goods and services in the study areas, in addition to limited number of buyers may discourage loan members from investing the cooperative loan in new markets. This may be important due to the cost of transportation and rental of sales outlets in new markets if compared with the possible fixed income expected.

7.3.10 Summary Result – Enterprise Profitability

The summary of the results of the nine null hypotheses tested are stated in table 7.2 below showing the null hypotheses that were rejected and those that the study failed to reject.

Table 7.2 Null Hypotheses Rejected and Fail to Reject on Enterprise Profitability

No.	Null Hypotheses	Rejected	Fail to Reject
H3i.	There is no relationship between participation in a cooperative and expansion of business facility.	X	
H3ii.	There is no relationship between participation in a cooperative and addition of new products.	X	
H3iii.	There is no relationship between participation in a cooperative and hiring more workers.	X	
H3iv.	There is no relationship between participation in a cooperative and improvement in quality of products.		X
H3v.	There is no relationship between participation in a cooperative and reduction in cost by buying input in greater volume.		X
H3vi.	There is no relationship between participation in a cooperative and reduction in cost with cheaper source of credit.		X
H3vii.	There is no relationship between participation in a cooperative and development of new enterprise.		X
H3viii.	There is no relationship between participation in a cooperative and making more profit.		X
H3ix.	There is no relationship between participation in a cooperative and selling in new markets.		X

To be able to provide a statistically relevant answers to the third hypothesis (H3) for this study, the data used in providing answer to the initial nine hypotheses in this section were collapsed as suggested and used by previous

studies (Edgcomb and Garber, 1998; Nelson, 2000), and a t-test was conducted to test the null hypothesis below.

H3: There is no relationship between participation in a cooperative and changes in business development associated with increased profitability.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Changes to business development	Yes	223	3.6143	2.44842	.16396
	No	79	3.2785	1.98673	.22352

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Changes to business development	Equal variances assumed	2.345	.127	1.098	300	.273	.33587	.30600	-.26632	.93806
	Equal variances not assumed			1.212	167.480	.227	.33587	.27721	-.21141	.88315

The t-test conducted above to compare changes in business development associated with increased profitability for loan and no-loan members suggests that there is no significant difference in the scores of loan (M = 3.6143, SD = 2.44842) and no-loan (M = 3.2785, SD = 1.98673) members; $t(300)=1.098$, $p=0.273$. Access to cooperative loan is not statistically sufficient for an entrepreneur to experience changes in business development associated with increased profitability. Members that took loans were not able to bring about significant changes in business development associated with profitability more than no-loan members. This result contradict Edgcomb and Garber (1998) that documented a statistical significant of $p=0.003$ and Sharma et al. (2005) that 62.5% of members had more profit which is significant with F value of 9.83. However, the study result agrees with the finding of Falaiye (2002) but partially

different from Calkins and Ngo (2005) that found that cooperative members in Ghana made more profit while contrary result was reported in Cote d'Ivoire.

The postulation of the social capital theory that relationship that exist in the cooperative would influence members' enterprises performance with possibilities for more profit which may be unattainable without membership of the program was not found in this study. Although Sharma et al. (2005) found that expansion of trade through the cooperatives loan leads to social capital, but this does not necessarily imply better enterprise profitability. The insignificant result of the effect of cooperative loan on changes in business development associated with increased profitability found in this study does not support the social capital theory as a tool for economic development as suggested by Anderson et al. (2002). The role of the cooperatives through the loans which is a financial capital to rural enterprises that should be converted to more profit by their enterprises was not achieved. This finding contradicts Simkhada (2004) that social capital includes the establishment and expansion of markets for more profit.

The effect of loan on increased profitability is 0.14 which suggests a weak positive relationship between the loan given and business development associated with increased profitability. The t-test result ($p=0.273$) fails to reject the null hypothesis that there is no relationship between participation in a cooperative and changes in business development associated with increased profitability. Access to cooperative loan may not guarantee changes in business development associated with profitability since members that took loans were not statistically able to significantly increase their business profitability.

7.4 Enterprise Assets

This section focuses on the last research question that 'does participation in cooperative loan services lead to increase in acquisitions of business assets?' The response to the question is discussed under two segments. The first part (7.4.1 to 7.4.7) is the analysis of changes to business assets as it relates to

both loan and no-loan members. The use of cooperative loan in rural business is discussed under section 7.4.8 for loan members only. The findings are explained with their implications for theory in sections 7.4.9 and 7.5.

7.4.1 Changes in Business Assets

The purpose of this section is to ascertain if the respondents have invested their loan during the last twelve months for the acquisition of some basic assets that are able to build the resource base of their enterprises. These assets that reflect growth in business development were grouped into six categories as small tools and accessories, major tools, means of transportation, storage structure, minor investment in marketing site and construction of physical structure as used by Edgcomb and Garber (1998), Falaiye (2002) and Wanyama et al. (2008). Requesting for the financial value of these assets was not possible because the respondents found it difficult; if not totally impossible to recall the cost of acquiring the assets during the pilot test. The same difficulty was noted by Edgcomb and Garber (1998) and Falaiye (2002) in the rural areas used for their studies.

Question 11 sought to know if the respondents have purchased or invested in any of the above assets within twelve months prior to the study. This is easier for the respondents to recall, than using a longer period of time that might have faded away in their memory, thereby making it easier to gather the data from them. Acquisition of any of these assets means that the respondent is able to invest the cooperative loan on the enterprise rather than for consumption purpose (Nelson, 2000; Falaiye, 2002) and an evidence of better standard of living. The result is reported in table 7.3 below in percentage. Thereafter, each asset is tested for statistical significance using t-test.

Table 7.3 Investment in Business Assets

<i>During the last 12 months, did you purchase or invest in any of the following assets for your business activity?</i>	Percent No-loan Member n=79	Percent Loan Member n=223
Purchased small tools/accessories such as cooking utensils, hoes, plough, baskets, basins and barrels.	26.6	31.8
Purchased major tools such as stoves, equipment and machinery.	25.3	43.0
Purchased own means of transportation such as car, motorcycle, tri-cycle, bicycle and pushcart.	19.0	33.6
Invested in a storage structure such as a granary, stock room and cold room.	15.2	22.4
Made a minor investment in marketing site by purchasing a chair, table, shed or the like.	26.6	40.8
Build structures in business location such as kiosk and shop.	22.8	36.3

7.4.2 Purchase of Small Tools

The definition of ‘small tools’ are basic items such as basin, hoes and baskets that are needed in conducting rural enterprises on daily basis. An entrepreneur can decide either to buy or to borrow from business neighbours within the same market. To a rural dweller, ‘small tools’ is a form of asset because possessing it reduces the entrepreneur’s dependency on his or her neighbour and this also may enhance his or her status as a lender and not a borrower. The result shows a response of 31.8% and 26.6% for loan and no-loan members respectively. Loan members were able to invest more in acquisition of small tools for their enterprises. Edgcomb and Garber (1998) reported 40% for clients and 19% for non-clients, while Falaiye (2002) documented 50% for clients and 31% for incoming clients. This is tested statistically with the null hypothesis below.

H4i: There is no relationship between participation in a cooperative and ownership of small tools.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number of small tools/accessories owned	Yes	223	.3184	.46690	.03127
	No	79	.2658	.44459	.05002

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Number of small tools/accessories owned	Equal variances assumed	3.423	.065	.870	300	.385	.05256	.06039	-.06627	.17139
	Equal variances not assumed			.891	143.176	.374	.05256	.05899	-.06404	.16916

The t-test result of 0.385 is not statistically significant and therefore did not reject the null hypothesis that there is no relationship between participation in a cooperative and ownership of small tools. Members that took loan were not able to significantly acquire small tools more than no-loan members. Contrary findings by Edgcomb and Garber (1998) and Falaiye (2002) suggested that clients own small tools more than non-clients using percentages but without any statistical test. The effect size result of 0.11 indicates that there is a weak positive relationship between participation in a cooperative and ownership of small tools. The effect of loan on acquisition of small tools is small and not significant. The costs of small tools are not high and as a result of this, the use of loan to acquire such tools is not justified as revealed in the t-test result. The loan members may prefer to buy small tools from their enterprise income rather than accessing loan from the scheme because this will hinder them from taking loans to acquire other enterprise assets while the loan is being repaid.

7.4.3 Acquisition of Major Tools

Major tools such as sewing machine and water pumping machine are machines that can be used for some years in the business without major fall in the value of the assets. The items classified as major tools may be motorised or manually operated. The ownership of the assets enables the owner to improve ways of carrying out daily business which is an indicator to growth in the enterprise and a sign of possible progress in living standard. The result has 43% of loan members and 25.3% of no-loan members confirming that they were able to

invest in major tools which are important to generate additional income on their enterprises. Falaiye (2002) documented 22% and 14% for clients and incoming clients respectively. The null hypothesis below is used to test the above response.

H4ii: There is no relationship between participation in a cooperative and ownership of major tools.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number of major tools owned	Yes	223	.4305	.49626	.03323
	No	79	.2532	.43760	.04923

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Number of major tools owned	Equal variances assumed	46.901	.000	2.812	300	.005	.17733	.06307	.05322	.30144
	Equal variances not assumed			2.985	154.030	.003	.17733	.05940	.05998	.29467

The t-test result shows a significant difference ($p=0.005$) in the score for loan and no-loan members. Loan membership is associated with investing in major tools in an enterprise because loan members were able to significantly acquire major tools in their enterprise more than no-loan members. Similar result was reported by Edgcomb and Garber (1998). The result is significant and the null hypothesis above is rejected. The effect size result of 37% indicates that there is an average positive relationship with moderate effect between participation in a cooperative and acquisition of major tools. The ANOVA test results reveal that age $p=0.002$, marital status $p=0.046$ and number of children $p=0.021$ are contributory factors to ownership of major tools in addition to the cooperative loan. Membership duration $p=0.269$, education $p=0.710$, house ownership

$p=0.482$, and household size $p=0.072$ are not statistically significant to the acquisition of major tools. The three variables that contribute to ownership of major tools are discussed below.

Age

The F-statistic shows that members within 41-50 years own more major tools ($M=0.5213$, $SD=0.50223$) than other age groups. Age plays an important role towards ownership of major tools by rural entrepreneurs and it helps to improve the economic position of those between 41-50 years in addition to the loan.

Marital Status

The ANOVA result reveals that there is no statistical significant difference between the score of those who are married, separate/divorced, widowed and single/never married. None of the four marital status of the members contribute more than the others. The members have equal opportunity to own major tools in their enterprises irrespective of their marital status.

Number of Children

The Post Hoc test reveals that there is no significant difference in the number of children in members' households. Irrespective of the number of children in a family, it does not affect the ability of members to increase their business assets as a result of ownership of major tools. The result is unexpected because a family with few children will be assumed to spend lesser money on children's upkeep than households with many children. The demographic statistic in table 6.5, section 6.4.1 of the last chapter indicates that the loan and no-loan members are not statistically different in number of children.

7.4.4 Ownership of Means of Transportation

Ownership of means of transportation connotes the acquisition of any means of transportation either operated manually or mechanically such as a bicycle, motorcycle, pushcart and lorry. The assets are used for the business and aid in the production and distribution of goods and services which will eventually

reduce the burden of depending completely on a third party before products are moved or services rendered by the entrepreneur. Means of transportation such as lorry and tricycle could also be another source of income to the owner by offering transportation services at a fee to other people alongside own transportation needs. Adedayo and Yusuf (2004) reported that 0.9% of members own commercial vehicles. The positive responses to the question on acquisition of means of transportation produce 19% and 33.6% for no-loan and loan members respectively. The statistical implication of this result is determined by conducting t-tests on the null hypothesis below.

H4iii: There is no relationship between participation in a cooperative and acquisition of means of transportation.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number of means of transportation owned	Yes	223	.3363	.47351	.03171
	No	79	.1899	.39471	.04441

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Number of means of transportation owned	Equal variances assumed	33.673	.000	2.462	300	.014	.14645	.05949	.02939	.26351
	Equal variances not assumed			2.684	162.931	.008	.14645	.05457	.03870	.25420

The t-test result of 0.014 is significant and the null hypothesis that there is no relationship between participation in a cooperative and acquisition of means of transportation is rejected. Members that took loans were able to significantly acquire means of transportation for their business more than no-loan members. This agrees partially with Wanyama et al. (2008) result that suggested that

members acquire motor cycle for their business in Rwanda, but this was not possible in other locations used for their study. The effect size result of 0.32 suggests that there is an average positive relationship between the loan and acquisition of means of transportation. The ANOVA result shows that membership duration $p=0.029$, age $p<0.001$ and marital status $p=0.017$ are the three variables that contribute to ownership of means of transportation in addition to the cooperative loan. Education $p=0.445$, house ownership $p=0.073$, household size $p=0.188$ and number of children $p=0.404$ are not statistically significant to acquisition of means of transportation. The three variables that contribute to ownership of means of transportation are discussed below.

Membership Duration

The F-statistic result revealed that the mean score for members with 6 years and above in the cooperative ($M=0.3689$, $SD=0.48487$) is higher in ownership of means of transportation than those between 0-1 year and 2-5 years in the scheme. The longer a member stays with the program, the better it is to acquire a means of transportation through the cooperative loan. This may be possible because of the high cost of the assets that constitute means of transportation which require more money to acquire than minor tools. The access to repeated loans over the years is another benefit available to members who have participated in the program for 6 years and above. The researcher interprets the results to imply that ownership of means of transportation is a gradual process that becomes more feasible when a member stays longer in the cooperative for about 6 years. The role of cooperatives in improving standard of living through the acquisition of means of transportation is not sporadic but requires patience, endurance and consistency in the scheme as member over time.

Age

Members who are 41-50 years of age acquire more means of transportation than other age groups. This could be regarded as the peak age for better performance when all other minor needs in their business must have been met and therefore afford them the opportunity to acquire their own means of

transportation. This may also be possible because those within this age group (41-50 years) are likely to be in the cooperative for a longer period than those in the lower age group. Ownership of means of transportation may become important to them to reduce their dependency on a third party and also improve their social status in the community. It may also be an indication of financial stability made possible because of repeated loans from the cooperative.

Marital Status

The researcher found from the ANOVA result that there is no statistical significant difference between the four groups (married, separated/divorce, widowed and single/never married) of marital status used for the study. Irrespective of the marital status a member belongs to, it has no direct relationship on the acquisition of means of transportation for rural businesses. The researcher had expected to find statistical difference between the married and those that are single/never married. Lack of statistical significance among them may be possible because the means of transportation relate to those used for the enterprise. Moreover, a means of transportation such as motorcycle may be adequate for an entrepreneur irrespective of the marital status. However, this depends on the nature and size of the enterprise and possibly the age of the head of the household.

7.4.5 Investment in Storage Facility

The differences in types of rural enterprises necessitate the inclusion of the question that has to do with investment in storage facility especially as identified in section 4.5.1 of chapter four of this thesis that the study areas do not benefit from government electricity facility. Those who need electricity for storage and preservative facilities such as cold room and fridge have to generate it themselves through the use of generating set. The purchase of fridge and other forms of non-motorised storage facilities are covered in this segment. This includes outright purchase, renovation and addition to the number of barns, stores and warehouse owned. Having a storage facility by a rural entrepreneur eliminates dependency on another person. This may reduce wastage of

products that could have been kept in a storage system especially when such products are perishable or seasonal. Those who confirm that they were able to invest in storage facility are 22.4% for loan members and 15.2% for no-loan members. Edgcomb and Garber (1998) documented 33% and 16% for clients and non-clients respectively. The response is tested with the null hypothesis stated below.

H4iv: There is no relationship between participation in a cooperative and ownership of storage facility.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number of storage structure/facility owned	Yes	223	.2242	.41800	.02799
	No	79	.1519	.36122	.04064

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Number of storage structure/facility owned	Equal variances assumed	8.515	.004	1.367	300	.173	.07232	.05290	-.03178	.17641
	Equal variances not assumed			1.465	157.136	.145	.07232	.04935	-.02515	.16979

The Sig. value from the t-test is 0.173 which implies that there is no statistically significant difference between the mean score of loan and no-loan members that invested in a storage facility. Being a loan member alone is not statistically sufficient for an entrepreneur to acquire a storage facility. Access to cooperative loan may not guarantee the acquisition of a storage facility since members who took loans were not statistically able to significantly invest in storage facilities more than no-loan members. The null hypothesis that there is no relationship between participation in a cooperative and ownership of storage facility cannot be rejected because the t-test result is not significant. Edgcomb and Garber

(1998) that used rural and urban centres for their study reported a statistical significance of $p=0.03$. The effect size of 0.18 indicates that there is a weak positive relationship between cooperative loan and acquisition of storage facilities with a small effect but not significant.

The result on acquisition of fridge in chapter six revealed that loan members were better than no-loan members. However, owning a fridge is just one out of other means of storage facilities available to rural dwellers. This could mean that the no-loan members invested in other storage facilities that may not require electricity to reduce their cost. This also agrees with the result on enterprise profit where the no-loan members performed better than loan members. The likely implication may be that lack of access to cooperative loan makes no-loan members to develop cheap strategies in acquiring storage facilities.

7.4.6 Minor Investment in Marketing Site

A marketing or business site for rural dwellers may include the village markets, front of the house and busy road-side depending on how big the community is. The entrepreneurs' ability in purchasing small marketing items such as chair, table, canopy, benches and shed was used as one of the factors to determine acquisition of business assets since these items are meant for the business and are expected to be used for a length of time. The result shows that 40.8% of loan members and 26.6% of no-loan members were able to have minor investment in their marketing/business site. A study by Falaiye (2002) found similar result of 34% for clients and 11% for incoming clients. The responses were subjected to t-test using the null hypothesis below.

H4v: There is no relationship between participation in a cooperative and minor investment in marketing site.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number with minor investment in marketing site	Yes	223	.4081	.49258	.03299
	No	79	.2658	.44459	.05002

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Number with minor investment in marketing site	Equal variances assumed	28.952	.000	2.261	300	.024	.14225	.06292	.01843	.26607
	Equal variances not assumed			2.374	150.584	.019	.14225	.05992	.02386	.26064

The t-test result of $p=0.024$ is significant and the null hypothesis that there is no relationship between participation in a cooperative and minor investment in marketing site is rejected. Loan members were able to significantly make minor investments in their marketing site more than no-loan members. The result suggests that being a loan member is related to making minor investments in marketing sites. The result of 0.30 from the standard effect size reveals that there is an average positive relationship between participation in a cooperative and owning minor investment such as chair, canopy and shed in their marketing/business site. The ANOVA result revealed that the only variable that complement the loan which made the members to have minor investment in business site is the age of the respondents which is statistically significant ($p=0.007$). Membership duration $p=0.314$, marital status $p=0.167$, education $p=0.764$, house ownership $p=0.947$, household size $p=0.285$ and number of children $p=0.501$ are not statistically significant to minor investment in business site.

Age

The F-statistic result shows the highest score for members between 41-50 years ($M=0.4894$, $SD=0.50257$). If this result is compared with the effect of age on the results in section 7.4.3 and 7.4.4 for acquisition of major tools and means of transportation respectively, members between 41-50 years of age reduce their poverty level and increase their standard of living more than any other age groups. This is because of better performance in acquiring the three types of assets namely major tools, means of transportation and minor investment in marketing/business site used as proxy for better economic condition on the effect of cooperative loan on rural enterprises.

7.4.7 Structures in Business Location

The study finds out if respondents were able to own the structures used for their businesses such as kiosks and shops. This is different from renting a shop or a stall from a third party. These are structures that are either permanent or semi permanent such that the entrepreneurs cannot be easily displaced from the location. Although the space where the structure is erected may be leased, but it should signify the allocation of a space that is reserved for the entrepreneur. Those with such structures are loan members 36.3% and no-loan members 22.8%. The null hypothesis to test the responses is stated below.

H4vi: There is no relationship between participation in a cooperative and building structures in business location.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number of structure in business location owned	Yes	223	.3632	.48201	.03228
	No	79	.2278	.42212	.04749

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Number of structure in business location owned	Equal variances assumed	26.894	.000	2.213	300	.028	.13538	.06117	.01501	.25575
	Equal variances not assumed			2.358	155.075	.020	.13538	.05742	.02195	.24881

There is a statistical significant difference in the score for loan (M=0.3632, SD=0.48201) and no-loan (M=0.2278, SD=0.42212) members; $t(300)=2.213$, $p=0.028$ that build structures in their business location. These results suggest that being a loan member is related to building structures in business locations for an entrepreneur. This finding matches that of Edgcomb and Garber (1998) which reported that clients own 55% and non-clients 54% with $p=0.03$. Falaiye (2002) documented 21% and 8% for clients and incoming clients respectively but it was not tested for statistical significance. This study result is significant and the null hypothesis above is rejected. The 0.29 standard effect size implies an average positive relationship with moderate effect between cooperative loan and owning structures in business location. The ANOVA test results indicate that membership duration in the cooperative is the only variable that is statistically significant ($p=0.026$) to the ability of members to own structure in marketing/business locations in addition to the cooperative loan. Other variables: age $p=0.133$, marital status $p=0.122$, education $p=0.430$, house ownership $p=0.787$, household size $p=0.168$ and number of children $p=0.239$ are not statistically significant to ownership of structure in business/marketing locations.

Membership Duration

The ANOVA result suggests that members between 2-5 years (M=0.2063, SD=0.40793) in the cooperative own more structures in marketing/business

locations than other groups. This is an unexpected result because members that have been with the scheme for 6 years and above should ordinarily be expected to acquire more structures in their business locations than others. Members do not need to wait until they are 6 years or more in the cooperative before taking the benefit of the cooperative loan to erect structures in their marketing/business locations. Improved economic condition and standard of living through the ownership of structure in business locations is possible for members within 2-5 years in the scheme more than other groups.

7.4.8 Use of Loan in Business

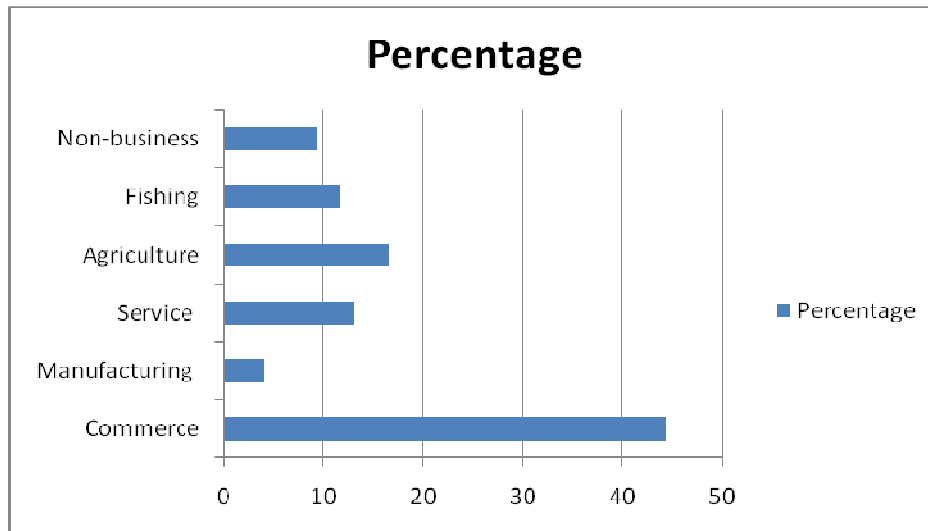
This segment examines how loan members invested their last loan in different areas of their businesses such as commerce, agriculture and fishing using the response to question 12 of the questionnaire. The result is presented in percentage in table 7.4 and in figure 7.1 below.

Table 7.4 Use of Loan in Business

<i>How did you invest the last loan you took from your cooperative society?</i>	Loan Member n=223
Commerce, trade and retail – including petty trade.	44.4%
Manufacturing – food processing, textile production, crafts and leather work.	4.0%
Service – hair dressing, restaurants, food stalls, cleaning services and shoe repairs.	13.0%
Agriculture – food or other crop production and animal raising.	17.49%
Fishing	11.7%
Non-income generating purpose.	9.41%

The result on the use of cooperative loan in business reveals that commerce with 44.4% took the largest portion of the business activity where cooperative loans are invested in the rural areas followed by agriculture with 17.49% and 13% to services. Results for fishing and manufacturing are 11.7% and 4% respectively. 9.41% of the respondents (21 out of 223) did not invest their last loan on business purposes.

Figure 7.1 Use of Business Loan



90.59% of the loan is invested on rural businesses and this may likely bring changes to the rural economy if the trend is consistently maintained over a period of time. This also reveals how important it is for rural entrepreneurs to have access to financial services in form of loans that can be used as working capital in their business which is capable of bringing development to rural settlements. The process may bring about poverty reduction, higher standard of living and also expose the rural products and markets to better patronage from those in neighbouring cities. This is similar to Enete (2008) findings that beneficiaries of cooperative loans use such funds for businesses such as petty trading or pay their children's school fees, while Simkhada (2004) reported that 67% of cooperative loan was for productive activities, 13% for social activities, 3% for repayment of previous loan and 11% for asset purchase and repair.

7.4.9 Summary Result – Enterprise Assets

Various criteria were used to determine if participation in a cooperative increases acquisition of business assets. Six null hypotheses were tested statistically with t-test, and the summary of their results are stated in table 7.5 below showing null hypotheses that were rejected and those that were not rejected.

Table 7.5 Null Hypotheses Rejected and Fail to Reject on Enterprise Assets

No	Null Hypotheses	Rejected	Fail to Reject
H4i.	There is no relationship between participation in a cooperative and ownership of small tools.		X
H4ii.	There is no relationship between participation in a cooperative and ownership of major tools.	X	
H4iii.	There is no relationship between participation in a cooperative and acquisition of means of transportation.	X	
H4iv.	There is no relationship between participation in a cooperative and ownership of storage facility.		X
H4v.	There is no relationship between participation in a cooperative and minor investment in marketing site.	X	
H4vi.	There is no relationship between participation in a cooperative and building structures in business location.	X	

The above is the result of the components used to identify acquisition of business assets as they only provide answers to each corresponding segment of enterprise assets. The individual findings above do not provide a particular answer in general terms if all business assets increase or not. Increase or decrease in enterprise assets is achieved by collapsing all the responses used for the initial six hypotheses in this section as used by Edgcomb and Garber (1998) and a t-test was carried out on the last null hypothesis (H4) stated below.

H4: There is no relationship between participation in a cooperative and increase in the acquisition of business assets.

Group Statistics

	Access loan from the cooperative	N	Mean	Std. Deviation	Std. Error Mean
Number of enterprise assets owned	Yes	223	3.0807	1.77641	.11896
	No	79	2.3544	1.24074	.13959

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Number of enterprise assets owned	Equal variances assumed	20.795	.000	3.354	300	.001	.72629	.21655	.30015	1.15243
	Equal variances not assumed			3.960	196.086	.000	.72629	.18340	.36459	1.08799

The p value for the t-test is 0.001 which implies a statistical significant difference between the mean score of loan members (M=3.0807, SD=1.77641) and no-loan members (M=2.3544, SD=1.24074) that increase their business assets. The null hypothesis that there is no relationship between participation in a cooperative and increases in the acquisition of business assets is therefore rejected. Loan members were able to significantly increase their enterprise assets more than no-loan members. This finding is in harmony with Edgcomb and Garber (1998) significant result of p=0.007 and Sharma et al. (2005) that members acquire more enterprise assets than non-members, but without statistical test. The study result is partially different from Wanyama et al. (2008) that cooperative leads to ownership of enterprise asset in Egypt, South Africa and Kenya, but with support from donor in Kenya. The standard effect size of 0.44 implies an average positive relationship and moderate effect between the cooperative loan and enterprise assets acquired.

The theoretical implication of the above findings of significant effect of cooperative loan on ownership of enterprise assets is in agreement with Anderson et al. (2002) study that physical capital is created by the program. This also tallies with World Bank (1998) that social capital includes improvement in economic position of members of an association which may be financial and physical benefits that are not easily attainable outside the group. The increase in ownership of enterprises assets made possible by the cooperative is an economic development. This is expected to lead to mutual

benefit of members (Basargekar, 2010), and social capital as a tool of economic development among people affect their standard of living positively (Anderson et al., 2002). The study result on enterprise asset supports the use of social capital theory as a potential framework to explain the role of cooperative societies in rural finance because the cooperative loan is used to generate physical capital which are the assets acquired in the enterprises. An improvement in the enterprises standard of living which enhances better assets ownership possibly reduces worries and stress, while these assets are useful and needed to support livelihood (Holmgren, 2011).

The variables which played a significant role in the acquisition of enterprise assets from the ANOVA test in addition to the cooperative loan are age $p < 0.001$, marital status $p = 0.001$ and household size $p = 0.032$. There was no significant contribution based on membership duration $p = 0.060$, education $p = 0.852$, house ownership $p = 0.477$ and number of children $p = 0.162$ towards ownership of enterprise assets. The ANOVA result reveals that members between the ages of 41-50 years ($M = 3.4787$, $SD = 1.75811$) performed better than other age groups in the acquisition of business assets. It should be noted that members between 41-50 years have consistently maintained the best standard of living performance in most of the criteria used to determine the role of cooperative societies in ownership of business assets such as major tools, means of transportation and minor investment in marketing/business site.

The statistical significance found in the marital status indicates that those who are married ($M = 3.0826$, $SD = 1.68265$) own more business assets than those who are single, widowed and separated/divorced. The ANOVA result on household size reveals no statistical significance on the number of people in the participants' household and ownership of enterprise assets. The size of members' household is not likely to influence the number of enterprise assets acquired by cooperative members. The role of the cooperatives towards better standard of living is possible through the cooperative loan because the scheme supports members with loans to acquire assets for their enterprises.

7.5 Summary and Conclusion

Two hypotheses were used to determine the role of cooperatives on rural enterprises. The study found a weak positive relationship with small effect between participation in a cooperative and enterprise profitability which is not statistically significant ($p=0.273$). This result does not support the social capital theory. This is an unexpected finding because ordinarily, availability of money for rural enterprise is expected to lead to more profit. However, the result agrees with the findings of Falaiye (2002). Access to cooperative loan with the intention of generating more profit by members may be possible on an individual basis, but it cannot be statistically supported for members as a group.

The study documents a statistical significance ($p=0.001$) with an average positive relationship with moderate effect between participation in a cooperative loan scheme and increase in the acquisition of business assets. This enhances the use of social capital theory to explain the role of cooperatives in improvement in members' standard of living through the acquisition of enterprise assets from cooperative loans. Table 7.6 below summarises the results of the two main hypotheses used as the flagship to measure the role of cooperative societies on members' enterprises.

Table 7.6 Null Hypotheses Rejected and Fail to reject at Business level

No	Null Hypothesis	Rejected	Fail to Reject
H3.	There is no relationship between participation in a cooperative and changes in business development associated with increased profitability.		X
H4.	There is no relationship between participation in a cooperative and increase in the acquisition of business assets.	X	

These results seem to highlight the importance of short term and long term decision making in enterprises. It is possible that the loan members are considering the long term viability of their business as supported by the cooperative loans rather than generating profit in the short term which can be re-invested.

This chapter and the previous two chapters - chapter five and six – have been able to use the social capital theory to explain and discuss the research proposition and hypotheses. The researcher provides the summary of the results documented in chapters five, six and seven in the next chapter and also integrates the findings of the three chapters – five, six and seven – together.

Chapter Eight

Cooperative Societies and Rural Finance

8.1 Introduction

This chapter provides the summary of results documented separately in the last three chapters to integrate the findings on the role of cooperative societies on individuals, households and enterprises together. This is to show how the three impact areas of the study fit together in answering the research questions and achieving the research objectives. The role of cooperative societies in rural finance explained through the social capital theory has been linked with better physical, financial and social capital. The proxies used to represent economic condition which is reflected in the members' standard of living for this study as identified from the literature in chapter three are household income (Ghosh and Maharjan, 2001; Simkhada, 2004; Adebayo et al., 2010), household assets (Adedayo and Yusuf, 2004; Ramotra and Kanase, 2009; Holmgren, 2011), enterprise profitability (Falaiye, 2002; Calkins and Ngo, 2005; Wanyama, 2008), enterprise assets (Edgcomb and Garber, 1998; Larocque et al., 2002; Sharma et al., 2005; Wanyama et al., 2008) and members satisfaction from savings and loan products (Eisenhauer, 1995; Lohlein and Wehrheim, 2003; Nathan et al., 2004; Lemma, 2008).

Decrease in income and lack of assets signify poverty, poor economic condition and low standard of living while the ownership of assets and increase in income through the cooperative loan suggest a positive role of cooperative societies on the members' standard of living and economic condition. Section two focuses on cooperative at the household. Cooperative societies and enterprise performance is discussed in section three. Section four focuses on members' satisfaction from cooperative societies while the summary and conclusion is presented in section five.

8.2 Cooperatives at the Household

The study considered the effect of cooperative societies loan on household income and household assets. The assets are motorcycle/tri-cycle, car/lorry, land, building, generator, television, radio, video/CD, fan and fridge.

8.2.1 Cooperatives Role on Household Income

“It is believed that credit boosts income levels, increases employment at the household level and thereby alleviates poverty” (Nathan et al., 2004: 3). The role of the cooperative for better economic condition is possible through access to the cooperative loan. The cooperative leads to better standard of living because of the increase in participants’ household income which is significant with $p=0.021$. And there is an average positive relationship between participation in a cooperative and increase in household income. The ANOVA result indicates that house ownership ($p<0.001$), membership duration ($p=0.002$) and marital status ($p=0.048$) contributed to the above result as complement to the cooperative loan. The study result of increase in household income provides the basis to support the social capital theory. This is because, the social capital theory explains that membership of an association leads to increase in economic condition of the members (Anderson et al., 2002).

8.2.2 Acquisition of Household Assets through Cooperatives

Asset building by the poor is important because asset ownership plays a critical role in changing the economic position and livelihood of the poor (Edgcomb and Garber, 1998; Falaiye, 2002). The acquisition of any of the ten assets by loan members more than no-loan members imply that the cooperative contributes positively to standard of living and improvement in economic condition of the members.

Better standard of living through the acquisition of motorcycle/tri-cycle was not possible because the study documents a weak positive relationship which is not significant ($p=0.710$) between cooperative loans and ownership of motorcycle/tricycle. Simkhada (2004) reported that members purchase

motorcycle more than non-members, but it was not tested statistically. The cooperative does not lead to improved economic condition among the members when assessed with number of car/lorry acquired through the cooperative loan because the t-test result of 0.321 is not significant. A weak positive relationship was found between participation in the cooperative and ownership of car/lorry. Previous studies (Simkhada, 2004; Sharma et al., 2005) documented that members acquire more of vehicle than non-members, but without any data or statistical test to support their findings. The insignificant results documented on ownership of motorcycle/tricycle and car/lorry does not support the social capital theory. This is because the results imply that participation in the cooperative does not lead to better standard of living and ownership of physical capital which is part of improvement in economic position of individual members of an association in the theory which the cooperative is expected to achieve among the members. Although, the cooperative provides loan to the members, which serves as financial capital in the social capital theory, but this has not been translated to generate physical capital in the theory in form of ownership of motorcycle/tricycle and car/lorry by the members.

The cooperative leads to better standard of living as a result of higher proportion of members that acquire plot of land. There is an average positive relationship between the cooperative and standard of living measured by members that acquire land and it is significant with $p=0.031$. Membership duration, age and household size are the contributory factors to the result. The finding agrees with Simkhada (2004) findings that members own more land than non-members. This result is different from that of Sharma et al. (2005) where non-members own more land than members. Better economic position through ownership of building was not possible by participating in the cooperative. The study documented insignificant result of $p=0.076$ between cooperative loan and ownership of building. Falaiye (2002) and Sharma et al. (2005) reported contrary result but their findings were not based on statistical test. The social capital theory is supported where the cooperative loan leads to higher ownership of household assets for members. The increase in acquisition of plot

of land by members indicates that participation in the cooperative leads to physical capital among members and support the theoretical underpinning. Contrarily, the insignificant relationship between cooperative membership and ownership of building challenge the assumption of the social capital theory that membership of an association leads to economic development of the members. This result does not support the social capital theory. This implies that it is not in all cases that economic development of individuals in an association can be improved upon because they belong to the association.

The cooperative contributes positively to standard of living because the cooperative loan was used to acquire generator by members. The result is significant ($p=0.014$) with an average positive relation. House ownership is the only demographic characteristic that complements the loan towards better standard of living that led to the acquisition of generator. Enhanced standard of living was traced to ownership of television because there is a statically significant ($p=0.015$) result with an average positive effect of the cooperative on members that bought television. This tally with Adjei et al (2009) result which was significant ($p=0.0000$). The contributory factors are age ($p=0.016$), educational ($p<0.001$) and household size ($p<0.001$).

There is statistical significance ($p=0.022$) between the cooperative and radios acquired by the members. The cooperative helps to reduce members' poverty level through the ownership of radio. Similar result was documented by Adjei and Arun (2009) with statistical significance of $p=0.000$, while Adedayo and Yusuf (2004) and Adebayo et al. (2010) reported that 18.5% and 93% of members respectively bought radio but without any statistical result. There is an average negative relationship between the loan and radios owned, and none of the demographic variables contributed to ownership of radio. Participation in the cooperative does not lead to the acquisition of fan ($p=0.475$) and video ($p=0.213$). Household living standard among the cooperative members measured through ownership of fridge reveals that the cooperatives lead to better standard of living because more members acquire fridges. The result is

significant ($p=0.005$) with a moderate effect and an average positive relationship. Similar significant result of $p=0.000$ was documented by Adjei and Arun (2009), while Edgcomb and Garber (1998) reported insignificant result of $p=0.12$. The ANOVA result reveals that education ($p=0.001$) and household size ($p<0.001$) are the contributory factors to ownership of fridge in addition to the cooperative loan.

The improvement in cooperative members' standard of living through the use of cooperative loan in acquiring household equipment provides a platform for ownership of physical capital such as generator, television and fridge. The result indicates that social capital theory is supported by the study since cooperative members are able to own more of physical assets because they have access to the cooperative loan. The role of cooperative toward an improved standard of living was possible for the members as determined from the significant result of $p=0.003$ on household asset acquisition. Adjei et al. (2009) documented strong association between the loan amount given and acquisition of household assets. The study rejected the second null hypothesis (H2) that there is no relationship between participation in a cooperative and increase in the acquisition of household assets. The effect of cooperative loan on members' standard of living based on household asset ownership result is moderate with an average positive relationship. This suggests that improvement in living standard may not be sporadic among the members. It occurs at gradual pace, but consistency of the participants may be required over time before they can be free from low economic condition. This result contradicts Falaiye (2002) that found no significant difference in accumulation of household assets, but tally with Ramotra and Kanase (2009) that cooperative leads to increase in household assets with a positive correlation between income and household assets. This study shows that better standard of living through the ownership of the following assets - land, generator, television, radio and fridge - were made possible by the cooperative for the members.

Conclusion can be drawn that the more of assets owned by a household, the better and bigger the varieties of options available to such household to improve their economic conditions with better sense of financial security and living standard. Cooperative therefore helps their members to have positive livelihood because they increase the members' access to assets acquisition through the program loan. Social capital through membership of cooperative which grant access to cooperative loan plays a positive role in asset acquisition at the household. This conclusion further strengthens the social capital theory as a potent theory for explaining the role played by cooperative societies in rural finance and especially at the household level.

8.3 Cooperative and Enterprise Performance

The contribution of cooperative to rural dwellers' standard of living at the enterprise level was measured by the entrepreneurs' ability to generate more profit and increase in ownership of enterprise assets.

8.3.1 The Role of Cooperatives on Enterprise Profitability

Criteria for enterprise profitability such as hiring of more workers, expansion of business facility, improvement in quality of products/services, reduction in cost and ability to sell in new markets/locations serves as proxy for likely increase in enterprise revenue and profitability (Edgcomb and Garber, 1998; Falaiye, 2002; Adedayo and Yusuf, 2004). Product and service diversification is an indication of positive change that shows that cooperative members are responding positively to enterprise opportunities in order to reduce risk, possibly make more profit and for better economic development.

The significant result ($p=0.028$) of participation in cooperative on expansion of business facility suggest an improvement in living standard of the members. The relationship between the cooperative and expansion of business facility is positive with moderate effect. This conform to Edgcomb and Garber (1998) that reported a positive relationship and statistical significant of $p=0.03$. Loan helps cooperative members to enhance their economic well-being by enlarging their

business facility which may not be possible without the loan. The demographic variables that contributed to the expansion of business facilities in addition to the loan are membership duration ($p < 0.001$), age ($p = 0.001$), education ($p < 0.001$) and house ownership ($p < 0.001$).

Enterprise development was possible because members were able to add new products or diversify their businesses. This is significant ($p = 0.016$) with average positive relationship and moderate effect. There is a positive contribution of cooperative loan to standard of living because it helps members in adding new products or to diversify their enterprises. This may enable the members to reduce their business risk because they have investment portfolio with the advantages of more earning and less sudden loss due to enterprise problems that those with single line of business may encounter. Only membership duration ($p = 0.001$) complement the above result. This is similar to Adedayo and Yusuf (2004) finding that cooperative loan leads to more enterprise profit which members used for business diversification. Statistical significant of $p = 0.002$ and an average positive relationship with moderate effect of the cooperative loan was found through the numbers of members that hire more workers. The program characteristics that contributed to the results are membership duration ($p = 0.003$), marital status ($p = 0.050$) and house ownership ($p = 0.006$).

Membership of the cooperative does not lead to better enterprise economic position as a result of the insignificant result of $p = 0.123$ between cooperative loan and improvement in the quality of their products. Study by Edgcomb and Garber (1998) do not support this finding probably because they used programs located in rural and urban centres. There is a weak negative relationship between the cooperative loan and improvement in quality of products. More of no-loan members reduce their enterprise cost by buying input in greater volume than loan members. The t-test result of $p = 0.824$ is not significant. The cooperative does not lead to an improved economy among members when determined by the numbers of members that buys input in greater volume through the program loan. The cooperative loan has a weak negative

relationship (-0.03) with small effect on buying input in greater volume. The cooperative role in reduction in enterprise cost via cheaper sources of credit was not possible because the study document a weak negative relationship and insignificant result of $p=0.168$ between the loan and reduction in cost because of cheaper source of credit. Edgcomb and Garber (1998) and Falaiye (2002) reported that clients' performance was higher than incoming clients.

Participation in the cooperative does not lead to better performance when examined through the development of new enterprises that was not significant ($p=0.245$). There is a weak positive relationship between the cooperative and development of new enterprises. An insignificant result ($p=0.165$) was found in the ability of members to making more profit with a weak negative relationship. It implies that participation in the cooperative does not contribute to poverty reduction because members are not able to significantly make more profit. This is an unexpected finding but it agrees with Falaiye (2002), but different from Edgcomb and Garber (1998) that found a statistical significance of $p=0.06$. The role of the cooperative when measured by the entrepreneurs' ability to sell in new market is not significant ($p=0.150$). This study found a weak positive relationship between access to cooperative loan and entrepreneurs' ability to sell in a new market. Study by Edgcomb and Garber (1998) found more clients than non-clients selling in new markets.

The role of cooperatives in assisting members to make more profit in their enterprises through the program loan was not possible as determined from the insignificant result of $p=0.273$ on increased profitability. Access to cooperative loan is not statistically sufficient for an entrepreneur to experience changes in business development associated with increased profitability. The study fails to reject the third null hypothesis (H3) that there is no relationship between participation in a cooperative and changes in business development associated with increased profitability. This result contradict Edgcomb and Garber (1998) that documented a statistical significant of $p=0.003$ and Sharma et al. (2005) that 62.5% of members had more profit which is significant with F value of 9.83.

However, the study result agrees with the finding of Falaiye (2002) but partially different from Calkins and Ngo (2005) that found that cooperative members in Ghana made more profit while contrary result was reported for Cote d'Ivoire. The effect of loan on increased profitability is 0.14 which suggests a weak positive relationship between the loan given and business development associated with increased profitability.

The postulation of the social capital theory that the existence of relationship in an association such as the cooperative would affect members' enterprises performance with possibilities of making more profit which may be unattainable without membership of the program was not found in this study. Although Sharma et al. (2005) found that expansion of trade through the cooperatives loan leads to social capital, but this does not necessary implies better enterprise profitability. The insignificant result of the effect of cooperative loan on changes in business development associated with increased profitability found in this study does not support the social capital theory as a tool for economic development as suggested by Anderson et al. (2002). The role of the cooperatives through the loans which is a financial capital to rural enterprises that should be converted into more profit in their enterprises was not achieved. This finding contradicts Simkhada (2004) that social capital includes the establishment and expansion of markets for more profit.

8.3.2 Effect of Cooperative Societies on Ownership of Enterprise Asset

Acquisition of enterprise assets is the ability to invest the program loan in the enterprise rather than for consumption purpose (Nelson, 2000; Falaiye, 2002). The assets that reflect enterprise economic growth are small tools and accessories, major tools, means of transportation, storage structure, minor investment in marketing site and construction of physical structure as used by Edgcomb and Garber (1998), Falaiye (2002) and Wanyama et al. (2008).

The result of the individual enterprise asset reveals that enterprise economic improvement does not occur through ownership of small tools because the

t-test results of $p=0.385$ is not significant, and the effect of loan on acquisition of small tools is small as determined from the effect size result of 0.11. Falaiye (2002) documented contrary result that clients acquire small tools than non-clients, but it was not tested statistically. Cooperative role was traced to acquisition of major tools by members because there is an average positive effect of the program loan on members' ability to buy major tools which is significant ($p=0.005$). Age, marital status and number of children are the contributory factors to the result in addition to the loan as determined from the ANOVA result. This finding tallies with Edgcomb and Garber (1998) and Falaiye (2002) results that clients were able to significantly acquire major tools than non-clients.

Significant result of $p=0.01$ was found in ownership of means of transportation. This suggests that cooperatives contribute to better standard of living of the members because they are able to acquire means of transportation for their enterprises. This agrees partially with Wanyama et al. (2008) result that suggested that members acquire motor cycle for their business in Rwanda, but this was not possible in other locations used for their study. The ANOVA result suggests that membership duration ($p=0.029$), marital status ($p=0.017$) and age ($p<0.001$) are the three demographic variables that contribute to ownership of means of transportation in addition to the loan. The role of cooperative societies toward investment in storage facility was not possible because the study found an insignificant result ($p=0.173$) between the cooperatives membership and ownership of storage facility. The result contradicts Edgcomb and Garber (1998) that found a statistical significance of $p=0.03$. Participation in the cooperatives lead to economic improvement because of the higher numbers of members that had minor investment in marketing site which is significant ($p=0.024$). Falaiye (2002) reported similar result but without statistical test. The participants' age is the only contributory factor from the ANOVA test. The program also leads to enhance living standard among members when assessed with the statistical result of members that acquire structure in business location ($p=0.028$) through the cooperative loan. The study found that membership

duration ($p=0.026$) is the only factor that complement the result. This conforms to the finding of Edgcomb and Garber (1998) which reported a statistical significance.

The study result of $p=0.001$ on the effect of cooperative loan on increase in business assets rejected the last hypothesis (H4) that there is no relationship between participation in a cooperative and increase in the acquisition of business assets. The cooperatives provide positive role towards enterprise asset acquisition because participation in cooperative reduces members' poverty level and increases their standard of living because members were able to increase the numbers of their enterprise assets. This finding is in harmony with Edgcomb and Garber (1998) significant result of $p=0.007$ and Sharma et al. (2005) that members acquire more enterprise assets than non-members, but without statistical test. The study result is partially different from Wanyama et al. (2008) that cooperative leads to ownership of enterprise asset in Egypt, South Africa and Kenya, but with support from donor in Kenya. The contributory demographic variables to the result in addition to the loan are, age ($p<0.001$), marital status ($p=0.001$) and household size ($p=0.032$). The standard effect size of 0.44 on enterprise asset suggests that the cooperative has an average positive relationship with moderate effect on enterprise assets acquired. The result suggests that poverty reduction, better standard of living and improvement in economic conditions is likely to be gradual than sporadic and it could take a while for members to escape completely from poverty level.

The theoretical implication of the above findings of significant effect of cooperative loan on ownership of enterprise assets is in agreement with Anderson et al. (2002) study that physical capital is created by the program. This also tallies with World Bank (1998) that social capital includes improvement in economic position of members of an association which may be financial and physical benefits that are not easily attainable outside the group. The increase in ownership of enterprises assets made possible by the cooperative is an economic development. This is expected to lead to mutual

benefit of members (Basargekar, 2010), and social capital as a tool of economic development among people affect their standard of living positively (Anderson et al., 2002). The study result on enterprise asset support the use of social capital theory as a potential framework to explain the role of cooperative societies in rural finance because the cooperative loan is used to generate physical capital which are the assets acquired in the enterprises. An improvement in the enterprises standard of living which enhances better assets ownership possibly reduces worries and stress, while these assets are useful and needed to support livelihood (Holmgren, 2011).

8.4 Members Satisfaction from Cooperative Societies

The role of cooperative societies is to bring satisfaction to the members which should lead to better standard of living and improvement in economic position in addition to other benefits that may accrue to the members as a result of participating in the program. This is so because the social capital theory postulate that economic condition of individuals improved when they participate in a group or association which may not be the main reason of belonging to such association (Torfi et al., 2011).

The study found that an individual who has been unable to develop a savings habit learns this by belonging to the cooperative with compulsory savings arrangement. Members do everything possible to ensure increase in their savings because it helps them in proper management of fund with the task of monitoring every amount of money they raise. This finding agrees with Sharma et al. (2005). Very small amount of money that members don't regard as useful for their financial upliftment before they joined the cooperative are counted and used as a useful fund for growing out of poverty and for better living standard due to their membership of the cooperative. The cooperative helps the members to curtail unnecessary spending such that immediate personal enjoyment such as drinking, that does not add value to the participants are either reduced or ignored. This improves their savings vis-a-vis the amount of loan obtainable; it eventually improves their earnings which brings positive

improvement to their economic conditions. Similar finding was reported by Edgcomb and Garber (1998) and Falaiye (2002). This cause significant improvement in clients living standards (Adjei et al., 2009).

The roles of the cooperative include the creation of self esteem among members because the members see themselves as part owners of the scheme and cannot be bluffed when issues affecting the cooperative are discussed. This makes the members to protect the interest of the cooperative to ensure its continuity. Despite Huppi and Feder (1990) finding that lack of sense of ownership leads to the failure of cooperative society in India, Philippines and Thailand, this study indicates contrary result. The findings from this study is in harmony with Larocque et al. (2002) that members felt good and are happy about themselves which they refer to as having more self-confidence.

Members are satisfied with the core role of the cooperative which is financial intermediation of mobilising savings and giving of loan to members at reduced interest rate without the pledging of fixed and financial assets as collateral. This finding matches that of Edgcomb and Garber (1998) and Falaiye (2002). The low interest rate charged by cooperatives on loans reduces the interest of members in patronising money lenders and possible reduction of loan default in the program. Idowu and Salami (2011) documented contrary result among formal finance clients. The use of a personal guarantor for cooperative loan reveals the role of cooperative in helping individuals who are just starting life or business without any asset to access loan. A similar result was documented by Falaiye (2002) while Eisenhauer (1995) reported that cooperative takes less collateral than banks. The personal guarantor arrangement greatly enhances the inter-personal relationship among members which enable them to provide support to members in trouble and reduce their individual poverty level. The cooperative thus serves as a platform for social interaction which helps to create social capital that is not available to non-members. This brought love and good relationship to the program participants which enables members to stick to the program motto "all for each and each for all". Collective action for mutual

benefit in the social capital theory is found in this study because of the use of personal guarantor among members for cooperative loan instead of financial and physical assets. This implies that the social and economic development benefit in the social capital theory (World Bank, 1998) is also attainable among the cooperative members.

The findings reveal that members are satisfied with the features and services offered by the cooperative savings and loan products because it meets their needs at various levels. Not because there were no alternatives, but the alternatives available are not within their immediate reach and are more expensive to them compared with the benefits they would derive. The rural financial needs are more accessible from cooperatives than other sources. The role of cooperative societies to affect members' social, physical and financial conditions positively by making life more comfortable and meaningful through savings and loan, which eventually will bring about better standard of living, improved economic condition and poverty reduction to the program participants, has been achieved from the findings of this study. This support the only research proposition for this study that cooperative savings and loan services satisfy the financial needs of their members in that they make a contribution to improvement in standard of living.

8.5 Summary and Conclusion

Increase in household income was traced to the role of cooperative societies from the study which further creates happiness, satisfaction and self fulfilment to the members thus removing them from psychological depression, worries and sense of rejection by the society. As a result of membership of the cooperatives, the members are more likely to have better economic conditions and be able to afford most of the essential needs of the family and perhaps to invest more funds into their trades for future growth as found in the result of enterprise assets acquired which led to better living standard.

The insignificant result of $p=0.273$ on enterprise profitability suggests that cooperatives may not be the right source of rural finance to achieve better enterprise profitability. Improved standard of living was found among the members because the cooperative loan helps them to increase household income, acquire household assets and enterprise assets, and they were satisfied with the savings and loan products offered by the cooperative. Access to loan has positive impact on the lives of the members. However, the role of cooperative was moderate on economic upliftment of members because strong positive relationship between the cooperative loan and members' performance at household and enterprise levels was not found in the study.

The cooperative also leads to physical, social and financial capitals which are found in the social capital theory. This can be explained further that cooperative societies lead to the creation of financial capital, physical capital and social capital for individual members because they participate in and enjoy the benefits of the program savings and loan services. The study result further enhanced the use of social capital theory as theoretical underpinning for members sponsored informal rural finance provider especially, the cooperative societies that offers savings and loan services to their members in rural areas.

The researcher provides the summary and conclusion of the major findings in the next chapter and also identifies the limitation of the study including the direction for future research.

Chapter Nine

Summary and Conclusions

9.1 Introduction

This chapter is the concluding part of this thesis. It serves as a conjunction point that integrates the previous chapters together. It brings out the major aspects of the study and how they have helped in achieving the research objectives. Section two gives the overview of the study while section three discusses the research process. Section four provides the major findings from the study, while section five focuses on major findings and the social capital theory. Section six highlights the contribution of the study to knowledge, while the implication of the findings is discussed in section seven. The chapter ends with the limitations and future studies in section eight.

9.2 Overview of the Study

At the outset, the study aimed to determine the role of cooperative societies in rural finance among rural people in Ogun State, Nigeria. This aim was broken down into five objectives (see page 2 and 3) as stated below.

1. Assess the roles cooperative societies' savings and loan products play in meeting participants' financial needs.
2. Examine the part played by cooperative societies in increasing participants' household income.
3. Assess the relationship that exists between cooperative members and the acquisition of household assets.
4. Establish the relationship between membership of cooperative societies and business development that lead to profitability.
5. Analyse the impact of participation in cooperative societies' membership on enterprise assets.

The research objectives were distilled into five research questions as stated below.

- i. What is the role of cooperative societies in satisfying the financial needs of their members?
- ii. Does participation in cooperative loan services lead to increase in household income?
- iii. Does participation in cooperative loan services lead to ownership of household assets?
- iv. Does participation in cooperative loan services lead to changes in business development associated with profitability?
- v. Does participation in cooperative loan services lead to increase in acquisition of business assets?

The research objectives above were further restructured into one proposition and four testable null hypotheses as stated below after the literature review which identify the gaps that currently exist.

Proposition:

Cooperative savings and loan services satisfy the financial needs of their members in that they make a contribution to improvement in standard of living.

Hypotheses:

- H1: There is no relationship between participation in a cooperative and increase in household income.
- H2: There is no relationship between participation in a cooperative and increase in the acquisition of household assets.
- H3: There is no relationship between participation in a cooperative and changes in business development associated with increased profitability.
- H4: There is no relationship between participation in a cooperative and increase in the acquisition of business assets.

The objectives of the study were achieved in chapters five, six and seven. Specifically, chapter five was used to accomplish the fulfilment of the first objective. Objectives two and three were achieved in chapter six while chapter seven helps to accomplish objectives four and five.

9.3 The Research Process

The research process involved series of articulated and interrelated activities that correspond to the first eight chapters of the thesis which are summarised below.

Chapter One

The researcher used the chapter to present his research objectives, scope of the study and the structure of the thesis.

Chapter Two

This chapter was used to commence the research by providing background to the study. The chapter helped the researcher to review various definitions of cooperatives and rural finance. It also assists in providing contextual information on development and practice of cooperative societies within and outside Africa, this also include the cooperative and informal finance sector in Nigeria. More importantly, the researcher provides a comprehensive definition of cooperative in the chapter.

Chapter Three

This is a follow-up of chapter two. It helped to review key literature on the topic under investigation. The literature review focused on studies on informal rural finance, cooperatives and savings mobilisation, cooperatives and loan facilities, cooperative services and members satisfaction, effect of cooperatives on household income, cooperatives and household asset acquisition, cooperatives and members' enterprises profitability, and cooperatives and enterprise assets. The review reveals that there is dearth of Nigeria based studies on cooperative societies in rural areas. This chapter helped to identify the existing gap in the

literature and possible areas where contribution to knowledge can be enhanced by the researcher. Furthermore, the researcher was able to identify methods that can be used to achieve the research objectives. It further helps in reviewing and adopting social capital theory as the theoretical underpinning for the study.

Chapter Four

This chapter was used to discuss the methods adopted for the study and steps taken in conducting the research after evaluating different research strategies and design suitable for the study. The choice of methods between longitudinal and cross sectional study, primary and secondary data and its justification are covered in the chapter.

Chapter Five

This chapter is used to present the results, findings and discussion of the interviews and focus group discussions using qualitative tools. It also examines members' satisfaction with cooperative savings and loan services which is considered as impact of the program at individual level.

Chapter Six

This chapter is the first chapter that used quantitative tool for empirical study of the thesis. It examines the relationship between participation in cooperative and household income and assets. T-test, one way ANOVA and standard effect size results were presented, analysed and discussed.

Chapter Seven

This chapter reports the second and the last empirical study of the thesis. It provides answers to two null hypotheses that examine the relationship that exists between membership of cooperatives societies and enterprises profitability and assets. Results of the hypotheses were reported and also discussed.

Chapter Eight

This chapter provides the summary of results documented separately in chapters five, six and seven to bring all the findings together. It was also used to integrate the results and findings on individuals, households and enterprises together to discuss how the three impact areas of the study fit into answering the research questions and achieving the research objectives.

9.4 Major Findings from the Study

The major findings of the study are discussed below based on the five research objectives.

9.4.1 Cooperative and Members Financial Needs

The first finding shows that savings products encourage members to save with the cooperatives instead of keeping money at home. This was seen as part of financial intermediation role of the cooperative. This is a major improvement in the local and primitive ways of keeping money at home, under the chairs and on the roof for a long period of time. The researcher interpreted this finding as implying advancement in the savings habit of rural dwellers that can be used as an avenue for the introduction of formal banking system to the rural people in the future. This finding, similar to that of Larocque et al. (2002), is important because savings habits can lead to more business for the formal banking sector if the banks can develop their business in rural areas. However, the lack of infrastructure in rural areas may prevent this and this may be an issue for the federal and state government to address. Hence, the benefits identified in this study accrue both to the rural dwellers themselves, and to the future developments in the formal banking sector.

The study discovered that the compulsory saving system of the cooperative has helped to inculcate a good saving habit into the majority of the members. The members find it easier to save now than when they first joined the program, as savings become habitual over time. The cooperative also helps the members to reduce or avoid unnecessary spending. The restriction on the withdrawal of

savings also helps members to visualise what awaits them if they withdraw their membership after a period of time or what will be given to their family in case of their death. This shows that saving is regarded as a form of social protection and social security which is not provided for by the government or others. Tsekpo (2008) notes that the absence of social protection scheme in the informal sector makes people look to cooperative societies as a source of solidarity in times of need.

The findings of this study on the benefits of loan service to the members show that the interest on loans is low compared to other informal finance providers, especially money lenders. This is expected to reduce the possibilities of members patronising such money lenders. It is interpreted to suggest a reduction in the number of loan defaults since, although it may not be possible to avoid loan default completely, it could be minimised by the low interest rate payable on the loan. The members do not see themselves as over-burdened by the program while servicing their loans. Flexible loan repayments in small instalments based on the borrower's income pattern was another finding. The ability to meet repayment schedules by the members is very important for cooperatives that relied solely on members' savings such as those considered in this study. Such cooperatives "achieve higher repayment rates" because "it is members' fund that is at stake" (Huppi and Feder, 1990: 199). The flexible loan repayment enhances adherence to the loan repayment schedule because members are not forced to pay specific amounts that their income cannot accommodate at a particular time. Processing of a cooperative loan is short – less than five days - enough to meet the time when members actually need the money.

The study found that the compulsory savings enhance self esteem of members because they see themselves as part owners of the cooperative. This makes them protect the interest of the cooperative and also do whatever it takes to ensure the continual existence of the program. This is similar to the findings of Edgcomb and Garber (1998), where self esteem arose because the program

leads to female members' empowerment, while Falaiye (2002) found self esteem because the clients had easier guarantees for loans. This is in contrast to Huppi and Feder's (1990) conclusion that failure of cooperative society is due to lack of sense of ownership among the members. The study reveals that savings help to actualise financial goals because the loan given depends on the amount of savings already held. This grants members confidence when in need of a loan facility from the cooperative because it will be very difficult, if not entirely impossible, for a loan application to be rejected. This agrees with Nathan et al. (2004) and Adjei et al. (2009) that the loan amount determines how the participants save. However, this is contrary to Larocque et al.'s (2002) result where only 13% of the program participants save in order to have access to credit.

The study shows that members' satisfaction is derived by the inter-personal relationship that occurs among the members whereby members see themselves as their siblings' keepers in many areas. This helps members in responding positively to socio-economic emergencies of their families and neighbours. The readiness of members to help each other when in trouble brought love and good relationship to the cooperative. This is traceable to the existence of spirit of togetherness among the cooperative members and not essentially to cultural aspects of any small community, though this may also have some influence on the result. A comment during the focus group discussions reveals that rural dwellers are neglected by the government on issues that affect their economy. This is contained in a statement by a female participant who is four years old in the scheme on the effect of the program with a broader perspective as stated below.

“The commercial banks have failed many of us who are poor people including the so called microfinance banks because they are located in the cities. The cooperative is the last and only hope of the poor in this community and neighbouring villages. It is ours and we are happy with it. Since the government cannot help us, we can help ourselves” (FGD 2).

The study also found loan availability, without the giving of physical collateral but supported by a personal guarantor who is also a member of the scheme, brought satisfaction to the program participants. This demands that members should be those of high integrity and of proven character within the community in order to access loans and guarantee other loan seekers from the cooperative. This is in view of the fact that a guarantor from the cooperative is also a member of the community. However, loan diversion could have a negative effect on members who stood as personal guarantors where such loan is not repaid as and when due. This may discourage some members from acting as a guarantor to other members of the program especially if such a guarantor experiences public ridicule because of another member's debt as a result of loan diversion. The researcher interprets the guarantor system to mean that members are more likely to get out of poverty if loans are properly utilised to enhance and improve an individual's income. Any financial service provider that desires to operate in rural areas must consider this, since the majority of rural dwellers do not have the type of collateral that can enable them to participate in loan products from the formal banking system (World Bank, 2000).

9.4.2 Relationship Between Cooperative Societies and Household Income

Almost everything that happens at household level depends on the pattern of income in the family which can increase, decrease or stay the same. The study found evidence that membership of cooperative societies provides part of the explanation for the increase in household income because there was a significant positive relationship between membership of the cooperative and an increase in household income. This enables the participants to increase household assets and thus leads to improvement in members' standard of living. The effect of a loan on an increase in household income was moderate with an average positive relationship.

9.4.3 Cooperative Participation and Acquisition of Household Assets

Acquisition of household asset represents an improvement in standard of living. The study shows that the following assets – land, generator, television, radio

and fridge – were more likely to be acquired by members than non-members. The study showed no linkage between participation in a cooperative and acquisition of motorised vehicles. This is not a concern in a rural area especially in the study locations with lack of tarred roads where the acquisition of automobiles may also result in high costs of repairs and maintenance.

The study found an average positive relationship of the ability of members to acquire land with a program loan. This is important because much of what happens in the rural areas is connected to the possession of land, which makes people much more powerful and gives them access to other resources. Whilst the study results differ from that of Sharma et al. (2005) - that non-members own more land than members - they agree with Simkhada's (2004) findings that members own more land than non-members. "Increase in land ownership is an important indicator of improvement in economic condition of a poor family" (Haque and Yamao, 2008: 668) and expansion in land ownership has a direct relationship to any increase in income. This means that the owner could sell such land in future with easy access to prospective buyers. The cooperative contributes to better standard of living measured in this way – through the numbers of members that own land through the cooperative loan. This is significant because the rural dwellers rely on the cooperative to provide financial intermediation for them.

In contrast, the study did not find evidence that cooperative members used the scheme as an avenue to acquire buildings. The loan amount available to most members may be too small to be used in the acquisition of buildings, bearing in mind that the program is self-sustained from the members' savings. Unlike the acquisition of land, house building is a longer term process, which may mean that the loan repayment duration of maximum of twelve months may not encourage the use of short term funds from the cooperative for a long term project such as house building. The high cost of building may also be too much for rural cooperatives to finance especially since the program is funded by the members without external funding. The findings suggest that house building in

rural areas is more likely to be a long term project that requires a good planning and the construction should be carried out in phases in order to manage the available money judiciously.

The study findings show a relationship between participation in a cooperative and ownership of generator. The researcher interprets this that, household ownership of generator in communities where there is lack of electricity is used to create, social strata and maintain a high social echelons in the community because of the lack of infrastructural facilities in such communities and villages. It also shows that the availability of electricity gives room for other activities such as the use of television, fridge and extended evening period to work, relax and relate with other households. The ownership of a generator indicates that such a member is economically stable because of the additional cost of fuelling the generator. The fuel cost will add to the household expenditure and thus suggest that such members' income has increased whereby they could take loan to acquire a generator and also afford the cost of fuelling and maintaining it. The study also found that participation in a cooperative can be associated with an increase in the acquisition of radios, televisions (similar to the result found in Adjei et al., 2009), and fridges at household level.

The acquisition of these assets - generator, television, fridge and radio - is an indication of improvement in members' standard of living made possible through access to cooperative loans. Hence members that took loans were significantly able to acquire household assets through such a loan. This is interpreted that participation in cooperative societies increases the capacity to acquire more household assets because of increase in income. This helps members to deal with risky situations which previously forced poor people to either sell their household assets or maintain the same level of assets over the years (Mawa, 2008). The effect of the cooperative on household assets ownership is moderate with an average positive relationship. The researcher interprets this as an improvement in standard of living and economic conditions rather than quality of life, as these are material acquisitions. However, it should be noted

that the cost of these household items are minimal compared to the cost in a developed economy because some of the items are well-used (as stated in chapter six, page 188) and imported from abroad. Hence, a small loan resulting in an increase in such assets still makes a difference and can lead to a better standard of living among members.

9.4.4 Relationship Between Cooperative and Enterprise Profitability

The study examines the role of cooperative societies on participants' enterprises, to establish if this has led to more profit as a result of access to a loan facility from the program. The initial findings show evidence that participation in a cooperative is associated with expansion in size of business facility, addition of new products/diversification and hiring of more workers. The study does not find any evidence to support a relationship between cooperative membership and improvement in quality of products, reduction of cost by wholesale buying, cheaper sources of credit, development of new enterprise, selling in new markets/location and making of more profit.

However, the overall study shows that there is no evidence that participation in a cooperative leads to business development that can be associated with increased profitability. Although the members have access to loan for their enterprise, this does not appear to contribute to making more profit than those without a loan opportunity. This is an unexpected finding which implies that the ability to make more profit is likely a function of other factors than access to a cooperative loan. The findings therefore point to the use of loans for business development which does not appear to result in increased profits, as far as the members could identify.

9.4.5 Relationship Between Cooperatives and Enterprise Assets

The last aspect of the study considers the effect of cooperative on increase in enterprise assets. Whilst the study found insignificant evidence of the effects of a loan on acquisition of small tools and investment in storage facilities, a better standard of living was traced to the acquisition of major tools by members

because there is a positive effect of the program's loan on members' ability to buy major tools. A significant result was found in ownership of means of transportation and in the minor investment in a marketing site. The study found significant evidence of increase in enterprise assets as a result of participation in cooperative societies. Members significantly increase their enterprise assets which they used to generate income (but not necessarily profit – see section 9.4.4 above) in their enterprise. This suggests a reduction in poverty level and improvement in the standard of living of the participants as a result of participating in the cooperative societies.

9.5 Major Findings and the Social Capital Theory

According to May (2001: 33), “findings on the social world are devoid of meaning until situated within a theoretical framework”. The delivery of rural finance is better understood and appreciated when examined through the lens of the social capital theory drawn out from the literature.

Social capital theory concerns the relationship that exists among people which is expected to lead to social and economic development. The theory signifies “the abilities of people to work together towards resolving social issue and promote equitable access to benefits of development” (Basargekar, 2010: 27). The finding that the program leads to the improvement of members' self esteem is confirmed by social capital theory where people operate in association. This makes the members to protect the interest of the program to ensure its continuity because of the acquisition of collective assets expected to lead to social and economic development.

Social capital is considered as a tool of economic development among people which also affect them positively (Anderson et al., 2002; Rankin, 2002) based on their “collective action for mutual benefit” (Basargekar, 2010: 26). The theory also focuses on collective responsibility that promotes better loan repayment (Basargekar, 2010). This is found in the study on the use of a personal guarantor for cooperative loans instead of collateral assets. This helps an

individual to access loan. The personal guarantor arrangement greatly enhances the inter-personal relationships among members which enable them to provide support for members in trouble and reduce their individual poverty level, an effect identified in social capital theory. Similarly, the study found that members are satisfied with the core elements of the program - financial intermediation of mobilising savings, and giving of loans to members at reduced interest rate. The study found that participation in a cooperative fosters social relationships as explained by social capital theory. Social capital is achieved through cordial relationships among members because they provide guaranty to one another. The above findings demonstrated how these actions brought love and good relationship to the program participants, as explained by social capital theory.

The study findings of an increase in the acquisition of household and enterprise assets are explained by the physical capital aspect of the social capital theory. Furthermore, the financial capital in the theory also explains the result of the increase in household income among the participants. However, an increase in financial capital through enterprise profitability was not found and this may be because profits realised are spent rather than been re-invested. However, a lack of increase in enterprise profitability does not contradict the explanatory power of social capital theory.

The benefit of restriction on the withdrawal of savings which helped the members to understand the consequence of withdrawing their membership after a period of time reveals that saving is regarded as a form of social security, which is a social capital, and especially financial security in form of the ability to accumulate savings and access to loans. The social capital theory explains the unexpected finding of the study that members' satisfaction is derived by the inter-personal relationship that occurs whereby members see themselves as their siblings' keepers in many areas of life because members are ready and do help each other when in trouble depending on the need of the member.

9.6 Contribution of Study to Knowledge

The study attempts to be the first empirical investigation in Nigeria that focuses on the relevance of cooperative societies on members' standard of living in rural communities and villages outside the state capital and local government headquarters where there are no government electricity, water and tarred road facilities.

The study shed light on how rural communities function – how their relationships develop, how individual esteem is increased, how interdependence grows, how hierarchies are maintained – and how this is facilitated in part by the loan-making of members promoted cooperatives. It has also provided more evidence on the importance of land ownership, and how this is enhanced when rural communities have access to cheap and affordable loans. It has also provided insights into the development of rural businesses, how complex they are, and how they require more input than the financing received through cooperative loans. In this way, the study makes a significant contribution to our understanding of rural communities in developing economies, thereby allowing the relationship between cooperative finance and rural economy development to be made clearer. In this way, the contribution is both academic – in the addition to the literature on community development, rural finance, standard of living issues, and informal cooperative functioning, and to practice – in the application of the findings to policy development, particularly in the banking sector.

The study contributes to knowledge in specific areas as discussed above, and as highlighted below.

The study developed the circle of social capital theory (page 59) which provides clarity to the expected component of the social capital theory when the theory is applied to rural finance, and especially for cooperative societies located in rural areas. The theory, applied to the findings of this study, allows the explanation of the interactions that exist through social, physical and financial capital which is

expected to be found in cooperatives. By applying the social capital theory, the study has discovered that cooperative helps the members to achieve increase in their social, physical and financial capital. In this way, the study contributes further to the explanatory power of social capital theory by demonstrating the interdependence of these three types of capital.

The study provides a clear distinction between standard of living and quality of life variables in measuring the economic condition of rural dwellers. Hitherto, this has been combined in other studies (Edgcomb and Garber, 1998; Falaiye, 2002; Calkins and Ngo, 2005; Sharma et al, 2005; Allahdadi, 2011) which leads to the inability to properly report their findings on quality of life criteria - not because quality of life is more of a qualitative issue but because their studies cover too many parameters of both the standard of living and quality of life. Because of these, results for the standard of living and quality of life variables were not properly reported. This study concentrates on variables of standard of living alone. This helps to trace the role of cooperatives to ownership of household assets, enterprise assets, enterprise profitability and increase in household income to determine changes in members' standard of living. This is important, because it enhances our understanding of the role of cooperative societies in rural finance, as being about improving standards of living of the members rather than quality of life such as health and family planning which rural cooperatives may not be financially adequately empowered to do.

The study has made a contribution in the application of social capital theory in exploring the roles of cooperatives in the creation of the three components - physical, social and financial capital - of the theory for their members. This contribution is unique, not because the three capitals are not part of the social capital theory but, because these capitals have not been explored by any single study underpinned by social capital theory. This study therefore broadens our knowledge to the usefulness of adopting the three capitals in a single study to explain the role of cooperative societies and other rural finance programs.

This study contributes to knowledge by filling the gap identified in the literature on the role of members promoted cooperative societies in rural areas. The objectives critically examined the effect of cooperative on members' standard of living. This has been partially examined by other studies (Ghosh and Maharjan, 2001; Larocque et al., 2002; Adedayo and Yusuf, 2004). However, Develtere and Pullet (2008) note that the role of cooperative societies on members' standard of living and poverty reduction has not been studied in any systematic way. This study fills the gap by examining the main criteria of standard of living at the individual, household and enterprise levels which are not explicit in other studies. The gap was filled in the sense that the study engaged the literature in identifying the limitations of previous studies (identified by Develtere and Pullet (2008) above). Methodologically, the study began by considering the range of other researchers' methods, which include research strategies suitable for the study, and also identified users of these methods and the reasons for their choices. This process led to the choice of both qualitative and quantitative methods for the study through an organised system of data collection.

This study also contributes to knowledge by applying the social capital theory to all the five research objectives, so as to discover the contribution of cooperative societies to members' standard of living and its implication for rural finance. Previous studies have used the social capital theory in other countries (Anderson et al., 2002; Lohlein and Wehrheim, 2003; Simkhada, 2004; Sharma et al., 2005) but in the case of Nigeria, the theory has not been used to explain the role of cooperative societies. The uniqueness of this study is the application of the three components of the social capital theory to the role of cooperative societies in Nigeria with concentration on rural areas of Ogun State. This, not only enables us to understand more fully how social and financial benefits flow from participating in cooperatives in this State but, allows a more general statement of the effect of rural finance provision to the improvement of rural dwellers standard of living.

9.7 Implications of Findings

The possible implications of the findings of this study for rural finance are as follows.

There is advancement in savings habits of rural people and this can be used as an avenue for the introduction of rural bank to the rural dwellers. This finding is important to the government, academicians and practitioners because if cooperative members can save with the scheme and also enjoy financial intermediation, they can also save with the rural bank where their savings can be withdrawn at will provided the bank is located nearer to the people. The policy implication will require the review of the current banking policy and regulation by the government to allow for the establishment of rural banks in rural areas. Establishment of rural bank will help to integrate the rural people into the financial system which will also help to reduce the quantity of money outside the banking system.

The study found evidence that loan availability without the use of collateral coupled with the low interest rate charged on loans as compared to that of the money lenders and the banks brought satisfaction to cooperative members. Any financial institutions that desire to operate in rural areas have the instrument of low interest and non-usage of collateral to contend with since majority of the rural people do not have the type of collateral required to participate in formal banking system (World Bank, 2000). The implication for practitioners is to device ways of reaching the rural people with savings and loan product in group such that the group guarantees individual member's loan. More funds can be mobilised as savings from this arrangement with improved amount of loan that could be given.

One of the findings in chapter seven challenged the lack of finance as the main reason for low profit among rural entrepreneurs. The rural entrepreneurs possibly need more things such as reduction of cost by wholesale purchase, improvement in quality of product and perhaps a greater entrepreneurial spirit.

And these are independent of loan provisions. This requires the immediate attention of the government to provide the necessary infrastructural facilities and training scheme in management, production, marketing and sales that will easily expose the rural dwellers to other economic information and modern equipment that may lead to reduction in cost of production and prepare them to make more sales.

The study reveals the lack of loan monitoring and supervision by the cooperative executives. As such, the executives should be concerned about the use of loan to ensure that loans are properly utilised for the purpose for which it is taken. This has the potential of reducing loan default and also encourage sincere member to be more committed to the program. This may also discourage members without genuine motives from accessing the program loan. Alternatively, It may be needful to ensure that guarantor(s) agree(s) with the purpose for which loans are obtained and monitor the loan before providing such obligation to compliment the efforts of the executives. The current duration of loan repayment of not more than twelve months is acceptable to members may be because of the loan amount involved. If loan amount is increased, it may not be possible to accomplish some repayment within the current loan duration. Likewise, the loan processing period may need to be reviewed to make it shorter to accommodate emergency cases because “poor households are more inclined to be in need of survival measures which include emergency consumption credit facilities” (Adjei et al. 2009: 282).

The study shows that the cooperatives should not be assumed to have met the growing financial needs of the rural dwellers. The existing cooperatives need to be developed with access to cheap fund from the government for on-lending to their members at reduced interest rate because the cooperatives are trusted part of the rural economy. The federal government through the Central Bank should be willing to provide free fund, though refundable, to cooperative societies operating in the rural areas for on-lending to their members, and the conditions attached should not be stringent to discourage the poor from

accessing the fund. This requires a shift of focus by the relevant governments and their agencies to deliberately put in place a functional policy that will lead to poverty reduction because of the growth of rural economy by removing constraints that hinders easy accessibility of rural goods and services to the urban centres.

Rural enterprise policy development training programs should be put in place at the local government level where rural dwellers can be trained on different areas of rural business management since the use of cooperative loan in their enterprise does not translate to more profit. This should include skill acquisition in management, production, marketing and sales which will enhance the use of modern tools and money management.

The finding that cooperative inculcate good savings habit to the rural dwellers implies that, it is not too late for Nigeria to commence a purpose driven rural finance strategic fund to develop rural financial system through the cooperatives, to provide revolving credit to rural dwellers through their respective cooperative, and to integrate the unregistered cooperative into formal rural finance providers for the development and improvement of rural economy. This arrangement will be relevant because the interest rate on bank loan is too high for rural cooperatives to access for on-lending to their members. This arrangement may reduce the cost of providing social support for rural people by the government.

The study reveals that the scheme replaces the absence of government social security in rural areas because the social security in Nigeria only covers people in paid employment in government registered enterprises. The government may have to either develop a new social security system solely for the rural dwellers or incorporate the rural people into the existing social security policy. In addition, concerted efforts should be made by the government to provide infrastructural facilities such as tarred road, electricity and drinkable water to the rural areas so as to improve their economic well-being. This may impact

positively on their business since the time lost due to none availability of these three infrastructural facilities in all the study sites can be channelled to productive use in their enterprises which may also increase their income, improve standard of living and further reduce poverty as household and enterprise income increases.

9.8 Limitations and Future Studies

The nature of a doctoral research in most cases imposes some restrictions on the researcher which may include the scope and coverage of the study as a result of time and financial constraints. This study is not an exception to these constraints.

The study is cross sectional which examines the phenomenon at a particular point in time. This may not provide a complete picture of the phenomenon studied. The researcher could not use longitudinal study due to lack of baseline data and time constraint. If this were to be available, the impact would be better measured using a longitudinal study which may have helped in tracing changes over a long period of time. Future studies may want to leverage on this by using the data provided in the study as baseline information for the conduct of longitudinal studies.

The actual amount of income available to the households and the economic value of household and enterprise assets could not be determined. The study relied on the respondents' response only which may give room for bias and dishonesty since physical inspection of the assets was not carried out. This limitation does not allow for comparison of values of assets with household and enterprise income. Future researchers may wish to involve professional valuers to determine the ranges of value of assets to be used for their study.

In addition to the above, the illiteracy level of the respondents made it difficult for them to personally complete the questionnaire without the researcher's assistance. This could create a mistake though adequate care was taken by the

researcher in the field work. Since the respondents were not able to personally peruse the completed questionnaire before it was used for the study, it may likely affect the outcome of the study especially in areas where increase, decrease and additions are used. In this case, future studies may want to consider members of registered cooperatives who may have better level of education than the unregistered cooperatives used in this study.

Lastly, the researcher will be willing to use qualitative tools – interview and focus group discussion – on household and enterprise impact level as a follow-up to this study, using the current findings as the bases for the investigation. However, access to the individuals may be difficult while the membership status of the participants – from no-loan member to loan member – might have changed considerably.

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Appendix 1. INTERVIEW QUESTION GUIDE

Community_____ Date_____

Local Government_____

A. Individual Basic Information

1. What is the name of your cooperative? _____
2. How long have you been a member? _____ (1) 0 – 1 year (2) 2 – 5 years (3) 6 years and above
3. Sex _____ (1) Male (2) Female
4. How old are you? _____ (1) 21-30 (2) 31-40 (3) 41-50 (4) 51-60 (5) 61- 70 (6) 71 and above.
5. Current marital status? _____ (1) Married (2) Separated/divorced (3) Widowed (4) Single/never married
6. What is the highest level of education you have completed?
(1) None (2) Primary School (3) Secondary School
(4) Technical/Vocational School (5) University/Polytechnic
7. Type of your family_____ (1) Monogamous (2) Polygamous

B. Savings Product

1. Do you save in the cooperative?
2. How regular do you save in a month?
3. What do you think about the savings?
4. What do you like about the savings?
5. What do you dislike in the savings?
6. What changes took place in your life as a result of saving in the program?
7. What changes would you like to see in the savings product?
8. Comment generally on the savings.

C. Loan Product

1. Have you taken loan from the cooperative before?
2. What did you do with the loan?

3. What do you think about the size of the loan? Is it too big, just enough, or too small?
4. How regular do you repay the loan?
5. How do you feel about the repayment amount?
6. What do you like about the loan?
7. What do you dislike about the loan?
8. What changes took place as a result of spending your loan?
9. Would you have been able to borrow from other source without the cooperative?
10. What is your comment on the loan?

D. Client Satisfaction

1. What are the main reasons that drew you to join the cooperative?
2. How would you describe your experience in participating in the cooperative?
3. In what ways did the cooperative make your life better?
4. In what ways did the cooperative make your life worse?
5. Why are you still remaining with the cooperative as a member?
6. Would you encourage your relative or friend to join the cooperative?
7. Why would you want your friend/relative to join or not to join the cooperative?
8. What changes do you want in the program?
9. What is your comment about the cooperative?

Appendix 2. FOCUS GROUP DISCUSSION GUIDE

A. Savings Product

1. What do you think about the savings?
2. What do you like about the savings?
3. What do you dislike in the savings?
4. What changes took place in members' life as a result of saving in the program?
5. What changes would you like to see in the savings product?
6. Comment generally on the savings?

B. Loan Product

1. What do you think about the size of cooperative loan?
2. What do you like about the loan?
3. What do you dislike about the loan?
4. What changes (positive and negative) took place among members as a result of access to the program loan?
5. What is your comment about the loan product?

C. Client Satisfaction

1. How would you describe your experience in participating in the cooperative?
2. In what ways did the cooperative make members' life better?
3. In what ways did the cooperative make members' life worse?
4. What changes do you expect in the program?
5. What is your comment about the cooperative?

Appendix 3. IMPACT SURVEY QUESTIONNAIRE

Dear respondent,

You have been selected to participate in a study that seeks to know your view about the cooperative society that you belong to. This exercise is for an academic purpose as a requirement in partial fulfilment for the degree of Doctor of Philosophy in Accounting and Finance. All information that you will provide will be treated in strict confidence.

Thank you.

Onafowokan Oluyombo

Questionnaire

Community _____ Date _____
Local Government _____

Section A. Individual Level: Basic Information

- Q1a.** What is the name of your cooperative? _____
- Q1b.** Have you taken loan from the cooperative before? _____ (1) Yes (2) No
- Q1c.** How long have you been a member? _____ (1) 0 – 1 year (2) 2 – 5 years (3) 6 years and above
- Q2.** Sex _____ (1) Male (2) Female
- Q3.** How old are you? _____ (1) 21-30 (2) 31-40 (3) 41-50 (4) 51-60 (5) 61-70 (6) 71 and above.
- Q4.** Current marital status? _____ (1) Married (2) Separated/divorced (3) Widowed (4) Single/never married
- Q5.** What is the highest level of education you have completed?
(1) None (2) Primary School (3) Secondary School
(4) Technical/Vocational School (5) University/Polytechnic

Section B. Household Level: Basic Information

- Q6.** Who owns the house where you live? _____ (1) Self (2) Rent it (3) Parent/family

Q7a. How many persons in your household (those who live together with you and share the same food at least once a day) are:

Number of persons?

Adult – 18 years of age or older?

Children – 17 years of age or younger?

Q7b. Type of your family _____ (1) Monogamous (2) Polygamous

Q7c. Who is the head of your household (the person who takes major decision)? _____ (1) Self (2) Female relative (wife, mother, sister, aunt, grandmother, mother-in-law, sister-in-law) (3) Male relative (husband, father, brother, uncle, grandfather, father-in-law, brother-in-law)

Section C. Household Level: Income

Q8a. Compared to a year ago, what is the position of your household overall income? _____ (1) Decreased greatly (2) Decreased (3) Stayed the same (4) Increased (5) Increased greatly

Q8b. (*If decreased at all*) Why did your income decrease? _____ (*Multiple answers possible*). (a) Household member fell sick or died (b) I have been sick (c) Loss to natural disaster (flood, wind) (d) Unable to get stock (e) Poor sales (f) Could not collect credit sales (g) Lost job

Q8c. (*If increased at all*) Why did your income increase? _____ (*Multiple responses possible*) (a) Expanded existing business (b) Started new business (c) Got a job / increase in wages (d) Able to buy stock at cheaper price (e) Opened a new shop/store

Section D. Household Level: Assets

Q9. Please indicate if you or anyone in your household owns any of these items.

Item (Read across by row, A - D, item by item)	A. Does anyone in the household own this item?		B. Are the items in good conditions/working well?		C. Was the item(s) acquired during the last 2 years?		D. (Loan members only) Was this possible because you took cooperative loan?	
	Yes	No	Yes	No	Yes	No	Yes	No
a. Motorcycle/Tri-cycle								
b. Refrigerator								
c. Car/lorry								
d. Plot of land								
e. Television								
f. Generator								
g. Radio								
h. Video/CD								
i. Fan								
j. Build house								

Section E. Enterprise Level: Income, Labour and Profit

Q10. During the last 12 months, did you make any of the following changes to your business activity so that you could earn more income or be more productive? (Read list of possible changes. Mark the appropriate box with an X.)	Yes	No
a. Expanded size of enterprise/business facility/farm		
b. Added new products/diversify crops		
c. Hired more workers		
d. Improved quality or desirability of product/add value, improved seed		
e. Reduced costs by buying inputs in greater volume or at wholesale prices		
f. Reduced costs with cheaper source of credit		
g. Developed a new enterprise		
h. Make more profit		
i. Sold in new markets/locations		

Section F. Enterprise Level: Assets

Q11. During the last 12 months, did you purchase or invest in any of the following assets for your business activity? (<i>Read list of possible changes. Mark the appropriate box with an X.</i>)	Yes	No
a. Purchased small tools/accessories (such as hoes, plough, baskets, basins, barrels)		
b. Purchased major tools (such as sewing machine, pumping machine, equipment, machinery)		
c. Purchased own means of transportation (such as car, motor cycle, bicycle, tri-cycle, pushcart)		
d. Invested in a storage structure (such as a granary, stock room, cold room)		
e. Made a minor investment in marketing site (by purchasing a chair, table, shed or the like)		
f. Build structures in business location (kiosk, shop)		

Section G. Enterprise Level: Use of Loan

Q12. How did you invest the last loan you took from your cooperative society?

(Do not read answers. Multiple responses possible)

- (a) Commerce/trade/retail (includes petty trade)
- (b) Manufacturing (includes food processing, textile production, crafts, leather work)
- (c) Service (includes hair dressing, restaurants, food stalls, cleaning services, shoe repairs)
- (d) Agriculture (includes food or other crop production, animal raising)
- (e) Fishing
- (f) Did not invest the loan in an income-generating enterprise.

Appendix 4. STANDARD EFFECT SIZE CALCULATION ON HOUSEHOLD

Outcome measure	DATA ENTRY						DIFFERENCE		
	Treatment group			Control group			pooled standard deviation	Mean Difference	Standardized Effect Size
	Mean	n	SD	mean	n	SD			
EFFECT OF LOAN ON: Household Income	0.87	223	0.34	0.76	79	0.43	0.36	0.11	0.30
EFFECT OF LOAN ON: No. of Land owned	0.332	223	0.47	0.203	79	0.40	0.46	0.13	0.28
EFFECT OF LOAN ON: No. of Generator owned	0.395	223	0.49	0.241	79	0.43	0.48	0.15	0.32
EFFECT OF LOAN ON: No. of Television owned	0.26	223	0.44	0.127	79	0.33	0.41	0.13	0.32
EFFECT OF LOAN ON: No. of Radios owned	0.278	223	0.45	0.418	79	0.496	0.46	-0.14	-0.30
EFFECT OF LOAN ON: No. of Fridge owned	0.269	223	0.44	0.114	79	0.32	0.42	0.16	0.37
EFFECT OF LOAN ON: No. of Household Assets owned	3.363	223	1.91	2.684	79	1.215	1.76	0.68	0.39

Formulae

Pooled standard deviation

$$\frac{(SD \times (n-1)) + (SD \times (n-1))}{(n + n - 2)}$$

Standardised effect size

$$\frac{\text{Mean difference}}{\text{Pooled SD}}$$

Appendix 5. ANOVA TEST RESULTS ON HOUSEHOLD – SPSS OUTPUT

HOUSEHOLD INCOME

A. Membership Duration

Descriptives

Number with increase in household income

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0-1 yr	63	.7619	.42934	.05409	.6538	.8700	.00	1.00
2-5 yrs	136	.8015	.40037	.03433	.7336	.8694	.00	1.00
>/= 6 yrs	103	.9417	.23537	.02319	.8957	.9877	.00	1.00
Total	302	.8411	.36623	.02107	.7996	.8825	.00	1.00

ANOVA

Number with increase in household income

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.652	2	.826	6.379	.002
Within Groups	38.719	299	.129		
Total	40.371	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Number with increase in household income

Tukey HSD

(I) Membership duration	(J) Membership duration	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
0-1 yr	2-5 yrs	-.03957	.05484	.751	-.1687	.0896
	>/= 6 yrs	-.17984*	.05756	.006	-.3154	-.0443
2-5 yrs	0-1 yr	.03957	.05484	.751	-.0896	.1687
	>/= 6 yrs	-.14028*	.04700	.009	-.2510	-.0296
>/= 6 yrs	0-1 yr	.17984*	.05756	.006	.0443	.3154
	2-5 yrs	.14028*	.04700	.009	.0296	.2510

*. The mean difference is significant at the .05 level.

B. Age

ANOVA

Number with increase in household income

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.060	4	.265	2.002	.094
Within Groups	39.311	297	.132		
Total	40.371	301			

C. Marital Status

ANOVA

Number with increase in household income

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.055	3	.352	2.665	.048
Within Groups	39.316	298	.132		
Total	40.371	301			

D. Education

ANOVA

Number with increase in household income

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.475	4	.119	.885	.473
Within Groups	39.895	297	.134		
Total	40.371	301			

E. Household Size

ANOVA

Number with increase in household income

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.833	12	.069	.508	.909
Within Groups	39.537	289	.137		
Total	40.371	301			

F. House Ownership

Descriptives

Number with increase in household income

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Self	92	.8370	.37143	.03872	.7600	.9139	.00	1.00
Rent it	170	.8941	.30860	.02367	.8474	.9408	.00	1.00
Parent/Family	40	.6250	.49029	.07752	.4682	.7818	.00	1.00
Total	302	.8411	.36623	.02107	.7996	.8825	.00	1.00

ANOVA

Number with increase in household income

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.347	2	1.174	9.229	.000
Within Groups	38.023	299	.127		
Total	40.371	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Number with increase in household income

Tukey HSD

(I) House Ownership	(J) House Ownership	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Self	Rent it	-.05716	.04616	.431	-.1659	.0516
	Parent/Family	.21196*	.06754	.005	.0529	.3710
Rent it	Self	.05716	.04616	.431	-.0516	.1659
	Parent/Family	.26912*	.06267	.000	.1215	.4167
Parent/Family	Self	-.21196*	.06754	.005	-.3710	-.0529
	Rent it	-.26912*	.06267	.000	-.4167	-.1215

*. The mean difference is significant at the .05 level.

G. No. of Children

ANOVA

Number with increase in household income

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.373	7	.196	1.479	.174
Within Groups	38.998	294	.133		
Total	40.371	301			

HOUSEHOLD ASSETS

1. PLOT OF LAND OWNED

A. Membership Duration

Descriptives

Number of Lands owned

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0-1 yr	63	.0952	.29590	.03728	.0207	.1698	.00	1.00
2-5 yrs	136	.3382	.47486	.04072	.2577	.4188	.00	1.00
>= 6 yrs	103	.3689	.48487	.04778	.2742	.4637	.00	1.00
Total	302	.2980	.45814	.02636	.2461	.3499	.00	1.00

ANOVA

Number of Lands owned

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.328	2	1.664	8.314	.000
Within Groups	59.850	299	.200		
Total	63.179	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Number of Lands owned

Tukey HSD

(I) Membership duration	(J) Membership duration	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
0-1 yr	2-5 yrs	-.24300*	.06818	.001	-.4036	-.0824
	>= 6 yrs	-.27369*	.07156	.000	-.4422	-.1051
2-5 yrs	0-1 yr	.24300*	.06818	.001	.0824	.4036
	>= 6 yrs	-.03070	.05844	.859	-.1683	.1070
>= 6 yrs	0-1 yr	.27369*	.07156	.000	.1051	.4422
	2-5 yrs	.03070	.05844	.859	-.1070	.1683

*. The mean difference is significant at the .05 level.

B. Marital Status

ANOVA

Number of Lands owned

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.757	3	.252	1.204	.308
Within Groups	62.422	298	.209		
Total	63.179	301			

C. Educational Background

ANOVA

Number of Lands owned

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.237	4	.309	1.483	.207
Within Groups	61.942	297	.209		
Total	63.179	301			

D. House Ownership

ANOVA

Number of Lands owned

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.755	2	.378	1.809	.166
Within Groups	62.423	299	.209		
Total	63.179	301			

E. Household Size

ANOVA

Number of Lands owned

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.793	12	.399	1.977	.026
Within Groups	58.386	289	.202		
Total	63.179	301			

F. Age

Descriptives

Number of Lands owned

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
21 - 30 yrs	35	.5143	.50709	.08571	.3401	.6885	.00	1.00
31 - 40 yrs	138	.2246	.41886	.03566	.1541	.2951	.00	1.00
41 - 50 yrs	94	.3511	.47986	.04949	.2528	.4493	.00	1.00
51 - 60 yrs	27	.2593	.44658	.08594	.0826	.4359	.00	1.00
61 - 70 yrs	8	.1250	.35355	.12500	-.1706	.4206	.00	1.00
Total	302	.2980	.45814	.02636	.2461	.3499	.00	1.00

ANOVA

Number of Lands owned

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.925	4	.731	3.604	.007
Within Groups	60.254	297	.203		
Total	63.179	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Number of Lands owned

Tukey HSD

(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
21 - 30 yrs	31 - 40 yrs	.28965*	.08524	.007	.0557	.5236
	41 - 50 yrs	.16322	.08919	.358	-.0816	.4080
	51 - 60 yrs	.25503	.11537	.179	-.0616	.5717
	61 - 70 yrs	.38929	.17651	.180	-.0952	.8737
31 - 40 yrs	21 - 30 yrs	-.28965*	.08524	.007	-.5236	-.0557
	41 - 50 yrs	-.12643	.06024	.223	-.2918	.0389
	51 - 60 yrs	-.03462	.09478	.996	-.2948	.2255
	61 - 70 yrs	.09964	.16380	.974	-.3499	.5492
41 - 50 yrs	21 - 30 yrs	-.16322	.08919	.358	-.4080	.0816
	31 - 40 yrs	.12643	.06024	.223	-.0389	.2918
	51 - 60 yrs	.09180	.09835	.884	-.1781	.3617
	61 - 70 yrs	.22606	.16588	.652	-.2292	.6814
51 - 60 yrs	21 - 30 yrs	-.25503	.11537	.179	-.5717	.0616
	31 - 40 yrs	.03462	.09478	.996	-.2255	.2948
	41 - 50 yrs	-.09180	.09835	.884	-.3617	.1781
	61 - 70 yrs	.13426	.18131	.947	-.3634	.6319
61 - 70 yrs	21 - 30 yrs	-.38929	.17651	.180	-.8737	.0952
	31 - 40 yrs	-.09964	.16380	.974	-.5492	.3499
	41 - 50 yrs	-.22606	.16588	.652	-.6814	.2292
	51 - 60 yrs	-.13426	.18131	.947	-.6319	.3634

*. The mean difference is significant at the .05 level.

G. No. of Children

ANOVA

Number of Lands owned

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.342	7	.335	1.617	.130
Within Groups	60.837	294	.207		
Total	63.179	301			

2. GENERATOR OWNED

A. Membership Duration

ANOVA

Number of Generators owned

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.635	2	.318	1.387	.251
Within Groups	68.454	299	.229		
Total	69.089	301			

B. Age

ANOVA

Number of Generators owned

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.370	4	.343	1.503	.201
Within Groups	67.719	297	.228		
Total	69.089	301			

C. Marital Status

ANOVA

Number of Generators owned

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.557	3	.519	2.290	.078
Within Groups	67.533	298	.227		
Total	69.089	301			

D. Education

ANOVA

Number of Generators owned

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.044	4	.511	2.264	.062
Within Groups	67.045	297	.226		
Total	69.089	301			

E. House Ownership

Descriptives

Number of Generators owned

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Self	92	.2500	.43539	.04539	.1598	.3402	.00	1.00
Rent it	170	.4353	.49726	.03814	.3600	.5106	.00	1.00
Parent/Family	40	.2500	.43853	.06934	.1098	.3902	.00	1.00
Total	302	.3543	.47910	.02757	.3001	.4086	.00	1.00

ANOVA

Number of Generators owned

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.551	2	1.276	5.732	.004
Within Groups	66.538	299	.223		
Total	69.089	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Number of Generators owned
Tukey HSD

(I) House Ownership	(J) House Ownership	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Self	Rent it	-.18529*	.06106	.007	-.3291	-.0415
	Parent/Family	.00000	.08934	1.000	-.2104	.2104
Rent it	Self	.18529*	.06106	.007	.0415	.3291
	Parent/Family	.18529	.08290	.067	-.0100	.3806
Parent/Family	Self	.00000	.08934	1.000	-.2104	.2104
	Rent it	-.18529	.08290	.067	-.3806	.0100

*. The mean difference is significant at the .05 level.

F. Household Size

ANOVA

Number of Generators owned

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.895	12	.325	1.439	.147
Within Groups	65.195	289	.226		
Total	69.089	301			

G. No. of Children

ANOVA

Number of Generators owned

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.973	7	.425	1.888	.071
Within Groups	66.117	294	.225		
Total	69.089	301			

3. TELEVISION OWNED

A. Membership Duration

ANOVA

Number of Televisions owned

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.542	2	.271	1.555	.213
Within Groups	52.146	299	.174		
Total	52.689	301			

B. House Ownership

ANOVA

Number of Televisions owned

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.087	2	.044	.248	.780
Within Groups	52.601	299	.176		
Total	52.689	301			

C. Household Size

ANOVA

Number of Televisions owned

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9.037	12	.753	4.986	.000
Within Groups	43.652	289	.151		
Total	52.689	301			

D. Marital Status

ANOVA

Number of Televisions owned

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.570	3	.190	1.087	.355
Within Groups	52.119	298	.175		
Total	52.689	301			

E. Age

Descriptives

Number of Televisions owned

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
21 - 30 yrs	35	.0571	.23550	.03981	-.0238	.1380	.00	1.00
31 - 40 yrs	138	.1957	.39815	.03389	.1286	.2627	.00	1.00
41 - 50 yrs	94	.2766	.44971	.04638	.1845	.3687	.00	1.00
51 - 60 yrs	27	.3704	.49210	.09471	.1757	.5650	.00	1.00
61 - 70 yrs	8	.3750	.51755	.18298	-.0577	.8077	.00	1.00
Total	302	.2252	.41838	.02408	.1778	.2725	.00	1.00

ANOVA

Number of Televisions owned

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.106	4	.526	3.091	.016
Within Groups	50.583	297	.170		
Total	52.689	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Number of Televisions owned

Tukey HSD

(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
21 - 30 yrs	31 - 40 yrs	-.13851	.07810	.391	-.3529	.0759
	41 - 50 yrs	-.21945	.08172	.059	-.4437	.0048
	51 - 60 yrs	-.31323*	.10571	.027	-.6034	-.0231
	61 - 70 yrs	-.31786	.16173	.286	-.7617	.1260
31 - 40 yrs	21 - 30 yrs	.13851	.07810	.391	-.0759	.3529
	41 - 50 yrs	-.08094	.05519	.585	-.2324	.0705
	51 - 60 yrs	-.17472	.08684	.263	-.4131	.0636
	61 - 70 yrs	-.17935	.15008	.754	-.5913	.2326
41 - 50 yrs	21 - 30 yrs	.21945	.08172	.059	-.0048	.4437
	31 - 40 yrs	.08094	.05519	.585	-.0705	.2324
	51 - 60 yrs	-.09377	.09011	.836	-.3411	.1535
	61 - 70 yrs	-.09840	.15199	.967	-.5156	.3187
51 - 60 yrs	21 - 30 yrs	.31323*	.10571	.027	.0231	.6034
	31 - 40 yrs	.17472	.08684	.263	-.0636	.4131
	41 - 50 yrs	.09377	.09011	.836	-.1535	.3411
	61 - 70 yrs	-.00463	.16612	1.000	-.4606	.4513
61 - 70 yrs	21 - 30 yrs	.31786	.16173	.286	-.1260	.7617
	31 - 40 yrs	.17935	.15008	.754	-.2326	.5913
	41 - 50 yrs	.09840	.15199	.967	-.3187	.5156
	51 - 60 yrs	.00463	.16612	1.000	-.4513	.4606

*. The mean difference is significant at the .05 level.

F. Education

Descriptives

Number of Televisions owned

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Non-Formal	108	.1481	.35690	.03434	.0801	.2162	.00	1.00
Primary	125	.3440	.47695	.04266	.2596	.4284	.00	1.00
Secondary	32	.0313	.17678	.03125	-.0325	.0950	.00	1.00
Technical/Vocational	20	.1500	.36635	.08192	-.0215	.3215	.00	1.00
University/Polytechnic	17	.2941	.46967	.11391	.0526	.5356	.00	1.00
Total	302	.2252	.41838	.02408	.1778	.2725	.00	1.00

ANOVA

Number of Televisions owned

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.803	4	.951	5.776	.000
Within Groups	48.886	297	.165		
Total	52.689	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Number of Televisions owned
Tukey HSD

(I) Educational Background	(J) Educational Background	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Non-Formal	Primary	-.19585*	.05330	.003	-.3421	-.0496
	Secondary	.11690	.08166	.608	-.1072	.3410
	Technical/Vocational	-.00185	.09876	1.000	-.2729	.2692
	University/Polytechnic	-.14597	.10586	.642	-.4365	.1446
Primary	Non-Formal	.19585*	.05330	.003	.0496	.3421
	Secondary	.31275*	.08038	.001	.0921	.5334
	Technical/Vocational	.19400	.09771	.276	-.0742	.4622
	University/Polytechnic	.04988	.10488	.990	-.2380	.3377
Secondary	Non-Formal	-.11690	.08166	.608	-.3410	.1072
	Primary	-.31275*	.08038	.001	-.5334	-.0921
	Technical/Vocational	-.11875	.11564	.843	-.4361	.1986
	University/Polytechnic	-.26287	.12176	.198	-.5971	.0713
Technical/Vocational	Non-Formal	.00185	.09876	1.000	-.2692	.2729
	Primary	-.19400	.09771	.276	-.4622	.0742
	Secondary	.11875	.11564	.843	-.1986	.4361
	University/Polytechnic	-.14412	.13384	.818	-.5114	.2232
University/Polytechnic	Non-Formal	.14597	.10586	.642	-.1446	.4365
	Primary	-.04988	.10488	.990	-.3377	.2380
	Secondary	.26287	.12176	.198	-.0713	.5971
	Technical/Vocational	.14412	.13384	.818	-.2232	.5114

*. The mean difference is significant at the .05 level.

G. No. of Children

ANOVA

Number of Televisions owned

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.503	7	.215	1.234	.284
Within Groups	51.185	294	.174		
Total	52.689	301			

4. RADIO OWNED

A. Membership Duration

ANOVA

Number of Radios owned

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.036	2	.518	2.417	.091
Within Groups	64.080	299	.214		
Total	65.116	301			

B. Age**ANOVA**

Number of Radios owned

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.884	4	.471	2.213	.068
Within Groups	63.232	297	.213		
Total	65.116	301			

C. Marital Status**ANOVA**

Number of Radios owned

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.160	3	.387	1.802	.147
Within Groups	63.956	298	.215		
Total	65.116	301			

D. Education**ANOVA**

Number of Radios owned

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.892	4	.473	2.222	.067
Within Groups	63.223	297	.213		
Total	65.116	301			

E. House Ownership**ANOVA**

Number of Radios owned

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.912	2	.456	2.123	.121
Within Groups	64.204	299	.215		
Total	65.116	301			

F. Household Size**ANOVA**

Number of Radios owned

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.845	12	.320	1.511	.119
Within Groups	61.271	289	.212		
Total	65.116	301			

G. No. of Children**ANOVA**

Number of Radios owned

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.675	7	.239	1.109	.357
Within Groups	63.441	294	.216		
Total	65.116	301			

5. FRIDGE OWNED

A. Membership Duration

ANOVA

Number of Fridges owned

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.120	2	.060	.339	.713
Within Groups	53.115	299	.178		
Total	53.235	301			

B. Age

ANOVA

Number of Fridges owned

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.252	4	.313	1.789	.131
Within Groups	51.983	297	.175		
Total	53.235	301			

C. Marital Status

ANOVA

Number of Fridges owned

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.585	3	.195	1.103	.348
Within Groups	52.651	298	.177		
Total	53.235	301			

D. Education

Descriptives

Number of Fridges owned

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Non-Formal	108	.1481	.35690	.03434	.0801	.2162	.00	1.00
Primary	125	.3520	.47952	.04289	.2671	.4369	.00	1.00
Secondary	32	.0938	.29614	.05235	-.0130	.2005	.00	1.00
Technical/Vocational	20	.2000	.41039	.09177	.0079	.3921	.00	1.00
University/Polytechnic	17	.1176	.33211	.08055	-.0531	.2884	.00	1.00
Total	302	.2285	.42055	.02420	.1809	.2761	.00	1.00

ANOVA

Number of Fridges owned

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.410	4	.853	5.082	.001
Within Groups	49.825	297	.168		
Total	53.235	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Number of Fridges owned
Tukey HSD

(I) Educational Background	(J) Educational Background	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Non-Formal	Primary	-.20385*	.05381	.002	-.3515	-.0562
	Secondary	.05440	.08244	.965	-.1719	.2807
	Technical/Vocational	-.05185	.09971	.985	-.3255	.2218
	University/Polytechnic	.03050	.10687	.999	-.2628	.3238
Primary	Non-Formal	.20385*	.05381	.002	.0562	.3515
	Secondary	.25825*	.08115	.014	.0355	.4810
	Technical/Vocational	.15200	.09864	.537	-.1187	.4227
	University/Polytechnic	.23435	.10588	.178	-.0562	.5249
Secondary	Non-Formal	-.05440	.08244	.965	-.2807	.1719
	Primary	-.25825*	.08115	.014	-.4810	-.0355
	Technical/Vocational	-.10625	.11675	.893	-.4267	.2142
	University/Polytechnic	-.02390	.12293	1.000	-.3613	.3135
Technical/Vocational	Non-Formal	.05185	.09971	.985	-.2218	.3255
	Primary	-.15200	.09864	.537	-.4227	.1187
	Secondary	.10625	.11675	.893	-.2142	.4267
	University/Polytechnic	.08235	.13512	.974	-.2885	.4532
University/Polytechnic	Non-Formal	-.03050	.10687	.999	-.3238	.2628
	Primary	-.23435	.10588	.178	-.5249	.0562
	Secondary	.02390	.12293	1.000	-.3135	.3613
	Technical/Vocational	-.08235	.13512	.974	-.4532	.2885

*. The mean difference is significant at the .05 level.

E. House Ownership

ANOVA

Number of Fridges owned

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.459	2	.230	1.302	.274
Within Groups	52.776	299	.177		
Total	53.235	301			

F. Household Size

ANOVA

Number of Fridges owned

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	9.591	12	.799	5.292	.000
Within Groups	43.644	289	.151		
Total	53.235	301			

G. No. of Children

ANOVA

Number of Fridges owned

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.838	7	.263	1.502	.166
Within Groups	51.397	294	.175		
Total	53.235	301			

6. HOUSEHOLD ASSETS OWNED

A. Membership Duration

Descriptives

Number of Household Assets owned

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0-1 yr	63	2.6508	1.15226	.14517	2.3606	2.9410	1.00	5.00
2-5 yrs	136	3.3971	1.98990	.17063	3.0596	3.7345	1.00	9.00
>/= 6 yrs	103	3.2330	1.74448	.17189	2.8921	3.5740	1.00	9.00
Total	302	3.1854	1.77806	.10232	2.9841	3.3868	1.00	9.00

ANOVA

Number of Household Assets owned

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	24.332	2	12.166	3.923	.021
Within Groups	927.284	299	3.101		
Total	951.616	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Number of Household Assets owned
Tukey HSD

(I) Membership duration	(J) Membership duration	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
0-1 yr	2-5 yrs	-.74627*	.26838	.016	-1.3784	-.1141
	>/= 6 yrs	-.58222	.28167	.099	-1.2457	.0812
2-5 yrs	0-1 yr	.74627*	.26838	.016	.1141	1.3784
	>/= 6 yrs	.16405	.23003	.756	-.3778	.7059
>/= 6 yrs	0-1 yr	.58222	.28167	.099	-.0812	1.2457
	2-5 yrs	-.16405	.23003	.756	-.7059	.3778

*. The mean difference is significant at the .05 level.

B. Age

ANOVA

Number of Household Assets owned

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	24.146	4	6.036	1.933	.105
Within Groups	927.470	297	3.123		
Total	951.616	301			

C. Marital Status

ANOVA

Number of Household Assets owned

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	24.267	3	8.089	2.599	.052
Within Groups	927.349	298	3.112		
Total	951.616	301			

D. House Ownership

ANOVA

Number of Household Assets owned

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	11.943	2	5.972	1.900	.151
Within Groups	939.673	299	3.143		
Total	951.616	301			

E. Household Size

ANOVA

Number of Household Assets owned

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	73.448	12	6.121	2.014	.023
Within Groups	878.168	289	3.039		
Total	951.616	301			

F. No. of Children

ANOVA

Number of Household Assets owned

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	23.614	7	3.373	1.069	.384
Within Groups	928.002	294	3.156		
Total	951.616	301			

G. Education

Descriptives

Number of Household Assets owned

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Non-Formal	108	3.1759	1.75525	.16890	2.8411	3.5107	1.00	7.00
Primary	125	3.5200	1.88200	.16833	3.1868	3.8532	1.00	9.00
Secondary	32	2.2813	1.05446	.18640	1.9011	2.6614	1.00	5.00
Technical/Vocational	20	3.1000	2.07491	.46396	2.1289	4.0711	1.00	8.00
University/Polytechnic	17	2.5882	1.12132	.27196	2.0117	3.1648	1.00	5.00
Total	302	3.1854	1.77806	.10232	2.9841	3.3868	1.00	9.00

ANOVA

Number of Household Assets owned

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	46.372	4	11.593	3.804	.005
Within Groups	905.244	297	3.048		
Total	951.616	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Number of Household Assets owned
Tukey HSD

(I) Educational Background	(J) Educational Background	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Non-Formal	Primary	-.34407	.22936	.563	-.9736	.2854
	Secondary	.89468	.35138	.083	-.0697	1.8591
	Technical/Vocational	.07593	.42499	1.000	-1.0905	1.2424
	University/Polytechnic	.58769	.45554	.698	-.6626	1.8380
Primary	Non-Formal	.34407	.22936	.563	-.2854	.9736
	Secondary	1.23875*	.34588	.004	.2894	2.1881
	Technical/Vocational	.42000	.42045	.856	-.7340	1.5740
	University/Polytechnic	.93176	.45130	.238	-.3069	2.1704
Secondary	Non-Formal	-.89468	.35138	.083	-1.8591	.0697
	Primary	-1.23875*	.34588	.004	-2.1881	-.2894
	Technical/Vocational	-.81875	.49764	.470	-2.1846	.5471
	University/Polytechnic	-.30699	.52397	.977	-1.7451	1.1311
Technical/Vocational	Non-Formal	-.07593	.42499	1.000	-1.2424	1.0905
	Primary	-.42000	.42045	.856	-1.5740	.7340
	Secondary	.81875	.49764	.470	-.5471	2.1846
	University/Polytechnic	.51176	.57593	.901	-1.0689	2.0925
University/Polytechnic	Non-Formal	-.58769	.45554	.698	-1.8380	.6626
	Primary	-.93176	.45130	.238	-2.1704	.3069
	Secondary	.30699	.52397	.977	-1.1311	1.7451
	Technical/Vocational	-.51176	.57593	.901	-2.0925	1.0689

*. The mean difference is significant at the .05 level.

Appendix 6. STANDARD EFFECT SIZE CALCULATION ON ENTERPRISES

Outcome measure	DATA ENTRY						DIFFERENCE		
	Treatment group			Control group			pooled standard deviation	Mean Difference	Standardized Effect Size
	mean	n	SD	mean	n	SD			
EFFECT OF LOAN ON: Expansion of Business Facility	0.498	223	0.50	0.354	79	0.48	0.50	0.14	0.29
EFFECT OF LOAN ON: Addition of New Products	0.274	223	0.447	0.139	79	0.348	0.42	0.13	0.32
EFFECT OF LOAN ON: Hire More Workers	0.274	223	0.447	0.101	79	0.304	0.41	0.17	0.42
EFFECT OF LOAN ON: Purchase of Major Tools	0.431	223	0.50	0.253	79	0.44	0.48	0.18	0.37
EFFECT OF LOAN ON: Means of Transport	0.336	223	0.474	0.19	79	0.395	0.45	0.15	0.32
EFFECT OF LOAN ON: Minor Investment in Marketing Site	0.408	223	0.493	0.266	79	0.445	0.48	0.14	0.30
EFFECT OF LOAN ON: Structure in Business Location	0.363	223	0.48	0.228	79	0.42	0.47	0.14	0.29
EFFECT OF LOAN ON: Enterprise Assets	3.081	223	1.78	2.354	79	1.24	1.65	0.73	0.44

Formulae

Pooled standard deviation

$$\frac{(SD \times (n-1)) + (SD \times (n-1))}{(n + n - 2)}$$

Standardised effect size

$$\frac{\text{Mean difference}}{\text{Pooled SD}}$$

Appendix 7. ANOVA TEST RESULTS ON ENTERPRISES – SPSS OUTPUT

ENTERPRISE PROFITABILITY

1. EXPANSION OF BUSINESS FACILITY

A. Membership Duration

Descriptives

Changes to business - Number that expanded size of business facility/farm

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0-1 yr	63	.2381	.42934	.05409	.1300	.3462	.00	1.00
2-5 yrs	136	.5000	.50185	.04303	.4149	.5851	.00	1.00
>/= 6 yrs	103	.5437	.50052	.04932	.4459	.6415	.00	1.00
Total	302	.4603	.49925	.02873	.4037	.5168	.00	1.00

ANOVA

Changes to business - Number that expanded size of business facility/farm

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4.041	2	2.021	8.511	.000
Within Groups	70.982	299	.237		
Total	75.023	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Changes to business - Number that expanded size of business facility/farm
Tukey HSD

(I) Membership duration	(J) Membership duration	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
0-1 yr	2-5 yrs	-.26190*	.07425	.001	-.4368	-.0870
	>/= 6 yrs	-.30559*	.07793	.000	-.4892	-.1220
2-5 yrs	0-1 yr	.26190*	.07425	.001	.0870	.4368
	>/= 6 yrs	-.04369	.06364	.772	-.1936	.1062
>/= 6 yrs	0-1 yr	.30559*	.07793	.000	.1220	.4892
	2-5 yrs	.04369	.06364	.772	-.1062	.1936

*. The mean difference is significant at the .05 level.

B. Marital Status

ANOVA

Changes to business - Number that expanded size of business facility/farm

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.866	3	.622	2.534	.057
Within Groups	73.157	298	.245		
Total	75.023	301			

C. Household Size

ANOVA

Changes to business - Number that expanded size of business facility/farm

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4.724	12	.394	1.618	.086
Within Groups	70.299	289	.243		
Total	75.023	301			

D. No. of Children

ANOVA

Changes to business - Number that expanded size of business facility/farm

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.126	7	.304	1.225	.289
Within Groups	72.897	294	.248		
Total	75.023	301			

E. Age

Descriptives

Changes to business - Number that expanded size of business facility/farm

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
21 - 30 yrs	35	.4857	.50709	.08571	.3115	.6599	.00	1.00
31 - 40 yrs	138	.3478	.47802	.04069	.2674	.4283	.00	1.00
41 - 50 yrs	94	.6170	.48872	.05041	.5169	.7171	.00	1.00
51 - 60 yrs	27	.5185	.50918	.09799	.3171	.7199	.00	1.00
61 - 70 yrs	8	.2500	.46291	.16366	-.1370	.6370	.00	1.00
Total	302	.4603	.49925	.02873	.4037	.5168	.00	1.00

ANOVA

Changes to business - Number that expanded size of business facility/farm

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4.522	4	1.131	4.763	.001
Within Groups	70.501	297	.237		
Total	75.023	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Changes to business - Number that expanded size of business facility/farm

Tukey HSD

(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
21 - 30 yrs	31 - 40 yrs	.13789	.09221	.566	-.1152	.3910
	41 - 50 yrs	-.13131	.09648	.653	-.3961	.1335
	51 - 60 yrs	-.03280	.12480	.999	-.3753	.3097
	61 - 70 yrs	.23571	.19093	.731	-.2883	.7597
31 - 40 yrs	21 - 30 yrs	-.13789	.09221	.566	-.3910	.1152
	41 - 50 yrs	-.26920*	.06516	.000	-.4480	-.0904
	51 - 60 yrs	-.17069	.10253	.457	-.4521	.1107
	61 - 70 yrs	.09783	.17718	.982	-.3885	.5841
41 - 50 yrs	21 - 30 yrs	.13131	.09648	.653	-.1335	.3961
	31 - 40 yrs	.26920*	.06516	.000	.0904	.4480
	51 - 60 yrs	.09850	.10638	.887	-.1935	.3905
	61 - 70 yrs	.36702	.17944	.247	-.1255	.8595
51 - 60 yrs	21 - 30 yrs	.03280	.12480	.999	-.3097	.3753
	31 - 40 yrs	.17069	.10253	.457	-.1107	.4521
	41 - 50 yrs	-.09850	.10638	.887	-.3905	.1935
	61 - 70 yrs	.26852	.19612	.648	-.2698	.8068
61 - 70 yrs	21 - 30 yrs	-.23571	.19093	.731	-.7597	.2883
	31 - 40 yrs	-.09783	.17718	.982	-.5841	.3885
	41 - 50 yrs	-.36702	.17944	.247	-.8595	.1255
	51 - 60 yrs	-.26852	.19612	.648	-.8068	.2698

*. The mean difference is significant at the .05 level.

F. Education

Descriptives

Changes to business - Number that expanded size of business facility/farm

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Non-Formal	108	.5741	.49679	.04780	.4793	.6688	.00	1.00
Primary	125	.3600	.48193	.04311	.2747	.4453	.00	1.00
Secondary	32	.3438	.48256	.08531	.1698	.5177	.00	1.00
Technical/Vocational	20	.7500	.44426	.09934	.5421	.9579	.00	1.00
University/Polytechnic	17	.3529	.49259	.11947	.0997	.6062	.00	1.00
Total	302	.4603	.49925	.02873	.4037	.5168	.00	1.00

ANOVA

Changes to business - Number that expanded size of business facility/farm

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4.965	4	1.241	5.262	.000
Within Groups	70.059	297	.236		
Total	75.023	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Changes to business - Number that expanded size of business facility/farm
Tukey HSD

(I) Educational Background	(J) Educational Background	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Non-Formal	Primary	.21407*	.06381	.008	.0390	.3892
	Secondary	.23032	.09775	.130	-.0380	.4986
	Technical/Vocational	-.17593	.11823	.571	-.5004	.1486
	University/Polytechnic	.22113	.12673	.408	-.1267	.5690
Primary	Non-Formal	-.21407*	.06381	.008	-.3892	-.0390
	Secondary	.01625	.09622	1.000	-.2478	.2803
	Technical/Vocational	-.39000*	.11697	.008	-.7110	-.0690
	University/Polytechnic	.00706	.12555	1.000	-.3375	.3516
Secondary	Non-Formal	-.23032	.09775	.130	-.4986	.0380
	Primary	-.01625	.09622	1.000	-.2803	.2478
	Technical/Vocational	-.40625*	.13844	.029	-.7862	-.0263
	University/Polytechnic	-.00919	.14576	1.000	-.4093	.3909
Technical/Vocational	Non-Formal	.17593	.11823	.571	-.1486	.5004
	Primary	.39000*	.11697	.008	.0690	.7110
	Secondary	.40625*	.13844	.029	.0263	.7862
	University/Polytechnic	.39706	.16022	.098	-.0427	.8368
University/Polytechnic	Non-Formal	-.22113	.12673	.408	-.5690	.1267
	Primary	-.00706	.12555	1.000	-.3516	.3375
	Secondary	.00919	.14576	1.000	-.3909	.4093
	Technical/Vocational	-.39706	.16022	.098	-.8368	.0427

*. The mean difference is significant at the .05 level.

G. House Ownership

Descriptives

Changes to business - Number that expanded size of business facility/farm

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Self	92	.6413	.48225	.05028	.5414	.7412	.00	1.00
Rent it	170	.3647	.48277	.03703	.2916	.4378	.00	1.00
Parent/Family	40	.4500	.50383	.07966	.2889	.6111	.00	1.00
Total	302	.4603	.49925	.02873	.4037	.5168	.00	1.00

ANOVA

Changes to business - Number that expanded size of business facility/farm

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4.572	2	2.286	9.702	.000
Within Groups	70.451	299	.236		
Total	75.023	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Changes to business - Number that expanded size of business facility/farm
Tukey HSD

(I) House Ownership	(J) House Ownership	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Self	Rent it	.27660*	.06283	.000	.1286	.4246
	Parent/Family	.19130	.09193	.096	-.0252	.4078
Rent it	Self	-.27660*	.06283	.000	-.4246	-.1286
	Parent/Family	-.08529	.08530	.577	-.2862	.1156
Parent/Family	Self	-.19130	.09193	.096	-.4078	.0252
	Rent it	.08529	.08530	.577	-.1156	.2862

*. The mean difference is significant at the .05 level.

2. ADDITION OF NEW PRODUCT/BUSINESS DIVERSIFICATION

A. Age

ANOVA

Change to business - Number that added new product/diversify crops

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.768	4	.192	1.055	.379
Within Groups	54.066	297	.182		
Total	54.834	301			

B. Membership Duration

Descriptives

Change to business - Number that added new product/diversify crops

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0-1 yr	63	.0952	.29590	.03728	.0207	.1698	.00	1.00
2-5 yrs	136	.2279	.42106	.03611	.1565	.2993	.00	1.00
>/= 6 yrs	103	.3398	.47596	.04690	.2468	.4328	.00	1.00
Total	302	.2384	.42682	.02456	.1901	.2867	.00	1.00

ANOVA

Change to business - Number that added new product/diversify crops

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.365	2	1.183	6.739	.001
Within Groups	52.469	299	.175		
Total	54.834	301			

Post Hoc Tests

Multiple Comparisons

Multiple Comparisons

Dependent Variable: Change to business - Number that added new product/diversify crops
Tukey HSD

(I) Membership duration	(J) Membership duration	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
0-1 yr	2-5 yrs	-.13270	.06384	.096	-.2831	.0177
	>= 6 yrs	-.24457*	.06700	.001	-.4024	-.0868
2-5 yrs	0-1 yr	.13270	.06384	.096	-.0177	.2831
	>= 6 yrs	-.11186	.05472	.104	-.2407	.0170
>= 6 yrs	0-1 yr	.24457*	.06700	.001	.0868	.4024
	2-5 yrs	.11186	.05472	.104	-.0170	.2407

*. The mean difference is significant at the .05 level.

C. Marital Status

ANOVA

Change to business - Number that added new product/diversify crops

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.367	3	.122	.669	.571
Within Groups	54.467	298	.183		
Total	54.834	301			

D. Education

ANOVA

Change to business - Number that added new product/diversify crops

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.595	4	.149	.814	.517
Within Groups	54.240	297	.183		
Total	54.834	301			

E. House Ownership

ANOVA

Change to business - Number that added new product/diversify crops

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.653	2	.326	1.802	.167
Within Groups	54.182	299	.181		
Total	54.834	301			

F. Household Size

ANOVA

Change to business - Number that added new product/diversify crops

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.913	12	.159	.870	.578
Within Groups	52.922	289	.183		
Total	54.834	301			

G. No. of Children

ANOVA

Change to business - Number that added new product/diversify crops

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.754	7	.251	1.388	.210
Within Groups	53.081	294	.181		
Total	54.834	301			

3. HIRE MORE WORKERS

A. Age

ANOVA

Change to business - Number that hire more workers

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.010	4	.253	1.436	.222
Within Groups	52.225	297	.176		
Total	53.235	301			

B. Membership Duration

Descriptives

Change to business - Number that hire more workers

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0-1 yr	63	.0952	.29590	.03728	.0207	.1698	.00	1.00
2-5 yrs	136	.2206	.41618	.03569	.1500	.2912	.00	1.00
>/= 6 yrs	103	.3204	.46891	.04620	.2287	.4120	.00	1.00
Total	302	.2285	.42055	.02420	.1809	.2761	.00	1.00

ANOVA

Change to business - Number that hire more workers

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.997	2	.998	5.827	.003
Within Groups	51.238	299	.171		
Total	53.235	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Change to business - Number that hire more workers

Tukey HSD

(I) Membership duration	(J) Membership duration	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
0-1 yr	2-5 yrs	-.12535	.06309	.117	-.2740	.0233
	>= 6 yrs	-.22515	.06621	.002	-.3811	-.0692
2-5 yrs	0-1 yr	.12535	.06309	.117	-.0233	.2740
	>= 6 yrs	-.09980	.05407	.157	-.2272	.0276
>= 6 yrs	0-1 yr	.22515	.06621	.002	.0692	.3811
	2-5 yrs	.09980	.05407	.157	-.0276	.2272

*. The mean difference is significant at the .05 level.

C. Education

ANOVA

Change to business - Number that hire more workers

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.134	4	.033	.187	.945
Within Groups	53.101	297	.179		
Total	53.235	301			

D. Marital Status

Descriptives

Change to business - Number that hire more workers

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Married	242	.2521	.43510	.02797	.1970	.3072	.00	1.00
Separated/Divorce	21	.1905	.40237	.08781	.0073	.3736	.00	1.00
Widowed	16	.2500	.44721	.11180	.0117	.4883	.00	1.00
Single/Never married	23	.0000	.00000	.00000	.0000	.0000	.00	.00
Total	302	.2285	.42055	.02420	.1809	.2761	.00	1.00

ANOVA

Change to business - Number that hire more workers

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.373	3	.458	2.630	.050
Within Groups	51.862	298	.174		
Total	53.235	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Change to business - Number that hire more workers

Tukey HSD

(I) Marital Status	(J) Marital Status	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Married	Separated/Divorce	.06159	.09490	.916	-.1836	.3068
	Widowed	.00207	.10769	1.000	-.2761	.2803
	Single/Never married	.25207*	.09103	.030	.0169	.4872
Separated/Divorce	Married	-.06159	.09490	.916	-.3068	.1836
	Widowed	-.05952	.13844	.973	-.4172	.2981
	Single/Never married	.19048	.12591	.431	-.1348	.5158
Widowed	Married	-.00207	.10769	1.000	-.2803	.2761
	Separated/Divorce	.05952	.13844	.973	-.2981	.4172
	Single/Never married	.25000	.13581	.256	-.1009	.6009
Single/Never married	Married	-.25207*	.09103	.030	-.4872	-.0169
	Separated/Divorce	-.19048	.12591	.431	-.5158	.1348
	Widowed	-.25000	.13581	.256	-.6009	.1009

*. The mean difference is significant at the .05 level.

E. Household Size

ANOVA

Change to business - Number that hire more workers

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.668	12	.222	1.271	.235
Within Groups	50.567	289	.175		
Total	53.235	301			

F. House Ownership

Descriptives

Change to business - Number that hire more workers

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Self	92	.3043	.46265	.04823	.2085	.4002	.00	1.00
Rent it	170	.2294	.42170	.03234	.1656	.2933	.00	1.00
Parent/Family	40	.0500	.22072	.03490	-.0206	.1206	.00	1.00
Total	302	.2285	.42055	.02420	.1809	.2761	.00	1.00

ANOVA

Change to business - Number that hire more workers

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.804	2	.902	5.244	.006
Within Groups	51.431	299	.172		
Total	53.235	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Change to business - Number that hire more workers
Tukey HSD

(I) House Ownership	(J) House Ownership	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Self	Rent it	.07494	.05368	.344	-.0515	.2014
	Parent/Family	.25435*	.07855	.004	.0693	.4394
Rent it	Self	-.07494	.05368	.344	-.2014	.0515
	Parent/Family	.17941*	.07288	.038	.0077	.3511
Parent/Family	Self	-.25435*	.07855	.004	-.4394	-.0693
	Rent it	-.17941*	.07288	.038	-.3511	-.0077

*. The mean difference is significant at the .05 level.

G. No. of Children

ANOVA

Change to business - Number that hire more workers

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.735	7	.248	1.415	.199
Within Groups	51.500	294	.175		
Total	53.235	301			

ENTERPRISE ASSETS

1. ACQUISITION OF MAJOR TOOLS

A. Membership Duration

ANOVA

Addition to business asset - major tools

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.624	2	.312	1.318	.269
Within Groups	70.819	299	.237		
Total	71.444	301			

B. Marital Status

ANOVA

Addition to business asset - major tools

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.884	3	.628	2.691	.046
Within Groups	69.560	298	.233		
Total	71.444	301			

C. Education

ANOVA

Addition to business asset - major tools

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.511	4	.128	.535	.710
Within Groups	70.933	297	.239		
Total	71.444	301			

D. House Ownership

ANOVA

Addition to business asset - major tools

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.348	2	.174	.732	.482
Within Groups	71.095	299	.238		
Total	71.444	301			

E. Household Size

ANOVA

Addition to business asset - major tools

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4.640	12	.387	1.673	.072
Within Groups	66.803	289	.231		
Total	71.444	301			

F. Age

Descriptives

Addition to business asset - major tools

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
21 - 30 yrs	35	.4857	.50709	.08571	.3115	.6599	.00	1.00
31 - 40 yrs	138	.3043	.46181	.03931	.2266	.3821	.00	1.00
41 - 50 yrs	94	.5213	.50223	.05180	.4184	.6241	.00	1.00
51 - 60 yrs	27	.2222	.42366	.08153	.0546	.3898	.00	1.00
61 - 70 yrs	8	.2500	.46291	.16366	-.1370	.6370	.00	1.00
Total	302	.3841	.48719	.02803	.3289	.4393	.00	1.00

ANOVA

Addition to business asset - major tools

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.859	4	.965	4.240	.002
Within Groups	67.584	297	.228		
Total	71.444	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Addition to business asset - major tools

Tukey HSD

(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
21 - 30 yrs	31 - 40 yrs	.18137	.09028	.264	-.0664	.4292
	41 - 50 yrs	-.03556	.09446	.996	-.2948	.2237
	51 - 60 yrs	.26349	.12219	.199	-.0719	.5988
	61 - 70 yrs	.23571	.18694	.715	-.2774	.7488
31 - 40 yrs	21 - 30 yrs	-.18137	.09028	.264	-.4292	.0664
	41 - 50 yrs	-.21693*	.06379	.007	-.3920	-.0418
	51 - 60 yrs	.08213	.10038	.925	-.1934	.3576
	61 - 70 yrs	.05435	.17347	.998	-.4218	.5305
41 - 50 yrs	21 - 30 yrs	.03556	.09446	.996	-.2237	.2948
	31 - 40 yrs	.21693*	.06379	.007	.0418	.3920
	51 - 60 yrs	.29905*	.10416	.035	.0132	.5849
	61 - 70 yrs	.27128	.17569	.535	-.2109	.7535
51 - 60 yrs	21 - 30 yrs	-.26349	.12219	.199	-.5988	.0719
	31 - 40 yrs	-.08213	.10038	.925	-.3576	.1934
	41 - 50 yrs	-.29905*	.10416	.035	-.5849	-.0132
	61 - 70 yrs	-.02778	.19202	1.000	-.5548	.4992
61 - 70 yrs	21 - 30 yrs	-.23571	.18694	.715	-.7488	.2774
	31 - 40 yrs	-.05435	.17347	.998	-.5305	.4218
	41 - 50 yrs	-.27128	.17569	.535	-.7535	.2109
	51 - 60 yrs	.02778	.19202	1.000	-.4992	.5548

*. The mean difference is significant at the .05 level.

G. Number of Children

ANOVA

Addition to business asset - major tools

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.862	7	.552	2.400	.021
Within Groups	67.581	294	.230		
Total	71.444	301			

2. OWNERSHIP OF MEANS OF TRANSPORTATION

A. Membership Duration

Descriptives

Addition to business asset - own means of transportation

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0-1 yr	63	.1746	.38268	.04821	.0782	.2710	.00	1.00
2-5 yrs	136	.3015	.46059	.03950	.2234	.3796	.00	1.00
>/= 6 yrs	103	.3689	.48487	.04778	.2742	.4637	.00	1.00
Total	302	.2980	.45814	.02636	.2461	.3499	.00	1.00

ANOVA

Addition to business asset - own means of transportation

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.479	2	.740	3.584	.029
Within Groups	61.700	299	.206		
Total	63.179	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Addition to business asset - own means of transportation

Tukey HSD

(I) Membership duration	(J) Membership duration	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
0-1 yr	2-5 yrs	-.12687	.06923	.161	-.2899	.0362
	>/= 6 yrs	-.19433*	.07266	.021	-.3655	-.0232
2-5 yrs	0-1 yr	.12687	.06923	.161	-.0362	.2899
	>/= 6 yrs	-.06746	.05934	.492	-.2072	.0723
>/= 6 yrs	0-1 yr	.19433*	.07266	.021	.0232	.3655
	2-5 yrs	.06746	.05934	.492	-.0723	.2072

*. The mean difference is significant at the .05 level.

B. Marital Status

ANOVA

Addition to business asset - own means of transportation

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.108	3	.703	3.429	.017
Within Groups	61.071	298	.205		
Total	63.179	301			

C. Education

ANOVA

Addition to business asset - own means of transportation

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.783	4	.196	.932	.445
Within Groups	62.395	297	.210		
Total	63.179	301			

D. House Ownership

ANOVA

Addition to business asset - own means of transportation

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.095	2	.548	2.638	.073
Within Groups	62.083	299	.208		
Total	63.179	301			

E. Household Size

ANOVA

Addition to business asset - own means of transportation

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.363	12	.280	1.354	.188
Within Groups	59.816	289	.207		
Total	63.179	301			

F. Age

Descriptives

Addition to business asset - own means of transportation

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
21 - 30 yrs	35	.0286	.16903	.02857	-.0295	.0866	.00	1.00
31 - 40 yrs	138	.3333	.47312	.04027	.2537	.4130	.00	1.00
41 - 50 yrs	94	.4255	.49707	.05127	.3237	.5273	.00	1.00
51 - 60 yrs	27	.1111	.32026	.06163	-.0156	.2378	.00	1.00
61 - 70 yrs	8	.0000	.00000	.00000	.0000	.0000	.00	.00
Total	302	.2980	.45814	.02636	.2461	.3499	.00	1.00

ANOVA

Addition to business asset - own means of transportation

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	5.895	4	1.474	7.641	.000
Within Groups	57.283	297	.193		
Total	63.179	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Addition to business asset - own means of transportation

Tukey HSD

(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
21 - 30 yrs	31 - 40 yrs	-.30476*	.08312	.003	-.5329	-.0766
	41 - 50 yrs	-.39696*	.08696	.000	-.6356	-.1583
	51 - 60 yrs	-.08254	.11249	.948	-.3913	.2262
	61 - 70 yrs	.02857	.17210	1.000	-.4438	.5009
31 - 40 yrs	21 - 30 yrs	.30476*	.08312	.003	.0766	.5329
	41 - 50 yrs	-.09220	.05873	.518	-.2534	.0690
	51 - 60 yrs	.22222	.09242	.117	-.0314	.4759
	61 - 70 yrs	.33333	.15971	.228	-.1050	.7717
41 - 50 yrs	21 - 30 yrs	.39696*	.08696	.000	.1583	.6356
	31 - 40 yrs	.09220	.05873	.518	-.0690	.2534
	51 - 60 yrs	.31442*	.09589	.010	.0512	.5776
	61 - 70 yrs	.42553	.16174	.067	-.0184	.8695
51 - 60 yrs	21 - 30 yrs	.08254	.11249	.948	-.2262	.3913
	31 - 40 yrs	-.22222	.09242	.117	-.4759	.0314
	41 - 50 yrs	-.31442*	.09589	.010	-.5776	-.0512
	61 - 70 yrs	.11111	.17678	.970	-.3741	.5963
61 - 70 yrs	21 - 30 yrs	-.02857	.17210	1.000	-.5009	.4438
	31 - 40 yrs	-.33333	.15971	.228	-.7717	.1050
	41 - 50 yrs	-.42553	.16174	.067	-.8695	.0184
	51 - 60 yrs	-.11111	.17678	.970	-.5963	.3741

*. The mean difference is significant at the .05 level.

G. Number of Children

ANOVA

Addition to business asset - own means of transportation

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.526	7	.218	1.039	.404
Within Groups	61.653	294	.210		
Total	63.179	301			

3. MINOR INVESTMENT IN MARKETING SITE

A. Membership Duration

ANOVA

Addition to business asset - minor investment in marketing site

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.544	2	.272	1.163	.314
Within Groups	69.920	299	.234		
Total	70.464	301			

B. Marital Status

ANOVA

Addition to business asset - minor investment in marketing site

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.185	3	.395	1.699	.167
Within Groups	69.279	298	.232		
Total	70.464	301			

C. Age

Descriptives

Addition to business asset - minor investment in marketing site

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
21 - 30 yrs	35	.4286	.50210	.08487	.2561	.6010	.00	1.00
31 - 40 yrs	138	.3188	.46772	.03982	.2401	.3976	.00	1.00
41 - 50 yrs	94	.4894	.50257	.05184	.3864	.5923	.00	1.00
51 - 60 yrs	27	.2593	.44658	.08594	.0826	.4359	.00	1.00
61 - 70 yrs	8	.0000	.00000	.00000	.0000	.0000	.00	.00
Total	302	.3709	.48384	.02784	.3161	.4256	.00	1.00

ANOVA

Addition to business asset - minor investment in marketing site

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.247	4	.812	3.586	.007
Within Groups	67.217	297	.226		
Total	70.464	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Addition to business asset - minor investment in marketing site
 Tukey HSD

(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
21 - 30 yrs	31 - 40 yrs	.10973	.09003	.740	-.1374	.3568
	41 - 50 yrs	-.06079	.09420	.967	-.3193	.1978
	51 - 60 yrs	.16931	.12185	.635	-.1651	.5038
	61 - 70 yrs	.42857	.18643	.148	-.0831	.9402
31 - 40 yrs	21 - 30 yrs	-.10973	.09003	.740	-.3568	.1374
	41 - 50 yrs	-.17052	.06362	.059	-.3451	.0041
	51 - 60 yrs	.05958	.10011	.976	-.2152	.3343
	61 - 70 yrs	.31884	.17300	.351	-.1560	.7937
41 - 50 yrs	21 - 30 yrs	.06079	.09420	.967	-.1978	.3193
	31 - 40 yrs	.17052	.06362	.059	-.0041	.3451
	51 - 60 yrs	.23010	.10387	.177	-.0550	.5152
	61 - 70 yrs	.48936*	.17521	.044	.0085	.9702
51 - 60 yrs	21 - 30 yrs	-.16931	.12185	.635	-.5038	.1651
	31 - 40 yrs	-.05958	.10011	.976	-.3343	.2152
	41 - 50 yrs	-.23010	.10387	.177	-.5152	.0550
	61 - 70 yrs	.25926	.19150	.658	-.2663	.7849
61 - 70 yrs	21 - 30 yrs	-.42857	.18643	.148	-.9402	.0831
	31 - 40 yrs	-.31884	.17300	.351	-.7937	.1560
	41 - 50 yrs	-.48936*	.17521	.044	-.9702	-.0085
	51 - 60 yrs	-.25926	.19150	.658	-.7849	.2663

*. The mean difference is significant at the .05 level.

D. Education

ANOVA

Addition to business asset - minor investment in marketing site

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.436	4	.109	.462	.764
Within Groups	70.028	297	.236		
Total	70.464	301			

E. House Ownership

ANOVA

Addition to business asset - minor investment in marketing site

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.026	2	.013	.055	.947
Within Groups	70.438	299	.236		
Total	70.464	301			

F. Household Size

ANOVA

Addition to business asset - minor investment in marketing site

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.333	12	.278	1.196	.285
Within Groups	67.131	289	.232		
Total	70.464	301			

G. Number of Children

ANOVA

Addition to business asset - minor investment in marketing site

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.491	7	.213	.908	.501
Within Groups	68.973	294	.235		
Total	70.464	301			

4. STRUCTURE IN BUSINESS LOCATION

A. Age

ANOVA

Addition to business asset - structure in business location

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.559	4	.390	1.781	.133
Within Groups	64.987	297	.219		
Total	66.546	301			

B. Membership Duration

Descriptives

Addition to business asset - structure in business location

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0-1 yr	63	.2063	.40793	.05139	.1036	.3091	.00	1.00
2-5 yrs	136	.3971	.49110	.04211	.3138	.4803	.00	1.00
>= 6 yrs	103	.3107	.46503	.04582	.2198	.4016	.00	1.00
Total	302	.3278	.47020	.02706	.2746	.3811	.00	1.00

ANOVA

Addition to business asset - structure in business location

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.612	2	.806	3.711	.026
Within Groups	64.935	299	.217		
Total	66.546	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Addition to business asset - structure in business location
Tukey HSD

(I) Membership duration	(J) Membership duration	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
0-1 yr	2-5 yrs	-.1907*	.07102	.021	-.3580	-.0234
	>= 6 yrs	-.10433	.07454	.342	-.2799	.0712
2-5 yrs	0-1 yr	.1907*	.07102	.021	.0234	.3580
	>= 6 yrs	.08638	.06087	.332	-.0570	.2298
>= 6 yrs	0-1 yr	.10433	.07454	.342	-.0712	.2799
	2-5 yrs	-.08638	.06087	.332	-.2298	.0570

*. The mean difference is significant at the .05 level.

C. Marital Status

ANOVA

Addition to business asset - structure in business location

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.281	3	.427	1.949	.122
Within Groups	65.266	298	.219		
Total	66.546	301			

D. Education

ANOVA

Addition to business asset - structure in business location

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.850	4	.212	.960	.430
Within Groups	65.697	297	.221		
Total	66.546	301			

E. House Ownership

ANOVA

Addition to business asset - structure in business location

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.107	2	.053	.240	.787
Within Groups	66.440	299	.222		
Total	66.546	301			

F. Household Size

ANOVA

Addition to business asset - structure in business location

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.642	12	.303	1.394	.168
Within Groups	62.905	289	.218		
Total	66.546	301			

G. Number of Children

ANOVA

Addition to business asset - structure in business location

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.031	7	.290	1.322	.239
Within Groups	64.516	294	.219		
Total	66.546	301			

5. ENTERPRISE ASSETS

A. Membership Duration

ANOVA

Changes to business assets

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	15.877	2	7.939	2.841	.060
Within Groups	835.517	299	2.794		
Total	851.394	301			

B. Education

ANOVA

Changes to business assets

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.856	4	.964	.338	.852
Within Groups	847.538	297	2.854		
Total	851.394	301			

C. House ownership

ANOVA

Changes to business assets

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4.210	2	2.105	.743	.477
Within Groups	847.184	299	2.833		
Total	851.394	301			

D. Age

Descriptives

Changes to business assets

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
21 - 30 yrs	35	2.6857	1.58618	.26811	2.1408	3.2306	1.00	5.00
31 - 40 yrs	138	2.7536	1.60206	.13638	2.4839	3.0233	1.00	6.00
41 - 50 yrs	94	3.4787	1.75811	.18133	3.1186	3.8388	1.00	6.00
51 - 60 yrs	27	2.1111	1.45002	.27906	1.5375	2.6847	1.00	5.00
61 - 70 yrs	8	1.8750	1.24642	.44068	.8330	2.9170	1.00	4.00
Total	302	2.8907	1.68183	.09678	2.7003	3.0812	1.00	6.00

ANOVA

Changes to business assets

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	61.229	4	15.307	5.754	.000
Within Groups	790.165	297	2.660		
Total	851.394	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Changes to business assets

Tukey HSD

(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
21 - 30 yrs	31 - 40 yrs	-.06791	.30870	.999	-.9152	.7793
	41 - 50 yrs	-.79301	.32298	.104	-1.6795	.0934
	51 - 60 yrs	.57460	.41779	.644	-.5721	1.7213
	61 - 70 yrs	.81071	.63920	.711	-.9436	2.5651
31 - 40 yrs	21 - 30 yrs	.06791	.30870	.999	-.7793	.9152
	41 - 50 yrs	-.72510*	.21813	.009	-1.3238	-.1264
	51 - 60 yrs	.64251	.34324	.335	-.2996	1.5846
	61 - 70 yrs	.87862	.59316	.575	-.7494	2.5066
41 - 50 yrs	21 - 30 yrs	.79301	.32298	.104	-.0934	1.6795
	31 - 40 yrs	.72510*	.21813	.009	.1264	1.3238
	51 - 60 yrs	1.36761*	.35615	.001	.3901	2.3451
	61 - 70 yrs	1.60372	.60072	.061	-.0450	3.2525
51 - 60 yrs	21 - 30 yrs	-.57460	.41779	.644	-1.7213	.5721
	31 - 40 yrs	-.64251	.34324	.335	-1.5846	.2996
	41 - 50 yrs	-1.36761*	.35615	.001	-2.3451	-.3901
	61 - 70 yrs	.23611	.65658	.996	-1.5659	2.0382
61 - 70 yrs	21 - 30 yrs	-.81071	.63920	.711	-2.5651	.9436
	31 - 40 yrs	-.87862	.59316	.575	-2.5066	.7494
	41 - 50 yrs	-1.60372	.60072	.061	-3.2525	.0450
	51 - 60 yrs	-.23611	.65658	.996	-2.0382	1.5659

*. The mean difference is significant at the .05 level.

E. Marital Status

Descriptives

Changes to business assets

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Married	242	3.0826	1.68265	.10816	2.8696	3.2957	1.00	6.00
Separated/Divorce	21	2.3810	1.43095	.31226	1.7296	3.0323	1.00	5.00
Widowed	16	2.0625	1.65202	.41300	1.1822	2.9428	1.00	6.00
Single/Never married	23	1.9130	1.34547	.28055	1.3312	2.4949	1.00	5.00
Total	302	2.8907	1.68183	.09678	2.7003	3.0812	1.00	6.00

ANOVA

Changes to business assets

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	47.331	3	15.777	5.847	.001
Within Groups	804.063	298	2.698		
Total	851.394	301			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Changes to business assets

Tukey HSD

(I) Marital Status	(J) Marital Status	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Married	Separated/Divorce	.70169	.37368	.240	-.2637	1.6671
	Widowed	1.02014	.42401	.078	-.0753	2.1156
	Single/Never married	1.16960*	.35842	.007	.2436	2.0956
Separated/Divorce	Married	-.70169	.37368	.240	-1.6671	.2637
	Widowed	.31845	.54509	.937	-1.0898	1.7267
	Single/Never married	.46791	.49578	.781	-.8130	1.7488
Widowed	Married	-1.02014	.42401	.078	-2.1156	.0753
	Separated/Divorce	-.31845	.54509	.937	-1.7267	1.0898
	Single/Never married	.14946	.53474	.992	-1.2321	1.5310
Single/Never married	Married	-1.16960*	.35842	.007	-2.0956	-.2436
	Separated/Divorce	-.46791	.49578	.781	-1.7488	.8130
	Widowed	-.14946	.53474	.992	-1.5310	1.2321

*. The mean difference is significant at the .05 level.

F. Household Size

ANOVA

Changes to business assets

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	62.861	12	5.238	1.920	.032
Within Groups	788.533	289	2.728		
Total	851.394	301			

G. Number of Children

ANOVA

Changes to business assets

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	29.613	7	4.230	1.513	.162
Within Groups	821.781	294	2.795		
Total	851.394	301			