

**SOCIO-ECONOMIC ANALYSIS OF LIVELIHOOD STRATEGIES OF RURAL  
WOMEN BENEFICIARIES OF MICROCREDIT IN THE TOLON/KUMBUNGU  
DISTRICT OF THE NORTHERN REGION OF GHANA**

**BY**

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**THIS THESES IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN  
PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF  
M,PHIL AGRICULTURAL EXTENSION DEGREE**

**DEPARTMENT OF AGRICULTURAL EXTENSION  
COLLEGE OF AGRICULTURE AND CONSUMER SCIENCE  
UNIVERSITY OF GHANA**

**JULY, 2009**

## DECLARATION

I, Zakaria Hudu, the researcher of this theses do hereby declare that with exception of various forms of assistance and references to literature which have been duly cited and acknowledged, the work presented in this theses entitled '**Socio-economic Analysis of Livelihood Strategies of Rural Women Beneficiaries of Microcredit in the Tolon/Kumbungu District of the Northern Region of Ghana**' was done by me in the Department of Agricultural Extension, College of Agriculture and Consumer Sciences, University of Ghana, Legon, from August, 2008 to July, 2009. It is further declared that this theses has never been presented either in whole or in part for the award of any degree in this University or elsewhere.

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This theses has been submitted for examination with my approval as supervisor

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**DATE**

## **Dedication**

This theses is dedicated to my mother, Mma Nafisah Alhassan

## **ACKNOWLEDGEMENT**

My Greatest appreciation goes to the Almighty God for seeing me through this programme successfully. My deepest gratitude and thanks also go to my supervisor – Dr. E. Achah-Nyamike Jnr. for his directions, guidance and constructive criticisms which helped to produce this work. Indeed, I am very grateful for all your support.

I further wish to express much gratitude to all lecturers in the Department of Agricultural Extension, University of Ghana, who in diverse ways assisted to get this work done. To my colleague students of the Department, I thank you very much for your valuable contributions to this theses.

My deepest thanks also go to authorities of the University for Development Studies for granting me study leave with pay which had enabled me complete this study. To members of staff of Department of Agricultural Economic and Extension (UDS), especially Dr. Joyce Bediako and Alhaj Seidu Iddi, I acknowledge your support and counselling.

In addition, I wish to acknowledge Mr. Ziblim Naatogma – Simli Pong Microcredit Scheme, Miss Naomi – Sinapi Aba Trust, Tamale, Mr. Walk – Kumbungu contact person for Simli Pong Microcredit, Mr. Saani – Bonzali Rural Bank Kumbungu, Mr. Zangina – Gbulung contact person for Simli Pong Microcredit Scheme and all persons interviewed for this study, for providing meaningful information and literature to complete this work.

I acknowledge the patience and support of my parents Mr. and Mrs. Zakaria Alhassan, my wife and son – Wunzooya and all those who have contributed in one way or the other to make this a success.

## **ABSTRACT**

The purpose of this study is to estimate the extent to which socio-economic characteristics, operations of microcredit institutions and community related factors influencing livelihood sustainability of rural women borrowers of microcredit. The study was conducted in the Tolon/Kumbungu District of the Northern Region of Ghana. Close and open-ended questionnaires, in-depth interviews, focus group discussions and direct observations were all used in collecting data from 150 women beneficiaries of microcredit sampled for this study. The research reveals that, almost all (90%) of the interviewees engaged in more than one livelihood strategies or income generating ventures, with more than two-third (72%) of them undertaking petty trading and agro-processing as their main source of income. Age, education level and type of main livelihood venture, were found to influence significantly women borrowers' ability to reduce vulnerability context associated with their livelihood ventures as a way of improving their livelihood sustainability. Also, women borrowers who received relatively higher amount of loan were found to have improved on their livelihood assets holdings and better prepare to withstand vulnerability context associated with their enterprises than those who received relatively small amount of loan. In addition, respondents from communities which main source of water was less than 2km away were found more likely to belong to the category of respondents who have enhanced their livelihood asset holdings since they started benefiting from microcredit than those who have to travel more than 2km to fetch water. The study recommends among others things, the provision of training to women borrowers to help build and enhance their managerial, vocational and entrepreneurial skills, and the need for the formulating and implementation of gender sensitive land tenure system to help improve women farmers' access to land.

## TABLE OF CONTENT

<b>DECLARATION</b>	<b>i</b>
<b>DEDICATION</b>	<b>ii</b>
<b>ACKNOWLEDGEMENT</b>	<b>iii</b>
<b>ANSTRACT</b>	<b>iv</b>
<b>LIST OF TABLES</b>	<b>v</b>
<b>LIST OF FIGURES</b>	<b>x</b>
<b>ABBREVIATION AND ACRONYM</b>	<b>xi</b>

### **CHAPTER ONE: BACKGROUND INFORMATION**

1.0 Introduction	1
1.1 Research Problem	6
1.2 Justification	8
1.3 Research Questions	9
1.4 Hypotheses of the Study	9
1.5 Objective of the Study	10

### **CHAPTER TWO: CONCEPTUAL FRAMEWORK AND LITERATURE** **13**

2.1 Definition Concept	13
2.2 Conceptualizing of Research Problem	22
2.2.1 Conceptual Framework	26
2.3 The Concept of Sustainable Livelihood	28
2.4 Sustainable Livelihood Frameworks	32
2.4.1 The DFID Sustainable Livelihood Framework	33
2.4.2 The IFAD Sustainable Livelihood Framework	36
2.4.3 Criticisms of livelihood framework	41
2.5 The Role of Institutions in Sustainable Livelihood	41
2.6 Rural Livelihood	44
2.6.1 Rural Livelihood Diversification	45
2.6.2 Demographic Characteristics and Rural Livelihood	47
2.7 Microfinance and Development	48
2.7.1 Microcredit and Livelihoods	50
2.7.2 An Overview of Microfinance in Ghana	51
2.8 Women and Empowerment	53
2.9 Ghanaian Women's Socio-economic Activities	55
2.9.1 Gender Consideration in Ghana Economics Policies	57

### **CHAPTER THREE: METHODOLOGY** **59**

3.1 Brief Description of the Study Area	59
3.2 Research Approach	60
3.3 Research Design	62
3.4 Sampling Techniques	62
3.5 Data Collection	63
3.5.1 Techniques for Collecting Primary Data	64
3.5.2 Focus Group Discussion	65

3.5.3 Secondary Data	66
3.6 Summary of Data Required and Method of Data Collection	66
3.7 Method of Data Analysis	68
3.7.1 Sustainable livelihood Analysis	68
3.7.2 Discriminant Analysis	70
3.8 Scope and Limitation of the Study	74
<b>CHAPTER FOUR: RESULTS AND DISCUSSION</b>	<b>75</b>
4.1 Socio-economic Characteristics of Respondents	75
4.1.1 Age of Respondents	76
4.1.2 Marital Status of Respondents	77
4.1.3 Educational Level of Respondents	79
4.2.1. Main Livelihood Venture	80
4.2.2 Farming	81
4.2.3 Petty trading and Agro processing	85
4.2.4 Service	87
4.3 Livelihood Capital/Assets of Women Borrowers	87
4.3.1 Women Borrowers' Human Capital	88
4.3.1.1 Access to training and skills development	90
4.3.1.2 Health Status of Respondents	92
4.3.1.3 Access to Labour	93
4.3.2 Physical Capital Base of Women Borrowers	96
4.3.2.1 Physical Asset accumulation and Control	97
4.3.3 Natural Capital of Women of Borrowers	97
4.3.1 Natural Resource Base of Respondents	100
4.3.4 Social Capital of Women Beneficiaries of Microcredit	100
4.3.4.1 Social Grouping and Participation in Social Activities	102
4.3.4.2 Household Status within Community Governance	105
4.3.5 Sources and form of financial Capital of Women Borrowers	106
4.3.5.1 Initial Start-up Capital of Women Borrowers	108
4.3.5.2 Control and Trend of Financial Resource	109
4.4 Assessment of Vulnerability Context and Livelihood Sustainability	110
4.4.1 Vulnerability Context and Prospects of Livelihood Sustainability	111
4.4.2 Perception of prospects of Livelihood Sustainability	112
4.4.2.1 Sustainability Prospects of women borrowers' Livelihood Capitals	114
4.4.2.2 Average Sustainability Score	115
4.5 Respondents' Socio-economics and Livelihood Sustainability	118
4.5.1. Socio-economic Characteristics and Prospects of Reducing Vulnerability	119
4.5.1.1 Age of Respondents and Prospects of Reducing Vulnerability	119
4.5.1.2 Marital Status of Respondents and Vulnerability Status	120
4.5.1.3 Level of Education and Vulnerability Status	122
4.5.1.4 Main Livelihood Venture and Prospects of Reducing Vulnerability	124
4.5.1.5 Intra-household Characteristics and Vulnerability Status	127
4.5.1.6 Discriminant Analysis of Socioeconomic Influencing Vulnerability	131
4.5.2 Socioeconomic Characteristics and Livelihood Sustainability	136
4.5.2.1. Age of Respondents and Livelihood Sustainability	137
4.5.2.2 Level of Education and Vulnerability	138
4.5.2.3 Marital Status and Prospects of Livelihood Sustainability	139
4.5.2.4 Personal Wealth Rank and Livelihood Sustainability	140

4.5.2.5 Number of Dependent and Prospect of Livelihood	142
4.5.2.6 Main Livelihood Venture and Prospects of Livelihood Sustainability	143
4.5.2.7 Socioeconomic factors influencing Livelihood Sustainability	146
4.6 Credit Provision and Livelihood Sustainability	150
4.6.1 Source of Credit	151
4.6.1.2 Simli Pong Microcredit Scheme	151
4.6.1.3 Bonzali Rural Bank Microcredit and Small Loan Scheme	153
4.6.1.4 Sinapi Aba Trust	157
4.6.2 Differences between the Three Microcredit Schemes	161
4.6.3 Loan Factors and Livelihood Sustainability	161
4.6.3.1 Prospect of Livelihood Sustainability and Source of Credit	162
4.6.3.2 Amount of Loan and Prospect of Livelihood Sustainability	163
4.6.3.3 Number of Loan cycles and Livelihood Sustainability	165
4.6.3.4 Investment and Prospects of Livelihood Sustainability	166
4.6.3.5 Discriminant Analysis of Credit Variables and Livelihood Sustainability	171
4.6.4 Loan Factors and Prospects of Reducing Vulnerability	173
4.6.4.1 Source of Credit and Prospect of Reducing Vulnerability	174
4.6.4.2 Extent of Investment and Prospect of Reducing Variability	177
4.6.4.3 Prospect of Reducing Vulnerability and Livelihood Venture	179
4.6.4.4 Discriminant Analysis of Credit and livelihood Variability	180
4.7 Community Factors and Livelihood Strategies	184
4.7.1 Physical Infrastructure	184
4.7.2 Water and Sanitation Facilities	186
4.7.3 Housing	187
4.7.4 Health Facilities	188
4.7.5 Location of Fuel wood	189
4.7.6 Community Factors and Livelihood Sustainability	190
4.7.7 Prospect of Reducing Vulnerability and Road Network	192
4.7.8 Distance of Source of water and Prospect of Reducing Vulnerability	193
4.7.9 Access to Health Care and Prospects of Reducing Vulnerability	193
4.7.10 Access to Health Care and Prospects of Reducing Vulnerability	194
4.7.11 Availability of fire wood and Prospect of Reducing Vulnerably	196
4.7.12 Discriminant Analysis of Community Factors Influencing Vulnerability	198
<b>CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATION</b>	<b>201</b>
5.1 Summary of Findings	202
5.2 Conclusion	205
5.3 Recommendations and Suggestions	206
<b>REFERENCE</b>	<b>209</b>
<b>APPENDIX</b>	
<b>Appendix A: Questionnaire for Personal Interview of Beneficiaries of Microcredit</b>	
<b>Appendix B: Interview Guide for Microcredit Scheme Operators</b>	
<b>Appendix C: Check list for focus group discussions</b>	



## LIST OF TABLES

<b>Table</b>	<b>page</b>
Table 3.1: Summary of Data Required and Method of Data Collection	67
Table 3.2: Summary of Method of Analysis	73
Table 4.1.1: Frequency Distribution of Age of Respondents	76
Table 4.2.1: Frequency Distribution of Main livelihood Venture	81
Table 4.2.2: Distribution of livestock numbers	84
Table 4.2.3: Frequency Distribution of Type of Service render	87
Table 4.3.1: Comparing respondents access to training across communities	90
Table 4.3.2 Cross tabulation of trend of household health and food security	92
Table 4.3.3: Cross tabulation of marital status and control over labour and time	93
Table 4.3.4: Distribution of Number of bowls	96
Table 4.3.5: Distribution of Extent of control Exerted on physical Assets	97
Table 4.3.6: Distribution of alternative source of fuel	100
Table 4.3.7: Crosstabulation of personal wealth rank and level of acceptance	102
Table 4.3.8: Crosstabulation of household status and Access to Resource	104
Table 4.3.9: Distribution of respondents financial capital	106
Table 4.3.10: Frequency Distribution of Source of Initial Capital	107
Table 4.3.11: Control over financial resource and trend	110
Table 4.4.1: Frequency Distribution of Number of Conditions fulfilled	114
Table 4.4.2: Frequency Distribution of Average sustainability score	117
Table 4.5.1: Crosstabulation of Age of Students and Vulnerability Score	120
Table 4.5.2: Crosstabulation of Vulnerability Status and Sustainability Status	124
Table 4.5.3a: Crosstabulation of Vulnerability Status and Main Livelihood	126
Table 4.5.3b: ANOVA of number of livelihoods and Status of Vulnerability	126
Table 4.5.4: Vulnerability and Extent of control exerted over financial resource	130
Table 4.5.5: Coefficients of Socioeconomic Variables Influencing Vulnerability	135
Table 4.5.6: Crosstabulation of Age of respondents and livelihood sustainability	138
Table 4.5.7: Crosstabulation of Level of Education and Livelihood Sustainability	139
Table 4.5.8: Crosstabulation of Marital Status and Prospects of Livelihood Sustainability	140
Table 4.5.9: Crosstabulation of Trend of financial capital and Livelihood sustainability	142
Table 4.5.10: ANOVA t of size of dependents and prospects of sustainability livelihood	143
Table 4.5.11a: Main livelihood venture and Prospects of livelihood sustainability	145
Table 4.5.11b: ANOVA of Number of Livelihood Venture and Livelihood Sustainability	145
Table 4.5.12: Socioeconomic Factors Influencing Livelihood Sustainability	150
Table 4.6.1: Frequency Distribution of Loan Officers and Clients	154
Table 4.6.2: Volume of Credit and Repayment rates from 2004 t0 2008	157
Table 4.6.3: Frequency Distribution of volume of credit	158
Table 4.6.4: Difference between Microcredit Schemes	161
Table 4.6.5: Prospects of Livelihood Sustainability and Source of Credit	163
Table 4.6.6: Amount of Credit and Prospects of Livelihood Sustainability	165
Table 4.6.7: Number of loan cycles and Prospects of Livelihood Sustainability	166
Table 4.6.8a: Crosstabulation of Livelihood Sustainability and Adequacy of Loan	170
Table 4.6.8b: Category of Livelihood Venture and Prospects of Livelihood Sustainability	171
Table 4.6.9: Discriminant function of Prospects of Livelihood sustainability	173

Table 4.6.10: Prospects of Reducing vulnerability and Loan duration	177
Table 4.6.11: Crosstabulation of Extent of Investment and Reducing Vulnerability	179
Table 4.6.12: Prospects of Reducing Vulnerability and Category of Livelihood venture	180
Table 4.6.13: Coefficients of Credit Variables and Vulnerability	183
Table 4.7.1: Nature of Road Network in and out of Community	186
Table 4.7.2: Frequency of Distribution of source of water	187
Table 4.7.3: frequency Distribution of Nature of roofing	188
Table 4.7.4: Frequency Distribution of Location of clinic/health post	189
Table 4.7.5: Location of the nearest source of fuel wood	190
Table 4.7.6a. Crosstabulation of communities and prospect livelihood sustainability	191
Table 4.7.6b. Crosstabulation of communities and prospect of reducing vulnerability	191
Table 4.7.7: prospects of Reducing Vulnerability and Nature of road network	192
Table 4.7.8: Source of water and prospect of reducing vulnerability	193
Table 4.7.9: Number of Village market accessed and prospect of Reducing Vulnerability	194
Table 4.7.10: Distance of Health Facility and Prospect of Reducing Vulnerability	196
Table 4.7.11: Distance of fuel wood and prospect of reducing vulnerability	197
Table 4.7.12: Discriminant Function of Community variables	200

## LIST OF FIGURE

<b>Figure</b>	<b>Page</b>
Figure 2.2.1: Conceptual Framework	26
Figure 2.2.2: DFID Livelihood Framework	33
Figure 2.2.3: IFAD Sustainable Livelihood Framework	37
Figure 4.1.1: Pie Chart Illustrating Marital Status of Respondents	77
Figure 4.1.2: Bar Chart Illustrating Education of Respondents	79
Figure 4.2.1: Pie Chart Showing Type of Product Sell	86
Figure 4.5.1: Bar Graph of Marital Status and Reducing Vulnerability	122

## **ABBREVIATION AND ACRONYM**

AgSSIP	Agricultural Services Investment Project
ASSIP	Agricultural Sub Sector Improvement Programme
CBRDP	Community Based Rural Development Programme
DFID	Department For International Development
ENOWID	Enhancing Opportunities for Women in Development
FINSSP	Financial Sector Strategic Plan
FNGOs	Financial Non-Governmental Organization
FSIP	Financial Sector Improvement Project
GDCP	Ghanaian Danish Community Project
IFAD	International Fund for Agricultural Development
IMF	International Monetary Fund
LSC	Loan and Saving Company
MDGs	Millennium Development Goals
MFP	Micro Finance Project
MOFA	Ministry of Food and Agriculture
NBFI	Non-Bank Financial Institution
NGO	Non-Governmental Organization
PAMSCAD	Programme of Action to Mitigate the Social Cost of Adjustment
PNDC	Provisional National Defence Council
RCBs	Rural Community Bank
REP	Rural Enterprise Project
RFSP	Rural financial Sector Project
ROSCA	Rotating and Accumulating Savings and Credit Association
SIF	Social Investment Fund
SRLC	Sustainable Rural Livelihood Advisory Committee
SL	Sustainable Livelihood
SLA	Sustainable Livelihood Approach
SLF	Sustainable Livelihood Framework
UNDP	United Nations Development Programme

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.0 Introduction**

This chapter serves as the introduction of the study and consists of the background information, the research problem, research questions, objectives of the study, hypotheses set for the study, justification of the study and conceptual framework employed to guide the study.

#### **1.1 Background Information**

Microcredit as a contemporary measure against poverty in developing countries is increasingly gaining recognition as an effective tool for rural poverty reduction among Donor Organizations, Governments, Non-Governmental Organizations and development practitioners. This recognition had helped galvanized much support attracting more resources to the microfinance sector through increasing donor funding and national budgetary allocations. Murdoch (2000) observes that, few recent innovations have held so much hope for reducing poverty in developing countries as microfinance. Indeed, microcredit has become one of the crucial driving mechanisms towards achieving the Millennium Development Goals (MDGs), especially concerning the targets of halving extreme poverty and hunger, and achieving gender equality and women empowerment by 2015 (Fernando, 2004). Leading advocates in the field have argued that, microfinance has the capacity not only to reduce poverty, but to develop the institutional capacity of microfinance institutions to efficiently and effectively provide sustainable financial services to poor households who are otherwise excluded from the formal banking system

for lack of collateral. Evidently, microcredit has become one of the most important interventions for reducing rural poverty in developing countries.

The extent of poverty in rural communities and the importance of rural livelihood security to the national economy call for the provision of microcredit interventions to ensure livelihood sustainability and improvement of rural economy. Shepherd, Arnold and Bass, (1999), in their study entitle “Forest and Sustainable Livelihood” concluded that, Livelihood insecurity remains a major problem in less developed countries, particularly those in Africa. Poverty, famine and malnutrition are serious perennial problems that these nations have to grapple with. They further stressed that, Poverty in the developing world is more a rural than an urban phenomenon, and in the poorest developing countries, 65-80 percent of the population still live in rural areas. The same can be said about Ghana as a developing country considering World Bank report in 1995 which revealed that, out of 35% of Ghanaians classified as poor, 75% lived in the rural areas. Study done later by Oduro (2001), also estimated that rural poverty contribute approximately 90% to national poverty.

More than one-half of the population living in the rural Savannah regions of Ghana continues to suffer from extreme poverty. Poverty is highest among self-employed households cultivating agricultural crops and has decreased only slightly compared to self-employed households engaged in export-crop agriculture and wage employees in the public and private sectors (ibid). In spite of these, agriculture, which is mainly rural-based and the core of the Ghanaian economy, remains the principal sector for the development and growth of the economy. The importance of the rural sector to the

economy and the extent of poverty in this sector have been acknowledged by successive governments. Since independence in 1957, with a relentless efforts in implementing policies that aim at poverty reduction, yet poverty still persist in the country especially in the rural communities. However, there has been success in the urban areas and in places where exports commodities such as cocoa, gold, timber and others are produced. As a result, the overall poverty rate fell from 51.7% in 1991/92 to 39.5% in 1998/99 in those areas based on household survey and other relevant data (Washington, 2002). However, poverty remains a systemic problem in rural settings of Ghana particularly in the northern sector where it is closely linked to low access to basic infrastructure, health services, education and microcredit (Washington, 2002). Based on the increasing numbers of the poor in Ghana and for that matter Sub-Saharan Africa, it was compelling for nations to address the phenomena. Appropriate measures are therefore being put in place to reduce poverty levels. In recent years, some measures adopted by policy makers and Non-governmental Organizations (NGOs) in many low income countries as a means of alleviating poverty in rural areas, is encouraging women to go into enterprise development. This they do by making available to them credit facilities with education. Pitt et al. (2003, as cited in Ansoglenang, 2006) reiterated that these programmes specifically target women because they are more credit constraint than men. Also women have restricted access to wage labour market and have inequitable share of power in decision-making process. They argued that the Grameen Bank of Bangladesh is perhaps one of the well known small-scale credit programmes for the poor, and more than 90 percent of its beneficiaries are women.

Ghana has a large rural sector where an estimated 60% of the population live. The large rural sector is heavily dependent on agriculture which is the dominant economic activity providing employment for about 90% of the rural dwellers. This group of people is served by rural and community banks which are currently regulated under the Banking act (Act 673; 2004). The other institutions operating in rural Ghana include the Savings and Loans Companies which are regulated under the Non-Banking Financial Institutions (NBFI) Law 1993 (PNDCL 328) (Bank of Ghana Annual Report, 2007). In pursuance of the microcredit desire to deepen and widen their outreach and coverage to rural dwellers, especially rural women, a number of policies and programmes affecting the microfinance sub-sector are currently being implemented. These include the Financial Sector Improvement Project (FSIP), Financial Sector Strategic Plan (FINSSP), the Rural Financial Services Project (RFSP), the United Nations Development Programme (UNDP) Microfinance Project, the Social Investment Fund (SIF), the Community Based Rural Development Programme (CBRDP), Rural Enterprise Project (REP), Agricultural Services Investment Project (AgSSIP) and the recent Micro credit and Small Loan Centre (MASLOC) (Bank of Ghana Annual Report, 2007).

In spite of these laudable policies and projects, access to credit by rural women continue to be a major problem hindering their ability to raise adequate capital for their income generating activities to ensure sustainable livelihood. This situation is worrying considering the important role of financial capital in mobilizing other factors needed for effective rural development. Hauge et al., (1999) observed that, improving access to capital for poor households is a vital part of any rural development strategy, especially one designed to rectify long standing rural inequality and to generate broad-based



growth. In addition, there may be further benefits from specifically targeting the capital needs of rural and low-income women. Most credit programs oriented to increase access to credit for poor households are based on a “gender neutral” approach where women or men are not specifically targeted. However, unless specifically targeted, women tend to have limited access to financial resources than men. This places them in a disadvantaged position in terms of access and control of resources which can be use as collateral to obtain formal credits.

Micro credit projects that specifically target women deserves special consideration from policy makers given the presumed social welfare and productivity gains to be realized from specifically enhancing women’s productive capacity within the household. Because of this realization, microcredit and income generating activities for rural women are becoming central elements of development intervention of Non-governmental Organizations (NGOs) in many developing countries, with keeping pace of global emphasis on self-employment and on basis of the assumption that microcredit programmes and micro-enterprises for rural women will lead to increased household income thus translates into more power and influence for women at both household and community level. Provision of microcredit has been taking a dominant place in local programmes in Ghana especially among NGOs working in the rural areas, as attention now focus on economic empowerment of women as bases for achieving gender equity and rural poverty alleviation. There is though the ability for the rural poor to move out of poverty but this is critically dependent on how accessible the assets are. It is therefore essential to investigate the roles of these livelihood assets in supporting the livelihoods of

the rural poor, their relative importance in rural livelihood support, and how these can be improved to offer viable livelihood outcomes.

As such ensuring livelihood security through sustainable livelihood strategies that empower women entrepreneurs to overcome their vulnerability and to guarantee continue flow of income is imperative in economic emancipation of women as prerequisite for gender equality and women empowerment as envisaged in the Millennium Development Goals (MDGs).

## **1.2 Research Problem**

It is widely assumed that microcredit will have a positive impact on women's livelihood, enabling them to perform better their reproductive role as brokers of health, nutritional and educational status of other household members. Microcredit is also believed to play important role in increasing women's employment in micro enterprises and improving the productivity of women's income generating activities. With regard to overcoming gender inequality, provision of micro credit to women is expected to play effective role in enhancing their self-confidence and status in the family as independent producers and providers of valuable cash resources to the household economy.

These assumptions and other claims are largely borne out of theory and empirical evidence of impact assessments of microcredit programmes, even though some results of such impact assessments showed shortcomings of meeting the set targets.

Tolon/Kumbungu district being one of the poorest districts in the country, has seen many financial institutions and Non-Governmental Organizations (NGOs) providing micro credits to women and women groups engaged in income-generating activities to help improve on their livelihoods and reduce poverty. In spite of these interventions, poverty seems not to ease its firm grip on the lives of rural women in the District. This unfortunate situation appeared to threaten the ability of women to secure sustainable livelihood to guarantee continuous flow of income, despite benefiting from microcredit schemes. Several factors such as poor infrastructure in the rural communities, lack of government commitment to the development of rural enterprises, over reliance on natural conditions for rural livelihood like rain-fed agriculture, socio-economic characteristics of rural women, community related factors such as poor social amenities, and social services among others, can be blamed for this situation. This therefore suggests a missing link requiring an in-depth livelihood analysis to establish factors influencing the ability of rural women to construct sustainable livelihood. It is in this light that this research sought to examine the socioeconomic characteristics of women beneficiaries of microcredit, community related factors of beneficiaries, intra-household resource allocation and control, reproductive and other social pressures on women beneficiaries of microcredit in the Tolon/Kumbungu District so as to ascertain their influence on the ability of rural women to secure sustainable livelihood to ensure continue flow of income and hence help reduce poverty among rural women.

This research seeks to analyse women borrowers' socioeconomic characteristics and community related factors and its influence on the sustainability of livelihood strategies of women enterprises in the Tolon/Kumbungu District of the Northern Region of Ghana.

### **1.3 Justification of the Study**

The need of this study is necessitated in response to the fact that assessment of many microcredit programmes undertaken by donors and scheme providers have been centred on sustainability of the credit schemes based on repayment rate and debt servicing capacities of borrowers with very little and detail findings on the profitability and sustainability of the borrowers' livelihood strategies. These indicators are proxies, as observed by Yaron et al., (1997), because they are not directly related to the success of borrowers, enterprise or to the impact on social or gender relations. Microcredit has been championed by gender activists as holding the key for women economic empowerment and the liberation of women from their subordinate position in society. This research sought to analyse women borrowers' socioeconomic characteristics and community related factors and its influence on the livelihood strategies of women enterprises. The conceptualized community related factors such as availability of water, fire wood, marketing opportunities, intra-road networks, intra-households resources distribution and control, women social ascribed status, roles and responsibilities and reproductive and child care responsibilities as having effect on the performance of women livelihood strategies and their abilities to efficiently invest their borrowed funds in productive ventures for good returns.

Results from this research will be useful to policy makers, rural development organizations, the district assemblies, Non-governmental Organizations (NGOs) and other gender related organizations in their intervention on women empowerment and poverty reduction among poor rural women. As it will provide information on interactions between women borrowers, socio-economic characteristics and community

factors and their influence on the performance of women livelihood ventures which is very useful in policy formulation and implementation with regard to women economic empowerment.

#### **1.4 Research Questions**

The research proceeds on the following research questions.

1. What type of livelihood strategies do women beneficiaries of microcredit in the Tolon/Kumbungu District invest their borrowed fund on?
2. What constitute the livelihood assets/capital from which rural women beneficiaries of microcredit in the district draw on to construct their livelihood?
3. To what extent do socio-economic characteristics of rural women borrowers exert influence on sustainability of their livelihood strategies?
4. What relationship exists between source of credit and sustainability of rural women borrowers' livelihood strategies?
5. To what extent do community factors influence livelihood sustainability of rural women borrowers' livelihood strategies?

#### **1.5 Hypotheses of the study**

The following hypotheses, all stated in the null form, were tested through empirical data;

H<sub>01</sub>: Socio-economic characteristics of women beneficiaries of microcredit do not significantly influence the sustainable status of their livelihood strategies.

H<sub>02</sub>: Source of credit does not significantly influence sustainability status of women borrowers' livelihood strategies.

H<sub>03</sub>: community factors do not significantly influence sustainability status of rural women beneficiaries' livelihood strategies.

H<sub>04</sub>: the type of Livelihood strategy engaged in by women beneficiaries of microcredit does not significantly affect the sustainability status of their livelihood strategies.

## **1.6 Objectives of the study**

The main objective of this study is to analyse factors influencing the sustainability of livelihood strategies of rural women beneficiaries of microcredit in the Tolon/Kumbungu District of the Northern Region.

### **1.6.1 Specific objectives of the study include:**

1. To examine the various Livelihood Strategies engaged in by rural women beneficiaries of microcredit in the Tolon/Kumbungu District.
2. To analyse Livelihood Capital/Assets from which rural women beneficiaries of microcredit drawn on to construct their livelihood.
3. To examine women borrowers' ability to reduce the vulnerability context associated with their enterprises in their drive towards constructing sustainable livelihood
4. To assess the influence of rural women borrowers' socio-economic characteristics on the sustainability of their livelihood strategies.
5. To analyse the influence of operations of credit providing institutions on the sustainability of livelihood strategies of women borrowers in the District.

6. To assess the influence of community factors on the sustainability of rural women borrowers' livelihood strategies in the Tolon/Kumbungu District.

### **1.7 Definition of Concepts**

Below are definitions of concepts that were explored to achieve the objectives of this study. These concepts were selected and explored because the researcher deemed them fit to be relevant to the purpose and objectives of this study. The concepts are defined below;

#### **1. Livelihood**

Livelihood comprises of the capabilities, assets (including both material and social resources) and activities required for a means of living. Livelihood according can also be viewed as a means of support or subsistence; adequate stocks and flows of food and cash to meet basic needs. This study will consider livelihood of women beneficiaries of micro credit as all economic activities the women undertake to enable them meet their basic needs and aspirations.

#### **2 Livelihood Strategies**

Livelihood Strategy refers to the ways and means of individual engaging in particular economic activities, organized in a particular way to produce their livelihood outcomes or meet their needs, wants and aspirations. This study considered livelihood strategies as all activities engaged in by beneficiaries women to enable them secure their livelihood

outcomes such as food security, clothing, paying for children education, financing their health needs, acquiring domestic wares such as cooking utilities among others.

### **3. Sustainable Livelihood**

A livelihood is sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base. Also livelihoods of individuals or households are said to be sustainable when they are resilient in the face of external shocks and stresses; are not dependent upon external support (or if they are, this support itself should be economically and institutionally sustainable); maintain the long term productivity of resources; and do not undermine the livelihoods of, or compromise the livelihood options open to, others.

### **4. Livelihood Outcomes**

Livelihood Outcomes are the achievements or outputs of Livelihood Strategies. In other words they are the objectives or purposes which are sought for by individual or household in their livelihood strategies. In broader prospective, common livelihood outcomes include more income, improved well-being, reduced vulnerability and more sustainable use of natural resources. It therefore means that the households should pursue



a broad range of livelihood strategies based on their assets (physical, financial, human, social and natural capital) in order to obtain the livelihood outcome they wish to achieve.

## **5. Credit**

Credit can be defined as the temporary transfer of capital resources from an individual or institution to another person or institution for specific period of time, purpose and at an agreed interest rate. For this research, a working definition of credit is temporary transfer of financial resources from formal or semi formal institutions to individual women or women groups for a specific period of time, purpose and at an agreed interest rate. This research will not include informal credits because of difficulties of obtaining information regarding the operations of informal lending institutions and lack of time since most informal credits mostly take place within social and cultural settings among family relations.

## **6. Microcredit**

Microcredits are small loans given to both rural and urban people to be used in viable ventures and to improve small businesses. The target is economic active poor usually women and women groups whose standard of living are very low, failing below the poverty line. For this study, microcredit is defined as the provision of small loans to individuals or groups (women), to help them invest in their livelihood ventures so as to improve on the performance of their businesses and living standard, which is to be repay within a given time period and at a given interest.

## **7. Beneficiary**

Person and/or group of persons who benefited from a specific project, programme or other form of development and/or emergency intervention is/are refer to as beneficiary.

For this study beneficiaries of microcredit is person and/or group of person who benefited from a microcredit project or programme.

## **8. Poverty**

There continues to be much debate about how poverty should be defined, but it is increasingly accepted that poverty is not just a lack of material necessities, assets and income. The notion of poverty has been broadened to include a deprivation in capabilities, voice and power that contribute towards a lack of well-being.

## **9. Vulnerability**

Vulnerability refers to the external environment in which people pursue their livelihoods and their exposure (risk) to the negative effects of the external environment, as well as external shocks and trends of seasonality.

## **10. Access to resources**

Vulnerability is closely linked to access to resources (capital assets) because these are a principal means by which people reduce their vulnerability. It is the access to resources, assets and entitlements that together give people the capabilities to pursue livelihood strategies that may have direct material as well as more individually subjective objectives.

### **1.7.1 Conceptualization of the Research Problem**

Livelihood comprises of the capabilities, assets (including both material and social resources) and activities required to make a living (DFID, 1999). Livelihoods analysis are based on income (in cash, kind, or services) obtained from employment, and from remuneration through assets and entitlements.

This study conceptualized livelihood of women microcredit beneficiaries as comprising of all activities the women undertake in order to make a living. It looks at their livelihood strategies as the capacity to combine their social, physical, natural and financial capitals to produce goods and services of economic value (either for exchange or used value) to enable them meet their needs, and build assets and capabilities to overcome their vulnerabilities and take advantage of the opportunities available to ensure continuous flow of income and improved well-being.

Livelihoods needs of men and women are not always the same, due to their different roles, responsibilities and resources endowment. The impact of different livelihood interventions will also vary according to gender, for instance, a technology to relieve the workload of men, may result in an increase in the workload of women. Women and men are likely to differ also in their capacity or authority to overcoming such technological barriers and other vulnerabilities exerted by the external environment.

Because of the different social, productive and reproductive roles that women and men play, they are faced with different challenges in the kind of livelihood strategies to

engage in so as to meet their needs and aspiration. Moser, (1994) identified the triple roles of women as reproductive, productive and community management roles as against productive and community politics roles of their men counterparts. Women always have to allocate their time, resource and energies to perform their triple roles which have an obvious influence on the performance of their livelihood ventures. These competing demands for women's labour, time, and resources placed them in a position to always finding a balance in their attempts to carry out their roles to meet their economic and social aspirations.

The socioeconomic characteristics of women also provide yet another dimension of assessing the productive role of women so far as their livelihood is concern within social and cultural context they find themselves. These social, economic and cultural roles of women obviously influence the nature of intra-household income and resource allocation and their level of control over household resources. All gender based constraints, intra-household resource allocation and control, community factors such as availability and accessibility of water, community market, road networks coupled with the broader micro and macroeconomic situation in the country, legal factors and government policies and environmental and ecological factors are conceptualized as either constituting vulnerability context or offering opportunities for enhancing the sustainability of women livelihood strategies.

Becker (1981) postulates two broad competing models of intra-household resource allocation: the Unitary Model and the Collective Model. The Unitary Model assumes that

household resources are distributed among its members according to a single set of household preferences. That is, the household is a monolithic unit (thus regarding the household as economic unit of analysis). The Collective Model, on the other hand, commonly views intra-household distribution as the outcome of bargaining between members with dissimilar preferences, so that allocations to a member (and her constituency) are dependent on her bargaining power. This study will conceptualize intra-household allocation of resources as collective model where household member's access and control of resources depend on her bargaining power and that there are dissimilarities among members in terms of their needs, aspirations, preferences, challenges and power.

The socioeconomic characteristics of beneficiaries' women such as age, marital status, position among co-wives, and source of income, among others are conceptualised to have effect on the main livelihood ventures such as farming, agro processing or trading on which borrowed fund is invested on. Also, source of credit such as Non-governmental administered credit; Rural Banks administered credit or Loan and Saving Company administered credit schemes and term of borrowing such as interest rate, borrowing qualifications, payment terms among others, is conceived to exert yet another influence on the performance of the livelihood ventures of women borrowers, as illustrated in the figure 1 below. In addition, community factors such as availability of water, marketing opportunities, how accessible the community is in terms of road networks, availability of fuel wood in the community, health centres and schools are conceived to have influence on women time allocated for productive activities and hence exert influence on the sustainability status of their livelihood strategies.

Finally, sustainability status of women livelihood will affect their livelihood outcomes such as ability to contribute towards household food security, buy clothing for both themselves and their children, paying for their children health and education among others.

### **1.7.2 Conceptual Framework**

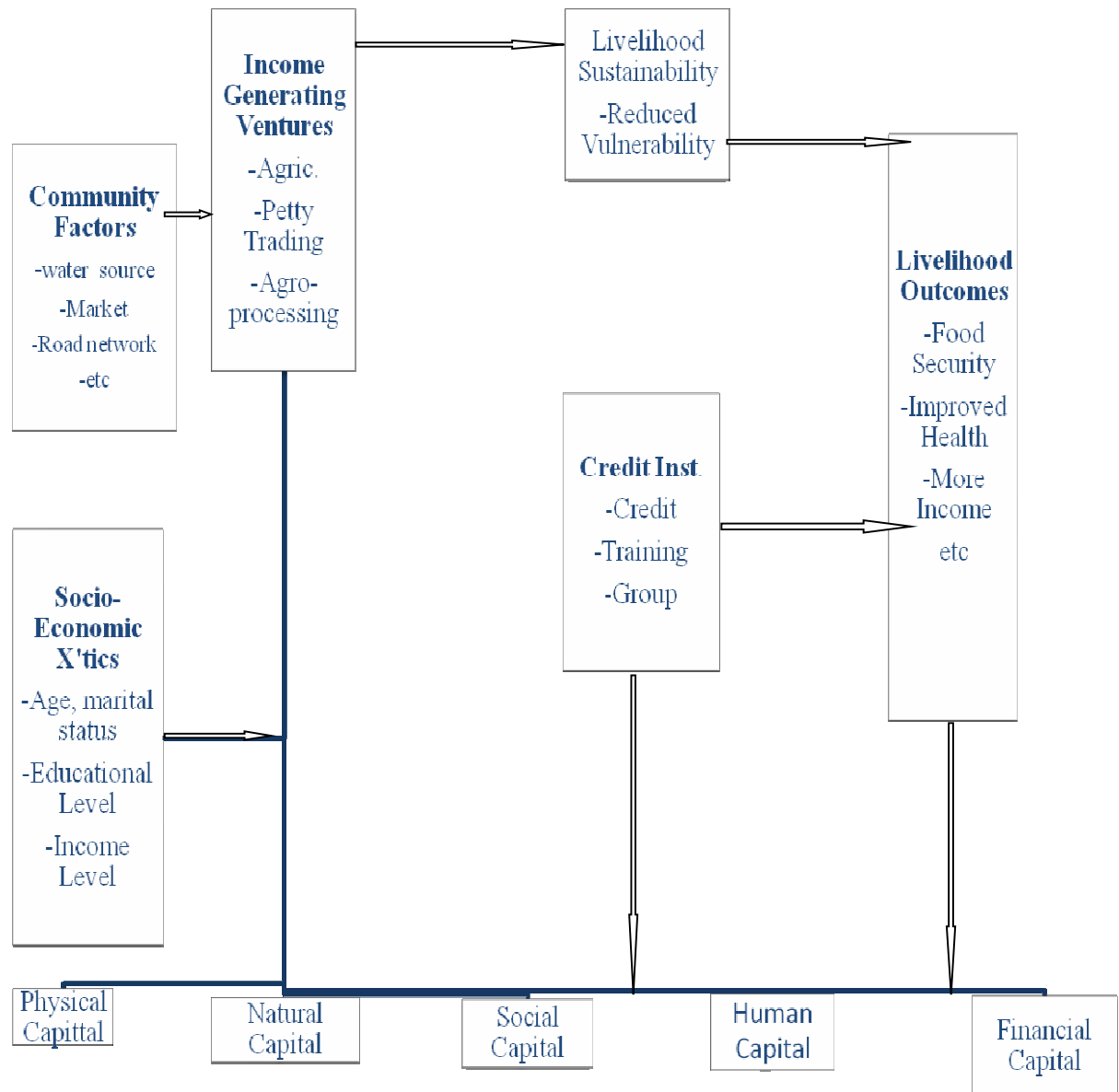
Conceptual framework abstracting the researcher view of linkages of concepts and variables explored in this study is illustrated in figure 1 below. the livelihood capitals such as human, social, physical, financial and natural on which the women drawn on to construct their livelihood strategies are shown in the five boxes labelled as such in the diagram. These capitals form inputs into their income-generating ventures, depicted in the diagram by a direct linkage between income-generating ventures and capital inputs.

The credit institutions inject financial capital in the form of credit into the capital pooled of the women beneficiaries, social capital by encouraging group formation, cooperatives and Susu groups, and human capital through training and skills on financial management and enterprise development.

Women borrowers' socio-economic characteristics affect their ability to harness these capitals base and construct sustainable and secure livelihood ventures. This phenomenon is depicted in the diagram by the linking of socio-economic characteristics on the main linkage between livelihood capital boxes and income generating venture box. This illustrates the relationship between livelihood capital base of borrowers and their socio-

economic characteristics such as age, income, education in one hand and nature and kind of livelihood venture engaged in. Also community factors such road networks, availability of water and market infrastructures among others is depicted by linking the main flow of capital to the income generating venture indicate the influence of these community factors on both capital inflow into beneficiaries, income generating ventures and the kind of livelihood venture that can be engaged in. all these influences affect the sustainability of women borrowers, livelihood strategies and hence the achievement of livelihood outcomes pursued such as more income, food security, good health among others. These livelihood outcomes also feedback to the livelihood assets or capital base and start the cycle again.

**Figure 1: Conceptual Framework**



Source: Zakaria, 2009 (Adapted from DFID Livelihood framework)

### 1.8 STRUCTURE OF THE THESIS

The thesis is structured into five chapters. Chapter one is general introduction to the whole study. It focuses on the background of the study, statement of the research



problem, objectives of the study, the hypotheses, the purpose of the study, and operational definitions of some key concepts and conceptual framework adopted for the study.

Chapter two deals with literature review where relevant literature on the study concepts are discussed. This chapter discussed documented research findings on concept of sustainable livelihood, livelihood frameworks, and overview of microcredit sector in Ghana, microcredit and rural livelihood, women empowerment among other relevant issues.

Chapter three deals with the research methodology adopted for this study. It discusses the research method employed and techniques used in the collection and analysis of data. The chapter also focuses on brief description of the study area and scope and limitations of the study.

Chapter four presents results and discussions of findings of the research within the context of the study objectives. It discussed findings on women borrowers' demographic characteristics, type of livelihood strategies they engaged in, nature of livelihood assets, issues relating to the credit they been benefiting from and community factors and their influences on their livelihoods.

Chapter five, the last chapter focuses on conclusion, implications and recommendations base on the findings of the research.

## **.CHAPTER TWO**

### **2.0 LITERATURE REVIEW**

#### **2.1 Introduction**

Literature on livelihood strategies of rural women, the role of microcredit in women empowerment and poverty alleviation abounds due to the recognition shown by researchers, international Organizations, donor institutions, governments and Non-governmental Organizations on rural enterprise development and the provision of microfinance services to the rural unbanked population as a key component in rural development drive. This chapter focuses on how various authors and authorities have defined the concepts involved in this research. In each case, the review follows with definitions and comments leading to establishment of point of departure with reference to this study. Issues discussed in this chapter included; concept of sustainable livelihood, overview of sustainable livelihood frameworks, livelihood assets, role of institutions in livelihood security, rural livelihood, livelihood diversification, intra-household resource allocation, and microcredit and women empowerment among others.

#### **2.2 Livelihood Strategies**

Livelihood Strategy refers to the ways and means of individual engaging in particular economic activities, organized in a particular way to produce their livelihood outcomes or

meet their needs, wants and aspirations. Individuals engaged in various means to enable them achieve their basic needs and aspirations.

Available studies have drawn attention to the enormous diversity of livelihood strategies at every level within geographic areas, across sectors, within households and over time.

This is not a question of people moving from one form of employment or ‘own-account’ activity (farming, fishing) to another. Rather, it is a dynamic process in which they combine activities to meet their various needs at different times. A common manifestation of this at the household level is ‘straddling’ whereby different members of the household live and work in different places, temporarily (e.g. seasonal migration) or permanently (DFID, 1999). Social patterns such as this clearly complicate analysis and underline the importance of viewing households and communities within their wider context. Since goods, financial resources and people are all mobile, an accurate picture of livelihoods cannot be gained if artificial boundaries are drawn (ibid).

### **2.2.1 Livelihood Assets**

The ability to pursue different livelihood strategies is dependent on the basic tangible and intangible (material and social) assets that people have in their possession. Drawing on an economic metaphor, such livelihood resources may be seen as the ‘capital’ base from which different productive streams are derived from which livelihoods are constructed. According to Ahmed and Lipton (1997) ‘Capital’ is conventionally seen as the stock of productive resources built up by human action by investing current income streams, and

so increasing future benefits from a given input of labour or raw material. Such capital may depreciate, be consumed or be sold off.

Johnson (1997) defines the various capital assets as follows: **Natural Capital:** – this refers to natural resources made up of land, water, soil, mineral, plant, fisheries, animal life and environmental services (hydrological cycle, pollution sinks etc) from which resource flows and services useful for livelihoods are derived. They provide goods and services, either without people's influence (e.g. forest, wildlife, soil stabilization) or with their active intervention (e.g. farm crops, tree plantation). Antoh (2005) notes that various natural assets combine and vary over time (e.g. seasonal variations in value). For example, degraded land with depleted nutrients is of less value to livelihoods than high quality, fertile land, and the value of both will be much reduced if users do not have access to water and the physical capital or infrastructure that enables them to use it for agricultural production.

Within the sustainable livelihoods framework, the relationship between natural capital and the vulnerability context is particularly close. Many of the shocks that devastate the livelihoods of the poor are themselves natural processes that destroy natural capital (e.g. fires that destroy forests, floods and earthquakes that destroy agricultural land) and changes in the value or productivity of natural capital (Chambers, 1987).

**Financial Capital** – the capital base (cash, credit/debt, savings) which are essential for the pursuit of any livelihood strategy is referred to as financial capital. Johnson (1997) categorised financial capital into: Stocks: savings, cash, bank deposits and liquid assets: - such as livestock and stored food grains. Financial resources can also be obtained through credit-providing institutions.

**Human Capital** – Human capital represents the skills, knowledge, ability to labour and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives. At a household level human capital is a factor of the amount and quality of labour available; this varies according to household size, skill levels, leadership potential, health status, etc (DFID, 1999). Human capital appears in the DFID Livelihood Framework as a livelihood asset, that is, as a building block or means of achieving livelihood outcomes. Its accumulation can also be an end in itself. Many people regard ill-health or lack of education as core dimensions of poverty and thus overcoming these conditions may be one of their primary livelihood objectives.

The skills, knowledge, ability to labour and good health as well as physical capability are very important for the successful pursuit of different livelihood strategies. It is the most important, not only for its intrinsic value but also because other capital assets cannot be used without it (Johnson 1997).

**Social Capital** – Carney (1998) asserts that in the context of sustainable livelihoods framework, 'social capital' is taken to mean the social resources (networks, social

claims, social relations, affiliations, associations) upon which people draw when pursuing different livelihood strategies requiring coordinated actions. Antoh (2005) notes that these social resources are developed through:

- Networks and connectedness, either vertical (patron/client) or horizontal (between individuals with shared interests) that increases people's trust and ability to work together and expand their access to wider institutions, such as political or civic bodies;
- Membership of more formalized groups which often entails adherence to mutually-agreed or commonly accepted rules, norms and sanctions; and
- Relationships of trust, reciprocity and exchanges that facilitate co-operation reduce transaction costs and may provide for informal safety nets amongst the poor.

**Physical Capital** – these are derived from the resources created by people, such as buildings, road transport, drinking water, electricity, communication systems as well as equipment and machinery needed to support livelihoods. It thus comprises producer goods and services, and also consumer goods available for people to use. Physical capital is important not only for meeting people's needs directly, but also for providing access to other capital (e.g. through transport and infrastructure).

Out of these tangible and intangible assets people construct and contrive a living, using physical labour, skills, knowledge, and creativity. Thus, people pursue a range of

livelihood outcomes (more income, food security, health security, reduced vulnerability, etc.) through different activities, by drawing on a range of assets (Chambers and Conway, 1992).

### **2.2.2 Livelihood Outcomes**

People pursue various livelihood strategies in order to achieve certain needs and aspirations. According to Booth et al (1998); Hanmer et al (1997), people aspire a range of outcomes. The outcomes that they aspire to obtain will vary greatly at all levels within households, communities, regions and so on. Livelihood outcomes are the achievements or outputs of livelihood strategies (DFID, 1999). In a broader prospective, common livelihood outcomes include more income, increase well-being, reduced vulnerability, improved food security and more sustainable use of resource based(Boyd et al, 2000).

It therefore means that the households should pursue a broad range of livelihood strategies based on their assets (physical, financial, human, social and natural capital) in order to obtain the livelihood outcomes they wish to achieve. The ability to access various combinations of assets helps to determine how vulnerable or robust a livelihood may be (DFID 1999)

### **2.3 The Concept of Sustainable Livelihood**

The concept of 'sustainable livelihood' is increasingly receiving attention from development practitioners and hence attracting debate among development scholars in

their attempts to defined and explain the concept. In view of this, different authors have expressed their views on what sustainable livelihood is or is not. As such, different interpretations, often without clear and unambiguous meanings, have been given to the term sustainable livelihood'. This was noted by Carswell et al (1997), when they commented that, the definitions of sustainable livelihoods are often unclear, inconsistent and relatively narrow. Without clarification, there is a risk of simply adding to a conceptual muddle.

Drawing on Chambers and Conway (1992) and Ellis (1999), livelihood can be defined as comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. They further assert that a livelihood is sustainable when it can cope with and recover from stresses and shocks maintain or enhance its capabilities and assets, while not undermining the natural resource base.

Carswell et al. (1997) identified five key elements or components of the definition, the first three of which focus on livelihoods, linking concerns over work and employment with poverty reduction as broader issues of adequacy, security, well-being and capability. The last two elements add the sustainability dimension, looking in turn at the resilience of livelihoods and the natural resource base on which they partly depend. These five key elements have been explained below.

- Creation of working days – This relates to the ability of individuals to combine various livelihood strategies to create gainful employment for a certain portion of



the year. In agrarian economy it may consist of on-farm activities like rain-fed agriculture and wage labour, petty trade as off-farm activity. Employment as observed by Sen (1975) can be looked at in three aspects as; engage in income bringing employment such as wage labour for the employed (exchanging labour for wage), production (employment providing a consumable output) and recognition (where employment provides recognition for being engaged in something worthwhile).

- Poverty reduction – The poverty level is a key criterion in the assessment of livelihoods. Various measures can be used to develop an absolute ‘poverty line’ measure based on income or consumption levels (see Ravallion 1992 and Baulch 1996). Alternatively, relative poverty and inequality can be assessed using Gini coefficient measures. There are a range of pros and cons for each measure, as well as some major measurement challenges as opined by Greeley (1994). However, Schaffer (1996) notes that such quantitative assessments of poverty can be used in combination with more qualitative indicators of livelihoods.
- Well-being and capabilities – The notions of ‘well-being’ and ‘capability’ provide a wider definitional scope for the livelihoods concept (Chambers, 1995). Sen (1984) sees capabilities as ‘what people can do or be with their entitlements’, a concept which encompasses far more than the material concerns of food intake or income. Such ideas represent more than the human capital which allows people to do things, but also the intrinsically valued elements of ‘capability’ or ‘well-being’. Chambers (1997) argues that such a well-being approach to poverty and

livelihood analysis may allow people themselves to define the criteria which are important. This may result in a range of sustainable livelihood outcome criteria, including diverse factors such as self-esteem, security, happiness, stress, vulnerability, power, exclusion, as well as more conventionally measured material concerns (Chambers, 1989).

- Livelihood adaptation, vulnerability and resilience – The ability of a livelihood to be able to cope with and recover from stresses and shocks is central to the definition of sustainable livelihoods. Such resilience in the face of stresses and shocks is the key to both livelihood adaptation and coping (Davies, 1996). Those who are unable to cope (temporary adjustments in the face of change) or adapt (longer term shifts in livelihood strategies) are inevitably vulnerable and unlikely to achieve sustainable livelihoods. Payne and Lipton (1994) note that assessing resilience and the ability to positively adapt or successfully cope requires an analysis of a range of factors, including an evaluation of historical experiences of responses to various shocks and stresses. They further note that different types of shock or stress, in turn, may result in different responses, including avoidance, repartitioning, and resistance or tolerance mechanisms.
- Natural resource base sustainability – Most rural livelihoods are reliant on the natural resource base at least to some extent. Following Conway (1985), Holling (1993) and others, natural resource base sustainability refers to the ability of a system to maintain productivity when subject to disturbing forces, whether a ‘stress’ (a small, regular, predictable disturbance with a cumulative effect) or a

‘shock’ (a large infrequent, unpredictable disturbance with immediate impact).

This implies avoiding depleting stocks of natural resources to a level which results in an effectively permanent decline in the rate at which the natural resource base yields useful products or services for livelihoods.

Scoones (1998) also notes that a sustainable livelihood is the one that can recover from stresses and shocks maintain or enhance its capabilities and assets, while not undermining the natural resources base. He further noted that a livelihood is sustainable if it is socially responsible, economically efficient and environmentally viable to the people. The ability of a livelihood to be able to cope with and recover from stresses and shocks is central to determining whether a given livelihood strategy is sustainable or not. Such resilience in the face of stresses and shocks is the key to both livelihood adaptation and coping (Davies, 1996). Those who are unable to cope (temporary adjustments in the face of change) or adapt (longer term shifts in livelihood strategies) are inevitably vulnerable and unlikely to achieve sustainable livelihoods. Payne and Lipton (1994) note that assessing resilience and the ability to positively adapt or successfully cope requires an analysis of a range of factors, including an evaluation of historical experiences of responses to various shocks and stresses.

The important thing to recognize about the concept of sustainable livelihood is that it is always subject to negotiation. Thus contradictions and trade-offs between different elements of the composite definition (above decomposed into five parts, but potentially divided up in different ways) must always be recognised. Different people will inevitably have different views as to the priority indicators, and where conflicts are highlighted,

choices then have to be made. By disaggregating the definition into a series of indicators however, such choices become explicit, making negotiation between outcome possibilities possible as part of any policy development, planning or implementation process which has sustainable livelihood concerns at its centre (Conway, 1985).

## **2.4 Sustainable Livelihood Frameworks**

Sustainable livelihood Framework is an analytical framework that provides a way of understanding the factors influencing people's ability to enhance their livelihoods. The most widely cited and used Sustainable Livelihood Framework is the DFID Sustainable Livelihood Framework and the IFAD Sustainable Livelihood Framework. Both frameworks tried to provide a way of understanding the factors influencing people's livelihoods and choices of livelihood strategies.

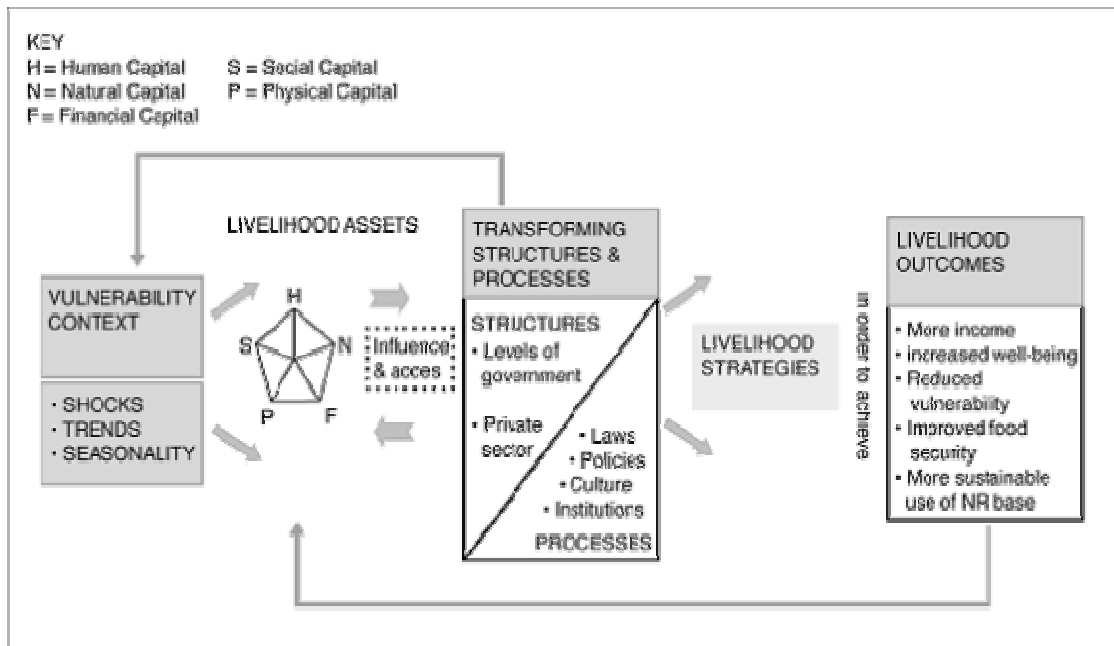
### **2.4.1 DFID Sustainable Livelihood Framework (SLF)**

The DFID Sustainable Livelihood Framework draws attention both on the range of factors that influence people's livelihood, and the complexity and diversity of people's livelihood strategies in a particular place or context. This framework offers effective tool for contextual analysis of factors and processes influencing people's livelihood strategies.

The livelihoods framework is a tool to improve understanding of livelihoods, particularly the livelihoods of the poor. It was developed over a period of several months by the

Sustainable Rural Livelihoods Advisory Committee (S.L.A.C), building on earlier work by the Institute of Development Studies (DFID, 1999).

**Figure 2: DFID Livelihood Framework**



Source: DFID 2001: livelihoods@difd.gov.uk

#### 2.4.1.2 Main elements of the DFID SLF and Core principles of application

Factors and elements in the above framework and their relationship and application in sustainable livelihood analysis are explained below.

**The *Vulnerability Context*:** The Vulnerability Context frames the external environment in which people exist. People’s livelihoods and the wider availability of assets are fundamentally affected by critical **trends** as well as by **shocks** and **seasonality** – over which they have limited or no control. Some of the trends include: population trends,

resource trends (including conflict), National/international economic trends, trends in governance (including politics), technological trends among others, shocks on the other hand includes human health shocks, natural shocks, economic shocks, conflict, crop/livestock health shocks among others and seasonality of prices, production, health employment opportunities among others (DFID, 1999).

**The asset pentagon:** The asset pentagon lies at the core of the livelihoods framework, 'within' the vulnerability context. The pentagon was developed to enable information about people's assets to be presented visually, thereby bringing to life important inter-relationships between the various assets. The shape of the pentagon can be used to show schematically the variation in people's access to assets. The idea is that the centre point of the pentagon, where the lines meet, represents zero access to assets while the outer perimeter represents maximum access to assets. It is important to note that a single physical asset can generate multiple benefits. If someone has secure access to land (natural capital) they may also be well-endowed with financial capital, as they are able to use the land not only for direct productive activities but also as collateral for loans. Similarly, livestock may generate social capital (prestige and connectedness to the community) for owners while at the same time being used as productive physical capital (animal traction) and remaining, in itself, as natural capital (DFID, 1999).

***Transforming Structures and Processes:*** Transforming Structures and Processes within the livelihoods framework are the institutions, organisations, policies and legislation that shape livelihoods. Their importance cannot be over emphasised. They operate at all levels, from the household to the international arena, and in all spheres, from the most

private to the most public. They effectively determine; access (to various types of capital, to livelihood strategies and to decision-making bodies and sources of influence), the terms of exchange between different types of capital; and returns (economic and otherwise) to any given livelihood strategy (DFID, 1999).

Structures in the framework are the hardware – the organisations, both private and public which formulate and implement policies and legislation, deliver services, purchase, trade and perform all manner of other functions that affect livelihoods. They draw their legitimacy from the basic governance framework. Structures exist at various levels. If structures can be thought of as hardware, processes can be thought of as software. They determine the way in which structures and individuals operate and interact. And like software, they are both crucial and complex: not only are there many types of processes operating at a variety of different levels, but there is also overlap and conflict between them (ibid)

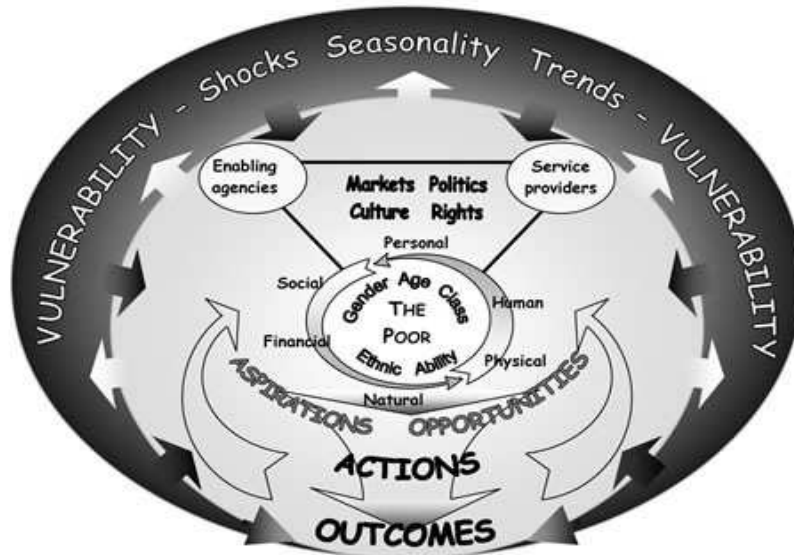
#### **2.4.2 IFAD Sustainable Livelihood Framework**

Since December 2002, IFAD has organised a series of workshops to encourage IFAD staffs and consultants to reflect on their experience in development work and on ways for them to implement the Strategic Framework for IFAD 2002-2006. These series of workshops led to the development of the IFAD Sustainable Livelihood Framework based on "hub model" (Hobley and Shields, 2000) aimed at addressing short comings and limitations of the DFID Livelihood Framework (Hamilton-peach and Townsley, 2007).

DFID framework does not offer an explicit platform for dealing with crucial elements of decision-making, such as people's individual orientations and collective worldviews or their experience and emotional attachments. By rearranging the framework, these linkages have been given greater salience and the relations between different elements have become more immediately apparent (Hamilton-peach, *et al*, 2007). A set of fundamental social "processes" such as gender, age, class (or caste) and ethnic group are placed immediately around the poor. These have been made more explicit than in the original DFID framework as they are factors that influence the relations of the poor with everything else in the framework. An additional group of livelihood assets "personal" assets have been added to the 5 contained in the DFID Livelihood framework. As the name suggests, this refers to the more personal factors that may affect the choices of individuals and households regarding their livelihoods. It is intended to emphasise people's internal motivations, their will to act and promote change (for themselves or others), their drive to assert their rights, and the spiritual side of their lives. It also incorporates their desire to engage in political activity (while "social" assets include the mechanisms by which they may be able to articulate that activity) and responding to widespread concerns. "Human" assets might also include some of these "personal" assets: however, from experience in Sustainable Livelihood training, it is clear that the health and educational aspects of human assets tend to obscure these other extremely important features of people's livelihoods, therefore justifying an additional heading (Hamilton-peach, *et al*, 2007).



**Figure 3: IFAD Sustainable Livelihood Framework**



Source: IFAD, 2007

#### **2.4.2.1 Incorporating the "hub model" for analyzing policies and institutions**

In the original Sustainable Livelihood framework, the “transforming structures and processes”, has often represented a problematic area in terms of communicating the key elements of the Sustainable Livelihood framework to new users (Hamilton-peach, et al, 2007). The IFAD has attempted to address this problem by "unpacking" the transforming structures and processes using the "hub model" of institutional analysis to represent the two basic levels of institution with which the poor, and external institutions agents interact with "service delivery" agencies and "enabling" agencies and identifying the poor, with their range of livelihood assets, as the "users" of these institutions. Service providers can include everything from national-level departments whose task is to implement policy measures to the community-level operators with whom the poor are

likely to have direct contact in their day-to-day lives. Enabling agencies can range from the highest national-level policy making bodies, to local administrations whose decisions on priorities and strategies in dealing with poverty might facilitate or hinder the work of those responsible for implementation.

**“Unpacking processes”:** In the original DFID framework, "processes" include such diverse elements as policies, legislation, the formal and informal rules governing institutions such as markets, organisations and tenure arrangements, culture and power relations defined by gender, age, ethnicity, caste and class. The grouping of such diverse elements often presents new users of the Sustainable Livelihood framework with significant problems, particularly as many of the elements grouped under this heading are relatively abstract and difficult to link to concrete influences on the livelihoods of the poor (Hamilton-peach, et al, 2007).

**Markets** are explicitly mentioned because of the importance that they play in determining how the poor are able to convert the resources at their disposal into livelihood assets. The specific inclusion of markets as a key influence is also important because they are liable to play a particularly important role in determining the opportunities for improved livelihood strategies that the poor can generate, and the extent to which they are likely to be able to realise aspirations (Dorward et al., 2003).

**Politics** - the network of power relations within society, whether formally or informally represented need to be distinguished from "policies" , the decisions regarding objectives, distribution of resources and priorities made by "enabling agencies".

**Culture** includes a broad range of "rules of the game", social and cultural norms that are likely to influence strongly how the poor are able to interact with the institutions that affect their livelihoods.

**Rights** are introduced as they represent an increasingly important set of demands that the poor can make on their institutional environment but can be recognised to varying degrees depending on the political and social structure of a particular country. All of these influences may be difficult for the poor themselves to take action on, but they are not immutable and need to be distinguished from those elements that represent the "vulnerability" context, which is difficult or impossible to change and must be "coped" with instead.

#### **2.4.2.2 Highlighting the linkages with the "vulnerability" context**

The new framework also makes the relationship between the "vulnerability" context and the other elements in the framework clearer and more explicit. If the poor are able to access the livelihood assets they require and are adequately supported by service providers and enabling agencies, and if they are able to make markets, politics, rules and

norms work to their advantage, then it should help them to cope with those elements of their vulnerability context which they can do little to change. The representation of the vulnerability context as "all-embracing" for the poor, but mediated by the interplay of the other elements in their livelihoods, emphasises the responsibility of development interventions to help the poor to cope with vulnerability factors (Hamilton-peach, et al, 2007).

#### **2.4.2.3 Introducing aspirations and opportunities**

The inclusion of the aspirations of the poor, and the opportunities that they are able to pursue, encourages users of the Sustainable Livelihood framework to focus on the hopes of the poor themselves and their capacity to take advantage of opportunities rather than making assumptions about what options and opportunities may exist within a given livelihoods system. This encourages a people-centred analysis and an understanding of the strengths of the poor that can be built on through the development process (Hamilton-peach, et al, 2007).

#### **2.4.3 Criticisms of livelihood framework**

Kinsella, Wilson and Jong (2000) argued that, the use of framework can provide a guide to collection of sustainable livelihood analysis data and help in identification of strengths and gaps associated with the roles and importance of the data, both real and potential.

Indeed, the livelihood framework has already been applied to analyse processes of agricultural diversification and rural development in Northern Europe.

Notwithstanding the wide usage of livelihood framework in development work in recent times, there have already been concerns raised over what factors to include in the conceptual framework. One of the major concerns is that the SL approach is too complex. Carney (1999:5), argued that ‘the approach is over ambitious and offers insufficient practical guidance on the way forward’.

Also the SL approach is designed to work across sectors. However, the reality is that, most government agencies and organisations are operated and funded independently on a sector basis and thus cross sector development is difficult or not easy to achieve (Carney, 1999). Furthermore, there is no mention of gender in the DFID published framework except for Ellis (2000) who lists gender, class, age and ethnicity under ‘social relations’ and the IFAD( Hamilton-Peach and Townsley, 2004) where gender, class, caste and ethnicity is the core of the framework.

## **2.5 The Role of Institutions in Sustainable Livelihood**

A broad definition of institutions, derived from the sociological and anthropological literature is adopted here as the operational definition in this research. This sees institutions as ‘regularized practices (or patterns of behaviour) structured by rules and norms of society which have persistent and widespread use’ (Giddens, 1979). Institutions may thus be formal and informal, often fluid and ambiguous, and usually subject to

multiple interpretations by different actors. Power relations are embedded within institutional forms, making contestation over institutional practices, rules and norms always important. Institutions are also dynamic, continually being shaped and reshaped over time. They are thus part of a process of social negotiation, rather than fixed ‘objects’ or ‘bounded social systems’.

According to Davies (1997: 24): “institutions are the social cement which link stakeholders to capital of different kinds to exercise power and so define the gateways through which they pass on the route to positive or negative [livelihood] adaptation”.

Scoones (1998) notes that institutions really matter for policy and practice of development regarding livelihood security, stressing on this linkage he offers a number of inter-related reasons including the following:

- Understanding institutional processes allow the identification of restrictions and opportunities (or ‘gateways’) to livelihood security. Since formal and informal institutions (ranging from tenure regimes to labour sharing systems to market networks or credit arrangements) mediate access to livelihood resources and in turn affect the composition of portfolios of livelihood strategies, an understanding of institutions and organisations is therefore key to designing improved sustainable livelihood outcomes.

- An institutional approach sheds light on the social processes which underlie livelihood sustainability. Achieving livelihood security is not a deterministic affair; contestations, negotiations and trade-offs are evident at every turn. An insight into social relationships, their institutional forms (formal and informal) and the power dynamics embedded in these is therefore vital. Interventions in support of livelihood security therefore must be attuned to such complexity, if suitable institutional entry points are to be found.
  
- An approach which emphasizes both formal and informal institutions and underlying rules and norms suggests a complex and ‘messy’ institutional matrix mediating the processes of livelihood shift (Leach *et al.*, 1997). For example, an analysis of an institutional matrix would look at which combinations of the wide range of informal and formal institutions and organisations operating at different levels; from within the household to the national (sometimes international) level particularly influence different people’s abilities to pursue combinations of different livelihood strategies, with what results for sustainable livelihood outcomes. Describing such an institutional matrix in any setting is not surprisingly far from an easy task. However, the recognition of such complexity allows scope for innovation in planned interventions at different levels, going beyond the conventional support for formal organisations or institutional mechanisms to look at combinations of formal and informal approaches (Cousins, 1997).

- Different people clearly have different access to different livelihood resources. This is dependent on institutional arrangements, organisational issues, power and politics. A socially differentiated view to analysing livelihoods is therefore critical, one that disaggregates the chosen unit of analysis – whether community, village or household – and looks at individuals or groups of social actors and their relationships, in relation to the range of relevant dimensions of difference (wealth, gender, age and so on) and the distribution of control over resources (Richards, 1989).

## **2.6 Rural Livelihood**

Rural livelihood strategies are often heavily reliant on the natural resource base (IDS, 1996). These various livelihood activities include food crop production; cash crop production; forest and tree product gathering, consumption, processing and sale; and income earning enterprises both on and off the farm (Brycesson, 1999).

Ellis (1999) in discussing rural livelihood diversity in developing countries notes that gender is an integral and inseparable part of rural livelihoods. He further argues that men and women have different assets, access to resources, and opportunities. Women rarely own land, may have lower education due to discriminatory access as children, and their access to productive resources as well as decision-making tend to occur through the mediation of men. Women typically confront a narrower range of labour markets than men, and lower wage rates. He concluded that diversification is more of an option for



rural men than for women. In this sense, diversification can improve household livelihood security while at the same time trapping women in customary roles.

The tendency for rural households to engage in multiple occupations is often remarked, but few attempts have been made to link this behaviour in a systematic way to rural poverty reduction policies. In the past it has often been assumed that farm output growth would create plentiful non-farm income earning opportunities in the rural economy via linkage effects. However, this assumption is no longer tenable. For many poor rural families, farming on its own is unable to provide a sufficient means of survival, and the yield gains of new technology display signs of leveling off, particularly in those regions where they were most dramatic in the past (Ellis, 1999).

### **2.6.1 Rural Livelihood Diversification**

In line with the Sustainable Livelihood framework, Ellis (1998) defines ‘rural livelihood diversification’ as ‘the process by which households construct a diverse portfolio of activities and social support capabilities for survival and in order to improve their standard of living’.

Considerations of risk spreading, consumption smoothing, labour allocation smoothing, credit market failures, and coping with shocks can contribute to the adoption, and adaptation over time of diverse rural livelihoods. However, livelihood diversity results in complex interactions with poverty, income distribution, farm productivity, environmental

conservation and gender relations that are not straightforward are sometimes counter-intuitive and can be contradictory (Ellis, 1999).

Livelihood literature especially those of Hussein and Nelson (1999) and Ellis (2000) acknowledged that exogenous trends and shocks play an important role in pushing rural people towards a diversified livelihood strategy, diversification choices are also firmly rooted in the micro-economic logic of farming households. Various elements identified and examined by livelihood literature as influencing rural livelihood diversification choices are:

**Availability of key-assets:** Dercon and Krishan (1996) Abdulai and Crole Rees (2001) contend that availability of key-assets such as savings, land, labour, education and/or access to market among others influence rural households and individuals' decision to diversify their livelihood strategy.

**Maximization of return per unit of labour:** Ellis (1993 and 2000) explains that at any given point in time, a rural household will choose the most cost-effective opportunity to ensure maintenance of its consumption level. For instance, availability of a surplus of household labour may influence the household decision to engage in wage labour to take advantage of the surplus and thereby diversifying not only their labour use but their income earning as well.

**Risk management:** Risk management is a further factor often cited to explain diversification behaviour of households and individuals (Chambers 1997, Reardon 1992, Bryceson 1996; Ellis 2000; Hussein and Nelson 1999). The basic logic of this argument

is that previous experience of crop or market failure can provoke diversification as a means of spreading perceived risk and reducing the impact of total or partial failure on household consumption.

**Gender relationships:** Gender relationships are also important in shaping diversification process. Social organization and culture can significantly influence the relative access of diverse resources between women and men as noted by Ellis (2000); Gladwin (2001) and Dolan (2002) or constraints such as mobility among gender as explained by Warren (2001). In some cultures, migratory wage labour or off-farm enterprises are basically men business, which results in transferring to women the whole responsibility for conventional subsistence and cash cropping (the so called “feminization of agriculture”).

### **2.6.2 Demographic Characteristics and Rural Livelihood**

Available literature demonstrates influence of social variables such as age, educational background, and household resource allocations among others on rural women ability to attain livelihood security and improved their standard of living. For instance, the life cycle hypothesis of human capital theory posits a relationship between productivity and age. The hypothesis predicts that productivity increases with age early in the life cycle and then decreases with age late in the life cycle as human capital depreciation exceeds investment. Productive age is normally considered to be between age 15 and 49 (Johnson and Neumark, 1997).

Caldwell (1967) argues that education helps open up new horizons for women and is also thought to have a positive effect on women's participation in formal employment. Kumekpor (1974) also argues that once a woman has had some formal education she does not become satisfied with her traditional roles only, she feels she has to justify the investment in her by putting what she has learnt into practice. Thus the level of education attained by rural women has an important bearing on the quality of household human capital due to its ability to open up new horizons for women in labour market.

## **2.7. Microfinance and Development**

Microfinance encompasses the provision of financial services and the management of small amounts of money through a range of products and a system of intermediary functions that are targeted at low income clients (Asiama and Osei, 2007). Available literature suggests that microfinance creates access to productive capital for the poor, which together with human capital, addressed through education and training, and social capital, achieved through local organization building, enables people to move out of poverty.

By providing material capital to a poor person, their sense of dignity is strengthened and this can help to empower the person to participate in the economy and society (Otero, 1999). The aim of microfinance according to Otero (1999) is not just about providing capital to the poor to combat poverty on an individual level, it also has a role at an institutional level. It seeks to create institutions that deliver financial services to the poor, who are continuously ignored by the formal banking sector.

Littlefield and Rosenberg (2004) argue that the poor are generally excluded from the financial services sector of the economy so MFIs have emerged to address this market failure. By addressing this gap in the market in a financially sustainable manner, an MFI can become part of the formal financial system of a country and so can access capital markets to fund their lending portfolios, allowing them to dramatically increase the number of poor people they can reach (Otero, 1999). More recently, commentators such as Littlefield, Murdugh and Hashemi (2003), Simanowitz and Brody (2004) and the IMF (2005) have commented on the critical role of microcredit in achieving the Millennium Development Goals.

According to Simanowitz and Brody (2004, p.1), "microcredit is a key strategy in reaching the MDGs and in building global financial systems that meet the needs of the most poor people." Littlefield, Murdugh and Hashemi (2003) state "microcredit is a critical contextual factor with strong impact on the achievements of the MDGs. Microcredit is unique among development interventions: it can deliver social benefits on an ongoing, permanent basis and on a large scale".

However, some schools of thought remain sceptical about the role of microcredit in development. For example, Hulme and Mosley (1996, p.134), while acknowledging the role of microcredit in helping to reduce poverty, concluded from their research on microcredit that "most contemporary schemes are less effective than they might be". The authors claim that microcredit is not a panacea for poverty-alleviation and that in some cases the poorest people have been made worse-off.

This notwithstanding, microfinance has emerged globally as a leading and effective strategy for poverty reduction with the potential for far-reaching impact in transforming the lives of poor people. It is argued that microfinance can facilitate the achievement of the Millennium Development Goals (MDGs) as well as National Policies that target poverty reduction, empowering women, assisting vulnerable groups, and improving standards of living. As observed by the former UN Secretary General Kofi Annan during the launch of the International Year of Microcredit (2005). Sustainable access to microfinance helps alleviate poverty by generating income, creating jobs, allowing children to go to school, enabling families to obtain health care, and empowering people to make the choices that best serve their needs." (Kofi Annan, December 2005).

### **2.7.1 Microcredit and Livelihoods**

Impact assessments of microcredit conducted by UNITUS (2004) in 24 countries indicated dramatic improvement in household income levels. These improvement according to the study, took place primarily through growth in borrowers' businesses which translated into increased household income. The study found that access to micro credit allowed the borrowers to increase the number of goods and services sold and reduce the cost of supply and raw materials. As a result, according to the study, sales increased and average profits grew from 25% to 40% .Also studies have shown that during an 8 year period, among the poorest in Bangladesh with no credit service of any type only 4% pulled themselves above the poverty line. But with individuals and families having access to credit from Grameen Bank, 48% rose above the poverty line within the same 8 year period (Zeller, *et al*, 2000).

One group based financial institution for rural poor in Bangladesh reveals that targeted credit programmes have had a positive impact on household welfare of a number of women in a number of ways. These include quality and quantity of food consumed the health of households and children's education. Econometric analysis of the same results established that credit access has a significant and strong effect on income generating and food and caloric consumption. (Zeller, *et al*, 2000).

Women's control over financial resources is increasingly seen as a key factor in explaining these mixed results. Literature suggests women inability to fully control their financial resources and this has been demonstrated to a negative impact on their livelihoods. For instance, Goetz and Chen (1995) note that about 63% of women's loans are actually invested by male relatives, while women bear the formal responsibility for repayment in a Bangladesh programme. Also a study of 151 Grameen Bank loans to women found that 12% surrendered the entire loan to male family members. Another study in Bangladesh discovered that, of 140 loans made by ACTIONAID to women, about 50% were used for men's productive activities (Sebstad and Chen, 1996).

### **2.7.2 An Overview of Microfinance in Ghana**

The concept of microfinance is not new in Ghana. There has always been the tradition of people saving and/or taking small loans from individuals and groups within the context of self-help to start businesses or farming ventures. For example, available evidence suggests that the first credit union in Africa was established in Northern Ghana in 1955 by Canadian Catholic missionaries. However, Susu, which is one of the microfinance

schemes in Ghana, is thought to have originated from Nigeria and spread to Ghana in the early twentieth century (Asiama and Osei, 2007).

Over the years, the microfinance sector has thrived and evolved into its current state, thanks to various financial sector policies and programmes undertaken by different governments since independence. Among these are:

Provision of subsidized credits in the 1950s; Establishment of the Agricultural Development Bank in 1965 specifically to address the financial needs of the fisheries and agricultural sector; Establishment of Rural and Community Banks (RCBs), and the introduction of regulations such as commercial banks being required to set aside 20% of total portfolio, to promote lending to agriculture and small scale industries in the 1970s and early 1980s; Shifting from a restrictive financial sector regime to a liberalized regime in 1986; and the promulgation of PNDC Law 328 in 1991 to allow the establishment of different categories of non-bank financial institutions, including savings and loans companies, and credit unions (Asiama et al, 2007).

These policies have led to the emergence of three broad categories of microfinance institutions. These include: Formal suppliers such as savings and loans companies, rural and community banks, as well as some development and commercial banks; Semi-formal suppliers such as credit unions, financial non-governmental organizations (FNGOs), and cooperatives and Informal suppliers as Susu collectors and the clubs, of Rotating and Accumulating Savings and Credit Associations (ROSCAs and ASCAs), traders, moneylenders and other individuals. In terms of the regulatory framework, rural and



community banks are regulated under the Banking Act 2004 (Act 673), while the Savings and Loans Companies are currently regulated under the Non-Bank Financial Institutions (NBFI) Law 1993 (PNDCL 328).

Programmes that has help in addressing the sub-sector in Ghana include the Financial Sector Improvement Project, Financial Sector Strategic Plan (FINSSP), the Rural Financial Services Project (RFSP), the United Nations Development Programme (UNDP) Microfinance Project, the Social Investment Fund (SIF), the Community Based Rural Development Programme (CBRDP), Rural Enterprise Project (REP), and Agricultural Services Investment Project (ASSIP) (Asiama, *et al*, 2007).

## **2.8 Women and Empowerment**

Poverty manifests itself as a material deprivation, and its causes could be attributed to unequal power attribute, which characterize domestic relations. These relations position women as subordinate, and dependent on their men folks who have control over the resources (Kabeer 2003,). “Women lack power, therefore empowerment of women is an issue that is emphasized on in the field of development these days”. Kabeer (2003: 170) defines empowerment as “the processes by which those who have been denied the ability to make choices acquire such ability”. In other words, empowerment entails a process of change. She further indicates that empowerment could be explored closely through the following inter-related pathways: agency, resources and achievements. Agency in

relation to empowerment implies the ability to actively exercise choice, which challenges power relations.

Despite the fact that beliefs and values legitimate inequality, the process of empowerment can begin within. The ability of women to initiate their own non-farm activities will enable them to decide for themselves, since they will have their own income which will give them the capacity to take decisions, protest, negotiate and bargain. Meanwhile, agency is exercise not in the abstract but through the mobilization of resources, which are the medium of power (ibid).

Therefore, women's ability to gain access to resources is imperative in the process of empowerment as the resources themselves. Empowerment requires a change in the conditions on which resources are acquired likewise an increase in access to resources (Kabeer, 2001). The ability to have access to non-farm activities might improve women stand within the family. The reason being that, the non-farm activities would serve as an independent source of income for the family livelihood and hence a stronger 'fall-back' position to bargain or negotiate from. Women's capabilities and their potential for living the lives they want come as a result of their access to resources and agency. This will give them the capability to build their livelihoods.

Hence women non-farm activities are seen as evidence of progress in women empowerment as it helps to contribute to their sense of independent serving as a livelihood strategy.

Advocates of resource theory have suggested that “when women make substantial economic contributions to the household, power and control in decision-making will shift in their favour” (Blood and Wolfe 1996; Blumstein and Schwartz 1983; Green and Cunningham 1976, all cited in Commuri et al., 2005:185). The ingenuity in these women to be able to negotiate with the existing cultural factors in order to contribute to household decision-making process enables them to play the role of social actors. Other factors that have greater influence on rural household decisions are: control and access to human, natural, productive and social factors (Bebbington; de Hann; Valdivia, 2001 and Valdivia et al., 2001), markets, institutions and the political environment (Ellis, 1993 ... in Valdivia et al. 2001).

Narayan (2005) explained empowerment to mean the expansion of freedom of choice and action to shape one’s life, that is, the control over resources and decisions. Unfortunately, women freedom is mostly always curtailed by factors such as local culture, which positioned them in a subordinate position in relation to their men folks. Subordination is often embedded in a culture of unequal institutional relations. So therefore an institutional definition of “empowerment is the expansion of assets and capabilities of women to participate in, negotiate with, influence, control, and hold accountable institutions that affect their lives” (Narayan, 2005: 5).

## **2. 9 Ghanaian Women’s Socio-economic Activities**

According to Apusigah, (2004) socio-economic locations that women occupy are critical to the survival of the family, community and state. She further argues that, Ghanaian

women's economic activities differ from culture to culture. Generally, however, women in rural areas are active participants in agricultural sector. They engage in such activities as crop production, animal husbandry and other agro-based activities as observed by Nikoi, (1998) and Dolphyne (1991). With limited access to capital/productive resources women tend to engage in simple agriculture using basic/simple technologies to produce food crops and tend to rear small animals rather than the use of advanced technology to produce cash crops and rear large animals (Apusigah, 2004).

Ghanaian women play effective role in the informal sector especially in trade and commerce apart from agriculture and harvesting of forest products. Women form the majority of the Ghanaian trading sector (Apt and Katila, 1994). Purchasing, transporting and selling goods are primarily a female responsibility. Ghanaian women are generally burdened with heavy economic responsibilities apart from their social ascribed roles within their households and communities. As a consequence of these economic responsibilities, women are highly economically active in Ghana. Their opportunities for economic activity is, however, primarily concentrated in the informal sector and within this sector they are primarily to be found as traders (Little, 1973). Also, according to Cutrufelli, (1983), over 25,000 traders turn up daily at the various markets in Accra, 85% of whom are women.

In addition, women are extensively involved in petty trading at the local level. Petty trading activity varies from very small doorstep trading activities to more conventional commercial arrangements based in kiosks or converted cargo containers (ibid).

In the formal sector, Ghanaian women work in various locations, although they continue to be under-represented across board (Dennis 1999; Kofi 1999; Mould-Iddrisu 1996 cited in Apusigah, 2004). Under-representation is, however, higher in some disciplines than others. For instance, women are more than under-represented in the sciences than in the arts. Also, the under-presentation of women is higher in noble professions such as medicine, law, engineering, accounting and politics than in teaching, nursing and secretary's duties (Kofi 1999, cited in Apusigah, 2004).

Several factors have been found as constituting hindrance to economic activities of women in Ghana. Child rearing is considered an onerous duty, and as such requires a great deal of time and energy of women who bear the greatest child care responsibilities. (Oppong 1977). Van de Walle and Foster (1990) have observed that Ghanaian woman's demand for a child is still very high. Women are particularly vulnerable because they do not control the agricultural resources and do not have the same opportunities as men to migrate because of their reproductive roles (Awumbila, *et al*, 1995)

### **2.9.1 Gender Consideration in Ghanaian Economic Policies**

In assessing the trend of Ghanaian economy in the 1990s Apusigah (2002), concluded that the economy within the period under review can be described as a mixed reality of boom and doom. Boom because of a period of relative success as the near decade-old economic recovery and structural adjustment programming had yielded significant improvement in the economic sector. And doom because of the social cost of the

Structural Adjustment Programmes which impact negatively on the poor especially women and children as a result of reduce government expenditure on social services and cost recovery on health delivery and education. Social critics such as Nikoi (1998) and Tsikata (2000), and the resistance by the masses of the Ghanaian working class compelled the government to address the social issues toward the close of the 1980s.

The criticisms that characterised the stringent economic reforms in Ghana during the 1980s were to compel policy makers to rethink the development project. The move to humanize development programming in Ghana and foster social equity has seen government implementing policies such as the Program of Action to Mitigate the Social Cost of Adjustment (PAMSCAD), the Ghana Vision 2020 and the Growth and poverty Reduction Strategy. Notwithstanding, Tsikata (2000) argue that, all these program guarantee the promotion of gender causes only on paper.

PAMSCAD saw women, rural poor and displaced workers as the worst victims for their failure to benefit from skills training and material support as a way of cushioning vulnerability. The US\$85 million fund that was established in 1988 was meant to benefit the “poorest individuals, small scale miners and artisans in particular, and communities were to be helped to implement labour-intensive self-help projects.”(Ghana Government, 1994, p.2)

Women were targeted to benefit from microcredit and skills training. A component of PAMSCAD was the Enhancing Opportunities for Women in Development (ENOWID) project.

The Women and Development component of Ghana Vision 2020, also sought to “strengthen the foundations for the establishment of a social environment that is void of gender bias and accords full recognition to women as equal societal and productive assets” (Ghana Government 1995, p. 48). The three key areas targeted were health and nutrition, productive resources, and educational enrolment and achievement.

## **CHAPTER THREE**

### **3.0 METHODOLOGY**

#### **Introduction**

This chapter focuses on brief description of the study area, instrument used to collect needed information for this study, method of data collection and analysis. It also presents sampling procedure and scope and limitation of the study.

#### **3.1 Brief Description of the Study Area**

The study was carried out in the Tolon/Kumbungu District of the Northern Region of Ghana. Tolon/Kumbungu District is 12km away from Tamale, the northern regional capital. The District is boarded to the east by the Tamale Metropolis, to the west by West Gonja District, to the South by Central Gonja District and to the north by the Savulgu/Nanton District. Geographically, the district lies within latitudes 9°25N and 10°00S and longitude 1°00E with land area of 2,631km<sup>2</sup>. According to the 2000 Population and Housing Census, the population of the district is 135,084 persons.

The district lies within the Guinea Savannah Zone, characterised by large areas of low grassland interspersed with trees, the shea tree being dominant with a mono-modal rainfall pattern with the wet season spreading from May to October annually. The mean annual rainfall is about 1,095mm (Donhouser, et al 1992).



### **3.2 Research Approach**

Brannen (1992) identifies three kinds of methodological approaches to research as: qualitative, quantitative and mixed or multiple approaches. However, it is generally believed that the research problem should define whether one chooses a quantitative or qualitative method (Glesne and Peshkin, 1992). Denzin (1989) argued that qualitative method is useful when one wants to look into a problem deeply whilst a quantitative method is useful when one wants to look into the problem widely.

Also qualitative method is generally regarded to be inductive, interpretative, and natural and seeks to get deeper meaning and understanding of specific situations. It places emphasis on process and meanings rather than on measures of quantity, intensity and frequency (Denzin and Lincoln 1998). Quinn (1980) also argues that the strategy in qualitative research is to allow important dimensions to emerge from analysis of the cases under study without supposing in advance what those important dimensions will be. It is said that the main weaknesses of qualitative method are that it tends to be subjective, difficult to replicate and also the method is not good for generalization and predictions (Patton 1990; McCracken (1988).

The quantitative method on the other hand is most important if only the researcher intend to collect numeric data that represent quantities of measurement, for example on resources, income, amount of loan, cost of input among other quantity measures. The common techniques for collecting quantitative data are the questionnaire and laboratory observations with emphases on large sample size to ensure representative of the

population from which it is chosen. Quantitative methods are criticised for being too artificial and over generalisation of findings. As Brannen (1992) noted, that qualitative approach is a pre-determined and finely tuned technological tool, however, it allows for much less flexibility, imaginative input and reflexivity.

According to Derbile (2003) cited in Angsonaglenang (2006), there has been the polarization along the lines of qualitative and quantitative methods in the field of research in any discipline, either in natural or social sciences. These therefore present options for choice as to which research approach will be appropriate for what kind of social science research to be conducted. He also indicated that proponents of quantitative research argued that human behaviour in the social sciences, like the physical phenomenon in the natural sciences can be quantified in attributes. It can therefore be subjected to generalizations that have universal applicability.

This study dealt with rural women and microcredit as a tool in alleviating poverty within the context of their socio-economic characteristics and community related factors which have direct or indirect influence on their livelihood ventures. This called for in-depth analysis of women's social, cultural and economic relationships as it influence their livelihood activities. These variables were explored through qualitative methods such as focus group discussions, observation and personal interviews with semi structured questionnaires as explained by Patton (1990), that, qualitative method consists of three kinds of data collection techniques namely: in-depth, open ended interviews; direct observation and documents. Minichiello et al. (1995) also argue that qualitative methods

include approaches that seek to uncover the thoughts, perceptions and feelings experienced by informants.

The discussion above has clearly demonstrated that both the qualitative and the quantitative approaches have their weaknesses. This therefore informed the reason for choosing to combine both methods in carrying out this research so as to assess social relationships on one hand and quantitative variables such amount of loan, interest rate, repayment rates among others. This is done so that the weaknesses of one could be checked by the alternative method.

Literature has documented such approach as method triangulation as explained by Mikkelsen (1995) as, triangulation or multiple strategies is a method that is used to overcome the problems associated with researches that rely on only one theory, single method and single data set. Methodological triangulation involves “within method” triangulation, in which case the same method used on different occasions and “between method” triangulation when different methods are used in the same study.

### **3.3 Sampling Techniques**

All women beneficiaries of formal and semi formal institutions administered micro credits in the district constituted the population of the study. From reconnaissance survey conducted by the researcher prior to data collection, three institutions namely Bonzali Rural Bank, Simli Pong Microcredit Scheme of the GDCP and Sinapi Aba Trust were found to be the dominant formal and semi formal microcredit providing institutions in the district. Accordingly, only beneficiaries from these three institutions were sampled for

this study because of their wide spread in the district and eventually unavailability of other institutions offering microcredit to women.

For the purpose of data collection and to ensure representativeness, the district was divided into three clusters in line with the three traditional areas in the district, namely Nyankpala traditional area, Kumbungu Traditional area and Tolon Traditional area. The division along the traditional boundaries was done because of the different levels of availability of social amenities and infrastructures among the three traditional areas that constitute the district. For instance, many villages in Kumbungu traditional area have access to portable drinking water because of their close proximity to the Dalung water works which supply water to Tamale Metropolis, the same cannot be said of Tolon and Nyankpala traditional areas.

Also Nyankpala traditional area is close to Tamale, the regional capital, with relatively good road network making the place accessible compare with the other two. A list of communities benefiting from microcredit within each cluster was obtained from the three institutions whose clients were interviewed for this study. Two communities each were randomly selected from the list for both Kumbungu and Nyankpala traditional areas and one community from Tolon traditional area, because the Tolon traditional area happened to have fewer beneficiaries communities as compared with the other two.

The sampled communities were Kumbungu, Gbulung, Nyankpala, Gbulahigu and Tolon. From the list of beneficiaries from each community sampled, the lottery method of

simple random sampling technique was used to sample 30 women beneficiaries from each of the five communities to form a sample size of 150. Selection of sample from each community took into consideration the number of clients of the three microcredit institutions in the community such that sample reflect the proportion of women benefiting from the three institutions .

### **3.4 Data Collection**

Both primary and secondary data were collected for this study. Personal interview with the aid of semi-structured questionnaires, key informant interviews and focus group discussions with the aid of checklist were used in collecting primary data.

#### **3.4.1 Techniques for Collecting Primary Data**

The primary data used in this research was collected from a field survey conducted by the researcher in the months of November, 2008 to January, 2009. Close and open-ended Questionnaire were the main method for collecting quantitative data whilst in-depth interviews, focus group discussions and direct observation were used to obtain qualitative data. Primary data was collected through observation, focus group discussions and interviews by the use of semi-structured questionnaires. Key informant interviews was also conducted with loan officers and managers of the credit schemes to obtain information on the operations of the credit schemes, criteria of selecting beneficiaries, interest rate charges on loans and other general information relevant to this research.

For personal characteristics and other personal information, semi structured questionnaires were administered by personal interview method to women beneficiaries

of microcredit. Information that was collected during the personal interviews was both qualitative and quantitative data comprising of personal demography characteristics of the beneficiaries' women, main livelihood venture engaged in, the adequacy and timeliness of the credit. Likerty type scale was used to categorized data on the extent of control borrowers exert on their borrowed monies as; 0-no control (surrender all to male member of household), 1-partial control and 2-full control and that of extent of investment of borrowed funds on livelihood ventures.

### **3.4.2 Focus Group Discussion**

To collect relevant qualitative data, focus group discussion was conducted among beneficiaries' women in each of the five communities. Some of the issues discussed in such focus group discussions included: the community sources of water; the distance of the water source from the community, its availability all year round and quality. Other were daily activities of beneficiaries women, wealth rank status of households, availability of health/clinic centre, market centre and its distance from the community, availability of fuel wood and its sustainability, existence of school in the community, existence of women social self help groups in the community.

Women contributions to household expenditure, their control of household resources, gender roles and responsibilities within households and other relevant issues were also discussed in the focus group discussions. These discussions were facilitated by the researcher with Dagboni the local spoken language of the area being the medium of the discussions.

#### **4.4.4 Secondary Data**

In order to improve the quality of discussions, explanation as well as to supplement the primary data, secondary data was also used in addition to the primary data. The secondary data was collected from both published and unpublished sources including journals, articles, books, official reports and the internet sources.

Secondary data from credit organizations, the district assembly, Ministry of Food Agriculture (MOFA) and Ghana Microfinance Institutions operating in the area and other relevant publications and records was also accessed for this study.

**Table 1: Summary of Data Required and Method of Data Collection**

<b>Study concepts</b>	<b>Objective</b>	<b>Information required</b>	<b>Source of Information</b>	<b>Method of data collection</b>
Livelihood Sustainability	To assess the sustainable status of women beneficiaries of micro credit and factors affecting it	1.Nature of capital 2. trend of capital inputs	1. women beneficiaries	1. Personal interviews 2. focus group discussion
Socioeconomic Characteristics of women beneficiaries	To ascertain the extent of influence of socioeconomic characteristics on livelihood sustainability	1.income level, age, educational level , marital status, position among co-wives etc	1. women beneficiaries	1. Personal interviews 2. focus group discussion
Household Characteristics	To identify household characteristics and their influence on utilization of credit and the sustainable status of livelihood.	control over personal resource, and sex of household head, Intra-household resource allocation, and spouse involvement in domestic chores	1. women beneficiaries  2.key informant	1. Personal interviews 2. Key informant interviews 3. focus group discussion
Intra- Community Related Factors	To assess the extent of influence of Community Related Factors on credit utilization and the livelihood sustainability	1.Road network, 2.water source, 3. health post/clinic, 4.market centre, 5.school, 6. Fuel wood source.	1. women beneficiaries 2. key informant	1. Personal interviews 2. Key informant interviews 3. focus group discussion 4.observation
Characteristics of Credit Institution	To identify the source, mode of operation, loan conditions and it influence on livelihood sustainability	1.source of credit, 2.payment schedule, 4.interest rate, 5. loan condition 6. mode disbursement	1. women beneficiaries 2. credit providers	1.Personal interviews 2. Key informant interviews 3. focus group discussion 4. documentary review
Type of Main Livelihood ventures	To identify the type of livelihood activities beneficiaries invest their money on	1. main economic activity 2. other economic activity 3. Contribution of economic activities to livelihood needs.	1. women beneficiaries	1.Personal interviews  2. focus group discussion



### **3.5 Method of Data Analysis**

Data were analysed by the aid of SPSS computer software. Descriptive statistics, bivariate analytical techniques, discriminant analysis and other parametric and non-parametric statistical techniques were used to analyse the data. Percentages, tables, means, graphs, and charts were used to summary results of analysis.

#### **3.5.1 Sustainable Livelihood Analysis**

Assessment of sustainability necessarily implies drawing conclusions or at least stating probabilities about future events. Like all forecasts, these necessarily contain a degree of uncertainty. Thus the degree to which sustainability can be measured and quantified depends very much on the ability of the analyst to predict reliable future events based on current happenings (Harrington, 1992).

With regard to livelihood construction, DFID (1999) identifies five set of capitals that individual draw their livelihood from. These are; Financial Capital, Human Capital, Social Capital, Natural Capital and Physical Capital. For this study, sustainability was measured or assessed based on the degree to which these capitals can withstand and be resilient in the face of shocks and stresses and continue to be available and improve on its quality for use by women entrepreneurs to ensure sustain livelihood.

Also DFID Livelihood Framework, observes that people's livelihoods and the wider availability of assets are fundamentally affected by critical trends as well as by shocks

and seasonality over which they have limited or no control. The Vulnerability Context frames the external environment in which people exist.

Ashley and Carney, (1999) note that there are no methods or tools prescribed for ‘doing livelihood analysis’ the key is to be flexible, employing a range of methods as the case requires.

This study assessed the ability of women beneficiaries of microcredit in the study area to cope with these critical external trends of seasonality, shocks and stresses by examining whether they have enhanced their wider availability of assets over the past five years.

To assess this, five point conditions was set up based on the DFID abstraction of access and combination of the five livelihood assets/capital. People’s varying access to these five capitals is illustrated in the DFID Livelihood Framework by pentagon of varying size depicting the constantly changing availability and access to resources. The five point conditions are;

1. Enhanced human capital through knowledge, skills, good health, improved food security, and access to labour.
2. Enhanced physical capital through acquisition of tools/equipment/machineries, increasing trend of accumulation of durable goods and wares.
3. Enhanced financial capital through increasing cash savings, increasing trends of accumulation of liquid assets such as livestock and improve access to credit.

4. Enhanced social capital through building social networks such as working in groups, participation in social activities, and healthy relationship with other community members.
5. Enhanced Natural capital through improved access to land, forest products and quality water source.

Respondents who fulfilled three or more of the above conditions are classified as having high prospect of reducing their vulnerability to external trends of seasonality, shocks and stresses and hence enhance the sustainability of their livelihood, also those who failed to fulfil more than three of the set conditions are classified as having low prospect of reducing their vulnerability and as such face high risks of vulnerability.

### **3.5.2 Discriminant Analysis**

Discriminant techniques was applied to identify socioeconomic characteristics of borrowers and community factors that classified or discriminate between two categories of performance of women livelihood ventures (high or low prospect of livelihood sustainability in one hand and high or low prospect of reducing vulnerability).

Discriminant analysis is a descriptive technique that belongs to the family of multivariate statistical techniques related to regression analysis and factor analysis. Given a vector of dichotomous and continuous variables observed on a set of individuals or objects known to belong to a certain number of different populations. The discriminant analysis can aid in discovering whether or not a set of variables discriminates well-grouped populations.

The discriminant analysis does very well provided that the variables in every group follow a multivariate normal distribution and the covariance matrices for every group are equal (Back *et al.*, 1997).

In this research the dependent variable is a dichotomous and categorised into high prospect of livelihood sustainability and low prospect of livelihood sustainability. While the composite independent variables consist of continuous, nominal, ordinal, interval and ratio data.

In identifying socioeconomic characteristics of women beneficiaries that discriminate between high prospect of livelihood sustainability and low prospect of livelihood sustainability, the model below was set as a discriminant function for verification through discriminant analysis.

$$D_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_n$$

Where D is dichotomy dependent variable ( i = 0, low prospect of livelihood sustainability or i = high livelihood sustainability),  $\beta_1$ ,  $\beta_2$ , and  $\beta_k$  are coefficients of the discriminant function with respect to  $X_1$ ,  $X_2$  and  $X_3$  respectively.

The independent variables which were a priori selected to constitute the discriminant composite function included;

$X_1$  = age of respondent (0 if less than 30 years; 1 if 30-50years; and 2 if above 50years)

$X_2$  = marital status (0 if single; 1 if married monogamy; and 2 if married polygamy)

X<sub>3</sub>= position among co-wives (0 if; junior and 1 if senior)

X<sub>4</sub>= reproductive status (0 if free from child care; 1 if child care)

X<sub>5</sub>= number of dependents

X<sub>6</sub>= sex of household head (0 if female headed household and 1; if male headed household)

X<sub>7</sub>= other sources of income (0 if no other source and 1 if other sources of income exist)

X<sub>8</sub> == personal wealth rank position (0: if ultra poor: 1; if poor: 2 if better off or 3; if rich)

X<sub>9</sub>= level of education (0 if no educational background; 1: basic level and 2 if above basic level)

X<sub>10</sub>= main livelihood venture (0 if agric.; 1 if agro processing and 2 if petty trading or 3 if service)

X<sub>11</sub> = Number of livelihood ventures

X<sub>12</sub>= level of control over financial resource (0 if no control; 1 partial control and 2 full control)

X<sub>14</sub>= level of investment of borrowed fund (0 if invest none; 1 invest partial and 2 invest entire loan)

X<sub>15</sub> = access to training ( 0 if yes and 1 if no)

X<sub>16</sub> = Level of participation in group ( 0 if not participation, 1 if partial and 2 if full )

A discriminant technique was also used to identify intra-community factors that classified low and high prospect of livelihood sustainability.

Madukwe et al (1997) in assessing contact farmer strategy for agricultural technology transfer in Nigeria, used discriminant analysis to determine the factors which classified

effective contact farmers and ineffective contact farmers based on their performance ranking.

**Table: 2 Summary of Method of Analysis**

<b>Study concepts</b>	<b>Objective</b>	<b>variables</b>	<b>Statistical Analysis/test/</b>
<b>Socioeconomic Characteristics</b>	To assess the influence of women borrowers' socio-economic characteristics on the sustainability of their livelihood strategies.	Age, marital status, level of education, income level etc	F test, Somer's d test Chi-square test, Wilks, Lambda Discriminant Analysis
<b>Household Characteristics</b>	To analysis the influence of women borrowers' intra-household characteristics on the sustainability of their livelihood strategies	Intra-household resource allocation, extent of control over household resource etc.	Chi-square test, Wilks, Lambda Discriminant Analysis
<b>Intra-Community Related Factors</b>	To assess the influence of community factors on the sustainability of rural women borrowers' livelihood strategies in the Tolon/Kumbungu District.	Road networks, nearest source of water, market, clinic etc.	Somers' d test Chi-square test, Wilks, Lambda Discriminant Analysis
<b>Characteristics of Credit Institution</b>	To analyse the influence of operations of credit providing institutions on the sustainability of livelihood strategies of women borrowers in the District.	Credit source, Payment schedule, Interest rate etc.	F test, Chi-square test, Wilks, Lambda Discriminant Analysis
<b>Type of Main Livelihood Venture</b>	To examine the various Livelihood Strategies engaged in by rural women beneficiaries of micro-credit.	Type of main livelihood ventures, number of livelihood ventures.	F test, Chi-square test, Wilks, Lambda Discriminant Analysis

### **3.6 Scope and Limitations of the Study**

As argued by Marshall and Rossman (1999), there is no such a thing as a perfectly designed research. Every research has some limitations. Thus every research examines certain issues relating to a topic in a unique perspective as compare to other research relating to the same subject.

There are a few limitations that need to be acknowledged regarding this study. The first relates to the perspective adopted. Instead of trying to understand the various livelihood strategies of all microcredit beneficiaries, this study is limited to women beneficiaries. Thus the main perspectives from which conclusions are drawn relates to rural women beneficiaries of microcredit. The generalization is validity claimed by the research is reasonable within the context of research considering the probability sampling techniques employed for the study and the large sample size used (150 rural women beneficiaries of microcredit were interviewed).

## **CHAPTER FOUR**

### **4.0 RESULTS AND DISCUSSION**

#### **Introduction**

This chapter presents results of analysis and discussions of data collected from one hundred and fifty women beneficiaries of microcredit in the Tolon/Kumbungu District of the Northern Region of Ghana. The chapter is divided into seven sections as follows: section one presents analysis and discussions of the socio-demographic characteristics of respondents; section two deals with discussion on analysis of livelihood strategies of the women borrowers interviewed; section three is an in-depth examination of livelihood capitals/assets from which respondents construct their livelihood; section four presents results and discussion of respondents' ability to reduce vulnerability associated with their livelihood strategies and their perception about the sustainability status of their livelihoods; section five presents analysis on the influence of borrowers' socio-economic characteristics on their livelihood sustainability; section six is an analysis of operations of microcredit providers and its influence on borrowers' livelihood sustainability and finally, section seven is an examination of community related factors and their influence on the livelihood strategies of respondents.

#### **4.1 Socio-Economic Characteristics of Respondents**

This section presents findings of selected social and economic characteristics of the sampled population. The social and economic characteristics selected are those deemed relevant to the purpose of this study as informed by available literature on the issues explored.



#### 4.1.1 Age of respondents

Age is an important social factor that influences individual working ability. Research findings linking age to productivity abound, one of such research findings is the life cycle hypothesis of human capital theory which posits a relationship between productivity and age. The hypothesis predicts that productivity increases with age early in the life cycle and then decreases with age late in the life cycle as human capital depreciation exceeds investment. Productive age is normally considered to be between age 15 and 49 (Johnson and Neumark, 1997). It is in line with this, that the research examines age of respondents as a relevant socio-economic characteristic by categorizing it as: (1) age less than 30 years, (2) age between 30 to 45 years (3) age between 46 to 60 years and (5) age above 60 years as shown in Table 4.1.1.

Results of analysis of the data collected for this study reveals that 9.3% of respondents are below the age of 30 years, while 36.7% are between 30 to 45 years and 36% and 18% falling within the age categorizes of 46 to 60 years and above 60 years respectively. Overwhelming majority (82%) of the women interviewed is between the ages of 30 and 60 years which compares fairly well with the productive age range.

**Table 4.1.1: Frequency distribution of Age of respondents**

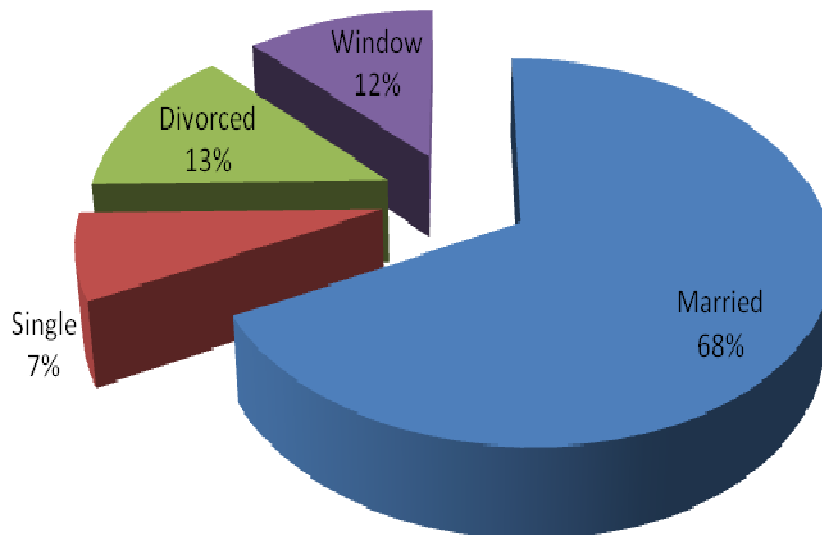
Age	Frequency of respondents	Percentage (%)
Below 30years	14	9.3
30-45years	55	36.7
46-60years	54	36.0
Above 60 years	27	18.0
Total	150	100.0

Source: Field Survey, 2007

#### 4.1.2 Marital Status of Respondents

Marriage is an important institution in most Ghanaian societies. As observed by Gyekye, (1998), Women in African societies want and hope to be married. He concluded that, an unmarried man is almost an anomaly. Hence marital status of respondents were explored for the purpose of this study and presented in Figure 4. The analysis shows that, majority of respondents (68%) interviewed are married, while very few (7%) are single (never married) and 13% and 12% divorcees and widows respectively. About 64.3% of the married women interviewed are in a polygamous marriage relationship, with 45.5% of them being senior wives and 18.8% junior wives, whilst 35.7% of the married women interviewed are in monogamous marriage relationship.

**Figure 4: Pie Chart Illustrating Marital Status of Respondents**



Source: Field Survey, 2009

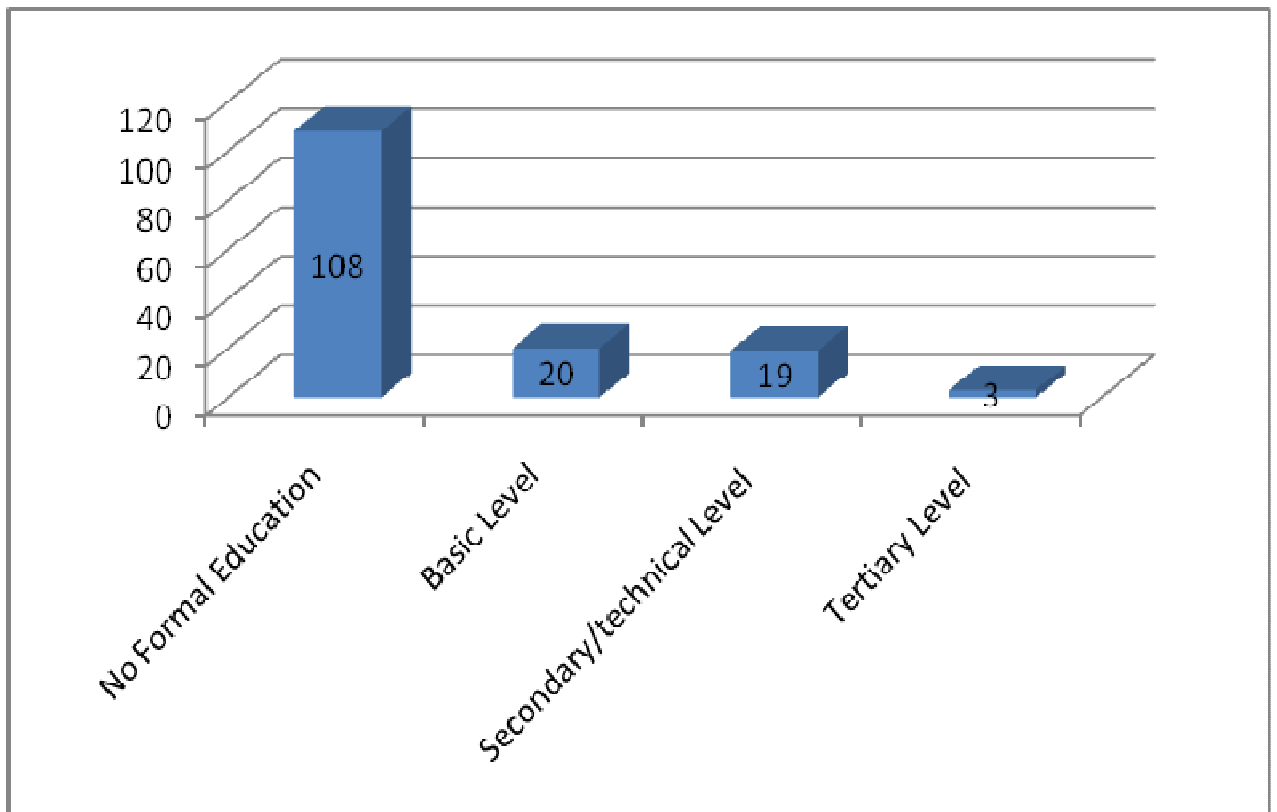
#### **4.1.3 Educational Level of Respondents**

Education has been identified as a major component of women empowerment and a means of enhancing human capital of women folk for effective and efficient production and productivity (Kabeer, 2003). Caldwell (1967) argues that education helps open up new horizons for women and is also thought to have a positive effect on women's participation in formal employment.

However, results of the survey reveal a worrying situation of high illiteracy rate among women in the study area. As high as 108 out of 150 respondents interviewed (representing 72%) have no formal education, with only 3 respondents having tertiary level education and 13.3% and 12.7% having basic and secondary education respectively, as illustrated in Figure 5.

This findings compares fairly well with the findings of the 2003 Core Welfare Indicators Questionnaire (CWIQ) Survey conducted in the Northern region, which reveals that Less than one-quarter (22.6 per cent) of adults (15 years and older) in the Northern Region are literate compared to the national average of 53.4 per cent. The adult literacy rate for males (32.2 per cent) is about two and half times that of females (12.9 per cent). Apart from Tamale Municipality, all the other districts including Tolon/Kumbungu District register adult literacy rates below 30 per cent.

**Figure 5: Bar Chart illustrating educational level of respondents**



Source: Field Survey, 2009

## **4.2 Borrowers' Livelihood Strategies**

This section presents findings and discussion on the various livelihood strategies engaged in by women beneficiaries of microcredit in the study area. Here, part of objective one set by the researcher is addressed.

*To analysis the livelihood capital base from which rural women beneficiaries of microcredit draw on to construct their various livelihood strategies (Objective one)*

### **4.2.1 Main Livelihood Venture**

People engage in diverse economic activities in order to make a living. Respondents interviewed for this study, engaged in one or more livelihood strategies or economic activities for their living. Ellis (1999) notes that risk spreading, consumption smoothing, labour allocation smoothing, credit market failures, and coping with shocks are considerations that push rural dwellers to diversify their livelihood. See also, Ellis (2000), Nelson (1999), Dercon and Krishan (1996) and Abdulai and Crole Rees (2001), who contend that availability of key-assets such as savings, land, labour, education and/or access to market among others influence rural households and individuals decision to diversify their livelihood strategy.

Average number of income-generating ventures per respondent is found to be about two with maximum of four and minimum of one. Majority (55.3%) of respondents operate two livelihood ventures, mostly agriculture and agro-processing or agro-processing and petty trading. Also, about 32.7% and 4% of the respondents interviewed for this study, have three and four livelihood ventures respectively.

In line with observation made by WISTAT (2000), Women comprise an increasing share of the worlds labor force. Worldwide women make up about 30 percent of the agriculture, fisheries and forestry labor force, 35 percent in industry and manufacturing, and 42 percent in services. Respondents' main livelihood ventures were categorized as: agriculture, agro-processing, petty trading and services. As shown Table 4.2.1, petty trading and agro-processing have the same number of respondents engaged in as their main livelihood ventures of 54 each, representing 36% of the sample population. Agriculture and service served as a main livelihood ventures respectively for 16.7% and 11.3% of the respondents interviewed.

**Table 4.2.1: Frequency Distribution of main livelihood Venture**

Main Livelihood Venture	Frequency of respondents	Percentage (%)
Agriculture	25	16.7
petty trading	54	36.0
Agro-processing	54	36.0
Service	17	11.3
Total	150	100.0

Source: Field Survey, 2009

#### **4.2.1.1 Agriculture**

Agriculture being the main stays of rural economy in Ghana and provides livelihood for most rural dwellers is well documented. However, only 16.7% of women beneficiaries of microcredit in the Tolon/Kumbungu District interviewed engaged in agriculture as their main livelihood venture. In focus group discussions held in all the communities in which this study was done, participants cited lack of land as a result of gender insensitive land tenure system, as being responsible for their inability to take agriculture as their main

livelihood venture. This confirms the observation made by Ellis (1999), that, gender is an integral and inseparable part of rural livelihoods as it has to do with ownership and control of productive resources. Also social organization and culture can significantly influence the relative access of diverse resources between women and men as noted by Ellis (2000); Gladwin (2001) and Dolan (2002).

Women beneficiaries of microcredit, who were interviewed for this study and engaged in agriculture as their main livelihood venture, cultivate crops and reared livestock. In addition to the 25 women who engaged in agriculture as their main livelihood venture, 33 other women interviewed, also engaged in agriculture but said it was not their main income-generating venture. In all 58 out of the 150 women interviewed engaged in one form of agriculture or the other.

Legumes such as groundnut cow pea, and soya beans; cereals such as maize and vegetables such as okro, tomatoes among other are crops cultivated by the women beneficiaries of microcredit in the study area.

Land is very important input in crop cultivation and also determines the type of crop that can be cultivated. However, majority of respondents (71.7%) who were engaged in crop cultivation do not own their land but only have access to use such land through share cropping, lease by family member or husband. Most (81.7%) of them obtained use right of their land through lease by their husbands or family members while, few (18.6%) through share cropping, where they intercropped in male family members or husbands

crop land. This confirms findings of Bernadette (1997), that women can farm on their own land, their husbands' land and leased or community land.

Majority (74.5%) of respondents have experienced decreasing trend of their crops yield over the past five years, while only 19.6% enjoyed increasing trend and 5.9% said there have not been any change in their crop yield. Respondents blamed the worrying situation of decreasing trend of their crop yield over the past five years on dwelling soil fertility, land constraint, health problems and unfavourable weather condition.

The types of livestock kept by respondents are sheep, goat, cattle and poultry. Almost all respondents who reared livestock kept poultry, about 70.5% of them reared goats and sheep and only two persons kept cattle. Rearing system or management system in which livestock are kept is found to be varying from one type of livestock to the other. For instance, goats and sheep are kept under extensive system of management since they do not have housing facilities to house the animals. However poultry and cattle are kept under semi intensive management system. For those who keep small ruminants (goat and sheep), about 84% of them said the animal sleep outside their homes mostly on streets and in front of their houses. Average livestock holding is found to vary from one type of livestock to another. Average number of livestock per person is 17, 6 and 5 for poultry, goat and sheep respectively as shown in Table 4.2.2.



In terms of trend of livestock numbers over the past five years, about 55.9% said they have experienced increasing trend of their livestock numbers and the remaining 44.1% said their livestock numbers have been decreasing since 2004.

General problems that hindered women beneficiaries who engaged in crop and livestock farming are identified as land constraint, poor soil fertility, high cost of inputs, poor extension services, lack of housing facilities and low pricing of farm produce in decreasing order of seriousness. Land constraint was noted as the top most problem facing women beneficiaries of microcredit engage in agriculture, as all of them ranked it as number one serious problem facing them. Apart from land constraint, about 62.5% of those who engaged in crop cultivation, blame their poor harvest over the past five years on dwelling soil fertility, while 4.2% complained about lack of housing structure for their farm animals, with 18.8% of the respondents ranked high cost of inputs as their number one serious problem and 8.3% and 4.2 % ranked poor extension service and low prices of agriculture produce as the most serious problem that need immediate attention.

In terms of solutions to these problems, respondents mentioned, land tenure reform, soil fertility improvement measures, reduction in price of inputs such as chemical fertilizer, provision of housing structures for farm animals, provision of input credit, provision of effective extension service and seeking divine intervention especially with regard to unfavourable whether conditions as solutions to their problems.

**Table 4.2.2: Distribution of Livestock Numbers**

Statistics	Number of Poultry	Number of Goat	Number of Sheep
Average livestock holding	17.3824	5.8529	4.7273
Minimum livestock holding	3.00	3.00	2.00
Maximum livestock holding	35.00	12.00	9.00

Source: Field Survey, 2009

#### **4.2.1.2 Petty Trading and Agro-processing**

The results show that 54 respondents- representing 36% of the sample size, engaged in petty trading as their main livelihood venture. In addition, 46 respondents also engaged in petty trading though not as their main livelihood activity. Thus, two-third of women borrowers of microcredit interviewed engaged in petty trading as their main livelihood strategy. This confirms the findings of Cutrufelli, (1983), that about 85% of Ghanaian traders are women.

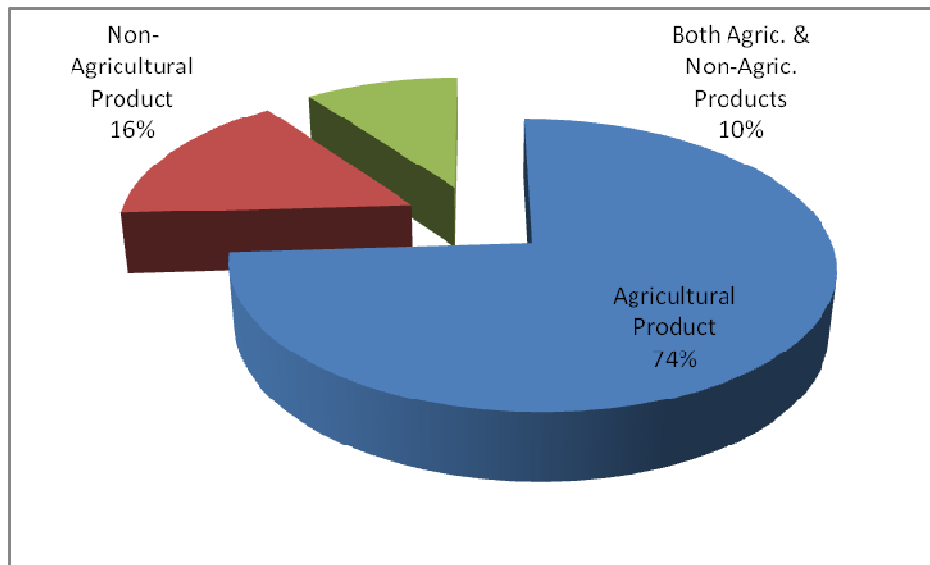
Respondents under this category of livelihood, generally under take buying and selling of agricultural products such as maize, groundnut, rice, soya beans, cow pears, millet and sorghum; forest products such as fire wood, and wild fruits and non-agricultural products such as provisions like sugar, milk, matches etc. The analysis reveals that 74% of respondents who under take petty trading as a livelihood venture, sell only agricultural produce, while 16% deal in only non-agricultural products such as clothes, provisions

like soap, sugar among others and 10% sell both agricultural produces and non-agricultural products as illustrated in Figure 6.

Agro-processors deal solely in processing of agricultural products such as paddy rice, groundnut oil extraction and Shea butter processing. They also sell their produce after processing just like petty traders. This study has categorized those who do not under take processing of their products before selling as petty traders and those who buy and processed before selling as agro-processors. Majority of respondents (60%) who engaged in agro-processing under take rice processing, followed by groundnut oil extraction (25%) and shea butter extraction (15%). But for 4 respondents who engaged in agro-processing, but said it was not their main economic venture, all the other respondents who engaged in agro-processing said it was their main economic venture by the virtue of it contribution to their total income.

Respondents ranked the problems facing their enterprises as traders as price fluctuation, low capital base, supply constraints, processing constraints, low demand of their products and lack of storage facilities in descending order of gravity. By ways of solutions to the problems enumerated, respondents called for provision of marketing information on radio, provision of modern processing equipments and training, construction of roads to open up their communities, provision of storage technology and marketing and product diversification since most of the products they deal with are seasonal.

**Figure 6: Pie Chart Illustrating Type of Product Sold**



Source: Field Survey, 2009

#### **4.2.1.3 Service**

Out of the 40 respondents who engaged in service delivery as their main livelihood venture, only 17 of them engaged in it as a main livelihood venture by the virtue of its contribution to their income. Services rendered by respondents are teaching, hair dressing, dress making and food vending. By way of distribution as illustrated in Table 4.3.4, about 52.5% of them engaged in dress-making, while 25% on hair dressing and 7.5% and 15% on Teaching and food vending respectively.

**Table: 4.3.4 Frequency Distribution of type of Service render**

Type of service	Frequency respondents	Percentage (%)
Teacher	3	7.5
Tailoring/Dress making	21	52.5
Hair dressing	10	25.0
food vending	6	15
Total	40	100.0
	150	

Source: Field Survey, 2009

### **4.3 Livelihood Capital /Assets of Women Borrowers**

This section presents findings and discussions of various livelihood capitals of respondents, from which they construct their livelihood strategies. It explored the nature and form of livelihood capital base of respondents' livelihood strategies. As such, it provides information addressing the other part of objective one.

The researcher examine women borrowers' livelihood assets based on the DFID livelihood framework (1991), which identifies five capital assets from which individuals construct their livelihood. These five livelihood capital are human capital, financial capital, physical capital, social capital and natural capital. This section describes the nature, form and trend over the past five years of respondents' livelihood assets as well as its resilience and vulnerability to external seasonality, stresses and shocks. Five years is chosen as base for this assessment because respondents started benefiting from credit facility since 2004.

#### **4.3.1 Women Borrowers' Human capital Base**

According to DFID livelihood framework (ibid) human capital represents the skills, good health and access to labour that together enable people to pursue various livelihood strategies to achieve their livelihood objectives. Drawing from the DFID Livelihood Framework, respondents' human capital is assessed based on three point conditions as;

1. Possessing of good health and that of dependents
2. Possessing requisite skills and receiving periodic training and education
3. Having access to labour

#### **4.3.1.1 Access to Training and Skills Development**

Apart from the fact that respondents are generally illiterates, with only 28% of them having some form of formal education, their access to training, both technical and enterprise management skills are equally not encouraging. The analysis reveals that over half of women beneficiaries interviewed (56.5%), have never received any training relating to their livelihood, while only 24% of the respondents have vocational or artisan skills and 68.7% reported that none of their household members has vocational or artisan skills. Those who said they have ever been trained on their livelihood venture mentioned Ghanaian Danish Community Project (GDCCP), a NGO based in Dalong, in the Tolon/Kumbungu District. The kind of training received included training on the use of new rice and shea butter processing equipment, management and book keeping skills and credit management and utilization skills.

Also respondents' accesses to training and skills acquisition to help improve on their livelihood significantly differ across communities. A Chi-square test conducted at 5% level of significant found that proportion of respondents who have received training do not significantly differ from one community to the other. However, Kumbungu women beneficiaries of microcredit interviewed appeared to be more likely to have received training than those from the other communities sampled. This can partly be attributed to the fact that, Kumbungu is closer to Dalong where they obtained the training than any of the other four communities. For example, as shown in Table 4.3.1, about 63.3% of respondents from Kumbungu interviewed have ever received training on their livelihood, whereas 44.8% of those from Nyankpala ever received training and 37.9% and 36.7% of

those from Tolon and Gbulung respectively have received training relating to their livelihoods.

**Table 4.3.1 Comparing Respondents' Access to Training Across Communities**

Receiving Training		Name of community					Total
		Nyankpala	Kumbungu	Tolon	Gbulahigu	Gbulung	
Yes	Frequency	13	19	11	10	11	64
	% within Column	44.8%	63.3%	37.9%	34.5%	36.7%	43.5%
No	Frequency	16	11	18	19	19	83
	% within Column	55.2%	36.7%	62.1%	65.5%	63.3%	56.5%
Total	Frequency	29	30	29	29	30	147
	% within Column	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Field Survey, 2009

$\chi^2 = 6.716$ ,  $df = 4$   $p < 0.05$  not significant

#### 4.3.1.2 Health Status of Respondents

Health is an important factor in human capital development considering its relationship with labour productivity. Respondents' access to credit is expected to impact positively on their health and that of their household members as observed by (Zeller, *et al*, 2000). Drawings from that reasoning, the trend of respondents' health since they started benefiting from microcredit (five year period) are examined on a Likerty type scale as improving, deteriorating and remain unchanged. Results of the analysis reveals that 57.3% of respondents described the trend of their health and that of their dependents over the past five years as improving, while 34% said it had remained the same and only 8.7% described their health as deteriorating over the period. However, about 40% of the respondents have not registered themselves and their dependents on the National Health



Insurance Scheme, while 14% have registered themselves and all of their dependents and 46% only registered some of their dependents. In spite of the fact that 75.3% of respondents said members of their households occasionally (at most one every month) fall sick and 11 respondents have persons in their households suffering from chronic sickness such as epilepsy, sickle cell and madness.

Women triple roles identified by Moser (1994) as productive, reproductive and community management roles as against productive and community politic roles of their male counterparts provides a basis for examining the influence of women reproductive role such as carrying pregnancy, lactating or breast feeding children, on their health. Here the trend of health of women interviewed is cross tabulated against their child bearing status as “child rearing” (women who are either pregnant or lactating) or “free from child care” (women who are not nursing children nor pregnant). However, Chi-square test of relation reveals no statistical significant relationship at 5% level of significant, between a respondents’ reproductive status and the trend of their health over the past five years.

Also Food does not only replenish loss energy but also boost up the immune system and hence have a direct bearing on people health. Household food security situation, as either food secured or insecure was cross tabulated against trend of personal health to test if there is any significant relationship between respondents’ food security status and the trend of their health over the past five years. A Chi-square test of relationship reveals statistical significant relationship between food security situation and trend of household

health over the past five years. This compares fairly well with the findings of Zeller, *et al*, (2000) and DFID, (2000). This relationship is however, weak considering Cramer's V of 0.2509 which is closer to zero indicating no relationship situation than one which stands for perfect relationship.

**Table 4.3.2 Cross Tabulation of Trend of household health and food security status**

Trend of household Health	Food Security Situation		Total
	food secure	food insecure	
Improving	50 (70.4%)	36 (45.5%)	86
Deteriorating	21 (29.6%)	43 (54.6%)	64
Total	71 (100%)	79 (100%)	150

Source: Field Survey, 2009  $\chi^2 = 18.317$ ,  $df = 1$   $p < 0.5$   $V = 0.251$  Significant

#### 4.3.1.3 Access to labour

Respondents generally depend on family labour to meet the labour requirements of their various livelihood strategies. About 74% of respondents depend solely on family labour to meeting their labour requirement, about 6% hired their labour input and 20% depend on both hired and family labour. Also Majority of respondents (57.5%) do not have full control over their labour and time which obviously influence the time and energy that they can allocate to their livelihood ventures. This is worrying because rural women ability to effectively negotiate with the existing cultural factors in order to contribute to household decision-making process so as to exert control regarding household resource is very imperative in ensuring their livelihood security; see Bebbington; de Hann; Valdivia, (2001) and Valdivia et al., (2001).

Respondents' level of control exerted over their labour and time is found to be significantly related to their marital status, as the chi-square test conducted in the contingency Table 4.3.3 showing chi-square calculated to be greater than chi-square tabulated at 5% level of significant with 3 degree of freedom. The cell contributing to the difference is "married, full control" cell as compare to "married, partial control" cell. These two cells showed a very Sharp difference as compare with the other cells. Those who are married and have partial control over their labour are almost twice those who are married but have full control over their labour. It can then be concluded that married women interviewed are more likely not to have full control over their labour and time as compare with single, divorced and windowed. Spouses of married women interviewed have a greater control of their wives labour and time as 95% of the respondents mentioned their husbands as exerting control on their labour.

**Table 4.3.3: Cross Tabulation of marital status and control over labour and time.**

Level of Control over Labour		Marital status				Total
		married	Single	divorced	windowed	
Full control	Frequency	34	5	11	12	62
	% within Column	33.7%	45.5%	68.8%	66.7%	42.5%
Partial control	Frequency	67	6	5	6	84
	% within Column	66.3%	54.5%	31.2%	33.3%	57.5%
Total	Frequency	101	11	16	18	146
	% within Column	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Field Survey, 2009

$\chi^2 = 12.06, df = 3 p < 0.05$  Significant

### **4.3.2 Physical Capital Base of Women Borrowers**

DFID Livelihood approach identifies physical asset required to pursue livelihood strategies as consisting of infrastructure, capital equipments such as machineries and tools. Respondents' physical capitals base from which they construct their livelihood are identified as ranging from cooking utensils to capital equipments such as sewing machines, hoes, bullocks carts and agro-processing equipment such as miller, kneaders and boilers which they used in processing paddy rice.

#### **4.3.2.1 Cooking Utensils and Agro-processing Tools/equipment/machineries**

Possession of cooking utensils is a prerequisite for marriage and as such require by every young woman in the study area. This was pointed out by participants in a focus group discussions, the researcher held in the five communities where this survey took place. Cooking pots, bowls (Local, Chinese or English), pans, washing basins coal pots and water storing containers are important physical assets for every house wife in the study area.

Participants of the focus group discussions identified three types of bowls which they said is an indicator of measure of wealth. These bowls are "English bowls", "Chinese bowls" and "local bowls" in order of decreasing value as ranked by participants. All the respondents interviewed have the local bowls with an average of 30 bowls per person, while 55.3% have the Chinese bowls with an average of 7 bowls per person, and 52% with an average of 4.8 bowls per person in the case of the English bowls.

Other domestic wares which respondents say play very critical role not only in their domestic activities but in their livelihood ventures as well, are water harvesting/storage wares such as earthen pots, drums and polytank in order of increasing value and important. Possessing cupboard either “local type” or “glass type” is considered as a prestige among rural women in the study area. Those who possessed the glass type are considered wealthier than those with the local type. Young girls as well as married women who have given birth to one or two children usual migrate down south to engage in what is commonly refer to as “Kayeyo” in order to be able to buy cupboard, bowls and other cooking utensils. This was cited by participants in the focus group discussions as one reason why girls and young women from the study area migrate down south to search for jobs.

Analysis of the survey data reveals that, but for two respondents, all the other respondents possessed water storage earthen pot with an average of 2 pots per person, whereas 26.7% have drums for storing water and only 8 respondents have polytank. Majority of respondents (87.3%) have either the local cupboard or the glass type, about 22% have the local type and 65.3% the glass type.

Cooking and other heating activities are mostly done by using the local tripod with fire wood as fuel and coal pots with charcoal as source of fuel in the study area. As high as 88% of respondents used the local tripod, while 47.3% used coal pot and just 8% and 2.7% of the respondents used stove with LPG (liquefied petroleum gas) as the fuel and electric cooker respectively.

**Table 4.3.4: Distribution of number of bowls**

Distribution of Type Bowls	No. of bowls (local)	No. of bowls (Chinese)	No. of bowls (English)
Number of respondents	150	83	78
Average No. of bowls per person		7.2048	4.8462
Minimum No of bowls	6.00	1.00	.00
Maximum No. of bowls	130.00	45.00	15.00

Source: Field Survey, 2009

#### **4.3.2.2 Physical Assets Accumulation and Control**

Trend of accumulation of physical assets by respondents over the past five years are measured in a Likerty type scale as “increasing trend”, “decreasing trend” or “no change”. Results of the survey found that, about 30% of the women interviewed enjoy increasing trend regarding accumulation of their physical assets, whereas 18.7% and 51.3% suffered decreasing trend and stagnation of accumulation of physical assets respectively, over the periods.

In addition to accumulation of physical capital, the extent to which women exert control over their physical assets such as tools, equipments, cooking utensils among others, is equally important if not more in determining the ability to productively utilize these assets for economic returns. As explained by Narayan (2005), that women inability to exert control on productive resources is a cause of women subordination which impact negatively on women empowerment. For that matter, the research assesses the extent of control

respondents exert on their physical assets, using a Likerty type scale as “no control at all”, “partial control” or “full control”. The analysis reveals that, about 81.3% of the respondents exert full control over their physical assets and 18.7% exercised partial control over their physical asset. No respondent reported to have lost control entirely over their physical assets.

#### 4.3. 5 Distribution of Extent of Control Exerted on physical Assets

Extent of Control exerted on physical assets	Frequency of respondents	Percentage (%)
full control	122	81.3
partial control	28	18.7
no control at all	0	0
Total	150	100.0

Source: Field Survey, 2009

#### 4.3.3 Natural Capital of Women Borrowers

As it is the case of many rural communities, respondents from the five communities interviewed depend to a large extent on natural resources for their livelihood and survival. The natural capital from which respondents obtained resource for their livelihood ventures are land, fuel wood, water bodies, tree crops such as shea tree, dawadawa among others. This compare well with the findings of IDS, (1996), Brycesson, (1999) and Chambers (1997).

##### 4.3.3.1 Natural Resource Base of Respondents

**Land:** Analysis of the data collected for this study reveals that, only 16% of the respondents interviewed indicates that they own land and 89.5% of respondents said their household own land with average household land holding of 6.5 hectares.

Household land holding is very important in determining respondents' access to land, economic trees, and wood lot for fuel wood harvesting. This is so because the natural resources such as economic trees like shea tree and fuel wood are own and access by the virtue of their occurrence in one farmland or bush land which fall within one family land. With this arrangement one can not enter into someone's farmland to harvest fuel wood or Shea nut without the permission of the owner. This according to participants in a focus discussion, will amount to trespassing, which is a serious offence and one can be halt before traditional authority and sanctioned.

Other economic trees such as dawadawa are termed as title trees and their ownership is by the virtue of holding certain traditional title which assigned such trees within a designated land to such title holders. This offers holders of such traditional title the exclusive right to own and access such trees sources. This arrangement is not gender sensitive, according to participants in the focus group discussions; women are not eligible to hold such titles. And hence they can only access such resource by the virtue of their relationship to such title holders as either husbands or family relations. This findings confirms observation made by Ellis (2000); Gladwin (2001) and Dolan (2002) that social organization and culture can significantly influence the relative access of diverse resources between women and men.

**Fuel wood:** All respondents interviewed for this study, said they depend on fuel wood for their domestic fire and heating. Other sources of fire for heating in the study area are charcoal, cow dung and cereal stuffs and husk. The results of the survey indicates that



only 3.3% of the respondents said apart from fuel wood that they used charcoal and LPG gas for heating, about 22.7% used charcoal and cereal stuffs or husks, while 15.3% used charcoal and cow dung for heating apart from fuel wood and 47.3% used only charcoal apart from fuel wood for domestic heating. However, individual respondent's ability to access these natural capital varies and this intend affect the sustainable status of their livelihood.

Apart from domestic fire and heating, fuel wood is largely used to provide fire for livelihood activities such as cooking and selling of food and agro-processing such as groundnut oil extraction, rice processing and shea butter extraction which 36% of the respondents engaged in as their main livelihood venture. The results also reveals that only 37% of respondents fetched their fuel wood for domestic fire and heating, whilst, the remaining 63% buy their fire wood. Discussants in all the communities who took part in the focus group discussion, painted a worrying picture of the stage of environmental degradation and deforestation in their communities which they said threaten the availability and sustainability of fuel wood which is the main source of fuel for heating in the study area.

They added that it has compelled some of them to cut economic trees like shea trees for fuel wood. As a result of this situation women in the study area now have to travel long distances than before to fetch fire wood. Results of the study, shows that 62.7% of the respondents who fetched their own fire wood now travel between 2km to 10km, whereas

37.3% travel more than 10km spending more time and energy than they do in ten years back.

**Table 4.3.6 Distribution of Alternative Source of Fuel**

Apart from fire wood what else do you use for heating	Frequency of respondents	Percentage (%)
charcoal	86	57.3
cow dung	2	1.3
charcoal and cereals stuffs/husk	34	22.7
charcoal and cow dung	23	15.3
charcoal and LPG gas	5	3.3
Total	150	100.0

Source: Field Survey, 2009

#### **4.3.4 Social capital of Women Beneficiaries of Microcredit**

The role of social relation or networking to the livelihood of women beneficiaries of microcredit in the study area varies from labour supply, access to inputs like land, fuel wood and economic trees to pooling of financial resources like Susu groups among others.

##### **4.3.4.1 Social Grouping and Participation in Social Activities**

Almost all the respondents interviewed belong to two or more social groupings. These social groupings include informal groups in which individual do not make deliberate conscious effort to belong to like family, and those in which individual member chose to belong to and make conscious efforts to maintain their membership such as Susu groups, groups form to access credit, religious groups among others. Also individual participation

in social activities like funeral, wedding, outdoor ceremonies and communal activities enhances her social relationships and their ability to access communal and social resource. In this light, respondents were asked to score their participation in social activities using a Likert type scale as full participation, partial participation and not participation at all based on how frequently the person attends other community member social occasions, whether they donate in such occasions or take active part in activities such as cooking, helping to fetch water and fire wood. Analysis of the data reveals that 50% of the respondents scored their participation in social activities as full participation and 49.3% scored it as partial participation.

During the focus group discussions, discussants were unanimous in arguing that the extent of participation in social activities enhances one's level of acceptance and kind of relation she will have with other members in their communities. They, however, added that such participation requires commitment of resources in the form of donations during weddings, outdoor ceremonies and funerals ceremonies and rendering help and services in such occasions.

To assess the influence of respondents' wealth on their level of participation in social activities, as noted by participants of the focus discussion that "participating in social activities requires commitment of resources in the form of cash donation and others", a Chi-square test was conducted between respondents' wealth rank position in relation with other community members and their level of participation in social activities. The results found a significant relationship between respondents' level of participation in social

activities and their wealth rank position at 5% level of significant. As shown in Table 4.4.7, relatively rich women interviewed participate fully in social activities more than those ranked as better off, moderate poor or ultra poor. For instance, about 73.7% of respondents ranked as rich participate fully in social activities, whereas 20.8% and 37.5% of moderate poor and ultra poor respondents fully participate in social activities.

**Table 4.3 .7 Cross Tabulation of personal wealth rank and level of Acceptance**

Level of Participation in Social Activities		Personal Wealth Rank Position				Total
		ultra poor	moderate poor	better off	rich	
Full participation	Frequency	9	10	42	14	75
	% within Column	37.5%	20.8%	71.2%	73.7%	50.0%
Partial participation	Frequency	15	38	17	5	74
	% within Column	62.5%	77.1%	28.8%	26.3%	49.3%
Total	Frequency	24	48	59	19	150
	% within Column	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Field Survey, 2009

$\chi^2=32.690$  df = 3 P < 0.05 Significant

#### 4.3.4.2 Household Status within Community Governance

As observes by Richards, (1989), different people clearly have different access to different livelihood resources. This is dependent on institutional arrangements, organisational issues, power and politics. As such, rrespondents' household head status with regard to community governance was assessed and categorized as opinion leaders, traditional leader/elders or ordinary members. A household head is described as a traditional leader/elder if he/she holds traditional title in his/her community; opinion leaders in one hand hold no traditional titles but have strong voice and shape opinions in their

communities while ordinary members in the other hand hold no traditional title and have little or no influence on other community members outside their households as compare with opinion leaders and traditional leaders. Opinion leaders include Assemblymen, Unit Committee members, Magazias, among others. The results reveal that, majority (72%) of respondents' household heads are ordinary members of their communities holding no traditional titles, and 16.7% of respondents coming from households whose heads hold traditional titles, whereas 11.3% of the respondents' household heads being opinion leaders.

In addition respondents were asked to score the extent of their access to communities' resources such as water source, forest resource, health and sanitary facilities and opportunities such as credits, education and training, extension services among others. Analysis of the scores reveals that Majority (82%) of respondents have limited access to community resources and opportunities, while 17.3% exert full access to opportunities available in their communities.

The status of respondents household head in relation to community governance is expected to have some influence on her level of access to community resources like water, wild forest product such as fire wood shea nut and opportunities such credit and training. This is so because traditional leaders are the custodians of land in the study area and as such have influence on land use and other resources. Opinion leaders such as Assembly men or women command much respect and influence in rural communities and usually serve as a mouth piece and liaison officers of their communities.

This expectation is confirmed in empirical analysis of data collected for this study. A Chi-square test that was conducted to ascertain difference in respondents' level of access to community resource between difference household heads statuses confirms the existence of significant difference at 5% level of significant. Respondents from opinion leaders headed households tend to be more likely to have full access to community resources and opportunities than those from ordinary households. For example, as shown in Table 4.4.8, about 52.9% of respondents from opinion leaders headed households have full access to community resources and opportunities, whereas only 15.7% of those from ordinary households and 20% of women from traditional leaders/elders have full access to communities' resources and opportunities.

**Table 4.3 .8 Cross Tabulation of Household Head Status and Access to Community Resources**

Level of Access		Household Head Status in Village Governance			Total
		opinion leader	ordinary member	traditional leader/elder	
Full access	Frequency	9	17	5	31
	% within Column	52.9%	15.7%	20.0%	20.7%
Limited access	Frequency	8	90	20	118
	% within Column	47.1%	83.3%	80.0%	78.7.0%
Total	Frequency	17	108	25	150
	% within Column	100.0%	100.0%	100.0%	100.0%

Source: Field Survey, 2009

$\chi^2=20.585$  df = 2 P>0.05 Significant

#### **4.3.5 Sources and form of Financial Capital of Women Borrowers**

The financial capital of rural women beneficiaries of microcredit in the study area is found to be in the form of both cash and non cash liquid assets. With regard to savings, some of the respondents embarked on compulsory savings to qualify for loan since some of the credit providers require prospective clients to save certain minimum amount before they are qualified for loan. Also respondents engaged in Susu collection as a form of savings. Apart from the compulsory savings and the Susu collection which are form of savings embarked on by respondents, about 68% said they make annual additional personal cash savings of below GH¢ 20.00, while 21.5% saves between GH¢ 21.00 to GH¢ 50.00 annually and only 10.5% saves above GH¢ 50.00 annually.

Liquid asset which also serves as a form of financial capital identified are stock of food and livestock. This confirms the findings of Johnson (1997) that financial capital of the poor consists of stocks of savings; cash, bank deposits or liquid assets such as livestock and regular inflows of money as pensions, or other transfers from the state, and remittances.

Remittances and credit also constitute a financial inflow of respondents' cash flow. About 20% of the respondents interviewed receive remittances from their grownup children, husbands living elsewhere, brothers and other relatives, with an average annual remittance amounting to GH¢46.00.

With regard to livestock, about 46.7% of the women interviewed keep small ruminants such as goat and sheep, whilst 8.7% keep large ruminant such as cattle this compares well with observation made by Apusigah (2004), that, women usual keep small ruminants like sheep and goat rather than large ruminant like cattle. Women borrowers in the study area purposely keep livestock as a store of value. They sell their livestock to transact one time payments such as paying children school fees, buying new clothing and preparing their young girls for marriage. The forms of financial capital from which rural women beneficiaries of microcredit in the study area draw on to construct their livelihood are shown in Table 4.3.9.

**Table 4.3.9 Distribution of Respondents financial capital**

Form of financial capital/ Ownership	Cash savings above 20GH	Remittance	Stock of Cereals	Stock of Legumes	Stock of shea nut	Small ruminant (goat)	Small ruminant (sheep)	Large Ruminant (cattle)	poultry
Yes (%)	68	20	82.4	74.7	49.3	24	22.7	8.7	26
No (%)	32	80	17.6	25.3	50.3	76	77.3	91.3	74
Total	100	100	100	100	100	100	100	100	100

Source: Field Survey, 2009

#### 4.3.5.1 Initial Start up Capital of Women Borrowers

Apart from credit from Rural Bank, financial NGOs, Loan and Saving Companies, respondents also access financing from Susu groups, loans from informal sources such as money lenders, friends and relatives to finance their economic activities and for sustenance. Women in the study area relied so much on their savings to raise initial capital to start their livelihood ventures. More than half ( 56%) of the women interviewed raised their initial capital to start their livelihood ventures through personal savings, while



24.7% source it from their husband and only 8% and 11.3% said they raised their initial capital from their families and credit respectively. Those who raised their initial capital through personal savings relied so much on harvesting and selling of natural products like fire wood, shea nuts; farm produce such as groundnut, maize and hiring their labour out by working on other people farms, through which they obtain initial capital to start their livelihood ventures.

Participatory Rural Appraisal tools such as participatory wealth ranking were used in the focus group discussions to set up both individual and household wealth ranks base on indicators and standard in each community. Base on this, respondents were required to rank their personal wealth in relation to other members in their communities as either, ultra poor, moderate poor, better off or rich. Very few respondents (12.7%) perceived themselves to be rich, with 16% considering themselves as poor and 32% and 39.3% ranking themselves as moderate poor and better off respectively. In terms of actual income, only 19.3% said they earned more than the national daily minimum wage of GH¢ 2.25 (Ghana Budget, 2007).

**Table 4.3.10 Frequency Distribution of Source of initial capital**

Source of initial capital	Frequency respondents	Percentage (%)
Credit	12	8.0
Personal saving	84	56.0
Family	17	11.3
Husband	37	24.7
Total	150	100.0

Source: Field Survey, 2009

#### **4.3.5.2 Control and Trend of Financial Resources**

The extent of control women borrowers exert on their financial resources especially their borrowed fund is very critical since it influences their investment drive and debt servicing capacity. Sebstad and Chen (1996) observe that a significant part of women, who may have access to finance, may not have control over the loans contracted.

Also Goetz and Gupta (1995) in their assessment of the impact of Bangladesh microcredit programmes concluded that about 63% of women's loans are actually invested by male relatives, while women bear the formal responsibility for repayment. In light with these findings, respondents control over their financial resource are determine with the aid of a Likerty type scale as "full control" (if they do not share control of their financial resource with others like husband)," partial control" (if they share control with others) and no control at all (if they have no say as to what their financial resource should be used for).

From the analysis, majority (62.7%) of the respondents have full control over their financial resources with none of them reporting having no control over their financial resources. The remaining 37.8% who exert partial control over their financial resources mentioned their husband (87.3%), other male relatives (10.9%) and female relatives (1.8%) as having some level of control over their financial resources.

With regard to trend of respondents' financial capital over the past five years, most of them (63.3%) have experienced increasing trend of their financial resource over the

period and 20.7% and 16% have suffered decreasing trend and stagnation of their financial resources respectively within the period, in spite of the fact that they have been benefiting from credit facility over the period.

A cross tabulation in a bivariate contingency table between extent of control women borrowers exert over their financial resources and trend of their financial resources over the past five years is shown in Table 4.3.11. A Chi-square test reveals a significance difference at 5% level of significant between women who exert full control and those who exert partial control over finances in terms of the trend of their financial capital accumulation over the past five years. Thus respondents with full control over their financial resources are more likely to experience increasing trend of accumulation of financial capital than those with partial control.

For instance, about 72.3% of women who exert full control over their borrowed funds have enjoyed increasing trend of accumulation of financial resources as compare with only 48.2% of women borrowers who exert partial control over their borrowed funds enjoying increasing trend of accumulation of financial capital over the past five years.

**Table 4.3.11: Control over Financial Resource and Trend of Financial Resources**

Trend of Financial Resources		Extent of control over Financial Resources		Total
		Full control	Partial control	
Increasing Trend	Frequency	68	27	95
	% within Column	72.3%	48.2%	63.3%
Decreasing Trend	Frequency	15	16	31
	% within Column	16.0%	28.6%	20.7%
Stagnant	Frequency	11	13	24
	% within Column	11.7%	23.2%	16.0%
Total	Frequency	94	56	150
	% within Column	100.0%	100.0%	100.0%

Source: Field Survey, 2009

$\chi^2=8.83$  df = 2 P < 0.05 Significant

#### **4.4 Assessment of Vulnerability Context and Livelihood Sustainability**

This section presents findings of analysis of the survey data regarding respondents' ability to reduce their vulnerability to critical trends, stresses, shocks and seasonality, through improving on their livelihood assets holdings and prospect of constructing sustainable livelihood. Here information obtained from the survey relating to objective two of this study is discussed. The objective two as set by the researcher state that;

*“To examine women borrowers' ability to reduce vulnerability associated with their enterprises in their drive towards constructing sustainable livelihood.”*

##### **4.4.1 Vulnerability Context and Prospect of Livelihood Sustainability**

DFID Livelihood Framework, observes that People's livelihoods and the wider availability of assets are fundamentally affected by critical trends as well as by shocks and seasonality over which they have limited or no control. Also the livelihood framework is based on the premise that the asset status of the poor is fundamental to understanding the options open to them, the strategies they adopt to attain livelihoods, the outcomes they aspire to and the vulnerability context under which they operate. Assets refer to owned, controlled, claimed or in some other means accessed by the household. It is by these assets that households are able to participate in production, the labour market and exchange with other households (Ellis, 2000). The Vulnerability Context frames the external environment in which people exist and operate their livelihood ventures.

This study assessed the ability of respondents to cope with these critical external trends of seasonality, shocks and stresses by examining whether they have enhanced their wider availability of assets over the past five years. For the purpose of this assessment the researcher set up five point conditions based on the DFID abstraction of access and combination of the five livelihood assets/capital. People's varying access to these five capitals is illustrated in the DFID Livelihood Framework by pentagon of varying size depicting the constantly changing availability and access to resources. The five point conditions are;

1. Enhance human capital through knowledge, skills, good health, improved food security, and access to labour.
2. Enhance physical capital through acquisition of tools/equipment/machineries, increasing trend of accumulation of durable goods and wares.
3. Enhance financial capital through increasing cash savings, increasing trends of accumulation of liquid assets such as livestock and improve access to credit.
4. Enhance social capital through building social networks such as working in groups, participation in social activities, and establishing healthy relationship with other community members.
5. Enhance Natural capital through sustainable use of natural resources, improved access to land, forest products and water resources.

Respondents who fulfilled three or more of the above conditions are classified as having high prospect of reducing their vulnerability to external trends of seasonality, shocks and stresses and hence enhance the sustainability of their livelihood, also those who failed to fulfil more than three of the set conditions are classified as having low prospect of reducing their vulnerability and as such face high risks of vulnerability.

#### **4.4.1.1 Prospect of Reducing Vulnerability**

The prospect of women beneficiaries reducing their risk to vulnerability context facing their livelihood as explained above, is determine by the number of conditions fulfilled which is regarded as a measure of the extent to which individual borrowers had enhanced or improved on their livelihood assets over the past five years, so as to withstand stress, shocks and external trends of seasonality facing their enterprises and hence reduce their risk towards the vulnerability context associated with their livelihoods.

Notwithstanding the fact that, improving access to one particular livelihood asset, says land (natural capital), enhances the chances of one obtaining other livelihood capitals to be able to construct livelihood venture, a combination of livelihoods assets is imperative in construct sustainable livelihood venture. Coming from this view point, respondents who are able to enhance three or more out of the five livelihood capitals over the past five years (fulfilling more than three conditions) are treated as having high prospect of reducing their vulnerability context, while respondents who enhanced less than three of their livelihood capitals within the same period are regarded as having low prospect of reducing vulnerability context associated with their livelihood ventures.

Analysis of data obtained from the survey, discovers that only 2 respondents met all the five conditions for reducing vulnerability, while 22% of the respondents did not meet any of the five conditions, with 32.7% meeting three of conditions, and 19.3% and 6% meeting two and four conditions respectively. By classification, about 60% fulfilled less than three conditions and hence are regarded as constituting Low prospect of reducing vulnerability and thereby facing high risks of vulnerability and 40% fulfilled three and more conditions and are classified as having high prospect of reducing their vulnerability to external critical trends of seasonality, tresses and shocks.

**Table 4.4.1: Frequency distribution of number of conditions fulfilled**

No. of conditions fulfilled	Frequency of respondents	Percentage (%)
0	33	22.0
1	28	18.7
2	29	19.3
3	49	32.7
4	9	6.0
5	2	1.3
Total	150	100.0

Source: Field Survey, 2009

#### **4.4.2 Perception of Prospect of Livelihood Sustainability**

The research also examined the perception respondents hold about the sustainability prospects of their livelihood strategies. To examine the extent to which respondents' livelihood strategies are constructed to cope with future critical trends of seasonality and



build in resilience against external shocks and tresses, Likerty type scale was used to score respondents perception about the sustainability state of available capitals from which they construct their livelihood. Respondents were required to rank sustainability state of each of financial, social, human, natural and physical capitals available to them on a five points Likerty scale as 1- “not sustainable at all”, 2- “very low prospects of sustainability”, 3- “low prospects of sustainability”, 4-“high prospects of sustainability” and 5-“very high prospects of sustainability”.

With an assumption that respondents rank scores are normally distributed over the five points Likerty type scale, with a mean score of 3- “low prospects of sustainability”; average rank scores of all the scores for the five capitals for each respondent were calculated and compare with the score of three. Respondents with average score of more than three are classified as having high prospects of constructing sustainable livelihood and those whose average score of Less than three are classified as having low prospects of constructing sustainable livelihood.

#### **4.4.2.1 Sustainability Prospects of women Borrowers Livelihood Capitals**

Results of the analysis reveals that, only one respondent perceived the prospects of sustainability of her human capital to be “very high”, three respondents perceived it as “not being sustainable at all”, while 36% score the prospects of sustainability of their human capital as “very low prospect” and 31.3% and 30% perceived the prospect of sustainability of their human capital as “low prospect” and “high prospect” respectively.

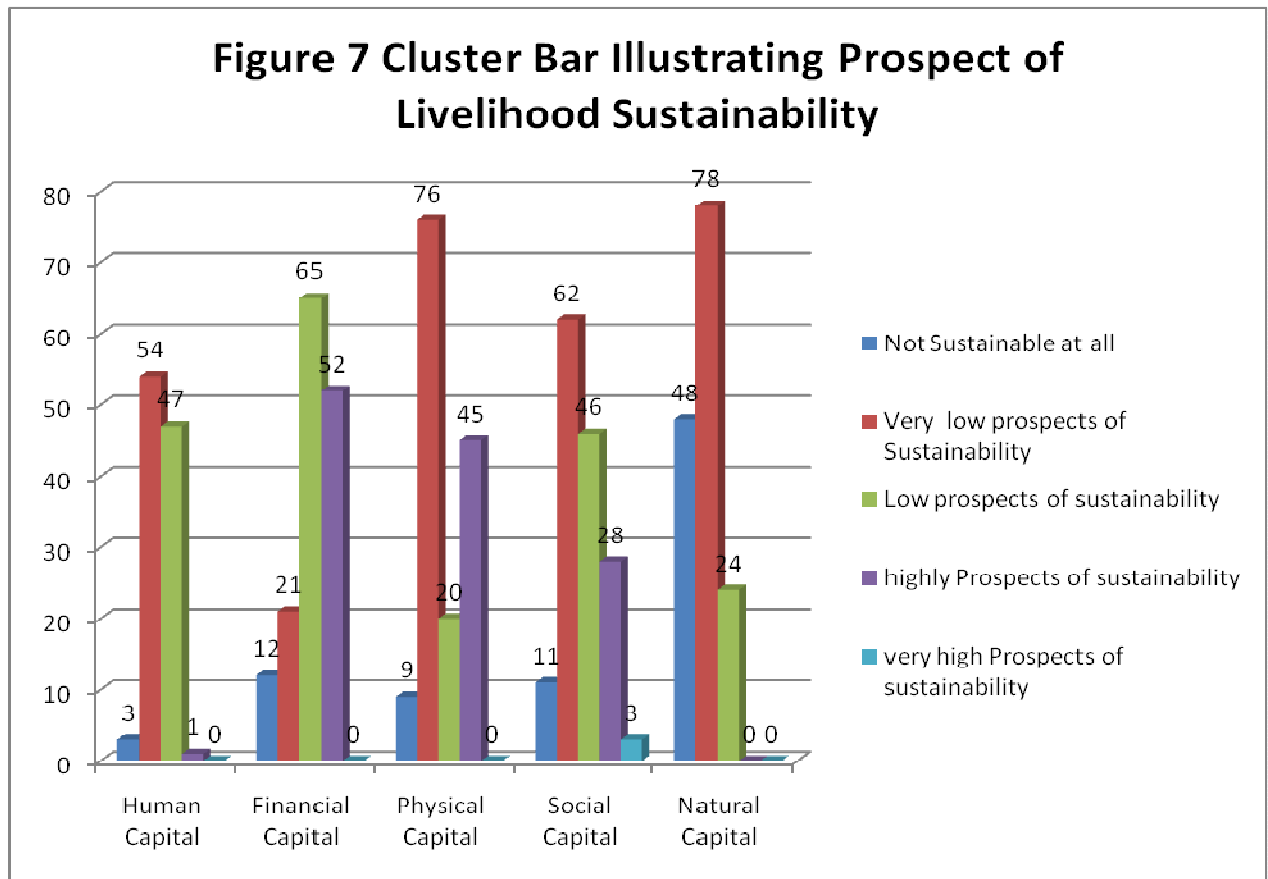
Also respondents' perceptions about the prospects of sustainability state of their financial capital on the five points Likerty scale is found from the analysis as that, about 8% of the women interviewed perceived the sustainability state of their financial capital as "not being sustainable at all", while 34.7% scored it to being "highly sustainable" with 14% and 43.3% scoring their perception about the prospects of sustainability state of their financial capital as being "very low prospect" and "low prospect of sustainability" respectively.

with regard to respondents' perception about the prospect of sustainability of their physical capital, a little over half (50.7%) of the women borrowers interviewed perceived the sustainability prospects of their physical capital to be "very low", while 6% perceived it "not to be sustainable at all", with 13.3% and 30% scoring their perception about sustainability prospects of their physical capital to be "low prospect of sustainability" and "high prospect of sustainability" respectively.

In addition, from the results of analysis, about 7.3% of the women borrowers interviewed scored their perception about the prospects of sustainability state of their social capital as 'not being sustainable at all', while 41.3% scored it as "very low prospects of sustainability" with 18.7% and 2% scoring it as "high prospect of sustainability" and "very high prospects of sustainability" respectively.

With regard to respondents perception of prospect of sustainability state of their natural capital, results of the analysis found that none of the respondents perceived the prospects of sustainability of their natural capital to be "highly sustainable" or "very high

sustainable”, while 32% said their natural capital is “not sustainable at all” with 52% and 16% scoring it as “very low prospect of sustainability” and “low prospect of sustainability” respectively.



#### 4.4.2.2 Average Sustainability Prospects Score

Respondents’ average score was obtained by summing their respective score for each of the five capitals and divided by five. In other words average prospect of sustainability score is the mean score of the scores of the five capitals. As reveals from the analysis respondents’ average score ranges from 1.4 to 5 with 1.3% of respondents having average

score of their five livelihood capitals of 1.4, while 12.7% having average score of 4, with 16% and 10% obtaining average score of 2.2 and 3 respectively as shown in Table 4.4.2.

In all, about 46.7% of respondents have their average sustainability prospect score of more than 3 and the remaining 53.3% scored averagely of less than 3. Implying that 46.7% of respondents are classified as having high prospects of constructing sustainable livelihood (High prospects of Livelihood sustainability) and 53.3% having low prospect of constructing sustainable livelihood (low prospects of Livelihood sustainability)

**Table 4.4.7 Frequency Distribution average sustainable score**

average sustainable score	Frequency of respondents	Percentage (%)
1.4	2	1.3
2	38	25.3
2.2	24	16.0
2.4	16	10.7
3	15	10.0
3.2	11	7.3
3.4	10	6.7
3.6	15	10.0
4	19	12.7
Total	150	100.0

Source: Field Survey, 2009

#### **4.5 Respondents' Socio-Economic Characteristics and Livelihood Sustainability**

This section presents discussion of the research findings relating to borrowers' socio-economic characteristics and how it influences their prospect of reducing vulnerability and their perception regarding sustainability status of their livelihood strategies. This is in direct response to objective three set up by the researcher as:

*“To assess the influence of women borrowers' socio-economic characteristics on their ability to reduce their vulnerability context and improved on their livelihood sustainability”.*

##### **4.5.1 Socio-Economic Characteristics and Prospect of Reducing Vulnerability**

Socioeconomic variables that were explored in this study included; Age, level of education, marital status, income level, source of initial capital, personal wealth rank, number of dependents, reproductive status, membership of social grouping, experience in main livelihood venture and number of livelihood ventures embarked on.

Respondents' prospect of constructing sustainable livelihood is assessed by examining their ability to build their livelihood capitals over the past five years against external threat of seasonality, stresses and shocks and hence reduce their vulnerability to these threats. From DFID livelihood approach, ensuring livelihood sustainability is to reduce vulnerability by enhancing the resilience of livelihood capitals. This section presents findings of influence of selected socio-economic characteristics of women borrowers on their ability to reduce their vulnerability to critical external seasonality, stresses and shocks.

#### **4.5.1.1 Age of Respondents and prospects of Reducing Vulnerability**

Age has been found to have influence on people ability to work and hence have impact on entrepreneurs' ability to reduce vulnerability and improve on their livelihood sustainability (Johnson and Neumark, 1997). Age of respondents is therefore assessed against their vulnerability status to test if there is any statistical significant relationship between age and respondents ability to reduce their vulnerability. From Chi-Square test in a contingency table shown in Table 4.5.1, women ability to reduce vulnerability facing their livelihood ventures is found to differ significantly across age groups. In other words, younger respondents are more likely to reduce their vulnerability to external stress of seasonality and shocks than older respondents.

For instance, about 71.4% of respondents below the age of 30 years are found to have enhanced their livelihood capital over the past five years and as such classified as having high prospect of reducing their vulnerability, whereas only 44.4% of respondents above the age of 60 years falling within the same category of high prospect of reducing vulnerability.

**Table 4.5.1: Cross Tabulation of Age of Respondents and Vulnerability Status**

Prospects of Reducing Vulnerability		Age of respondents				Total
		Below 30years	30-45years	46-60years	Above 60years	
High Prospects of Reducing Vulnerability	Frequency	10	19	19	12	60
	% within Column	71.4%	34.5%	35.2%	44.4%	40.0%
Low prospects of Reducing Vulnerability	Frequency	4	36	35	15	90
	% within Column	28.6%	65.5%	64.8%	55.6%	60.0%
Total	Frequency	14	55	54	27	150
	% within Column	100.0%	100.0%	100.0%	100.0%	100.0%

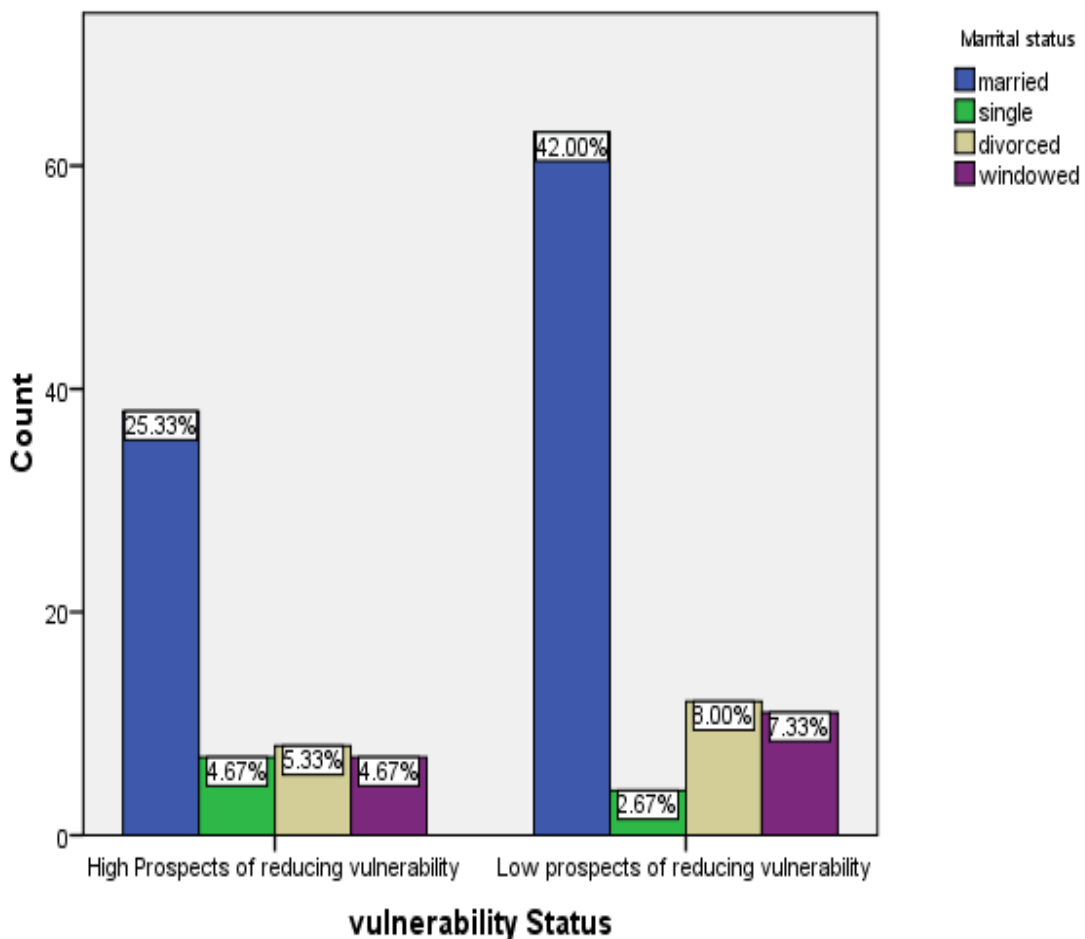
Source: Field Survey, 2009

 $\chi^2 = 8.188$  df= 3 P<0.05 Significant**4.5.1.2 Marital status of Respondents and Vulnerability Status**

Moser, (1998) argues among other things that a household relation is an asset in the form of human capital. Thus, the marital status has either a positive or negative influence on livelihoods outcomes as marital partners contribute to each others welfare-help provide access to productive resources which enhances livelihoods. Marital status of respondents is therefore expected to have influence on their ability to enhance their livelihood asset holdings and hence increase their prospect of reducing vulnerabilities associated with their enterprises to ensure sustainable livelihoods. However, marital status of women borrowers of microcredit interviewed was not significantly difference at 5% level of significant in terms of their ability to reduce their vulnerability to external stresses and shocks through enhancing their livelihood assets. Thus respondents' marital status is not a good predictor of the prospects of their reducing vulnerability facing their enterprises. Married women, single, widow as well as divorcees are equally likely to have improved their asset holdings against external trends of seasonality, stresses and shocks.

As shown in Figure 8, in one hand about 25.3% of married women interviewed have enhanced their livelihood asset holdings over the past five years and hence are classified as having high prospect of reducing their vulnerability to external shocks and stresses, while only 4.7% of single women interviewed belong to the same category. In the other hand about 42% of married women borrowers of microcredit interviewed have low prospect of reducing their vulnerability to external shocks and stresses.

**Figure 8: Bar Graph of Marital Status and Prospect of Reducing Vulnerability**



Source: Analysis of Field Survey Data, 2009



#### **4.5.1.3 Level of Education and Vulnerability Status**

Livelihood options available to women have been argued to increase by investment in educations well as by the skills acquire. Caldwell (1967), argues that education help open up new horizons for women and is also thought to have a positive effect on women's participation in formal employment. Also, Kumekpor (1974), argues that once a woman has had some formal education she does not become satisfy with her traditional roles only, she feels she has to justify the investment in her by putting what she has learnt into practice. Thus the level of education attained by respondents has an important bearing on the quality of household human capital due to its ability to open up new horizons for women in labour market.

In line with these arguments, educational level of respondents are classified as either attained some form of formal education or no formal education to enable Chi-square test to be conducted, since the division into basic level, secondary level, tertiary level and no formal education produced significantly lesser counts per cell, with some of the cells having less than five expected counts.

The analysis reveals a significant relationship between education and ability to reduce vulnerability at 5% level of significant. Those who attained some form of education tend to have higher tendency of reducing their vulnerability as compare with those without any form of formal education. Thus those with some form of formal education are most

likely to have enhanced their livelihood assets over the past five years than those with no form of formal education. For instance, about 70.7% of the women borrowers who attained some form of formal education have been able to improved on their assets holdings over the past five years and as such regarded as having high prospect of reducing their vulnerability to external stresses and shocks, whereas 28.4% of those with no formal education have been able to enhanced their asset holdings hence belong to the same category of high prospect of reducing vulnerability as shown in Table 4.5.2

**Table 4.5.2: Cross Tabulation of vulnerability status and educational status**

Prospects of Reducing Vulnerability		Level of Formal Education			Total
		Attained of Formal Education	Some level	No Formal Education	
High Prospects of Reducing Vulnerability	Frequency	29	31	60	
	% within Column	70.7%	28.4%	40.0%	
Low prospects of Reducing Vulnerability	Frequency	12	78	90	
	% within Column	29.3%	71.6%	60.0%	
Total	Frequency	41	109	150	
	% within Column	100.0%	100.0%	100.0%	

Source: Field Survey, 2009

$\chi^2 = 22.203$  df= 1 P<0.05 Significant

#### 4.5.1.4 Main Livelihood Venture and prospects of Reducing Vulnerability

Respondents' main livelihood ventures as either Agriculture, Commence/petty trading, Agro-processing or Service are found to be significantly related to respondents' prospect of reducing vulnerability facing their livelihood at 5% level of significant as illustrated in the cross tabulation depicting Chi-square analysis conducted to ascertain this relationship as shown in table 4.6.3. Respondents who engaged in services such as teaching, hair

dressing, and tailoring and food vending are most likely to have high prospects of reducing vulnerabilities facing their livelihood ventures through enhancing their livelihood assets' as compare to respondents who engaged in agriculture as their main livelihood venture.

For those who engaged in agriculture as their main livelihood venture, as high as 72% of them could not enhanced their livelihood assets over the past five years period and hence are classified as facing a high risk of vulnerability to external seasonality and shocks. This could be attributed to the erratic rainfall pattern in the study area as it is the case of the guinea savannah ecological zone coupled with gender insensitive land tenure system.

With regard to respondents who engaged in services such as food vending, hair dressing, dress making among others as their main livelihood venture, about 76.5% of them have been able to enhanced their asset holdings over the past five years as shown in Table 4.5.3a, while only 25.9% and 48.1% of respondents who engaged in agro-processing and petty trading respectively have also been able to enhance their asset holdings over the same period.

Also respondents interviewed for this study, do not engaged in one livelihood venture but involved in perusing diverse livelihood ventures to obtained their livelihood needs and aspirations. Analysis of Variance of number of livelihood ventures respondents who have enhanced their asset holdings over the past five years in one hand compare with those who did not enhanced their assets holdings over the same period in the other hand,

reveals a significant different in the number of livelihood ventures engaged in by the two groups at 5% level of significant as shown in Table 4.5.3b. Women who have enhanced their livelihood assets holdings over the five year period (high prospects of reducing vulnerability) are most likely to be engaged in more livelihood ventures than those who were not able to improve on their assets holdings over the same period.

From this study, women who engage in diverse livelihood ventures have a better chance of reducing their vulnerability to external trends of seasonality, stresses and shock. Apparently, they have diverse sources of income and opportunities of investing their borrowed monies on different economic ventures. They are also able to engage themselves all year around, thus avoiding seasonal redundancy with it consequence of eroding savings since they have to depend on their past savings during the off-season.

**Table 4.5.3 a: Cross Tabulation of Vulnerability Status and Main Livelihood Venture**

Prospects of Reducing Vulnerability		Category of Main livelihood				Total
		Agriculture	petty trading	agro-processing	service	
High Prospects of Reducing vulnerability	Frequency	7	26	14	13	60
	% within Column	28.0%	48.1%	25.9%	76.5%	40.0 %
Low prospects of reducing vulnerability	Frequency	18	28	40	4	90
	% within Column	72.0%	51.9%	74.1%	23.5%	60.0 %
Total	Frequency	25	54	54	17	150
	% within Column	100.0%	100.0%	100.0%	100.0%	100.0 %

Source: Field Survey, 2009

$\chi^2=16.782$ , df= 3 P< 0.05 Significant

**Table 4.5.3b: ANOVA of number of livelihood ventures and Status of Vulnerability**

Source of Variation	Sum of Squares	Df	Mean Square	F
Between Groups	8.614405	1	8.614405	21.37035
Within Groups	59.65893	148	0.403101	
Total	36.000	149		

Source: Field Survey, 2009

p < 0.05 Significant

#### **4.5.1.5 Intra-household Characteristics and Vulnerability Status**

Intra-household characteristics such as household resources allocation and control, reproductive roles of women within their households, among others are expected to have influence on the livelihood options available to women borrowers and their ability to enhance their assets holdings.

Although child care responsibilities take a toll on respondents' energy and time. A Chi-square test conducted to determine any relation between reproductive status of respondents and their ability to enhance their livelihood assets against their vulnerability context, found no significant relationship. In other words, respondents who have child care responsibilities are equally likely to reduce vulnerability facing their livelihood ventures as those free from child care responsibilities.

Also, respondents' status within their households as either head of their households or ordinal members is examined and cross tabulated against the prospects of reducing vulnerability. Results of the analysis discover that, about 89.3% of respondents are

ordinary members of their households with just about 9.7% heading their households. Results of Chi-square test found no significant difference between respondents who head their households and those who are just ordinary members of their households in terms of their prospects of reducing vulnerability context within which they operate their livelihood ventures at 5% level of significant. This failed to confirm conclusions made by Cahn (2002) and Verma, (2001) that Culture (including gender) and household dynamics can cause risk and vulnerability as a result of differential access to resources like land base on gender as evident in some communities

In addition, the extent to which women beneficiaries of microcredit interviewed exert control over their financial resources most particularly their borrowed funds is scored on a Likert type scale as “full control”, “partial control” or “no control at all” and cross tabulated with their prospect of reducing vulnerability facing their livelihoods. The results reveal significant difference between respondents who are classified as having high prospect of reducing vulnerability and those classified as low prospect of reducing vulnerability in terms of their level of control over their financial resources within their household.

As shown in Table 4.5.4, respondents who exert full control over their financial resources are more likely to enhance their assets holdings thereby belonging to the category of high prospect of reducing vulnerability than those with lesser control over their financial resources.

Also women control over their labour and time is very critical in assessing their livelihood sustainability. Rural women labour and time is usual use not only for their own livelihood activities but also in working on their husbands' farms, communal work within their communities and domestic activities geared towards producing commodities for common consumption. This was confirmed in the focus groups discussions, where participants admitted that their husbands have greater say as to what and when to use their labour and time. They added that their husbands work, especially farm activities supersede all other activities including time and labour allocated for their livelihood ventures. One women said *“when you are preparing to go to market to sell your wares and your husband say you should go to farm to help him plant his crops, what can you do, you have to abandon the market or else...”*

To assess respondents level of control over their labour and time within their households as either full control, partial control or no control at all, a Chi-square analysis was undertaken to determine if respondents who have high prospect of reducing vulnerability and those with low prospect of reducing vulnerability differ in terms of their level of control over their labour and time. The analysis reveals significant difference at 5% level of significant in the extent of control exerted on labour and time between respondents who have high prospect of reducing their vulnerability and those with low prospect of reducing their vulnerability.

Respondents with full control over their labour and time are most likely to have high prospect of reducing their vulnerability more than those who have partial control over

their labour. For instance 52.1% of women who have full control over their labour and time were able to improve on their assets holdings over the past five years and as such classified as having high prospect of reducing vulnerabilities facing their livelihoods. Compare with 19.6% of those who have partial control over their labour and time who have been able to enhance their livelihood assets over the same period.

In terms of husbands helping their wives in performing domestic chores such as cooking, washing, fetching water among others, the analysis reveals lesser involvement of husbands in domestic task among spouses of women beneficiaries of microcredit in the study area.

Results of the analysis shows that 58.9% of married women interviewed said their husbands do not assist them in carrying out domestic chores. However, Chi-square test conducted found a significant relationship between prospects of reducing vulnerability and husband involvement in carrying out domestic chores at 5% level of significant. Respondents whose husbands assist them in performing domestic work tend to have high prospects of reducing vulnerability facing their livelihood strategies than those whose husbands do not assist them in carrying out domestic chores.



**Table 4.5.4 Cross tabulation of vulnerability Status and control over financial resources**

Prospects of Reducing vulnerability		Extent of control over Financial resources		Total
		Full control	Partial control	
High Prospects of reducing vulnerability	Frequency	49	11	60
	% within Column	52.1%	19.6%	40.0%
Low prospects of reducing vulnerability	Frequency	45	45	90
	% within Column	47.9%	80.4%	60.0%
Total	Frequency	94	56	150
	% within Column	100.0%	100.0%	100.0%

Source: Field Survey, 2009

$\chi^2=15.430$  P<0.05 Significant

#### **4. 5.6: Discriminant Analysis of Socio-economic Characteristics Influencing Vulnerability**

Discriminant analysis was conducted to determine socio-economic characteristics of women borrowers that significantly classified them into high prospect of livelihood sustainability and low prospect of livelihood sustainability. Socioeconomic characteristics of women borrowers that were a prior selected to constitute the independent variables in the discriminant function for the analysis are; age of respondents, educational level of respondents, marital status and respondents' household size. Others include; type of main livelihood venture, number of livelihood ventures operated by respondent, reproductive status of respondent, respondents control over their labour, time and borrowed fund among others.

From the discriminant analysis, seven variables are found to be significant in discriminating between the two groups (high prospect of reducing vulnerability and low

prospect of reducing vulnerability) as shown in Table 4.5.5. With Wilks' Lambda statistics of 0.339 ( $\chi^2 = 109.710$ ;  $df = 7$   $p < 0.05$ ) indicates that the discriminating power not accounted for by the discriminant function is insignificant, while 85.7% of the variables correctly classified between the two groups of high and low prospect of reducing vulnerability.

Also, conical correlation of 0.815 yielding R-square (co-efficient of determination) of 0.664 implying that 66.4% of the variation among the dichotomy dependent variables (high or low prospect of reducing vulnerability) is jointly explained by the variation of independent variables in the discriminant function. The variables found to be significant in discriminating between the two groups as follows;

**Wealth Rank:** personal wealth rank position in relation with other members in respondents' communities as ultra poor, poor, better-off or rich is significant in discriminating between the category of high prospect of reducing vulnerability and low prospect of reducing vulnerability. Personal wealth rank of respondents contributes 29% of the total discriminant power of the independent variables in the discriminant function.

Those who were ranked rich or better off are most likely to have high prospect of reducing the vulnerability facing their livelihood strategies as compare with ultra poor or poor respondents.

**Trend of Financial Resources:** the trend of respondents' financial capital over the past five years as either increasing, decreasing or remain stagnant is significant in

discriminating between the two groups of low or high prospect of reducing vulnerability. It contributes 23.1% of the total discriminative effect of the independent variables in the discriminant function. Respondents who have experienced increasing trend of accumulation of financial capital over the past five years are most likely to have high prospect of reducing vulnerability than those who suffered decreasing or stagnation trend of accumulation of financial capital. For example, about 69.5% of respondents who enjoyed increasing trend of accumulation of financial capital belong to the category of high prospect of reducing vulnerability as compared to only 3.2% of those who suffered decreasing trend of financial capital. .

**Control over Financial Capital:** the extent of control respondents exert on their financial capital as either full control, partial control or no control at all is found to be significant in discriminating between high and low prospect of reducing vulnerability to external trend of seasonality, shock and stress facing respondents' livelihood strategies. It contributes 14.3% of the total discriminant power of the independent variables in the discriminant function. Respondents with full control over their financial capital are found more likely to be ranked high prospect of reducing vulnerability than those with partial control over their financial capital. For example, about 66.1% of those who exert full control on their financial capital are ranked high prospect of reducing vulnerability as compare to 44.1% of those who exert partial control over their financial resources.

**Household Status of Respondents:** the status of respondents within their household as either heads of their household or members of their households is found to be significant

in discriminating between high or low prospect of reducing vulnerability. Household status of respondents contributes only 3.7% of the total discriminating effect of the independent variables in the discriminant function. Respondents who are heads of their households are more likely to be ranked high prospect of reducing vulnerability than those who are just ordinary members of their households.

**Level of participation in group:** level of respondents' participation as either very active or less active is found to be significant in discriminating between high or low prospect of reducing vulnerability, contributing 18.2% to the total discriminating effect of the independent variables in the discriminant function. Respondents who are very active in their groups are more likely to be ranked high in prospect of reducing vulnerability as compare to those are less active in their groups. For example, about 72% of respondents who are very active participant in their groups' activities ranked high in their prospects of reducing vulnerability as compare to 22% of those who are less active in the activities of their groups.

This perhaps is the case, because participating actively in group activities such as meetings, Susu collection and labour sharing make it possible for one to harness group social capital in form of labour input and common equipments, tools and commodities to help improve on one's livelihood capital holdings.

**Spouse Assistant in domestic Activities:** spouse assistance in domestic chores is found to be significant in discriminating between high and low prospect of reducing

vulnerability. Those who said their husbands assist them in domestic activities such as cooking, sweeping, fetching of water and fire wood among others are more likely to have high prospect of reducing vulnerability than those who said they are not assisted by their husbands. However, less than half of the respondents (41.1%) said their husband assist them in their domestic chores. Also 60.1% of those who said they are assisted by their spouse are ranked high in terms of prospect of reducing vulnerability as compare to 40.9% those who are not being assisted by their spouse.

**Number of Livelihood ventures:** the number of livelihood ventures embarked on by respondents as independent variable in the discriminant function is found to be significant in discriminating between high and low prospect of reducing vulnerability. The number of livelihood ventures that respondent engaged in contributes 10.2% of the total discriminative effect of the independent variables in the discriminant function. Respondents with many livelihood ventures are more likely to be ranked as high in terms of prospect of reducing vulnerability than those with fewer livelihood ventures.

**Table 4.5.5 Coefficients of Socio-economic Variables influencing Vulnerability**

Discriminating Variables	Standardized coefficient	Percent Contribution	Unstandardized coefficient
Wealth Rank	0.592	29.0	0.662
Trend of Financial	-0.472	23.1	0.29
Control over Finance	-0.293	14.3	- 0.937
Household Status	0.076	3.7	1.446
Level of participation group	0.372	18.2	0.692
Spouse Assistant	0.026	1.3	0.026
No. of Livelihood ventures	0.213	10.2	0.213
			-4.586 (constant)

Percent of Correct Classification = 85.7%

Conical Correlation = 0.815

Wilks' Lambda = 0.339 ( $\chi^2 = 109.710$ ;  $df = 7$   $p < 0.05$ )

Source: Field Survey, 2009

#### **4.5.2 Socio-Economic Characteristics and Prospects of Livelihood Sustainability**

People perception about the sustainability of their livelihood capital base from which they construct their livelihood strategy is very crucial in determine how sustainable their livelihood strategies are. This is so because if people perceived any of their livelihood capital not to be sustainable it will influence their aspiration and hope about sustainability of their entire livelihood sustainability. According to IFAD SL approach, inclusion of the

aspirations of the poor, and the opportunities that they are able to pursue, encourages users of the Sustainable Livelihood framework to focus on the hopes of the poor themselves and their capacity to take advantage of opportunities rather than making assumptions about what options and opportunities may exist within a given livelihoods system (Hamilton-peach, et al, 2007).

In line with this, respondents' perception of the prospects of sustainability of their various livelihood capitals are score on a scale of 1 to 5 (not sustainable at all to very highly sustainable) and based on average score of the five livelihood capital, respondents are categorized into two groups as high prospects of livelihood sustainability and low prospects of livelihood sustainability.

Women borrowers' socio-economic characteristics such as age, educational background among other are examine against these two groups (high or low prospect of livelihood sustainability) to ascertain the influence of respondents' socio-economic characteristic on livelihood sustainability.

#### **4.5.2.1 Age of Respondents and Livelihood Sustainability.**

Sustainable status of respondents livelihood is assess as dependent variable against age as an independent variable in order to assess the relationship between respondents' age and prospect of livelihood sustainability. A bivariate analysis in a contingency table is use to assess this relationship and with Chi-Square test conducted at 5% level of significant to test the null hypothesis that "there is no relationship between respondent's age and

prospects of livelihood sustainability”. As shown in Table 4.5.6, Chi-Square value of 13.85 indicates a rejection of the null hypothesis. This implies that there is significant relationship between age of respondents and prospect of their livelihood sustainability.

Older women of the ages of 46-60years and above 60years tend to be more likely to perceive their livelihood sustainability as low than young women of 30-45years and below 30years. For instance, in Table 4.5.6, about 70.4% and 61.1% of women of the ages of 46-60years and 60years respectively, perceived their livelihood sustainability as low, whereas only 47.3% and 14.3% of women of the ages of 30-45years and below 30years respectively perceived their livelihood sustainability to be low.

**Table 4.5.6: Cross Tabulation of Age of Respondents and Prospect of Livelihood Sustainability**

Prospect of Livelihood Sustainability		Age of respondents				Total
		Below 30years	30-45years	46-60years	Above 60years	
Low prospect of livelihood sustainability	Frequency	2	26	33	19	80
	% within Column	14.3%	47.3%	61.1%	70.4%	53.3%
High prospects of livelihood sustainability	Frequency	12	29	21	8	70
	% within Column	85.7%	52.7%	38.9%	29.6%	46.7%
Total	Frequency	14	55	54	27	150
	% within Column	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Field Survey, 2009

$\chi^2 = 13.85, P < 0.05$  and  $df = 3$  Significant

#### 4.5.2.2 Level of Education and Livelihood Sustainability

Respondents with difference level of Education are found to differ significantly in their prospect of livelihood sustainability at 5% level of significant. As shown in Table 4.5.7,



women beneficiaries of microcredit interviewed who has no formal educational background, are less likely to perceive their livelihood venture as high than those with some level of formal education. For example, about 77.3% of respondents who has completed secondary/tertiary level of formal education perceived the prospect of their livelihood sustainability to be high, whereas only 33.3% of respondents without any form of formal education also perceived their livelihood sustainability to be high.

**Table: 4.5.7 Cross tabulation of Level of Education and prospects of Livelihood Sustainability**

Prospect of Livelihood Sustainability		Level of education			Total
		Basic	Secondary/ Tertiary	No formal education	
Low prospect of livelihood sustainability	Frequency	3	5	72	80
	% within Column	15.0%	22.7%	66.7%	53.3%
High prospects of livelihood sustainability	Frequency	17	17	36	70
	% within Column	85.0%	77.3%	33.3%	46.7%
Total	Frequency	20	22	108	150
	% within Column	100.0%	100.0%	100.0%	100.0%

Source: Field Survey, 2009  $\chi^2 = 27.85$ ,  $P < 0.05$  and  $df = 2$  Significant

#### 4.5.2.3 Marital Status and Prospects of Livelihood Sustainability

To assess the relationship between marital status of respondents and the prospects of sustainability of their livelihood, a Chi-square test was conducted in a cross tabulation of marital status and prospects of livelihood sustainability as shown in Table 4.6.14. The results of the test suggest statistical significant relationship between marital status of respondents and the prospects of their livelihood sustainability at 5% level of significant. Among the married women interviewed, about 41.6% of them perceived the prospects of

sustainability of their livelihood to be high as against 81.9% of single women who perceived the prospects of their livelihood to be high. Thus at 5% level of significant, single women interviewed are more likely than married women to be in the category of high prospects of livelihood sustainability.

**Table 4.5.8 Cross tabulation of marital status and Prospects of Livelihood Sustainability**

prospect of livelihood sustainability		Marital status				Total
		Married	Single	Divorced	widowed	
Low prospect of livelihood sustainability	Frequency	59	2	6	13	80
	% within Column	58.4%	18.2%	30.0%	72.2%	53.3%
High prospects of livelihood sustainability	Frequency	42	9	14	5	70
	% within Column	41.6%	81.8%	70.0%	27.8%	46.7%
Total	Frequency	101	11	20	18	150
	% within Column	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Field Survey, 2009  $\chi^2 = 13.465$ ,  $P < 0.05$  and  $df = 3$  Significant

#### 4.5.2.4 Personal Wealth Rank and Livelihood Sustainability

Respondents' individual wealth rank in relation with other members in their communities is examined and assessed against the prospects of sustainability status of their livelihood venture to find out if there is any association between personal wealth rank and sustainable status of their livelihood. From the analysis, about 72.9% of respondents who ranked themselves as better off in relation to other members of their community, belong to the category of high prospect of livelihood sustainability, while all respondents who ranked themselves as ultra poor perceived the prospect of their livelihood sustainability to low and all respondent ranked as rich belong to the category of high prospect of livelihood sustainability.

Also annual income of respondents was also found to be associated with sustainable status of livelihood venture. Persons with higher income are found to be more likely to be operating highly sustainable livelihood venture than those with low annual incomes.

In addition, trend of accumulation of respondents' financial capital over the past five years is score as either increasing, decreasing or remain stagnant and assessed against the prospects of their livelihood sustainability to determine if there is any significant relationship between trend of financial capital of respondents and the prospect of their livelihood sustainability. A Chi-Square test of relationship in bivariate analytical techniques is used to test the significant of the relationship at 5% level of significance.

Results of the test as shown in Table 4.6.9 suggest a significant relationship between trend of financial capital and sustainable status at 5% level of significant. Respondents who enjoyed increasing trend of their financial capital over the past five years tend to be more likely to perceived prospect of sustainability of their livelihood strategies to be high than those with decreasing trend and those who have not seen any change.

For instance, about 69.5% of women who have experience increasing trend of their financial capital belong to the category of high prospect of livelihood sustainability, whereas none of those who suffered decreasing trend of financial resources belong to the category of high prospect of livelihood sustainability and only 16.7% of those whose

financial resource have remain unchanged over the past five years belong the same category of high prospect of livelihood sustainability.

**Table 4.5.9: Cross tabulation of trend of financial capital and prospects of livelihood sustainability**

Prospect of Livelihood Sustainability		Trend of Financial Capital			Total
		Increasing	Decreasing	Stagnant	
less prospect of livelihood sustainability	Frequency	29	31	20	80
	% within Column	30.5%	100.0%	83.3%	53.3%
High prospects of livelihood sustainability	Frequency	66	0	4	70
	% within Column	69.5%	.0%	16.7%	46.7%
Total	Frequency	95	31	24	150
	% within Column	100.0%	100.0%	100.0%	100.0%

Source: Field Survey, 2009

$\chi^2 = 55.65$ ,  $P < 0.05$   $df = 2$  Significant

#### 4.5.2.6 Number of Dependent and Prospect of Livelihood Sustainability

Households are usually organized around needs which have social, psychological, cultural economic and historical dimensions. These socially constructed needs include food, shelter clothes, companionship, recreation among others (Gardiner, 1997). Rakodi (2002) has argued that the household size or composition is a determinant factor of the capacities and strategies available to it. Gonzalez et al. (2001), has also stated that the size of a household and the availability of earners are very important element of vulnerability. Poverty is thus more likely in large household size with proportionally small income earners.

In line with these findings, Analysis of Variance (ANOVA) was conducted to determine whether the house size of respondents whose livelihood strategies were categorised as high prospect of livelihood sustainability is significantly differ from those whose livelihood was categorised as low prospect of sustainability. The ANOVA conducted reveals a significant difference in the size of dependents between the two groups at 5% level of significant.

As can be seen in Table 4.5.10, there is more variability in the size of dependents between respondents with high and low prospect of livelihood sustainability as compare to variability within each group. Those with high prospects of livelihood sustainability tend to have more dependents than those with low prospects of livelihood sustainability partly because of high reliance on family labour by women beneficiaries of microcredit in the study area for the labour demand of their livelihood ventures.

**Table 4.5.10 ANOVA table of size of dependents and prospects of Sustainable Livelihood**

Source of Variation	Sum of Squares	df	Mean Square	F
Between Groups	5.673	1	5.673	26.52
Within Groups	31.660	148	0.2139	
Total	37.333	149		

$F_{\text{tabulated}}$  at 5% level of significant (1,148) is 3.91  
Source: Field Survey, 2009

Significant

#### **4.5.2.7 Main Livelihood Venture and Prospect of Livelihood Sustainability**

The main livelihood venture that respondents embarked on is found to be significantly related to the prospect of their livelihood sustainability at 5% level of significant as

illustrated in the Table 4.6.111a. From the table, about 70.6% of respondents who engaged in service as their main livelihood venture perceived their livelihood sustainability to be high as compare to 40% of respondents who engaged in agriculture as their main livelihood. Hence, those who engaged in service delivery and petty trading are found to be more likely to perceive their prospect of livelihood sustainability to be high as compare to those operating agriculture and agro-processing as their main livelihood ventures.

In order to diversify their source of income and in response to the seasonality of rural enterprises, both on-farm and off-farm, women borrowers of microcredit interviewed engaged in more than one livelihood venture. To analyse whether respondents with high prospect of livelihood sustainability and those with low prospect of livelihood sustainability significantly differ in terms of the number of livelihood ventures they engaged in, Analysis of Variance was conducted.

Result of the analysis established significant difference in the number of livelihood ventures engaged in by respondents with high prospect of livelihood sustainability and those with low prospect of their livelihood sustainability at 5% level of significant. Respondents with many livelihood ventures are more likely to perceive the sustainability of their livelihood to be high than those with less number of livelihood ventures.

**Table 4.5.11a: Cross tabulation of Main Livelihood Venture and Prospect of Livelihood Sustainability**

Prospect of Livelihood Sustainability		Category of livelihood				Total
		Agriculture	petty trading	agro-processing	service	
Low prospect of livelihood sustainability	Frequency	15	21	39	5	80
	% within Column	60.0%	38.9%	72.2%	29.4%	53.3%
High prospects of livelihood sustainability	Frequency	10	33	15	12	70
	% within Column	40.0%	61.1%	27.8%	70.6%	46.7%
Total	Frequency	25	54	54	17	150
	% within Column	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Field Survey, 2009

$\chi^2=11.31$ , P <0.05 df= 3 Significant

**Table 4.5.11b: ANOVA table of Number of livelihood ventures and prospect of Livelihood Sustainability**

Source of Variation	Sum of Squares	df	Mean Square	F
Between Groups	5.693	1	5.693	26.127
Within Groups	31.641	148	0.2179	
Total	37.333	149		

F<sub>tabulated</sub> at 5% level of significant (1,148) is 3.91 Significant

Source: Field Survey, 2009

#### **4.4.3 Socioeconomic Factors Discriminant between High and Low Prospect of Livelihood Sustainability**

To determine combined and interactive influence of respondents' socioeconomic characteristics as independent variables on their livelihood sustainability, a discriminant analysis as example of multi-variate analytical technique was applied. This was done to investigate which of the socioeconomic characteristics significantly classified respondents into high and low prospect of livelihood sustainability.

Variables such as age, educational background, income, personal wealth rank, trend of financial resource, size of dependents, number of livelihood ventures, among others were treated as independent variables and included in the discriminant function to investigate their influence in classifying respondents into the two groups of high and low prospect of livelihood sustainability.

Six variables namely age of respondents, income level, personal wealth rank, trend of financial capital, size of dependents and number of livelihood ventures are found to be significant in discriminating between High and Low prospect of livelihood sustainability.

The analysis yielded Wilks' Lambda statistics of 0.273 compare with Chi-square of 132.35 indicates that the discriminating power not accounted for by the discriminant function is insignificant at 5% level of significant, with 90.9% of the variables correctly classified. Also a conical correlation of 0.853 yielding co-efficient of determination ( $R^2$ ) of 0.728, suggest that 72.8% of the variation among the dichotomy dependent variable of



High and Low prospect of livelihood sustainability is jointly explained by the variation of the independent variables in the discriminant function.

The variables which are found to be significant in discriminating between High and Low prospect of livelihood sustainability are;

**Age:** Respondents' age is found to be significant in discriminating between High and Low prospect of livelihood sustainability, contributing 11.9% of the total discriminating power of the independent variables in the discriminant function. Relatively young women beneficiaries of microcredit interviewed are more likely to belong to the category of high prospect of livelihood sustainability than older women. For example, about 85.7% of respondents below the age of 30 years belong to the category of high prospect of livelihood sustainability as against 29.6% of those of the age of above 60 years.

**Income Level of Respondents:** annual income level of respondents measured as either below the national minimum wage or above the national minimum wage of GH ₵2.25 daily (Minimum National Wage, 2008; Ghana Budget for 2008), is found to be significant in discriminating between High prospect or Low prospect of livelihood sustainability, contributing 24.6% to the total discriminant effect of the independent variables in the discriminant function.

Respondents whose annual income level were above the national minimum wage are found to be more likely to perceived their livelihood sustainability as high than those with

annual income of below the minimum national wage. For example, about 55.2% of respondents whose annual income are above the national minimum wage perceived the sustainability prospect of their livelihood strategies to be high as against 11.1% of those whose annual income fell below the national minimum wage.

**Personal Wealth Rank:** Also personal wealth rank position of respondents is found to be significant in discriminating between High and Low prospect of livelihood sustainability, contributing about 31.8% to the total discriminating effect of the independent variables in the discriminant function. Respondents whose wealth rank position is either better-off or rich are more likely to perceive their livelihood sustainability as high than those ranked as ultra poor or poor. For example, none of the ultra poor respondents and only 16.7% of respondents ranked as poor perceived the prospect of their livelihood sustainability to be high as against 72.9% of better-off respondents and all respondents who ranked themselves as rich perceived the prospect of their livelihood sustainability to be high.

**Trend of Financial Capital:** trend of financial capital of respondents as increasing, decreasing or stagnant is found to be significant in discriminating between respondents' perception of the sustainability of their livelihood as either High or Low and contribute 17.5% of the combined discriminative power of the independent variables in the discriminant function. Respondents who have experienced increasing trend of their financial capital over the past five years are more likely to perceived the prospect of sustainability of their livelihood strategies to be high than those who have suffered

decreasing trend and stagnation of their financial capital over the same period. For instance, about 69.4% of respondents with increasing trend of financial capital over the past five years, perceived the prospect of sustainability of their livelihood strategies to be high as against none of those who suffered decreasing trend and only 16.7% of those whose financial capital remained stagnant over the period.

**Size of Dependents:** the number of dependents of respondents is found to be significant in discriminating between High and Low prospect of livelihood sustainability, contributing only 3.1% of the combined discriminative effect of the independent variables in the discriminant function. Respondent with many dependents is more likely to perceived the prospect of sustainability of her livelihood strategy to be high than those with fewer dependents. The heavy reliance on family labour for the labour requirement of respondent livelihood strategies which are mostly labour intensive can be accounted for this observation.

**Number of Livelihood ventures:** the number of livelihood ventures run by respondents is found to be significant in discriminating between High and Low prospects of livelihood sustainability contributing 11.1% of the combined discriminative effect of the independent variables in the discriminant function. A respondent with fewer number of livelihood venture is more likely to perceive the prospect of sustainability of her livelihood strategy to be low than those with many livelihood ventures.

**Table: 4.5.12 Discriminant Function of Socioeconomic Factors Influencing Livelihood Sustainability**

Discriminating Variables	Standardized co-effacements	Percentage Contribution	Unstandardized coefficient
Age	0.402	11.9	0.186
Income	-0.828	24.6	-0.502
Wealth Rank	-1.071	31.8	-0.470
Trend of Financial	0.591	17.5	0.353
Size of Dependents	0.104	3.1	0.371
No. of Livelihood Ventures	0.373	11.1	0.039
			2.137(Constant)

Percent of Correct Classification = 90.9%

Conical Correlation = 0.853

Wilks' Lambda = 0.273 ( $\chi^2 = 132.347$ ; df = 6 p> 0.05)

Source: Field Survey, 2009

## **4.6 Credit Provision and Livelihood Sustainability**

This section presents findings and discussion of the operations of the three microcredit institutions which clients were interviewed for this study. It explores their mode of disbursements, credit conditions, mode of repayment and schedule and their influence on rural women borrowers' livelihood sustainability. This is to provide information to address objective four of this study as;

*“To analyse the influence of operations of credit providing institutions on the sustainability of livelihood strategies of rural women borrowers in the District”.*

### **4.6.1 Source of Credit**

Respondents covered by this survey are beneficiaries of Non-governmental Organization administered micro-credit, Rural Bank administered microcredit and Loan and Saving Company administered micro-credit. Clients of Simli Pong Microcredit Scheme operated by the Ghanaian Danish Community Project, a non-governmental organization operating in the northern region, were sampled for the NGO administered microcredit beneficiaries, clients of Bonzali Rural Bank also sampled for the rural bank category and Sinapi Aba Loan Trust clients for the Loan and Saving Company category.

#### **4.6.1.2 Simli Pong Microcredit Scheme**

Ghanaian Danish Community Project (GDGP) has been operating in the northern region of Ghana for over 25 years now, implementing programmes of activities in four main sectors of which Simli Pong Microcredit Scheme is one. The scheme was formed in

January 2005 from the GDCP loan project 'Women *and Loans*' which had been disbursing credit since 1996. The credit scheme currently operates in three districts in the northern region, namely Tolon/Kumbungu District, Savulgu/Nanton District and the Tamale Metropolis (personal interview with Scheme Manager).

**Mode of Disbursement;** But for dry season farmers group in Buntanga which include men, the most defining characteristics of the credit programme is loaning only to women's groups of between 15-30 individuals. Loans are predominantly used for women's traditional activities such as shea butter processing, ground nut processing, rice processing and petty trading, based on the rationale that borrowers already have some experience with these tasks.

Communities after animation and group formation send in applications for a group loan and monies are disbursed after approval by Simli Pong management. A prospective group application has to include all members' names, a description of the groups' objectives, and any qualifications gained by members. To meet the compulsory saving condition demanded by the credit management, would-be members pay in small amounts weekly or monthly to a group account, perhaps between 3-4 months, in order to build up collateral and prove their worth to Simli Pong. This also acts as a self-selection process in the community, as not all would-be members can fulfil this demand.

The group also has to appoint a leader, (the *Magazia*), a cashier and a secretary, who form the groups' executive. Each benefiting community has a loan facilitator, who acts as mediator between a small number of groups, the respective loan officer and management.

The loan officer's main tasks involve monthly visits to groups to collect repayments and to act as the first link in the process of new group formation. A loan is then approved to a group disbursing among members with each member guaranteeing for each other loan.

Repayment is done on monthly instalment bases over a period of 12 calendar months. The first three months is a repayment free grace period, after which the remaining 9 months demand regular monthly payments. As repayment commences, groups are monitored monthly and loan renewal is conditioned by all members keeping up individual and regular instalments and finishing at the agreed time. Besides this repayment, members are also encouraged to save between 1-2 Ghana cedis a month to a saving account monitored by Simli Pong.

**Source of Funding and Collaborating Organizations:** The scheme depends largely on donor support mainly on aid from the Danish International Development Agency (Danida) which provides funding for the scheme. The scheme collaborate also with other organizations such as GDCP the mother organization, commercial and rural banks in the area, Community Livelihood Improvement Project (CLIP) a NGO based in Tamale, Ghana Danish Association among others in executing its programmes.

**Financial Self-sustainability:** The scheme is currently moving vigorously towards financial self-sustainability due to dwelling donor support mainly from Danish International Development Agency (Danida), the main donor organization to the scheme. In a consultancy reporting in June, 2004, the overall objective of programme financial self-sustainability was emphasized with the aim of achieving; '...100% sustainability within 2 years, to expand lending portfolio by 70% in the operational year and 10% in subsequent years.' (Consultancy Report, 2004 cited in Stacey, 2006).

#### **4.6.1.3 Bonzali Rural Bank Microcredit and Small Loan Scheme**

The Bonzali Rural Bank operates in the Tolon/Kumbungu District, Tamale Metropolis, Yendi Municipal and the Gushegu District, all in the northern region. The Bank which is the first rural bank in the Northern region was established in May, 1990, to offer financial services to the rural dwellers who constitute majority of the unbanked population in the country due to lack of access to banks and other financial institutions. The Bank has been advancing microcredit to women and women groups in Nyankpala, Kumbungu, Tamale Metropolis and Yendi since 1997.

Currently, 18 loan officers consisting of 3 female and 15 males operate the microcredit scheme serving a total client base of 12,298 with average loan officer client ratio of 1:683. Thus one loan officer served an average of 683 clients. Majority of beneficiaries of the bank's microcredit are from Tamale, where 81.4% of the clients are, with only 0.8% coming from Nyankpala zone.



Yendi has the highest loan officer client ratio of 1:859, thus one loan officer saving 859 clients as compare to Nyankpala, where one loan officer serve 93 clients as shown in Table 4.6.1.

**Table 4.6.1: Frequency Distribution of Loan Officers and Clients**

Benefiting Community	Number of Loan Officers	Number of Clients	% of clients per community	Loan Officer Client Ratio
Nyankpala/Gbulahigu	1	93	0.8	1:93
Kumbungu/Gbulung/Tolon	1	573	4.7	1:573
Yendi	2	1,718	14.0	1:859
Tamale	14	10,007	81.4	1:715
Total	18	12298	100	1:683

Source: Loan Records Bonzali Rural Bank, 2009

**Mode of Disbursement:** The microcredit unit of the Bonzali Rural Bank offered microcredit to small scale farmers, both male and female, women traders and agro-processors and all other persons engaged in income generating activities. Prospective beneficiaries must be client of the bank operating active account with the bank or a member of identified and trained group operating group account with the bank.

Applications for loan are submitted by individual or group to the bank through the loan officers to the manager of the microcredit unit where applications are vetted and processed for disbursement. For the group applicants, prospect group application has to include all members' names, a description of the groups' objectives, and any qualifications gained by members.

To meet the compulsory saving condition demanded by the credit management, would-be members pay in small amounts to the account to qualify for loan.

The group also has to appoint a leader, (the *Magazia*), a treasurer and a secretary, who form the groups' executive. Loans approved for a group and disburse among members of the group with each member literally serving as guarantor for other members, since group solidarity are used as a substitute for collateral.

Repayment is done by two weeks instalment for a period of six months within which both principal and interest must be fully paid for. As repayment commences, groups are monitored and loan renewal is conditioned by all members keeping up individual and regular instalments and finishing at the agreed time. If a member of a group fails to repay, other members will have to make up the difference by using either their savings or contribute to off-set the default before they are qualify for renewal of their loan.

**Source of Funding and Collaborating Organizations:** The microcredit unit of the bank is founded by interest from loans and donor support in the form of funds, technical support, training and equipments. One of such organization is SPEED-GHANA, which has been collaborating with the bank in the form of funds and technical support in the form of staff training and equipments. Also, other organizations such as MASLOC and MUWAC provide funds to the bank for onward disbursement to a defined client as credit on their behalves, where the bank only served as a disbursing institution and funding and selection of beneficiaries done by the sponsoring organization.

**Provision of Other Services:** Apart from the financial services such as loan and savings, the microcredit unit of the bank does not offer any other services such as Business Development Service as it is the case of Simli pong an NGO financial institution based in Tamale.

**Financial Self-sustainability:** The bank unlike NGO financial organization do not operate subsidized microcredit scheme and as such orient itself on the principle of financial self-sustainability, where interest on loans disbursed are expected to cover operational cost in the short run and total cost in the long run. As such prudent financial management and due diligent in selecting clients of the microcredit scheme to ensure high repayment rate is the hallmark of the bank microcredit and small loan unit.

For that matter, repayment rate has been improving since 2004, increasing from 67% in 2004 to 90% in 2008 as shown in Table 4.5.6.2. However, this is still unacceptable since default rate of more than 5% is not good for the achievement of financial self-sustainability. Also the total volume of credit disbursed has increased by more than three folds from 2004 to 2007.

**Table 4.6.2 Volume of Credit and Repayment Rate from 2004 to 2008**

year	Volume of Credit disbursed(Ghana Cedis)	Interest Rate Charge (%)	Repayment Rate (%)
2004	605,229.00	27	67
2005	1,075,455.00	27	69
2006	1,888,350.00	27	80
2007	2,458,196	27	85
2008		30	90

Source: Field Survey, 2009

#### **4.6.1.4 Sinapi Aba Trust**

Sinapi Aba Trust is registered as a Loan and Saving Company providing micro financial services to economic active poor operating small and medium enterprises. The mission is “to serve as “mustard seed” through which opportunities for enterprise development and income generation are provided to the economically disadvantaged to transform their lives”. And a vision of “ a nation under Almighty God where the strong help the weak and all people have the dignity of providing for themselves, their families, their Church and community”.

Tamale branch of Sinapi Aba Trust which was established in 1997 currently served 28 communities within the Northern Region. The operational areas of the branch in Tamale cut across Tamale Metropolis, Savulgu/Nanton District, Tolon/kumbungu District and Yendi Municipality.

Six loan officers comprising one female and five male operate the credit scheme in all the 28 communities serving a current client based of 4,773 as at the time of this survey, with

a loan officer client ration of 1: 791. In other words, one loan officer serves an average of 791 clients most of which are in group with very few as individual applicants. Majority (76.5%) of the clients who benefited from the microcredit scheme in 2008 are men with only 23.5% being women.

**Table 4.6.3 Frequency Distribution of volume of credit**

year	No. of clients			Volume of credit in Ghana cedis			Interest charged (%)	Repayment rate (%)
	male	Female	Total	Male	Female	Total		
2006	3914	128	4042	-	-	-	-	-
2007	2162	359	2521	583,900	204,840	788,740	35	90
2008	3653	1120	4773	1,464,728	711,352	2,176,680	38	90
Total	9729	1607	11336	2,048,628	916,192	2964820	-	-

Source: Field Survey, 2009

**Mode of Disbursement:** Beneficiaries of the credit scheme of Sinapi Aba Trust consist of both male and female farmers, women traders and agro-processors, local artisans, table top operated among others. Prospective clients either apply as a group or individual after meeting the loan requirement, such as; compulsory saving as individual saving account holder or group operated account, operating exiting enterprise, possessing of collateral mostly for individual applicants and provision of business addresses or residential address for identification. Prospective clients submit their application either as group or individual through the loan officer operating in their area for consideration. Group applicant first have to form their group with membership not more than 20 and not less than 10 members with facilitation from the respective loan officer or organization linking

the group to the Trust. The group account, executives and membership is then assessed to ensure that they meet the requirements for credit before their application is processed.

Sinapi Aba Trust disbursed their loan in cash for both individual applicants and each member within a group. Members in a group take cash based on amount allocated to their groups.

**Provision of Other Services:** Apart from financial intermediation, Sinapi Aba Trust provides Business Development services, sanitation education, disease prevention and control and family planning. For business development services, the organization provides services such as financial management and record keeping, technical training and equipment financing, enterprise development and business expansion and marketing and customer care. Other services provided are HIV/AIDS education, malaria prevention and sanitation and hygiene education. The cost of these services is mostly borne by the organization but collaborating organizations such as District Assemblies in their operational areas. The Rural Enterprise Development Project (REDP) sometimes sponsored such programmes and provide resource personnel to handle the training and educational programmes.

**Financial Self-sustainability:** Financial self-sustainability within the context of micro financial institutional sustainability and continuation of microcredit provision to the less privilege economic active poor is very crucial in the contemporary global move to alleviate poverty through economic empowerment. According to Otero (1999), is not just

about providing capital to the poor to combat poverty on an individual level, it also has a role at an institutional level. It seeks to create institutions that deliver financial services to the poor, who are continuously ignored by the formal banking sector.

For that matter the Trust have implemented measures to ensure efficient operation of the credit scheme through effect mobilization and prudent financial management aimed at achieving higher loan recovery rate and reduction of bad debts ( personal commence by the Manager, Tamale Branch). Some of the measures include client identification through reliable address, effective collaboration with other institutions, staff development and training and encouraging group applications. The Trust is increasingly reducing its dependency on donor funds and shifting towards financial Self-sustainability.

#### **4.6.2 Differences between the three Microcredit Schemes**

The three microcredit institutions differ in the interest rate charged on clients in 2006, 2007 and 2008 at 5% level of significant as shown in Table 4.6.4. Sinapi Aba Trust charged relatively higher interest as compare to the other two institutions, with Simli pong Microcredit scheme maintaining its interest rate since 2006.

Also the three institutions differ in terms of average amount of loan allocated per person in 2006 and 2007 at 5% level of significant with F values of 3.89 and 10.92 respectively. However, there is no significant difference in the average amount of loan per person in 2008 at 5% level of significant ( $F = 2.05$ ) as can be seen in Table 4.6.4.

**Table 4.6.4 Differences between the three Microcredit Schemes**

Attribute	Simli pong	Bonzali Rural Bank	Sinapi Aba Trust	F-value
Amount per client 2006	66.50	86.60	66.60	3.89*
Amount per client 2007	62.20	85.60	86.90	10.92*
Amount per client 2008	115.50	130.80	141.80	2.05
Interest charged 2006	30.01	27.03	35.00	104.7*
Interest charged 2007	30.0	27.02	35.00	42.9*
Interest charged 2008	30.01	30.03	38.00	329.14*

P<0.05

Source: Field Survey, 2009

\* indicate F-values that are significant at 5% level of significant

### **4.6.3 Loan Factors and Livelihood Sustainability**

Loan factors such as disbursement conditions, interest rate, and average amount of loan per person and source of credit are expected to influence the ability of beneficiaries to pursue sustainable livelihood. Here bivariate statistical techniques are applied to determine the influence of these loan factors on respondents' livelihood sustainability.

#### **4.6.3.1 Prospect of Livelihood Sustainability and Source of credit**

The source of credit, either from Simli pong, Bonzali Rural Bank or Sinapi Aba Trust was assessed against respondents' perception about the prospect of their livelihood sustainability and Chi-Square test conducted to find out if there exist any significant difference between respondents' livelihood sustainability and the source of their credit.



As shown in Table 4.6.5, the Chi-Square test conducted indicates no significant difference at 5% level of significant in terms of prospect of livelihood sustainability between respondents benefiting from difference credit source. Respondents who took their loan from Simli pong, Bonzali Rural Bank or Sinapi Aba Trust do not significantly differ from each other in terms of prospect of their livelihood sustainability. Even though Interest rates charged by the various credit institutions significantly differ at 5% level of significant.

However, as shown in Table 4.6.5, over half (52.1%) of beneficiaries of Bonzali Rural Bank belong to the category of high prospect of livelihood sustainability, while 50% and 37.7% of clients of Sinapi Aba Trust and Simli Pong Microcredit Scheme respectively, are found to belong to the same category of high prospect of livelihood sustainability.

**Table 4.6.5 prospect of livelihood sustainability and Source of Credit**

Prospect of livelihood Sustainability		Source of Credit			Total
		Simli pong	Bonzali Rural Bank	Sinapi Aba Trust	
Low prospect of Livelihood Sustainability	Frequency	33	23	20	76
	% within Column	62.3%	47.9%	50.0%	53.9%
High prospects of livelihood sustainability	Frequency	20	25	20	65
	% within Column	37.7%	52.1%	50.0%	46.1%
Total	Frequency	53	48	40	141
	% within Column	100.0%	100.0%	100.0%	100.0%

Source: Field Survey, 2009

$\chi^2 = 2.429$  df= 3 P <0.05 not Significant

#### **4.6.3.2 Amount of loan and Prospect of Livelihood Sustainability**

Amount of loan received per respondent determines to some extent the ability of respondents to invest into their livelihood venture and their debt servicing capacity. Results of the survey reveal that average loan allocated per person across the three credit schemes is GH ¢70, GH ¢100 and GH ¢128 in 2006, 2007 and 2008 respectively, with a maximum of GH ¢200, GH ¢250 and GH ¢350 and minimum of GH ¢30, GH ¢50 and GH ¢60 respectively for 2006, 2007 and 2008. Amount of loan received by the respondents have been increasing steadily since 2004.

Analysis of Variance techniques was applied to test whether amount of loan received by respondents in the category of high prospect of livelihood sustainability significantly differ from amount received by respondents in the category of low prospect of livelihood sustainability in the various years.

The test indicate that, amount of loan received by respondents in the category of low prospects of livelihood sustainability is significantly different from the amount allocated to those in the category of high prospect of livelihood sustainability in 2006, 2007 and 2008 at 5% level of significant. As shown in Table 4.6.6 with F-values of 4.437, 5.294 and 5.626 respectively.

Respondents who perceived the prospect of their livelihood sustainability to be high tend to receive higher amount of loan as compare with those who perceived the prospect of their livelihood sustainability to be low. For instance, average loan amount per

respondent in the category of high prospect of livelihood sustainability is GH ¢86.27, GH ¢122.50 and GH ¢150.15 in 2006, 2007 and 2008 respectively, whereas that of those in the category of low prospect of livelihood sustainability is GH ¢50.25, GH ¢81.55 and GH ¢103.02 respectively for 2006, 2007 and 2008. Therefore the amount of loan received is significantly associated with respondents' perception about the prospect of their livelihood sustainability.

**Table 4.6.6 Amount of Credit and Prospect of Livelihood sustainability**

Attribute	High prospect of Sustainability	Low prospect of Sustainability	F-value
Average Amount per client 2006	86.27	50.25	4.437*
Average Amount per client 2007	122.50	81.55	5.294*
Average Amount per client 2008	150.15	103.02	5.626*

P<0.05

Source: Field Survey, 2009

\* indicate significant F-values at 5% level of significant

#### **4.6.3.4 Number of Loan Cycles and Prospect of Livelihood Sustainability**

Also not only amount of loan received by respondents influences their livelihood sustainability but also continuation of credit line to ensure continuous flow of financial capital is equally important in achieving sustainable livelihood. Number of loan cycles a respondents complete determines the number of times she had benefited from the credit.

Results of the survey reveal that, about 60% of respondents interviewed have taken loans more than three times. The number of loan cycles completed or the number of times a respondent benefited from the credit is found to be significantly related with the respondent's perception of her livelihood sustainability at 5% level of significant.

Respondents who have completed more than two loan cycles are found to be more likely to belong to the categorize of high prospect of livelihood sustainability than those who benefited less than three loan cycles. As illustrated in Table 4.6.7, about 57.8% of respondents who have completed more than three loan cycles belong to the category of high prospect of livelihood sustainability, whereas only 30% of those who have benefited more than three loan cycles are classified as high prospect of livelihood sustainability.

**Table 4.6.7: Number of Loan Cycles and prospect of Livelihood Sustainability**

prospect of Livelihood Sustainability		Number of Loan Cycles		Total
		Less than three time	More than three times	
Low prospect of livelihood sustainability	Frequency	42	38	80
	% within Column	70.0%	42.2%	53.3%
High prospects of livelihood sustainability	Frequency	18	52	70
	% within Column	30.0%	57.8%	46.7%
Total	Frequency	60	90	150
	% within Column	100.0%	100.0%	100.0%

Source: Field Survey, 2009

$\chi^2=11.161$ , df= 1 P<0.05 Significant

#### **4.6.3.5 Investment and Prospect of Livelihood Sustainability**

The extent to which respondents invest their borrowed funds on their economic ventures are classified as “investing entire loan”, “investing part” or “not investing at all” are analysed against prospect of their livelihood sustainability to assess any relationship between extent of investing borrowed fund and livelihood sustainability. All the respondents either invest their entire loan in their livelihood ventures or part of it in their livelihood venture; none of them said they did not invest their loan on their livelihood venture.

Findings of the survey indicate that 80.7% of the women borrowers interviewed invest their entire loan on their livelihood ventures, out of the remaining 19.3% who only invest part of their loan on their livelihood ventures, about 76.9% said they used the remaining amount to buy food for their household, 2 respondents said they used it to pay their children school fees and 4 respondents used it to buy clothing. However the analysis found no significant difference in the extent of investing loan on livelihood venture between respondents in the category of high and low prospect of livelihood sustainability at 5% level of significant.

Participants in a focus group discussion cited loan duration or period of loan repayment as a factor they consider in choosing where to invest their loans and what proportion of the loan they should invest. However, the three microcredit providing institutions whose clients were surveyed for this study differ by the duration within which respondents are required to complete paying their loans. The loan duration of Bonzali Rural Bank is 6

months; 8 months in the case of Sinapi Aba Loan Trust and 12 months for clients of Simli Pong.

A Chi-square test conducted found no significant relationship between loan duration and prospect of livelihood sustainability at 5% level of significant. Thus loan duration does not significantly influence prospect of livelihood sustainability. This situation can partly be attributed to the disbursement procedure in which respondents' chance of assessing the next loan cycle depends on the time finished paying the previous loan. For that matter, respondents whose loan duration were 6 months usually take two loan cycle in succession in a year as compared to those with loan duration of 12 months who only complete one loan cycle in a year.

Also, mode of repayment was examined to determine its influence on respondents' ability to manage their debt servicing capacity and how sustainable their livelihoods are. But for 17 respondents who said they pay back the loan they took from Simli Pong Microcredit Scheme in 2005, as a lump sum at the end of the credit duration, all the other respondents pay their credit as monthly instalments spread across the loan duration. However a Chi-Square test of relationship conducted found no significant relationship between mode of repayment and prospect of livelihood sustainability at 5% level of significant. Thus mode of loan repayment was found not to be a good predictor of prospect of individual livelihood sustainability.

Microcredit among others is aimed at meeting the financing requirement of beneficiaries' enterprises so as to help generate investment and income for the livelihood of their

clients. Respondents were asked whether the amounts of loans offer them are adequate to meet the financial need of their enterprises. From the analysis of responses obtained, about 58% of the respondents said their loans were not adequate to meet the financing needs of their enterprises while the remaining 42% said the loans they received were adequate considering the size of their enterprises.

A Chi-square test of relationship found a significant relationship between adequacy of loan and respondents perception about the prospect of their livelihood sustainability at 5% level of significant. Cross tabulation of prospect of livelihood sustainability and adequacy of loan is shown in Table 4.6.8a. From the table, about 63.5% of respondents who said their loan is adequate perceived the prospect of sustainability of their livelihood to be high as against 34.5% of those who said their loans are not adequate. Respondents who said their loans are adequate are more likely to perceived the prospect of sustainability of their livelihood strategies to be high.

Also the type of livelihood ventures or enterprise that borrowers run determine their loan requirement in terms of amount and timeliness of loan, their debt servicing capability and their investment potential. Livelihood ventures on which rural women borrowers of microcredit interviewed are classified as either on-farm or off-farm. The on-farm ventures are crop production and livestock rearing enterprises and the off-farm ventures include agro-processing, petty trading, food vending, dress making/tailoring and hair dressing.

Participants of focus discussion intimated that their ability to fully invest or utilize their loans is sometime hampered by the time loans are disbursed. They explained that if loans are disbursed in line with cash demand of their various enterprises they will be able to adequately invest it for good return. For instance, those who are engage in agro-processing and petty trading require loan just after harvesting of farm produce since prices of farm produce are low during that time. While those engage in crop production prefer loans to be disbursed just at the beginning of rainy season to enable them buy farm inputs such as seeds, fertilizer and pay for tractor services.

A Chi-square test however, found no difference between respondents who invest their loans on on-farm and off-farm in terms of prospect of livelihood sustainability. In other words, respondents who invest their loans on on-farm enterprise are equally likely to perceive their livelihood sustainability as high as compare with those who invest their loans on off-farm ventures.

However, as shown in Table 4.6.8b, about 72.2% of respondents who invest their loan on on-farm enterprises perceived their livelihood sustainability to be low compare with 50.8% of those invest their loans on off-farm enterprises. Also about 49.2% of women borrowers who invest their loans on off-farms venture said the prospect of their livelihood sustainability is high, while only 27.8% of those who invest their borrowed fund on on-farm enterprises regard the prospect of their livelihood sustainability to high.



**Table 4.6.8a Cross tabulation of Livelihood Sustainability and Adequacy of Loan**

Prospect of Livelihood Sustainability		Adequacy of loan		Total
		Yes	No	
Low prospect of livelihood sustainability	Frequency	23	57	80
	% within Column	36.5%	65.5%	53.3%
High prospects of livelihood sustainability	Frequency	40	30	70
	% within Column	63.5%	34.5%	46.7%
Total	Frequency	63	87	150
	% within Column	100.0%	100.0%	100.0%

Source: Field Survey, 2009

$\chi^2=12.355$ , df= 1 and P <0.05

**Table 4.6.8b: Category of Livelihood Venture and Prospect of Livelihood Sustainability**

prospect of livelihood Sustainability		Category of Livelihood Activity (ies) Borrowers Invest on.		Total
		On-farm	Off-farm	
Low prospect of livelihood sustainability	Frequency	13	67	80
	% within Column	72.2%	50.8%	53.3%
High prospects of livelihood sustainability	Frequency	5	65	70
	% within Column	27.8%	49.2%	46.7%
Total	Frequency	18	132	150
	% within Column	100.0%	100.0%	100.0%

Source: Field Survey, 2009

$\chi^2=2.932$ , df= 1 P <0.05 Significant

#### **4.6.6 Discriminant Analysis of Credit Variables Influencing Livelihood Sustainability**

Credit variables are assessed in a multi-variate analytical technique to determine their ability to discriminate between respondents perception of High or Low prospect of livelihood sustainability. Credit variables included in the discriminant function are amount of loan allocated per person, interest rate charge, number of loan cycles enjoy, adequacy of loan allocated, source of credit, mode of repayment and the extent to which respondents invest their loans on their livelihood ventures. Others include timeliness of loan allocated, extent of repayment and spouse involvement in managing loan.

From the analysis, three variables namely; Average amount of loan received per person, Number of loan cycles completed and adequacy of loan are found to be significant in discriminating between high and low prospect of livelihood sustainability at 5% level of significant.

As illustrated in Table 4.6.9, about 72.7% of the cases in the discriminant function are correctly classified with a conical correlation of 0.780 yielding R square (Co-efficient of determination) of 0.608 implying that 60.8% of the variation in the two groups of high and low prospect of livelihood sustainability are jointly explained by the variation of the independent variables in the Discriminant function.

Average amount of loan allocated per person is found to discriminate significantly between respondents who perceived the prospect of their livelihood sustainability to be

high and those who regard it as low prospect of sustainability. Average amount of loan allocated per person share about 36.5% of the total discriminant power of all the independent variables in the discriminant function. Respondents who received relatively higher loan tend to be more likely of perceiving the prospect of their livelihood sustainability to be high than those with relatively smaller loan allocations.

Also respondents who completed many loan cycles in succession are more likely to perceived the prospect of their livelihood sustainability to be high than those who just taken one or two loans in succession. As shown in Table 4.6.9, number of loan cycles completed contributes 27.2% to the total discriminant influence of all the independent variables in the discriminant function.

Adequacy of loan is also found to be significant in discriminating between the two categories of high and low prospect of livelihood sustainability, constituting about 36.2% to the total discriminant power of the independent variables in the discriminant function.

**Table 4.6.9: Discriminant Function of Coefficients of Credit variables discriminating between High and Low Prospect of Livelihood Sustainability**

Discriminating Variables	Standardized coefficient	Percent Contribution
Amount of Loan	0.652	36.5
	0.562	
No. of Loan cycles	0.488	27.2
	0.265	
Adequacy of Loan	0.646	36.2
	0.715	
Constant	-0.625	

Percent of Correct Classification = 72.7%  
 Conical Correlation = 0.780  
 Wilks' Lambda = 0.754 ( $\chi^2 = 34.748$ ; df = 3 p > 0.05)  
 Source: Field Survey Data, 2009

#### 4.6.4 Loan Factors and Prospect of Reducing Vulnerability

Respondents' ability to reduce their vulnerability to external trend of seasonality, stress and shocks which was assessed based on the extent to which they have enhanced their livelihood assets over the past five years as explained in section 4.3. Based on this assessment, respondents have been grouped into two categories. Those who have improved or enhanced their asset holdings over the five year period are classified as "High Prospect of Reducing Vulnerability", while respondents who could not enhanced their asset holdings over the period are also classified as "Low Prospect of Reducing Vulnerability.

Loan factors such as interest rate, amount of loan allocated per respondent, source of loan, mode of payment, adequacy and timeliness of loan are expected to play a role in respondents' ability to improve on their livelihood assets and as such prepare to withstand external trend of seasonality, stresses and shocks that constitute vulnerability context facing their livelihoods. In response to this, both bivariate and multi-variate analytical techniques are applied to loan factors mentioned above and its influence on respondents' ability to deal with the vulnerability context facing their livelihood strategies.

#### **4.6.4.1 Source of Credit and Prospect of Reducing Vulnerability**

A Chi-square test of relationship conducted to determine if there exist any relationship between source of loan and respondents ability to reduce their vulnerability to external trend of seasonality, stress and shocks found no significant relation between respondents' ability to reduce their vulnerability and the source of their credit at 5% level significant. Thus respondents who sourced their credit from Simli Pong Microcredit Scheme; Bonzali Rural Bank or Sinapi Aba Loan Trust are not significantly differ in terms of their prospect of reducing vulnerabilities facing their enterprises through enhancing their livelihood assets holdings since they start benefiting from credit.

However, the three microcredit schemes whose clients constitute interviewees for this study differ in their mode of operations such as loan duration (repayment period), interest rate charge among others. Therefore respondents benefiting from different microcredit schemes have different periods within which to complete repaying their loans. Beneficiaries of Simli pong have 12 months loan duration while beneficiaries of Sinapi

Aba Trust are require to complete loan repayment in 8 months after disbursements and 6 months for beneficiaries of Bonzali Rural Bank. As shown in Table 4.6.10, a statistical test of difference reveals significance difference between respondents in the categories of High and Low prospect of reducing vulnerability in terms their loan durations.

Respondents who used 12 months period to repay their loans are more likely to belong to the category of high prospect of reducing vulnerability as compare with those who are given 6 months and 8 months loan durations. For example, about 56.4% of respondents who used 12 months to complete their loan repayment have been able to enhanced their asset holdings over five year period and as such classified as high prospect of reducing vulnerability, whereas only 37.9% and 16.7% of respondents who used 6 months and 8 months respectively have enhanced their asset holdings within the same period and for that matter belong to the same category of high prospect of reducing vulnerability. Thus respondents with different loan durations significantly differ in terms of their ability to reduce vulnerabilities facing their enterprises.

Some of the women beneficiaries interviewed have been benefiting from microcredit since 2004 completing several loan cycles, while others have just taken their second or third loans. Sustained credit disbursement to women borrowers is expected to ensure continue injection of financial capital into beneficiaries' enterprise to help improve on the performance of their businesses and their ability to enhance their livelihood assets as observe by Littlefield, Murdugh and Hashemi (2003).

Out of the 150 respondents interviewed, about 60% of them have completed more than two loans cycles and 40% completing less than three loans cycles.

The credit institutions assessed groups' loan credibility by how successful the groups complete repaying their loans which determines groups' eligibility to obtain subsequent loan. Thus the more loan cycles completed by a group, the more credible and loan worthy the group becomes and hence stand a better chance of continuing benefiting from credit facility. However, respondents who completed more than two loan cycles are not significantly better than those who have just benefited less than three loan cycles in terms of their ability to enhance their livelihood asset holdings.

A Chi-square test conducted at 5% level of significant to test this relationship yielded Chi-square value of 2.894 compare with Chi-square tabulated of 5.99 at 2 degree of freedom. Thus respondents who have benefited more than two loan cycles and those benefited less than three loan cycles do not differ significantly from each other in terms of prospect of reducing vulnerability facing their enterprises by enhancing their livelihood assets.

**Table 4.6.11: Prospect of Reducing Vulnerability and Loan Duration.**

Prospects of Reducing Vulnerability		Loan Duration			Total
		6 months	8 months	12 months	
High Prospects of reducing vulnerability	Frequency	33	2	22	57
	% within Column	37.9%	16.7%	56.4%	41.3%
Low prospects of reducing vulnerability	Frequency	54	10	17	81
	% within Column	62.1%	83.3%	43.6%	58.7%
Total	Frequency	87	12	39	138
	% within Column	100.0%	100.0%	100.0%	100.0%

Source: Field Survey, 2009

$\chi^2=7.084$ , df= 2 P < 0.05 Significant

#### **4.6.4.2 Extent of Investment and Prospect of Livelihood Sustainability**

The extent to which respondents invest their borrowed fund on their livelihood ventures is score on a Likerty scale as investing entire loan on livelihood venture, invest part of their loans on their livelihood venture or invest none of their borrowed money on their livelihood venture. This was then cross tabulated with the prospect of respondents' ability to reduce the vulnerabilities facing their economic ventures through enhancing their livelihood assets.

A Chi-square test of relationship reveals a significant relationship between prospect of reducing vulnerability and extent of investing borrowed fund on livelihood venture at 5% level of significant. Respondents who invest their entire loan on their livelihood ventures are more likely to reduce their vulnerability through enhancing their livelihood asset holdings than those who only invest part of their loan on their livelihood ventures. As shown in Table 4.6.12, about 52.7% of respondents who invest their entire borrowed fund on their livelihood ventures have high prospect of reducing the vulnerability facing their enterprises as against only 18.18% of those who invest part of their borrowed fund on their economic ventures.

Inadequate loan allocation and loans not being received at the appropriate time were mentioned by participants of focus group discussion as problem hindering their ability to effectively invest their loan for good returns which in turn affect their debt servicing capacity since they have to pay their monthly instalments from proceeds of their enterprises. About 69.5% of interviewees said they often have to source monies from



other sources such as borrowing from friends and relatives and selling their assets such as farm produce to be able to settle their monthly instalment, while 24% said they always depend solely on the proceeds (profit) from their enterprises to pay their monthly instalment and only 6.5% said they sometimes default in paying their monthly instalment which has to be made up by other members of their groups.

When respondents were asked whether the amount of loan they received from the credit institutions were adequate and timely for their enterprise, about 42% said their loans were adequate, while 51.3% said the time they received their loans are not timely considering cash demand of their enterprises. Most of them would have want disbursement of loans to be scheduled such that it will coincide with the time when farm produce are being harvested so that they can obtain their supplies at low prices.

However, a Chi-square test conducted to determine whether respondents in the categories of High and Low prospect of reducing vulnerability differ in terms of adequacy and timeliness of loan, yielded Chi-square value of 1.67 and 2.132 respectively for adequacy and timeliness with 2 degree of freedom indicating no significant difference at 5% level of significant.

**Table 4.6.12 Cross tabulation of Extent of Investment and Prospect of Reducing Vulnerability**

Prospects of Reducing Vulnerability		Extent of investment 2008		Total
		Invest Entire Loan	Invest part of Loan	
High Prospects of Reducing Vulnerability	Frequency	49	9	58
	% within Column	52.7%	18.8%	41.1%
Low prospects of reducing vulnerability	Frequency	44	39	83
	% within Column	47.3%	81.2%	58.9%
Total	Frequency	93	48	141
	% within Column	100.0%	100.0%	100.0%

Source: Field Survey, 2009

$\chi^2=15.060$ ,  $df= 1$   $P <0.05$  Significant

#### 4.6.4.3 Prospect of Reducing vulnerability and Category of Livelihood Venture

A Chi-square test of found that respondents belonging to the two categories of High and Low prospect of reducing vulnerability differ significantly in terms of whether they invest their loans on on-farm or off-farm ventures at 5% level of significant.

As shown in Table 4.6.13, only one respondent who invest her borrowed fund on on-farm venture belongs to the category of high prospect of reducing their vulnerability out of the 18 respondents who invest their borrowed monies on on-farm ventures. For those who invest their loans on off-farm ventures, about 44.7% of them have high prospect of reducing their vulnerabilities to external trends of seasonality, stresses and shocks.

Therefore, those who invest their loans on off-farm ventures are more likely to have enhanced their livelihood asset holdings than those who invest it on on-farm ventures.

**Table 4.6.13: Cross Tabulation of Prospect of reducing Vulnerabilities and category of livelihood venture**

Prospects of Reducing Vulnerability		Livelihood Venture		Total
		On-farm	Off-farm	
High Prospects of Reducing Vulnerability	Frequency	1	59	60
	% within Column	5.6%	44.7%	40.0%
Low prospects of Reducing Vulnerability	Frequency	17	73	90
	% within Column	94.4%	55.3%	60.0%
Total	Frequency	18	132	150
	% within Column	100.0%	100.0%	100.0%

Source; Field Survey, 2009  $\chi^2=10.112$ , df= 1 P <0.05 Significant

#### 4.6.4.4 Discriminant Analysis of Credit Variables Influencing Vulnerability

To assess the combined influence of loan conditions and other credit variables on beneficiaries' ability to improve on their livelihood asset base so as to be able to withstand vulnerability context associated with their various livelihood activities, a discriminant analysis was applied to determine which credit variable(s) significantly classified respondents into the two categories of High and Low prospect of livelihood sustainability.

Variables a prior selected for the discriminant function included; source of loan, average loan allocated per person, interest rate charge, mode of repayment and loan duration. Others included extent of investing loan on livelihood venture, category of livelihood venture on which loan was invested on and extent of spouse involvement in loan management.

The analysis yielded five variables as discriminating between High and Low prospect of reducing vulnerability at 5% level of significant. The analysis yielded Wilks' Lambda statistics of 0.630 ( $\chi^2 = 56.146$ ;  $df = 5$   $p < 0.05$ ) indicates that the discriminating power not accounted for by the Discriminant function is insignificant, with 76.7% of the cases correctly classified among the two categories of high and low prospect of reducing vulnerability. The conical correlation of 0.808 yielding R-square of 0.653, indicates that 65.3% of the variation between the two groups is jointly explained by the variation of the independent variables in the discriminant function. The variables that significantly discriminate between the two groups are as following;

**Amount of Loan:** Average amount of loan received per person was found to be significant in discriminating between high and low prospect of reducing vulnerability contributing 15.1% of the discriminating power of the independent variables in the discriminant function as shown in Table 4.6.14. Respondents who received relatively higher amount of loan tend to have high prospect of reducing their vulnerability to external trends of seasonality, stresses and shocks through improvement of their livelihood as compare to those receiving relatively small amount of loan.

**Interest Rate Charged:** Interest rate charge is found to differ among the tree microcredit schemes and also differ among respondents benefiting from different sources. Interest rate is also significant in discriminating between the two groups of High and Low

prospect of reducing vulnerability contributing 25.6% to the discriminating power of the discriminant function.

**Extent of Investment:** Extent of investing borrowed fund into livelihood venture as either investing entire loan or part of the loan is found to be significant in discriminating between high and low prospect of reducing vulnerability contributing 19.9% to the total discriminating power of the discriminant function as shown in Table 4.6.14. Respondents who invest their entire loan on their livelihood ventures are more likely to belong to the category of high prospect of reducing vulnerability as compare to those who invest part of their loan on their economic ventures.

**Duration of Loan:** Loan duration is also found to vary from one institution to the other and significant in discriminating between the two categories of high or low prospect of reducing vulnerability contributing 23.4% to the discriminating power of the independent variables in the discriminant function. Respondents who repaid their loans in six months period are found to be more likely to belong to the category of high prospect of reducing vulnerability as compare with those who repay their loans in 8 or 12 months period.

**Seeking approval from Spouse:** Seeking or not seeking approval from spouse before accepting credit was found to be significant in discriminating between High and Low prospect of livelihood sustainability contributing only 16% to the discriminating power in the discriminant function. Respondents who said they sought approval from their husbands tend to be more likely to belong to the category of high prospect of reducing

vulnerability than those who did not seek approval from their husbands or any male relative. This is partly so because respondents who sought approval from their husbands stand a better chance of making them aware of the conditions that goes with the loans and this will prevent them from borrowing from it. This was confirmed in the focus group discussions as discussants agreed that by informing or seeking approval from spouse will prevent him from demanding part of it or requiring you to use part of it for cooking. One women remarked in the focus group discussion that “how can you keep such money without informing your husband”.

**Table 4.6.14: Discriminant Function of Coefficients of Credit variables discriminating between High and Low Prospect of Reducing Vulnerability**

Discriminating Variables	Standardized coefficient	Percent Contribution
Amount of Loan	0.415	15.1
	0.553	
Interest Rate Charged	0.704	25.6
	0.315	
Extent of Investment	-0.548	19.9
	-0.424	
Duration of Loan	0.642	23.4
	0.225	
Seek approval	0.441	16.0
	0.385	
Constant	4.05	

Percent of Correct Classification = 76.7%

Conical Correlation = 0.808

Wilks' Lambda = 0.630 ( $\chi^2 = 56.146$ ;  $df = 5$   $p > 0.05$ )

Source: Analysis of Field Survey Data, 2009

#### **4.7. Community Factors and Livelihood Strategies**

The kind of livelihood venture that individual can engage in depend to a greater extent on the site factors of the community, district or region in which individual live. Environmental factors, climate, resource availability and availability of marketing opportunities among others, varies from place to place, community to community and they affect the nature and kind of livelihood strategies that inhabitant can engage in.

The communities where this survey took place are endowed with different level of physical facilities such as roads, school buildings, clinics, water source and market squares which in one way or the other influence the performance of respondents livelihood strategies and their access to resources and opportunities.

##### **4.7.1 Physical Infrastructure**

**Road Network:** roads in the district can be described as fairly accessible. All of which are gravel surface feeder roads apart from the road leading from Tamale, the northern regional capital to Nyankpala. The District planning Officer interviewed noted that the feeder roads undergo routine maintenance at least once every three years. The roads linking the five communities, where this survey took place to the District capital and other sub towns in the District and beyond are assessed and categorized as good road network or poor road network depending on their accessibility throughout the year.

The analysis reveals that, only 19.3% of the respondents said their road networks are good and all of them came from Nyankpala, whereas the remaining 80.7% described their road net works as poor.

**Telecommunication and Transportation:** All the communities where this survey took place have telephoning reception from MTN, Onetouch, Zain and Tigo mobile networks. Most of the respondents have ever received or make a phone call with just 25.3% possessing their own mobile phones. For listening to news from the local FM stations, most of the respondents have radio cassette players ranging from 2 batteries, 4 batteries to 8 batteries in increasing order of value and prestige.

About 16% of respondents said they have two battery cassette players, about 26% said they have 4 battery cassette players and 16.7% have 8 battery cassette players. The remaining 41.3% who do not have radio sets do have access to radio because all the respondents said at least one member of their household has a radio.

In terms of transportation, bicycles have a very important role to play in the northern region in general and the study area in particular. Respondents access to bicycles, owning one or have use access, is linked to the number of bicycles in their homes. In term of prestige attached to bicycles and their ability to carry loads, bicycles in the study area are of two types, the old type as refer to and the new type. The old type (phoenix bicycles) are strong and can carry heavy load but less prestigious as compare to the new type which can not carry heavy load but goes with some level of prestige. The analysis discovers that, virtually every household (92.7%) in the study area have at least one bicycle with



average number per household of 2 old bicycles and a maximum of 4 bicycles. For the new type, about 21.3% of the respondents do not have new bicycles in their households.

**School Building:** Apart from Gbulahigu, which has one school building, all the other five communities (Tolon, Gbulung, Kumbungu and Nyankpala) have more than two school buildings, both primary and Junior High Schools (JHS). Kumbungu and Tolon have Senior High School (SHS), while Nyankpala houses one of the Campuses of University for Development Studies (UDS).

#### 4.7.1 Nature of Road Network road network community

Nature of Road Network	Frequency of Respondents	Percentage (%)
Good Road network	29	19.3
Poor Road network	121	80.7
Total	150	100.0

Source: Field Survey, 2009

#### 4.7.2 Water and Sanitation Facilities

Fetching of water is mostly done by women in many rural communities. Therefore the source of water and its distance from the communities and its availability throughout the year have a greater impact on women's time and labour and hence their livelihood activities. The water sources available in the communities where this survey took place are nearby streams, dam/dug outs, pipe born water, boreholes and well.

When respondents were asked which of their main sources of water are, about 46.7% said dam/dug out, while 20% said pipe born water, with 10% said wells, and 20% said boreholes and only 3.3% said nearby stream. Source of water is found to be associated with the community where respondents came from. For instance, all the respondents from Kumbungu have pipe born water as their main source of water.

As at the time of this survey, pipe born water had just been extended to Tolon, Nyankpala and Gbulung, but no respondent in those communities mentioned pipe born water as their main source of water. This was so because the tapes have not started flowing regularly. Out of the 150 respondents interviewed 78.7% travel between 2 to 5km to fetch water during the dry season and only 21.3% fetch their water by travelling less than 2km.

**Table 4.7.2 Frequency of distribution of source of water**

Main Source of Water	Frequency of Respondents	Percentage (%)
Nearby stream	5	3.3
Dam/dug out	70	46.7
Well	15	10.0
Pipe borne water	30	20.0
Dam/dug and borehole	30	20.0
Total	150	100.0

Source: Field Survey, 2009

#### **4.7.3 Housing**

Generally, the nature of housing and construction depict a greater reliance on local architect, technology and materials in housing construction industry in the study area. Most houses in the study area is built from mud and land crate bricks and roofed with

thatches. But for Nyankpala, Tolon and Kumbungu which are relatively big towns where discussants in a focus group discussion said of late there have been changes in the nature of housing construction in which cement blocks are used; all the other communities still relied on local materials in constructing their houses. The average number of rooms per house was found to be 5 rooms, with 44.7% of the houses of respondents roofed with only thatches and 46.6% and 8.7% roofed with both thatches and zinc and only roofed rooms respectively.

**Table 4.7.3 Frequency Distribution of Nature of roofing**

Nature of Roofing	Frequency of Respondents	Percentage (%)
Roofed with only Thatch	67	44.7
Roofed with only zinc	13	8.7
Roofed with both thatch and zinc	70	46.6
Total	150	100.0

Source: Field Survey, 2009

#### **4.7.4 Health Facilities**

Apart from Gbulahigu which has just had clinic at the time of this survey, all the other five communities have clinics. Visit to the clinics and interaction with the District Director of Ghana Health Service, reveals that but for the Tolon clinic that has a visiting medical Doctor, the clinic were manned by nurses. But for the services of the Health Assistants recruited under the National Youth Employment Programme, all clinics did not have the required trained nurses.

Exclusion of respondents from Gbulahigu where pregnant and lactating mothers attend antenatal and post natal care in Nyankpala clinic which is about 8km away, all the other respondents said they sought their antenatal and post natal services in those clinics in their communities.

#### **4.7.4 Frequency of Distribution of Location of the clinic/health post**

Location of Clinic/Health post	Frequency of respondents	Percentage (%)
Within the community	100	67.7
More than 5km away	50	32.3
Total	150	100.0

Source: Field Survey, 2009

#### **4.7.5 Location of Fuel Wood**

Almost all the respondents depend on fire wood for their domestic heating and therefore fetch fuel wood in their farmlands and in the wild. In the focus group discussions held in all the communities where the survey took place, discussants paint a glooming picture of the extent of deforestation in their communities. This situation had compelled many of them to start cutting economic trees such as shea nut, dawawdawa and mango for fire wood which usually were not the case.

Also, because of the situation of deforestation in the study area coupled with unavailability of wood lot in the area, respondents said they now have to travel several kilometres to fetch fire wood. From the analysis of the survey data, about 9.3% or 14 respondents reported not to fetched their own fuel wood in the bush, but rather buy their fire wood in their communities. Whiles the rest of the respondents fetch their own fire

wood from their farmlands and in the wild, about 53.3% and 37.3% travel not less than 5km and more than 5km to fetch their fire wood respectively.

**Table 4.7.5: Location of the nearest source of fuel wood**

Location of the nearest source of fuel wood	Frequency of Respondents	Percentage (%)
Within the community	14	9.3
Less than 5km away from the community	80	53.3
More than 5km away from the community	56	37.3
Total	150	100.0

Source: Field Survey, 2009

#### **4.7.6 Community Factors and Livelihood Sustainability**

Respondents from different communities is found not to be significantly different from each other in terms of their perception concerning the prospect of livelihood sustainability of their livelihood strategies at 5% level of significant as established by a Chi-square test illustrated in the Table 4.7.6a. Though, the communities differ in terms of physical structures such as road networks, market squares, land availability and access to social services such as health and education.

However, in the case of prospect of reducing vulnerability, the Chi-square test found significant relationship between respondent's prospect of reducing vulnerability and the community from which the respondent is coming from at 5% level of significant. Thus respondents from different communities differ in terms of prospect of reducing their vulnerability to external trend of seasonality, shocks and tresses. Respondents from

Nyankpala and Kumbungu are more likely to belong to the category of high prospect of reducing vulnerability than those from Tolon, Gbulahigu and Gbulung as shown in Table 4.6.6b. For instance, about 66.7% of respondents from Nyankpala belonged to the category of high prospect of reducing vulnerability as against 13.3% of respondents from Tolon.

**Table 4.7.6a: Cross tabulation of communities and prospect of livelihood sustainability**

prospect of livelihood sustainability	Name of community					Total
	Nyankpala	Kumbungu	Tolon	Gbulahigu	Gbulung	
Low prospect of livelihood sustainability	12	14	20	17	17	80
High prospects of livelihood sustainability	18	16	10	13	13	70
Total	30	30	30	30	30	150

Source: Field Survey, 2009

$\chi^2=5.089$  df= 4 P <0.05 not Significant

**Table 4.7.6b: Cross tabulation of communities and prospect of reducing Vulnerability**

Prospects of Reducing Vulnerability		Name of community					Total
		Nyankpala	Kumbungu	Tolon	Gbulahigu	Gbulung	
High Prospects of Reducing Vulnerability	Frequency	20	18	4	10	8	60
	% within Column	66.7%	60.0%	13.3%	33.3%	26.7%	40.0%
Low prospects of Reducing Vulnerability	Frequency	10	12	26	20	22	90
	% within Column	33.3%	40.0%	86.7%	66.7%	73.3%	60.0%
Total	Frequency	30	30	30	30	30	150
	% within Column	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Field Survey, 2009

$\chi^2=25.556$  df= 4 P < 0.05 Significant

#### 4.7.7 Prospect of Reducing Vulnerability and Road network

Respondents from communities with good road network are found to be more likely to belong to the category of high prospect of reducing vulnerability than those from communities where the road networks are described as poor. This was indicated by a chi-square test which established a significant relationship at 5% level of significant between prospect of reducing vulnerability and nature of road networks linking respondents' communities to other communities in the district and the region as whole. For instance, about 69% of respondents who come from communities with good road networks are found to have enhanced their livelihood assets over the past five years and hence are classified as high prospect of reducing vulnerability as against 33.1% of respondents from communities with poor road networks.

**Table 4.7.7 Prospect of Reducing Vulnerability and Nature of road net work**

Prospects of Reducing Vulnerability		road network community		Total
		good network	bad road network	
High Prospects of reducing vulnerability	Frequency	20	40	60
	% within Column	69.0%	33.1%	40.0%
Low prospects of reducing vulnerability	Frequency	9	81	90
	% within Column	31.0%	66.9%	60.0%
Total	Frequency	29	121	150
	% within Column	100.0%	100.0%	100.0%

Source: Field Survey, 2009

$\chi^2=12.568$  df= 1 P < 0.05 Significant

#### 4.7.8 Distance of Source of Water Prospect of Reducing Vulnerability

A Chi-square test conducted, found a significant relationship between distance of main source of water and prospect of reducing vulnerability at 5% level of significant. Respondents whose main source of water is less than 2km away from their communities are more likely to belong to the category of high prospect of reducing vulnerability than those who have to travel more than 2km to fetch water. For instance, 20 out of the 32 respondents who travel less than 2km to fetch water belong to the category of high prospect of reducing vulnerability as against 40 out of 118 respondents who travel more than 2km to fetch water.

**Table 4.7.8 Source of Water and prospect of Reducing Vulnerability**

Prospects of reducing vulnerability	Distance of Source of Water from Community		Total
	Less than 2km away from the community	More than 2km away from the community	
High Prospects of reducing vulnerability	20	40	60
Low prospects of Reducing Vulnerability	12	78	90
Total	32	118	150

Source: Field Survey, 2009

$\chi^2=8.581$  df= 1 P = 0.05 Significant

#### 4.7.9 Access to Market and Prospect of Reducing Vulnerability

Respondents move from one village market to the other to sell their goods and/or buy goods. The number of village market that respondent can access, depends on the distance of the market centre, location of respondent's village and the nature of road networks in the area. However, a Chi-square test conducted at 5% level of significant found no



significant between respondents who are in the category of high and low prospect of reducing vulnerability in terms of the number of village markets respondents accessed.

Those who have access to one, two, three, or more than three village markets are equally likely to belong to either low or high prospect of reducing vulnerability. Thus a respondent ability to reduce their vulnerability to external trends of seasonality, stresses and shocks does not significantly depend on the number of village markets that she has been accessing over the past five years.

**Table 4.7.9: Number of Village market accessed and Prospect of Reducing Vulnerability**

Prospects of reducing vulnerability	How many village/town markets do you access for your goods				Total
	1	2	3	more than three markets	
High Prospects of reducing vulnerability	38	17	1	4	60
Low prospects of reducing vulnerability	60	28	1	1	90
Total	98	45	2	5	150

Source: Field Survey, 2009

$\chi^2=3.570$  df= 3 p = 0.05 Significant

#### 4.7.10: Access to Health Care and Prospect of Reducing Vulnerability

Access to health care though have to do with availability and affordable of health delivery services, however, the existence and distance in terms of proximity of physical structure in the form of clinic or health centre in rural communities is very important in examining access to health care and it influence on livelihood of rural women. Women

are much involved in transporting sick relatives especially children to health facilities for treatment.

Also, during ante natal and post natal health attendance, women spent most of their time in visiting health facilities and this become additional demand on their time and energy where health facilities are not in their communities and they have to travel along distance to access such services.

Notwithstanding, a Chi-square test carried out at 5% level of significant found no significant difference between respondents prospect of reducing vulnerability through enhancing or improving on their livelihood assets and allocation of nearest health facility to their community as either found within the community or allocated 5km away from their communities.

As shown in Table 4.7.10, about 44.1% of respondents whose communities have clinic or health centre belong to the category of high prospect of reducing vulnerability, whereas only 31.2% of those who have to travel more than 5km are in the category of high prospect of reducing vulnerability.

**Table 4.7.10: Distance of Health Facility and Prospect of Reducing Vulnerability**

Prospects of Reducing Vulnerability		Location of Clinic/health Centre		Total
		Within the community	More than 5km away	
High Prospects of Reducing Vulnerability	Frequency	45	15	60
	% within Column	44.1%	31.2%	40.0%
Low prospects of Reducing Vulnerability	Frequency	57	33	90
	% within Column	55.9%	68.8%	60.0%
Total	Frequency	102	48	150
	% within Column	100.0%	100.0%	100.0%

Source: Field Survey, 2009  $\chi^2=2.21$  df= 1 P<0.05 not Significant

#### 4.7.11: Availability of Fire Wood and Prospect of Reducing Vulnerability

Almost all the respondents interviewed for this study depend on fire wood for their domestic heating and other requirement for energy as it relate to their livelihood such as rice processing and ground nut oil extraction. Respondents either fetched fire wood themselves from the wild or buy them. Those who buy their fire wood do not have to travel but get them to buy as people carry them to their communities while those who fetch their fire wood travel some distance in order to cut the fire wood in the wild or farm lands.

This requires energy and time consuming thereby affecting their livelihood ventures. A statistical test conducted at 5% level of significant confirms a significant relationship between distance of fire wood source and prospect of reducing vulnerability as show in Table 4.7.11.

Respondents who travel relatively shorter distance to fetch fire wood are found more likely to belong to the category of respondents who have enhanced their livelihood asset holdings over the past five years and as such have high prospect of reducing vulnerability than those who travel relatively long distance to fetch their fire wood.

As shown in Table 4.6.11, about 62.5% of respondents who have to travel less than 5km to fetch their fire wood belong to the category of high prospect of reducing vulnerability, compare to 25.6% and 50% of those who travel more than 5km and those who buy their fire wood in their communities respectively.

**Table 4.7.11 Distance of fuel wood and Prospect of Reducing Vulnerability**

Prospects of Reducing Vulnerability		Location of the nearest source of fuel wood;			Total
		Within the community	More than 5km	Less than 5km	
High Prospects of reducing vulnerability	Frequency	2	23	35	60
	% within Column	50.0%	25.6%	62.5%	40.0%
Low prospects of reducing vulnerability	Frequency	2	67	21	90
	% within Column	50.0%	74.4%	37.5%	60.0%
Total	Frequency	4	90	56	150
	% within Column	100.0%	100.0%	100.0%	100.0%

Source: Field Survey, 2009

$\chi^2 = 19.803$  df= 2 P < 0.05 Significant

#### **4.7.12 Discriminant Analysis of Community Factors Discriminating between High and Low Prospect of Reducing Vulnerability.**

Discriminant analysis of community factors discriminating between high and low prospect of reducing vulnerability yielded three variables which are found to be significant in discriminating between the two groups with Wilks' Lambda statistics of 0.773 ( $\chi^2 = 37.7$ ;  $df = 3$   $p > 0.05$ ) indicating that the discriminating power not accounted for by the discriminant function is insignificant.

Also, about 72.7% of the independent variables were correctly classified with a conical correlation of 0.75 yielding R Square (co-efficient of determination) value of 0.562 implying that 56.2% of the variation between the two groups is jointly explained by the variation of the three dependent variables in the discriminant function. The variables found to be significant in discriminating between the two groups are as follows;

**Intra-Road Network:** The road network in a community, in terms of spread and physical conditions, determines the status of prospect of reducing vulnerability of respondents in that community. Intra-road network contributes 45.2% to the discriminating power of the three independent variables in the discriminant function. Respondents from communities which road networks were described as good tend to be more likely to have high prospect of reducing their vulnerability to external trends of seasonality, stresses and shocks than those from communities of poor intra-road networks.

**Distance of source of water:** The distance of main source of water in a community is found to be significant in discriminating between high and low prospect of reducing

vulnerability, constituting 41.8% of the total discriminant effect of the three independent variables in the Discriminant function as shown in Table 4.7.12. A community which main source of water is less than 2km away from the community tends to have more respondents falling in the category of high prospect of reducing vulnerability than those communities which main source of water is more than 2km away from the community.

For example, about 62.5% of respondents from communities which source of water is less than 2km away from their community belong to the category of high prospect of reducing vulnerability as against 33.9% of those from communities which main source of water is more than 2km.

**Distance of fuel wood:** Distance of source of fuel wood to a community was found to be significant in discriminating between high and low prospect of reducing vulnerability contributing 24% of the total discriminating power of the independent variables in the discriminant function. Respondents from communities where the source of fuel wood is less than 5km tends to be more likely to belong to the category of high prospect of reducing vulnerability than those communities where they have to travel more than 5km to fetch fire wood.

**Table 4.7.12: Discriminant Function of Coefficients of Community variables discriminating between High and Low Prospect of Reducing Vulnerability**

Discriminating Variables	Standardized coefficient	Percent Contribution
Intra-Road network	1.231 0.558	45.2
Distance of source of water	1.140 0.455	41.8
Distance of fuel wood	-0.653 -0.720	24.0

Percent of Correct Classification = 72.7%

Conical Correlation = 0.75

Wilks' Lambda = 0.773 ( $\chi^2 = 37.7$ ; df = 3 p> 0.05)

Source: Field Survey, 2009

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATION

#### 5.0 Introduction

This chapter presents a summary of the study findings and a set of conclusions and recommendations, which when implemented could enhance the sustainability of rural women livelihood.

The study had five specific objectives: first objective was to analyse the livelihood capital base from which rural women beneficiaries of microcredit draw on to construct their various livelihood strategies; second objective was to examine women borrowers' ability to reduce the vulnerability context associated with their enterprises in their drive towards constructing sustainable livelihood. Third specific objective was to assess the influence of rural women borrowers' socio-economic characteristics on the sustainability of their livelihood strategies. Fourth objective was to analyse the influence of operations of credit providing institutions on the sustainability of livelihood strategies of women borrowers in the District and finally, objective five was to assess the influence of community factors on the sustainability of rural women borrowers' livelihood strategies in the Tolon/Kumbungu District.



## **5.1 Summary of Findings**

Rural women beneficiaries of Microcredit interviewed for this study engaged in various livelihood strategies for their livelihood. Majority of the interviewees engaged in more than one livelihood or income-generating venture, with more than two-third (72%) of them undertaking petty trading or agro-processing as their main source of income. Very few (16.7%) of them undertake crops and livestock production as their main income-generating venture.

Rural women borrowers of microcredit interviewed, draw resources from all the five livelihood capital (physical, human, social, financial and natural) in constructing their livelihoods. The physical capital base of respondents ranges from domestic wares such as cooking utensils, water storing wares to tools, equipments and machines such as hoes, rice processing and shea butter extracting equipments.

Almost all respondents interviewed for this study belong to one or more groups such as Susu group, groups form to access loans from bank and NGOs and community self-help groups. These constitute social capital in the form of social networking labour pool and groups' solidarity being use as a substitute for collateral in accessing loans. The financial capital base of respondents was found to be in the form of both liquid and cash financial resources. Apart from credit, respondents' cash financial resources are remittances, savings, Susu and proceeds from their enterprises. The non-cash financial resources included stock of food and livestock. With regard to human capital, majority of women borrowers interviewed for this study were generally illiterate with few of them reporting

to have ever received training such as technical training on agro-processing and business development service in general.

As is usually the case of rural livelihood, respondents depend largely on natural resource such as land, water bodies, wood lot, and shea tree, among others for their livelihoods.

Less than half (40%) of respondents interviewed for this study, have been able to enhance their asset holdings since 2004 and as such they are classified as having high prospect of reducing the vulnerability context associated with their enterprises. Apart from natural capital base, respondents generally perceived the sustainability of their livelihood capital to be somewhat sustainable, especially financial capital in which overwhelming majority (63.3%) of respondents said it has been increasing since they started benefiting from micro-credit.

The three microcredit institutions from which clients were sampled for this study are found to differ significantly in terms of interest rate they charged and period or duration of loan repayment. They however, do not differ significantly in terms of amount of loan allocated per clients, mode of loan repayment and proportion of clients who have been able to enhance their asset holdings within five year period.

Also respondents who were classified as having high prospect of reducing the vulnerability context associated with their enterprises are found to significantly differ in terms of amount of loan allocated per respondent, loan cycle, loan duration and extent of

investing loan on beneficiaries' enterprises from those classified as having low prospect of reducing their vulnerability context. In addition, interest rate, loan duration and amount of loan allocated per respondent are found to discriminate significantly between respondents classified as "High and Low prospect of reducing vulnerability" on one hand and those classified as "High and Low prospect of livelihood sustainability" on the other hand.

In terms of influence of beneficiaries' socioeconomic characteristics on their ability to reduce the vulnerability context facing their livelihoods and improve on the sustainability of their livelihood; interviewees who were in the category of High and Low prospect of reducing vulnerability on one hand and those classified as High and Low prospect of livelihood sustainability on the other hand, are found to differ significantly in terms of age, their educational background, type of main livelihood venture and number of livelihood ventures per respondent. Also age, trend of financial resources over the past five years and income level are found to discriminate significantly between respondents classified as High and Low prospect of reducing vulnerability.

Community factors such as intra-road network, distance of main source of water and distance of the nearest source of fire wood are found to influence significantly respondents ability to enhance their livelihood asset holdings and their ability to construct sustainable livelihood. Also proportion of respondents with high prospect of livelihood sustainability was found to differ across communities. For instance, more than half of the respondents from Nyankpala and Kumbungu belong to the category of High prospect of

livelihood sustainability while less than half of respondents from Tolon, Gbulung and Gbulahigu belong to the same category.

## **5.2 Conclusion**

The research shows that rural women borrowers of microcredit in the Tolon/Kumbungu district engage in agriculture, petty trading, agro-processing, food vending, tailoring and hair dressing as their livelihood ventures. Overwhelming majority(72%) of interviewees of this study engage in agro-processing such as rice processing, shea butter extraction and groundnut oil extraction and petty trading such as retailing of agricultural produce like maize, groundnut, beans and non-agricultural produce like clothing and provisional as their main livelihood ventures by the virtue of their contribution to their income.

The results also show that less than half (40%) of the women borrowers interviewed have been able to enhance their livelihood asset holdings since they started benefiting from micro-credit. Age of respondents, educational background, type of main livelihood venture, number of livelihood ventures per respondent, income level and personal wealth rank are socioeconomic characteristics found to influence significantly respondents ability to reduce vulnerability facing their enterprises and improve on the sustainability of their livelihoods. Respondents who attained some form of formal education, those who have experienced increasing trend of their financial sources since they started benefiting from credit and respondents with diverse livelihood ventures are more likely to have experienced enhancement of their livelihood asset holdings since they started benefiting

from credit and hence stand a better chance of reducing their risk to vulnerability facing their enterprises.

Loan factors such as loan duration, amount of loan allocated per respondent, interest rate charge, number of loan cycles completed, loan adequacy and timeliness were found to influence significantly respondents' perception about the sustainability of their livelihoods and their ability to enhance their livelihood assets against critical trends of seasonality, stress and shock which constitute their vulnerability context. However respondents in the category of High and Low prospect of reducing vulnerability were found not to significantly differ terms of source of credit.

Respondents from Nyankpala and Kumbungu are found more likely to belong to the category of high prospect of livelihood sustainability and achieved improvement of their livelihood asset against external critical trends of seasonality, stress and shocks than those from Gbulung, Gbulahigu and Tolon. Intra-community road networks, distance of main source of water and distance of source of fire wood were found to influence significantly respondents' ability to enhance their livelihood asset holdings and improve on their livelihood sustainability.

### **5.3 Recommendations and Suggestions**

Based on the findings of the research the following recommendations are made:

- Almost all women beneficiaries of microcredit interviewed for this study do not own land or have direct access to land, but rely on their husbands and other male family members to access land for crops cultivation. This situation limits their ability to invest their borrowed money on agriculture. Therefore, this study recommends formulation and implementation of gender sensitive policies regarding agricultural land use and tenure system to enable rural women farmers undertake agriculture independently without having to depend on the benevolence of their husbands and other male relatives to access land for farming.

- Also, in response to the general lack of skills training and education regarding enterprise development and management among women borrowers interviewed, the researcher recommends the provision of training to women beneficiaries of microcredit to help build and enhance their managerial, vocational and entrepreneurial skills.

- In addition, respondents of this survey cited the seasonal nature of the products they deal with and the inability of loan disbursement to coincide with crops harvesting time and shea nut picking time, as reason for them not being able to reduce their cost of production by taking advantage of low prices during this time. This study therefore recommends the need for loan officer to take into consideration the kind of livelihood

venture women borrowers run, so as to design appropriate and timely credit package to meet their cash demand.

- The research found that respondents who were from communities with good road networks were more likely to reduce their vulnerability context and improve on their livelihood sustainability by being able to access many village markets, because of easiness of transportation. In line with this, the study recommends that, Central Government and the District Assembly should construct feeder roads to help open up the communities and reduce cost of transportation and travel time. This will help improve market access of rural entrepreneurs and free movement of goods and people to and from the hinterlands.

- The study discovers that women entrepreneurs in the rural communities which lack portable and accessible drinking water spend their precious time and energy in search of water daily and this negatively affected the performance of their enterprises. This research therefore recommends provision of portable drinking water through extension of pipe lines to the rural communities, drilling of boreholes, dams and dug outs to help relief the burden on women's time and energy.

- This study did not explore the profitability and marketing challenges facing rural women borrowers of micro-credit. Therefore there is the need for further research on profitability of borrowers' enterprise and marketing challenges and prospects.

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**APPENDIX A:  
QUESTIONNAIRE FOR DATA COLLECTION ON THE TOPIC “SOCIO-  
ECONOMIC ANALYSIS OF LIVELIHOOD STRATEGIES OF RURAL WOMEN  
BENEFICIARIES OF MICROCREDIT IN THE TOLONG/KUMBUNGU  
DISTRICT OF NORTHERN REGION”**

**Questionnaire for Personal Interview of Beneficiaries of Micro-credit**

Questionnaire Code.....
Name of Community... ..
Administrator/Interviewer:..... Date: .....

**A: Background of Respondents**

- 1) Name of Respondent .....
- 2) Age of respondent: Below 30 [1] 30-45 [2] 46-60 [3] Above 60[4]
- 3) Marital status: Married [1] Single [2] Divorced [3] widowed [4]
- 4) If married indicate position among co-wives:  
monogamy [1] Senior [2] Junior [3] or others (Specify) [4].....
- 5) Religion: Christianity [1] Islam [2] Traditional [3] None [4] or Others (specify)[5].....

6) Level of education: Basic/Middle [1] Secondary/voc/tech [2] Tertiary [3] no formal education [4] or others (specify).....

7) Please indicate the Number of your dependants and their ages;

	age below 8	8 – 20years	36- 60 years	21- 35years	age above 60	Total
Number of dependants						

8a) Are you a native of this community? Yes [1] No [2]

8b) If no, why did you move here? .....

**B: Identification of Livelihood Activities**

9a) what major economic activity do you engage in as your main source of livelihood?

Agriculture [1] commerce/petty trading [2] agro-processing [3], service [4] others (specify) [5].....

9b) what are the others economic activities that you engaged in?

.....  
 .....  
 .....

9c) rank your livelihood activities according to its contribution to your household needs?

*(Please complete the table below. List in order of priority)*

Livelihood activity	Rank of contribution to income	How long have you been in
1.		
2.		
3.		
4.		

5		
6.		

(Move to the appropriate economic activity)

**B1: AGRICULTURE (Crop Cultivation)**

10) What type of agricultural activity are you engaged in? Crop farming [1] mixed farming [2] animal husbandry [3]

12a) Do you own the land on which you cultivate your crops? Yes [1] or No [2]

12b) If no, how did you acquire the land? Rental [1] borrowed [2] share cropping [3] family land

[4] Husband land [5] or others (specify).....

13) What farming practice do you undertake? Mono cropping [1] Mono culture [2] Mixed cropping [3] others (specify) [4].....

14) What farming system do you practice? Shifting cultivation [1] Crop rotation [2] Continuous cropping [3] or others (specify).....

15) What crops do you grow?.....  
 .....  
 .....

16a) what is the size of your farm? .....

16b) on what basis do you farm? Commercial [1] subsistence [2] both [3] or others (specify).....

17) Please provide estimates of investment on your crop last season?

Type of crop enterprise	Expenditure on seed	Expenditure on fertilizer	Expenditure on labour	Expenditure on land	Expenditure on harvesting	Expenditure on storage	Expenditure on processing
1.							
2.							
3.							
4.							
5.							
6.							

18) How long have you been cultivating crops?.....

19a) Do you market your produce? Yes [1] or No [2]

19b.) if yes, how do you market your produce?

.....

20.) Do you have a ready market for your produce? Yes [1] or No [2]

20a). if no why?.....

21. What was the yield of your crops and prices last season?

Crop	Output/yield	Number sold	Number consumed	Number given to friends	Price per unit	Amount realised
1.						
2.						
3.						
4.						
5.						
6.						
7.						

22a. how will you describe the trend of your crops yield for the past years?

Increasing [1], decreasing [2] or remained stagnant [3].

22b. what accounts for the trend?.....

**B2: AGRICULTURE (Livestock)**

23) What type of livestock do you rear?

Type of livelihood	Number	System of rearing(intensive, semi intensive or extensive)	Basis of rearing (subsistence, commercial or both)
1.			
2.			
3.			
4.			
5.			
6.			

(Basis of rearing; Commercial [1] Subsistence [2] Both [3])

24) On the average, how much do you earn per year from the sell of your livestock? Below GH¢20 [1] 20 – 35, [2] 35.1 – 60 [3] 60.1-100 [4] 100- 200 [5] above 200 [6]

25a) how will you describe the trend of the stock of your livestock over the past five years?

Increasing [1], decreasing [2] or remained stagnant [3].

25b. what accounts for the trend?.....

26a) what problems do you encounter in your farming activity (apply to both crops and livestock)?

a).....

b).....

c).....

26b) how can these problems be addressed?

a).....

b).....

c).....

**C: Commerce/petty Trading**

27a) what commercial activity (ies) do you engage in? Agricultural marketing [1] marketing of non

Agricultural products [2] or others (specify).....

27b.) please mention the products/goods you sell?.....

.....  
.....  
.....

28) On what scale is your commercial activity? Petty trading [1] Retailing [2] or Wholesaling [3], processing selling [4]

29) What is your source of initial capital? Bank [1] Personal savings [2] Friends [3] Family [4]

Susu groups [5] others (specify) [6].....

30) What is your Maximum sale per month..... and Minimum sale per month .....

31) How much income do you make per month from your commercial activity? Below GH¢20 [1] 20 – 35 [2] 35.1 – 60 [3], 60.1-100 [4] 100- 200 [5] above 200 [6]

32) What problems do you usually encounter in your business?

a).....

b).....

c).....

33) How can these problems be addressed?

a).....

b).....

c).....

**D: Service**

34) What kind of service do you render? Teaching [1] Tailoring [2] Hair dressing [3] Civil servant/ Public servant [4] , Driving [5], food vending [6] or Others (specify).....

35) What is your average monthly income from the service you render? Below GH¢20 [1] 20 – 35 [2] 35.1 – 60 [3], 60.1-100 [4] 100- 200 [5] above 200 [6]

36a) what problems do you usually encounter?

a).....

b).....

c).....

36b) how can these problems be addressed?

a).....

b).....

c).....

37. What other livelihood strategies do you engaged in? Fetching and selling of fire wood [1] hiring out labour [2], local artisan [3], food vending [4] others (specify) [5].....

**E: Shift in Livelihood Activity**

38. Has there been a shift in your economic/livelihood activity? Yes [1] No [2]

39. When did you change your occupation/livelihood activity? Less than 1 yr [1] Between 1 and 3 years [2] Between 3 and 5yrs [3] Above 5 years [4]

40. What used to be your occupation/livelihood activity? Farming [1] petty trading [2] food vendor [3] Civil and Public servants [4], Artisan [5] Others (specify).....

41. Are you satisfied with your current occupation/livelihood? Yes [ ] No [ ]

Explain.....

42. What is the reason (cause) for the change in your previous occupation/livelihood? (In order of priority)

1)  
.....  
..

2).....  
.....

3).....  
.....

43a. do you have intention to change your current livelihood activity? Yes [1] or No [2]

43b.  
explain.....

43c. what livelihood venture do you intend to change to?.....

43d.  
Why.....  
.....



**F: STOCK OF LIVELIHOOD CAPITALS**

44) Human Capital

<b>Household/personal Human Capital</b>	Number  (where applicable)	Comments  (trend over the years)
1. No. of household members chronically sick		
2. No. of household members occasionally sick		
3. No. of household members scarcely sick		
4. No. of dependents registered under the NHIS		
5. food security status of household		
6. educational level of household head		
7. educational level of spouse/husband, if he is not the household head		
7. No. of children now at school and level		
8. No. of household members with basic education		
9. has the respondent have artisan or vocational skills		
10. No. of household members with artisan or vocational skills		
11. No. of respondent current reproductive status ( pregnant, lactating etc		
11. have ever received training on your livelihood(if yes, mention source and kind of training)		

45a. what has been the trend of your health over the past five years?

Improving [1], Deteriorating [2] or Remain the same [3]

45b. what has been the trend of your household health over the past five years?

Improving [1], Deteriorating [2] or Remain the same [3]

46a. what has been the trend of your education or skill level over the past five years?

Increasing [1], Decreasing [3] or Stagnant [3]

46b. what has been the trend of education or skill level of your household members over the past five years? Improving [1], Deteriorating [2] or Remain the same [3]

47a. what level of control do you exert on your own labour and time?

Full control [1], partial control [2] or no control [3].

47b. If not “full control”, who control your labour and time?

Husband [1], parents [2], other family members [3] or others (specify)  
[4].....

48. How will you score the sustainable status of your human resource? From a scale of 1 to 5 ( 1;Not sustainable at all to 5; very high sustainable)

#### 49) **Physical Capital**

50a. what has been the trend of the quality of your physical capital over the past five years?

Increasing [1], Decreasing [2] or Stagnant [3]

51b. what has been the trend of the quantity of your physical capital over the past five years?

[1], Decreasing [2] or Stagnant [3]

52. To what extent do you exert ownership or control over your physical capital?

Full control [1], partial control [2] or No control [3].

53. How will you score the sustainable status of your physical capital? From a scale of 1 to 5 ( 1;Not sustainable at all, to 5; very high sustainable)

#### 54 **Financial Capitals**

Financial Capital			
1. Personal annual cash/saving (amount)			
2. personal access to credit over GH¢ 50.00			
3. personal grain banking, cereal			
	Physical Capital	number	comment
4. Personal grain banking, legume			
1. No. of rooms in household			
5. Personal grain banking, shea nut			
2. No. of bowls (local)			
6. Personal grain banking dawadawa			
3. No. of bowls (Chines)			
7. Personal small ruminant (sheep)			
4. No. of bowls (English)			
8. Personal small ruminant (goat)			
9. battery radio cassette player			
9. Personal large ruminant (cattle)			
6. 4 battery radio cassette player			
10. Personal poultry			
7. 8 battery radio cassette player			
11. stock of eggs			
8. No. of water harvesting earthen pot			
02. Personal stock of shea butter			
9. No. of water harvesting drum			
12. Remittance/source/amount			
10. No. of water harvesting polytank			
14. How will you rank your in relation to others (Ultra poor,, Moderate poor, Better off and Rich)			
11. cupboard (local)			
12. cupboard (glass)			
14. Annual income			
13. cooker ( local tripod )			
16. salary or pension or other emoluments			
14. cooker ( wooden stove)			
15. cooker (gas cylinder)			
16. cooker ( electric)			
17. No. of hoes in the household and number belong to the respondent			
18. a pair of bullock and plough			
19. 2 pair of bullocks and plough			
20. donkey cart			
21. old bicycle			
22. new bicycle			
23. agro-processing equipment/machineries (specify)			
24. corm mill			
25. stock of food available			
30. others			

55a. what has been the trend of your financial capital over the past five years?

Increasing [1], Decreasing [2] or Stagnant [3]

56b. what extent do you exert control over your financial resources?

Full control [1], Partial control [2] or No control [3]

57c. how will you score the sustainable status of your financial capital? From a scale of 1 to 5 ( 1;Not sustainable at all to 5; very high sustainable)

**58. Social Capital**

Social Capital	
1. status in community; native/settler	
2. participation in community governance	
3. Village governance (level of authority )	
4. Household head status in Village governance	
5. Household wealth rank status (Ultra poor,, Moderate poor, Better off and Rich)	
6. No. of group in the community	
7. Personal participating in group	
8. Religious inclination	
9. Level of participation in social activities like funerals, wedding, outdoorings etc	
10. Type of relation to other members in the community	
11. Level of acceptance in the community	
12. Access to opportunities	
13. Access to community resources like dam, borehole etc.	
14. does your spouse assist you in domestic chores	
15. are consultant in decision making process in the household	
16 status within household	

59a. how readily do you access social capital available to you over the passed year?

More readily [1], readily [2] or less readily [3].

59b. what has been the trend of your social capital over the past five years?

Increasing [1], Decreasing [2] or Stagnant [3]

60. How will you score the sustainable status of your social capital? From a scale of 1 to 5 ( 1;Not sustainable at all to 5; very high sustainable) Not sustainable at all [1], some what sustainable [2], quit sustainable [3], highly sustainable [4] or very high sustainable [5]

**61 Natural Capital**

Household/Community Natural Capital	
1. Land ownership and size(personal/household)	
2. forest/wood ownership (personal/household) access and management	
3. communal Woodlot ownership, management and access	
4. water source and availability	
5. mineral; type and accessibility	
6. river	
7. lake	
8. does your family/married home own land	
9. If. Do you have right of ownership/inherence of such land.	
10. Others (specify)	

62a. what has been the trend of household/community Natural Capital (quality and quantity) over the past five years? Increasing [1], Decreasing [2] or Stagnant [3]

63b. how readily do you access the community natural capital over the past five years?

More readily [1], readily [2] or less readily [3]

64c. how will you score the sustainable status of your Natural capital? From a scale of 1 to 5 ( 1;Not sustainable at all to 5; very high sustainable)

**G: Community Related Factors**

65 How will you describe the road network to your community? Good [1] or poor [2]

66. What source of water do you rely on? Nearby stream [1], dam/dug out [2], well [3], borehole [4] pipe borne water [5] others (specify).....

67. How far is your source of water from the community? Within the community [1], 2km away from the community [2] or more than 2km away from the community [3]

68. How many village/town markets do you access for your goods? 1 [1], 2 [2], 3 [3] or more than 3 [4]

69.. Location of the market; within the community [1], 10km away from the community [2] or more than 10km away from the community [3]

70. Location of the nearest school; within the community [1], 10km away from the community [2] or more than 10km away from the community [3]

71.. Location of the clinic/health post; within the community [1], 10km away from the community [2] or more than 10km away from the community [3]

72. Location of the nearest source of fuel wood; within the community [1], 10km away from the community [2] or more than 10km away from the community [3]

73a. Apart from wood what else do you use for heating an cooking?.....

**H: MICROCREDIT AND BORROWERS LIVELIHOOD**

74.Please indicate the source of your credit

Year	Source of Credit	Amount received	Interest paid	Duration	Extent of investment	Extent of repayment	Mode of payment
2003							
2004							
2005							
2006							
2007							
2008							

NB; Extent of investment of borrowed fund; invest all [1], invest part [2], or invest none [3]

Extent of payment; full payment [1], partial payment [2] or paid none [3]

75a. if you do not invest your entire borrowed fund on your livelihood, what did you use the rest for? Consumption [1], buy cloths [2], pay children school fees [3], surrender to husband/family relatives [4] or others (specify).....

76. Did you seek approval from your husband/family relative before accepting the credit? Yes [1] or No [2]

77a. if yes/no, why?.....

78. What livelihood activity (ies) do you invest your borrowed fund on? Agro-processing [1], petty trading [2], agriculture [3] or other (specify).....

79a. do you ever receive training or equipment/tools from the credit providers? Yes [1] or no

79b. if yes what kind of training fill this table

Kind of training	Equipment/tools	Organization offering the training	Usefulness of the training

80a. has the credit help to improve on your livelihood? Yes [1] or no

80b. Explain.....  
 ...  
 .....

81. What has been the trend of your income/profit accruing from your livelihood activities since you started benefiting from the credit facility? Increasing [1], decreasing [2] or remained stagnant [3]

82c .explain.....

83. Please list and rank the items on which you spend your income on according the amount spent

Expenditure terms	Rank
1. Food/soup ingredients	
2. Clothing	
3. Children education	
4. Children health	
5. Social occasions/activities	
6.	
7.	
8.	
9.	
10.	

84 .Do you belong to any group? Yes [1] or No [2]

If yes/no  
why?.....

.....  
.....

**APPENDIX B:**

**QUESTIONNAIRE FOR DATA COLLECTION ON THE TOPIC “SOCIO-ECONOMIC ANALYSIS OF LIVELIHOOD STRATEGIES OF RURAL WOMEN**



**BENEFICIARIES OF MICROCREDIT IN THE TOLONG/KUMBUNGU DISTRICT OF NORTHERN REGION”**

**Questionnaire for Managers of Microcredit Schemes**

1. Name of institution .....
2. Type of institution; NGOs [1], Rural Bank [1], Loan and Saving Company [3], Susu Collection Company[4], District Assembly [5] or others (specify).....
3. When was the institution established?.....
4. When did the institution start giving loans to women?.....
  
5. What are/is your coverage area(s)?  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....
6. Who are beneficiaries of your credit scheme? Male farmers [1], female farmers [2], both male and female farmer [3], women traders [4], women agro processors [4] or others(specify).....
7. What criteria do you use in selecting beneficiaries?  
.....  
.....  
.....  
.....
8. What are/is the source of funding to your credit scheme? Government/DA common fund [1], donor funding [2], saving mobilization [3], others (specify).....
9. How many loan officers operate the credit scheme?
- 10.

Number of loan officers and their operational areas		Sex of loan officers	Number of clients serve		Total
Name of operational area	Number of loan officers		Male	female	

11. What is the mode of disbursement of your credit scheme? Individual [1], group [2], others (specify).....  
 .....  
 .....

12. Do you collaborate with other organization in disbursing your credit? Yes [1] or No [2]

11a. if yes, name the institution/organization.....

Name of collaborating organization	Nature of collaboration
1.	
2.	
3.	
4.	

13. What categories of people do you consider for your loans? Only women [1], women and men [2], farmers [3], others (specify).....

14. How many clients did you give credit to in..

year	Female	Male	Total
2003			
2004			
2005			
2006			
2007			
2008			

15. What was the volume of credit you gave to your clients in

Year	Amount (GH ¢)			Interest rate charge	Repayment rate	Level of satisfaction with repayment rate
	Female	Male	Total			
2003						
2004						
2005						
2006						
2007						
2008						

Level of satisfaction with repayment rate: satisfied [1] or unsatisfied [2]

10a. if unsatisfied with repayment rate, what are you doing to encourage repayment?

.....  
 .....

16. Will your organization continue to provide credit for women? Yes [1] or No [2]

16a. if no, why?.....  
 .....  
 .....

17. Does your organization provide Business Development Service to your clients? Yes [1] or No [2]

18a. if yes, what kind of BDS you provide and who bear the cost of providing the service?

Type of BDS	Institution providing the service	Who bear the cost of the service( Beneficiaries [1] or organization [2])
1.		
2.		
3.		
4.		
5.		

18b. if no, why?.....

19 What other forms of interventions do your organization under take in your operational area apart from credit?.....

20. What problem(s) do you face in providing credit to women?

21. What do you think can be done by the stakeholders in solving the above mentioned problems?

- Your institution.....
- Central government.....
- District Assembly.....
- Donor organizations.....
- Bank of Ghana.....
- Beneficiaries women.....
- Others .....

Any comments about running and sustainability of the credit scheme.....

Thank you

## **APPENDIX C: FOCUS GROUP DISCUSSION CHECK LIST**

### **[A] INTRODUCTION**

- Introduction of members, both research team and focus group participants.
- Purpose of gathering.

### **[B] DISCUSSION**

- Discussion on credit received, source and challenges associated with their ability to access credit( terms and conditions, interest charges payment schedule and timeliness of the credit)
- Discussion on the type of livelihood activities engaged in
- Nature and characteristics of livelihood assets from which they draw their livelihood; nature and trend of capital inputs ( financial, social, natural, physical and human capitals)
- What has been the trend of the various economic activities (from 2003 to 2007)?
- What are the underlying causes of these changing trends?
- Questions on Nature and characteristics of accumulated assets
- A discussion about the shift in livelihood and the extent to which it has occurred.
- A discussion about the possible causes.
- A discussion about the perceived outcomes of the shift.
- Has there been any cultural change.
- Has there been and social change.
- Which NGO's or social groups are operating here.
- Which of them have been most helpful?
- Discussions on community characteristics (source of water, fuel wood, roads, clinic, school etc.) and how it influences their livelihood?
- Intra-household characteristics ( role of spouse in domestic chores, control of household resources) and how it impact on their livelihood
- Exercise of community/household wealth ranking
- What are the general problems inhabiting your livelihood