

AN ASSESSMENT OF THE CONTRIBUTION OF CASHEW PRODUCTION TO LOCAL
ECONOMIC DEVELOPMENT, A CASE STUDY OF THE BRONG AHAFO REGION

BY

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DECLARATION

I hereby declare that this work is my own work towards the Master of Science degree and that to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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ABSTRACT

Effective poverty reduction in Ghana is underpinned by sustainable local economic growth and development. It is for this reason that the Government of Ghana aims to ensure local ownership of development interventions. One way of ensuring local economic development is through the promotion of non-traditional agricultural commodities such as cashew. With the Brong Ahafo Region's comparative advantage in the production of cashew, the industry has gained currency with several farmers engaged by it.

Following this the study sought to assess the contribution of the cashew industry to the local economic development towards poverty reduction. With data from both primary and secondary sources, the study identified that first; the cashew industry has provided employment to about 8,233 people in Jaman North, Tain, Wenchi and Kintampo districts. These farmers received technical and logistical support from MoFA, chiefly under the Cashew Development Project (CDP).

A total amount of GH¢2,417,013.00 has been dispensed as credit to about 4,580 farmers towards the CDP between 2004 and 2007. However, the study revealed that the low priced variety is mostly produced in the study areas. Again it was identified that there was no fixed prices for the cashew products like that of Cocoa. The prices of cashew products were rather determined by the forces of demand and supply.

For the cashew industry to have improved the economic lives of many of the people in the districts, the study recommended that MoFA should educate and train farmers to use improved cashew seeds and disease resistant varieties. Again, the government should take over the responsibility of fixing the prices of cashew nuts like that of cocoa so that the farmers would be secured even if there is a bumper harvest. Finally, the government could operate a buffer stock system to avoid a situation where supply exceeds demand to force the price down.

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To Him, the one and only giver of wisdom, the omnipotent, omnipresent and the giver of life, I say "BLESSED BE THY NAME". Finally, I dedicate this study to my children, Alex Osei Sarpong, Ofosu Sarpong Kobi and Nana Gyensaa Sarpong.

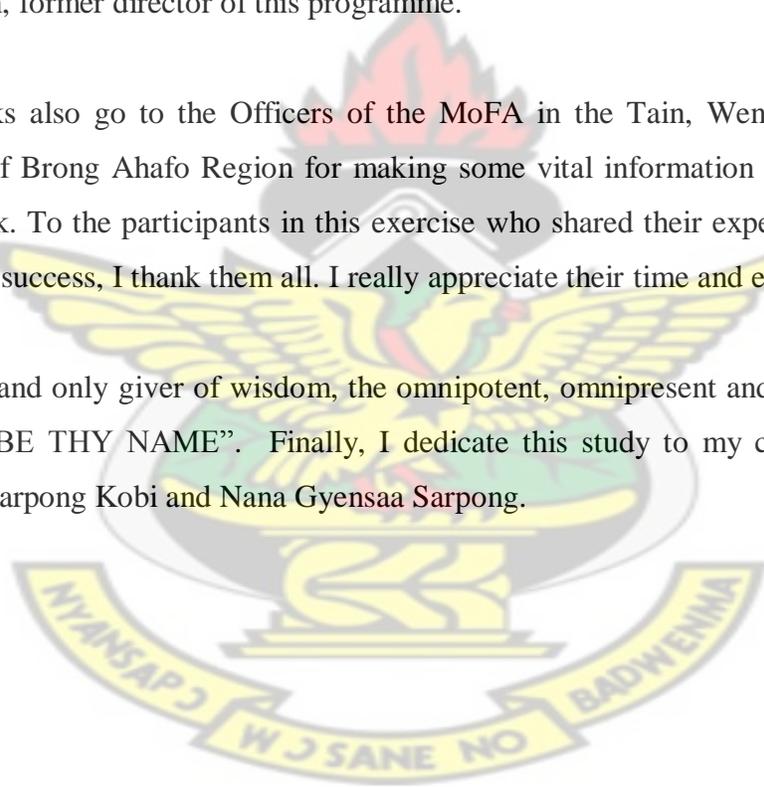


TABLE OF CONTENTS

| CONTENTS | PAGES |
|---|-------|
| COVER PAGE..... | i |
| DECLARATION..... | ii |
| ABSTRACT..... | iii |
| ACKNOWLEDGEMENTS..... | iv |
| CONTENTS | v |
| LIST OF TABLES..... | ix |
| LIST OF FIGURES..... | x |
| LIST OF PLATES | xi |
| LIST OF APPENDICES | xii |
| LIST OF ABBREVIATIONS AND ACRONYMS..... | xiii |

CHAPTER ONE GENERAL INTRODUCTION

| | |
|-------------------------------------|---|
| 1.1 Background to the Study | 1 |
| 1.2 Problem Statement | 3 |
| 1.3 Research Questions | 5 |
| 1.4 Key Assumption | 5 |
| 1.5 Objectives of the study | 5 |
| 1.6 Scope | 6 |
| 1.7 Justification | 6 |
| 1.8 Limitations of the Study | 7 |
| 1.9 Organisation of the Study | 8 |

CHAPTER TWO

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

| | |
|--|-----------|
| 2.1 Introduction | 9 |
| 2.2 Definition of some Related Concepts | 9 |
| 2.2.1 The Concept of Economic Growth and Development | 9 |
| 2.2.2 The Concept of Development | 10 |
| 2.2.3 The Concept of Local Economic Development (LED)..... | 12 |
| 2.3 Approaches to Local Economic Development | 14 |
| 2.3.1 Growth Promotion Approach to LED | 14 |
| 2.3.2 Structural Change Approach to LED..... | 15 |
| 2.3.3 Localization Approach to LED | 16 |
| 2.4 Local Government Authorities and Local Economic Development | 17 |
| 2.5 The Status of Cashew Industry in Ghana | 20 |
| 2.6 The Performance of Cashew Industry in some selected Countries | 22 |
| 2.6.1 International Cashew Industry | 22 |
| 2.6.2 Cashew Industry in Nigeria | 26 |
| 2.6.3 Cashew Industry in Tanzania | 29 |
| 2.6.4 Mutual Link between Cashew Industry and the Economy..... | 30 |
| 2.7 Conceptual Framework for LED | 31 |
| 2.8 Lessons Learnt from the Review | 33 |

CHAPTER THREE

RESEARCH METHODOLOGY

| | |
|------------------------------------|-----------|
| 3.1 Introduction | 34 |
| 3.2 Research Approach | 34 |
| 3.3 Research Units | 34 |

| | | |
|------------|---|-----------|
| 3.4 | Research Variables | 35 |
| 3.5 | Sample Size Determination | 35 |
| 3.6 | Sampling Procedure | 36 |
| 3.7 | Sources of Data and Data Collection Techniques | 37 |
| 3.8 | Data Analytical Techniques | 38 |
| 3.9 | Summary | 39 |

CHAPTER FOUR

ANALYSIS, PRESENTATION AND DISCUSSION OF DATA

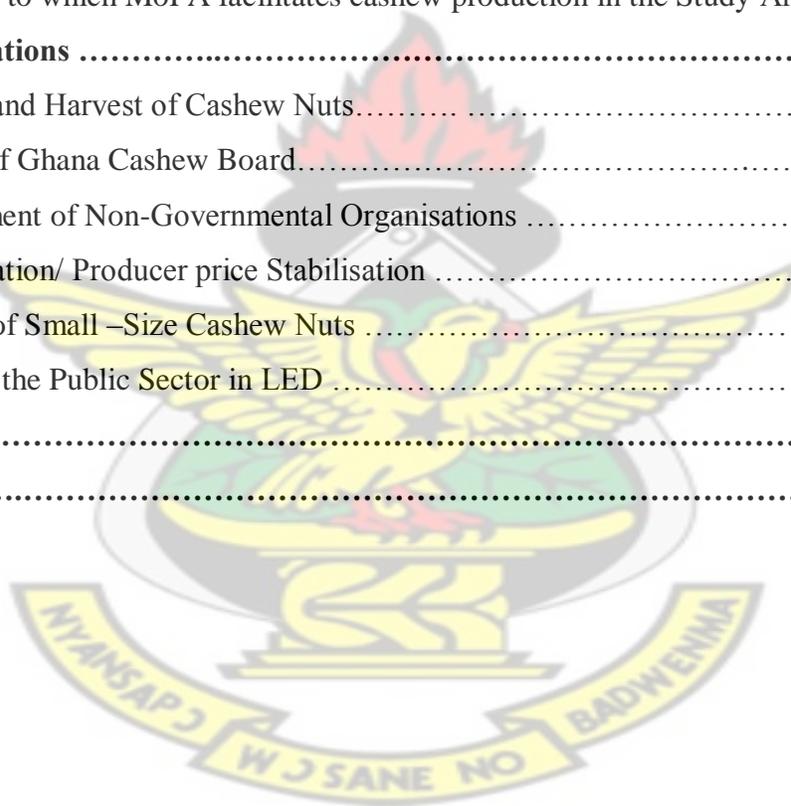
| | | |
|------------|--|-----------|
| 4.1 | Introduction | 40 |
| 4.2 | Background of the Study Districts in Regional Context | 40 |
| 4.2.1 | Location and Size | 40 |
| 4.2.2 | Vegetation and Climate | 41 |
| 4.2.3 | Population | 42 |
| 4.2.4 | Age an Sex Structure | 42 |
| 4.2.5 | Employment Status..... | 43 |
| 4.2.6 | Industry | 43 |
| 4.2.7 | Occupation | 44 |
| 4.2.8 | Transportation | 44 |
| 4.3 | The Status of Cashew Industry in Brong Ahafo Region | 45 |
| 4.3.1 | Land Acquisition | 47 |
| 4.3.2 | Income Distribution among Cashew Farmers | 48 |
| 4.3.3 | Gender Distribution in Cashew Industry | 50 |
| 4.3.4 | Access to Credit Facilities | 52 |
| 4.3.5 | Access to Market Opportunities | 52 |
| 4.3.6 | Raw Cashew Nuts Processing | 53 |
| 4.3.7 | Environmental Situation | 55 |
| 4.3.7.1 | Environmental Impacts of Cashew Production | 55 |
| 4.3.8 | Access to Agricultural Extension Services | 57 |
| 4.3.9 | Constraints of Cashew Production..... | 58 |

| | |
|---|-----------|
| 4.3.10 The prospects of cashew industry in the study area | 60 |
| 4.4 Cashew Industry and Local Economic Development..... | 60 |
| 4.5 Summary | 63 |

CHAPTER FIVE

KEY FINDINGS, RECOMMENDATIONS AND CONCLUSION

| | |
|---|-----------|
| 5.1 Introduction | 64 |
| 5.2 Key Findings | 64 |
| 5.2.1 The Role of the Cashew Industry to LED..... | 64 |
| 5.2.2 Effects of Cashew Production on the Environment | 64 |
| 5.2.3 The Extent to which MoFA facilitates cashew production in the Study Areas | 65 |
| 5.3 Recommendations | 66 |
| 5.3.1 Production and Harvest of Cashew Nuts..... | 66 |
| 5.3.2 Formation of Ghana Cashew Board..... | 67 |
| 5.3.3 Encouragement of Non-Governmental Organisations | 67 |
| 5.3.4 Price Regulation/ Producer price Stabilisation | 68 |
| 5.3.5 Production of Small –Size Cashew Nuts | 68 |
| 5.3.6 The Role of the Public Sector in LED | 68 |
| 5.4 Conclusion | 68 |
| References..... | 70 |



LIST OF TABLES

| Tables | Pages |
|---|-------|
| Table 2.1 Major Cashew Production Districts in Ghana..... | 21 |
| Table 2.2 Cashew Products..... | 24 |
| Table 2.3: India's Imports of Raw Cashew Nuts | 25 |
| Table 2.4: Income from Cashew Exports, 2003 -2008 | 27 |
| Table 3.1: Sample Sizes | 36 |
| Table 3.2: Research Questionnaire Response Rate | 38 |
| Table 4.1: Volumes and Values of Cashew Exports 2000 - 2008 | 46 |
| Table 4.2: Land Ownership | 48 |
| Table 4.3: Income Distribution | 48 |
| Table 4.4: Gender Distribution in Cashew Production | 51 |
| Table 4.5: Gender Distribution in Cashew Processing Factories | 51 |
| Table 4.6: Access to CDP-ADB Credit Facilities, 2004 – 2007..... | 52 |
| Table 4.7: Major Cashew Nut Processors in the Study Areas | 54 |
| Table 4.8: Training Programmes for Cashew Farmers in the Study Areas..... | 57 |
| Table 4.9: Farmers' Assessment of Extension Services Received | 58 |
| Table 4.10 District Assemblies' Revenue from Cashew Produce | 62 |

LIST OF FIGURES

| Figures | Pages |
|---|-------|
| Figure 2.1 Public Investment and LED..... | 20 |
| Figure 2.2: A Conceptualised Relationship between Cashew Industry and LED | 32 |
| Figure 4.1: Lorenz Curve showing Income Disparity among Cashew Farmers..... | 50 |
| Figure 4.2: Environmental Rating by Farmers..... | 56 |



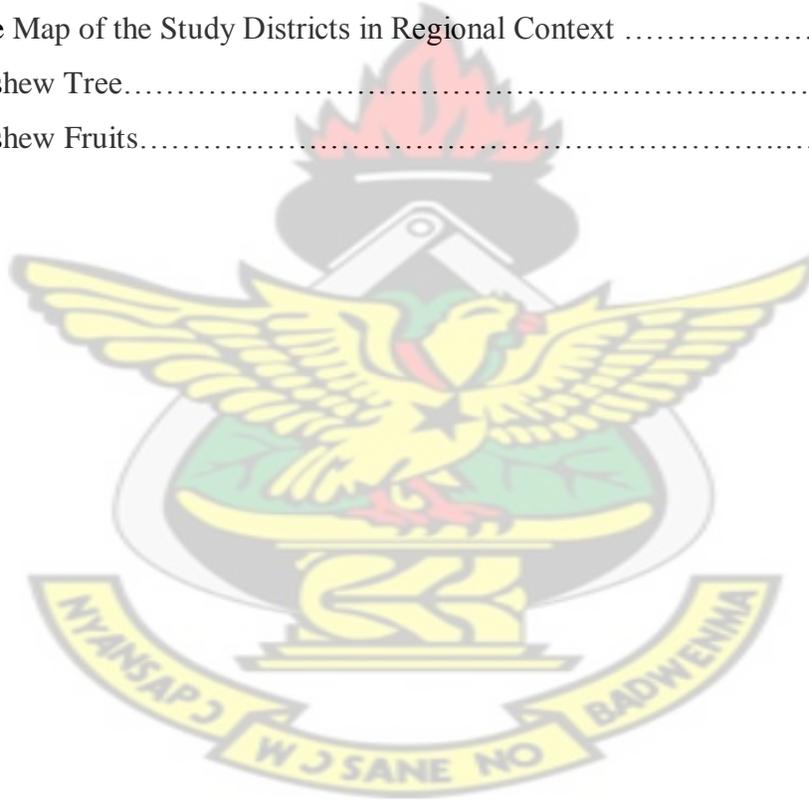
LIST OF PLATES

| Plates | Pages |
|--|-------|
| Plate 2.1: Cashew Kernels Prepared and Packaged Differently..... | 23 |
| Plate 4.1: Raw Cashew Nuts being off loaded at Nuts Processing Factory at Nsawkaw..... | 54 |



LIST OF APPENDICES

| Appendices | Pages |
|--|-------|
| Appendix 1: Questionnaire for District Agriculture Development Units | 75 |
| Appendix 2: Questionnaire for Cashew Farmers | 79 |
| Appendix 3: Questionnaire for Cashew Buyers..... | 83 |
| Appendix 4: Questionnaire for Cashew Processors..... | 87 |
| Appendix 5: The Map of the Study Districts in Regional Context | 91 |
| Appendix 6: Cashew Tree..... | 92 |
| Appendix 7: Cashew Fruits..... | 93 |



LIST OF ABBREVIATIONS AND ACRONYMS

| | |
|---------|--|
| AAGDS | Accelerated Agricultural Growth and Development Strategy |
| ADB | Agricultural Development Bank |
| ADF | African Development Fund |
| ADRA | Adventist Development and Relief Agency |
| AfDB | African Development Bank |
| BoG | Bank of Ghana |
| CAPEAG | Cashew Processors and Exporters Association of Ghana |
| CDP | Cashew Development Project |
| CNSL | Cashew Nut Shell Liquid |
| DADU | District Agricultural Development Unit |
| DPA | Direct Productive Activity |
| EU | European Union |
| FAO | Food and Agricultural Organisation |
| GDP | Gross Domestic Product |
| GNP | Gross National Product |
| GNPA | Ghana National Procurement Agency |
| GoG | Government of Ghana |
| GPRS I | Ghana Poverty Reduction Strategy |
| GPRS II | Growth and Poverty Reduction Strategy |
| IMF | International Monetary Fund |
| LED | Local Economic Development |
| LEDNA | Local Economic Development Network of Africa |
| MoFA | Ministry of Food and Agriculture |
| MTDP | Medium Term Development Plan |
| NGO | Non Governmental Organisation |
| NTES | Non-Traditional Export Sector |
| PRS | Poverty Reduction Strategy |
| PSD | Private Sector Development |
| PSDS | Private Sector Development Strategy |

| | |
|--------|---|
| RAISE | Rural and Agricultural Incomes in a Sustainable Environment |
| SOC | Social Overhead Capital |
| TIPCEE | Trade and Investment Programme for Competitive Export Economy |
| UK | United Kingdom |
| USA | United State of America |
| USAID | United States Agency for International Development |

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CHAPTER ONE

GENERAL INTRODUCTION

1.1 Background to the Study

Blakely (1988), defines Local Economic Development (LED) as a process by which local government and/or community –based groups manage their existing resources and enter into new partnership arrangements with the private sector, or with each other, to create jobs and stimulate economic activities in a well defined economic zone. In other words, LED is about local people working together to achieve sustainable economic growth that brings economic benefits and improvement in the quality of life for all in the locality. The essence of LED is therefore a process whereby optimal use is made of endogenous potentials and resources to ensure the creation of economic activities to bring about an improvement in the living conditions of the people. In contemporary times, the local levels are seen as the main focus for economic development. Local economic development has become a major development focus and paradigm over the past three decades due to the failure of centralized economic management to provide all the necessary development especially, at the local level.

The Government of Ghana (GoG) launched a 25 –year perspective plan (Ghana Vision 2020), in 1995 for national development. The aim was to transform Ghana from a low-income economy to middle –income country by the year 2020. To attain the rate of growth required to make such a transformation, the Ministry of Food and Agriculture (MoFA) formulated a medium term (1997-2007) Accelerated Agricultural Growth and Development Strategy (AAGDS) to increase the Agricultural sector’s growth rate from 2-3 per cent (1990- 96) to 5-6 per cent per annum (ADF, 2000).

In line with the AAGDS, MoFA identified cashew as one of the Non-Traditional agricultural commodities for which Ghana has a comparative advantage to produce for domestic market (food and industrial material), and for export to regional and international markets. MoFA as a result have been providing technical and logistical supports to the cashew farmers.

The cashew industry is one sub-sector that has the potential to increase Ghana's foreign exchange earnings. However, the long-term neglect of the cashew in favour of cocoa production has left Ghana behind in competing for a global cashew market worth billions of US dollars (ADF, 2000). However, the past 14 years in Ghana have been characterised by frantic government efforts to resuscitate the economy through structural reforms recommended and supported by donor agencies, particularly the World Bank and the International Monetary Fund (Bank of Ghana, 2007 cited in CDP (2008)).

The Non-Traditional Export Sector (NTES) has been given attention in economic development due to persistent deterioration in the terms of trade for the country's major or traditional exports – cocoa, timber, and minerals (gold, diamond, bauxite and manganese). (Bank of Ghana, 2007 cited in CDP (2008)). For example the cashew sub-sector grew at 30 per cent in value to US\$1,164.5 million in 2007, from US\$892.9 million in 2006.

Cashew is one of the agricultural products with the greatest potential for increasing foreign exchange and employment. There is a growing demand on the world market for cashew kernels as well as its by-products. It is ranked third in the world of nuts after Almond and Walnut with a world demand of about 1.75 million metric tonnes (Ghana Cashew Association, Brong Ahafo chapter, 2008).

There are prospects to increase cashew production and processing for both local consumption and export even though Ghana is a late developer of cashew crop. For example production of raw cashew nuts increased from 6,338 tonnes in 2003 to 34,633.88 tonnes in 2006; 23,616.40 tonnes in 2007 and 81,190.47 tonnes in 2008 (ISSER, 2002, 2006, 2007, 2008). In 2006, Ghana exported 47,000 metric tonnes of raw nuts. This earned the country about US\$ 23 million. This figure is considered small when compared with world excess demand of 430,000 metric tonnes of raw nuts, valued at US\$270 million, and growing at a rate of 5-8 per cent per annum (Ghana Shippers Council, 2007 cited in CDP (2008)).

Cashew is thus fast becoming an important component of the country's Non-Traditional Export Sector (NTES). It has become the source of livelihood to some Ghanaians, especially in the Brong Ahafo Region (BAR). Mim Cashew and Agricultural Products factory in the Asunafo North district of BAR processes cashew into brandy and cashew wine. Nsawkaw, Sampa and Awisa cashew factories in the Tain, Jaman North and Wenchi districts respectively process cashew into kernels for local consumption and export.

About 819,190 persons, representing 79.2 per cent of the population in (BAR), are economically active and about two-thirds (66.4 per cent) of this are in Agriculture (Ghana Statistical Service, 2005). About eight thousand people in the study areas are into cashew production. Many others are engaged as cashew farm labourers and workers in other related activities. The African Development Bank (AfDB) and MoFA have selected Wenchi, Tain, Jaman, Techiman and Kintampo districts in the region for the implementation of cashew development project, (ADF, 2000). It is therefore necessary to assess the contributions of the cashew production to the economic development of these areas and make recommendations where necessary.

1.2 Problem Statement

The Non-Traditional Export Sector (NTES) has been given attention in economic development due to persistent deterioration in the terms of trade for Ghana's traditional exports – cocoa, timber, and minerals (gold, diamond, bauxite and manganese). Cashew has thus been identified as one non-traditional crop that has the potential to generate foreign exchange for the country (Bank of Ghana, 2007 cited in CDP (2008)).

In 1998, the Brong Ahafo Cashew Farmers Association at a durbar held at Sampa, Jaman District complained of low prices for their cashew products resulting in low incomes at the end of the farming seasons. The causes of the low prices for the cashew products may be many. Few among them are; first, unlike cocoa, the prices of cashew products are neither fixed nor determined by the Government. The prices are rather determined by the forces of demand and supply. There is therefore a high level of price fluctuations. Secondly, the products are priced depending on the type of variety. However, in the study areas, the local (tiny, low priced) varieties of cashew are largely produced. Since the demand for the local type is low, these poor

farmers are compelled by the situation to take any price offered by the buyers. Again poor post-harvest handling or drying of the nuts reduces the utility (usefulness) in them. The buyers feel reluctant to buy such deformed nuts and that offer low prices for them. Finally, the cashew products in the study areas attract low prices because there are inadequate processing plants to add value to the raw nuts. The nuts are mostly sold in their raw state.

The issue of low prices and the resultant low incomes for cashew farmers in the study areas discourage the farmers from working on their farms. This reduces the Agricultural sector's contribution to Gross Domestic Product (GDP) and also worsens the farmers' living conditions. In the end some of these farmers claim they find it difficult to repay the loans they take to maintain their farms. This is likely to kill the industry in the study areas and increase the incidence of unemployment and poverty.

In July 2000, a mission was sent by the African Development Fund (ADF) upon the request of Government of Ghana (GoG) to appraise a Cashew Development Project (CDP) for financing by ADF. The sector's goal for the project was to improve living standards of the rural population by generating rural employment in order to contribute to poverty reduction, and earn foreign exchange for the country. It also sought to increase production and village level processing of cashew products towards poverty reduction. The CDP became operational in 2003 with ADF providing 85.7 per cent of the total project costs while the GoG also provided the remaining 14.3 per cent of the total project costs (ADF, 2000).

The study areas -Wenchi, Tain, Jaman and Kintampo districts were among the districts selected by the Ministry of Food and Agriculture (MoFA) in collaboration with the African Development Bank (AfDB) for the implementation of the CDP, (ADF, 2000). According to the District Agricultural Development Units (DADU) in the study districts, there are over 8,000 cashew farmers in these sampled districts. However, some of these cashew farmers do not take cashew production as a full time employment, perhaps due to the low prices for their cashew products and the resultant low incomes at the end of their farming seasons. On April 4, 2008, the Ghanaian Chronicle newspaper reported that cashew production had become attractive to the farmers in Jaman, Tain, Wenchi and Kintampo districts in the Brong Ahafo Region. It therefore

reported the need for cashew stakeholders to support the industry with more processing plants in these production centres to add value to the raw nuts. The Newspaper identified low prices as the major complaint of the farmers. This research is thus necessary to identify other challenges of the industry for consideration and address by the appropriate authorities.

1.3 Research Questions

1. What is the role of the cashew industry in Local Economic Development?
2. What effects has cashew production on the local environment?
3. What roles does the Ministry of Food and Agriculture play in the development of the cashew industry?
4. What are the prospects and challenges of the cashew industry in the study areas?
5. What is the way forward for the cashew industry?

1.4 Key Assumption

The objectives of the research are based on the premise that cashew production in the study area brings about local economic development. This is because there are about five processing factories and over twenty purchasing centres in the area.

1.5 Objectives of the study

The general objective of the study is to assess the potentials of the cashew industry for local economic development and propose policy options that will facilitate it.

Contextually, the study seeks to:

- i. examine the role of the cashew industry in local economic development;
- ii. assess the effects of the cashew production on the environment;
- iii. examine the roles of MoFA in the development of the cashew industry in the study area;
- iv. suggest policy options that could promote local economic development; and
- v.
- vi. examine the prospects and challenges of the cashew industry in the study areas.

1.6 Scope

Geographically, the study is limited to the Jaman, Tain, Wenchi and Kintampo districts of Brong Ahafo Region. However, comparisons are made with other regions or countries where necessary. The content of the study focuses on the cashew industry with emphasis on its contribution to the economic development of the study districts. The study expands from 2003 to 2008, the period when the Cashew Development Project by the MoFA and ADF became operational.

1.7 Justification

The Brong Ahafo Cashew Farmers Association claimed in 1998 that the cashew farmers receive low prices for their products. They claimed that this results in low incomes for the farmers at the end of the farming seasons thereby worsening their living standards and rendering them indebted to their creditors. Meanwhile, the Government of Ghana (GoG) through the MoFA and ADF introduced Cashew Development Project (CDP) which became operational in 2003 to ‘improve living standards of the rural population by generating rural employment in order to contribute to poverty reduction, and earn foreign exchange for the country. It also sought to increase production and village level processing of cashew products towards poverty reduction (CDP, 2008). The study districts were captured under the CDP and so this study is necessary to assess the contribution of cashew production to the LED.

The Ghanaian Chronicle newspaper reported on April 4, 2008 that cashew production had become attractive in Jaman North, Tain, Wenchi and Kintampo districts of Brong Ahafo Region but that the farmers were faced with low prices and inadequate processing plants in the production centres. The report was silent on the contribution of the cashew industry to the LED. This study is therefore necessary since it will identify the real challenges of the cashew industry, assess the contribution of cashew industry to LED, identify the prospects of the cashew industry to fight poverty and enhance local economic development in the study areas.

Finally, poverty reduction takes the centre stage in the development policies of many developing countries. Against this background, the ADF’s Appraisal Report on the Cashew Development Project in 2000, states that cashew production has the potential of generating significant

additional income for the rural population, and that contribute to poverty reduction. Again, a report by the Ghana Cashew Association, Brong Ahafo chapter in 2008, states that there are brighter opportunities in the cashew sub-sector for economic development in the Brong Ahafo Region but these opportunities seem not to be fully utilized. The report noticed that farmers as well as investors in the cashew industry in the region are not efficiently resourced and motivated to contribute effectively to the development of the local economies. The report claimed most farmers do not have access to credit facilities to maintain their farm. A research into the cashew industry in four selected districts of the B/A Region is therefore necessary since it will help to identify the challenges and potentials of the industry. It is hoped that the identification of the challenges and potentials in the industry will guide cashew stakeholders to take appropriate steps to bring about improvement in the local economies leading to reduction in unemployment rate, increased income generation, and reduced armed robbery and rural-urban migration. The findings and recommendations that have direct relevance on the industry in the study areas shall be the fulcrum around which similar studies will revolve in future.

1.8 Limitations of the Study

The study faced the following challenges in the process of collecting data;

a). Lukewarm attitudes of some respondents

Some respondents did not see the essence of the exercise since according to them, there had been similar exercises conducted in their communities which did not yield any fruitful results. This made it difficult to get some farmers to answer the questions. However, upon several interactions, most farmers came to realise that they had to provide the necessary information to enable other people get to know what was happening in the cashew production in their areas.

b). Limited time/ Wrong timing

The timing for the study coincided with the season when the farmers were busy working on their farms. A number of follow -ups were therefore made before they could be found. In certain cases, meetings had to be rescheduled. Again, the communities are so dispersed that a considerable amount of time was spent in traveling to respondents.

c). Illiteracy and Poor Record Keeping

Most of the respondents lacked formal education. This coupled with poor record keeping practices hindered smooth access to information. For instance, the estimation of the annual proceeds from their farms was a problem. However, with guidance they were able to cope with the study.

d). Financial and Personnel Constraints

There were not enough funds and hence only a handful qualified personnel could be engaged to assist in the data collection. As a result, the scheduled time had to be extended for seven days.

1.9 Organisation of the Study

The study is organised into five chapters. Chapter one contains the background to the study, the research problem, objectives, justification and limitations of the study. Chapter two covers a detailed review of literature on concepts of local economic development, economic growth and development and the contribution of cashew industry to LED. The third chapter presents the methodology for the study while chapter four analyses and presents the research findings. The fifth chapter takes a look at the key issues or findings from the analysis of the data collected from the field, offers recommendations to policy formulators and the general populace with respect to investment opportunities and LED in the study areas.

CHAPTER TWO

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 Introduction

This chapter examines existing literature on Local Economic Development (LED) to have a theoretical understanding of how the local economy could be developed with the available local resources and potentials. The chapter thus examines the concept of LED and its place in promoting growth and development in society. Various related concepts such as the concept of development, the concept of economic growth and development are discussed to assess the essence of developing the local economies to sustain social, political and economic development of local areas. The chapter also discusses how public investment can lead to LED. Also present is the performance of cashew industry in other countries such as Nigeria, India and Tanzania. This is examined to learn lessons from best practices to enhance Ghana's cashew sub-sector. Also present in this chapter is the conceptual and analytical framework. It explains how certain factors combine to bring about LED.

2.2 Definition of Concepts

The concept of economic growth and development, and the concept of development are two concepts that focus on development issues. These concepts are employed in this study to ease understanding of the concept of Local Economic Development (LED).

2.2.1 The Concepts of Economic Growth and Development

Economic development in the past was seen in terms of the planned alteration of the structure of production and employment so that agriculture's share of both production and employment declines while that of manufacturing and services increase (Todaro, 2003). Todaro claims that economic growth is a necessary condition to improve the quality of life. Development was therefore defined as a rapid and sustained rise in real output per head and attendant shifts in the technological and economic characteristics of society. This conceptualisation gave priority to increased commodity output instead of the human beings involved in the production. Increases in the output of such

industries were recorded as growth in the economy and for that matter development for the country (Kane and Sand, 1988).

Economic development implies a qualitative change in what or how goods and services are produced through shifts in resource use, production methods, workforce skills, technology, information, or financial arrangements. In other words, it is the growth of the country's wealth that is to improve the well being of the country's inhabitants (Todaro, 2003). Economic development increases a regional economy's capacity to create wealth for local residents. It depends upon deployment of a region's building blocks – labour, financial capital, facilities and equipment, know-how, land, other physical resources, and public and private infrastructure, (Kane and Sand, 1988 cited by Kane, 2004). A regional economy can grow without changing if it simply produces more of the same goods and services in the same manner. For example, an increase in the population of an area will mean more income and more demand-driven growth even absent of qualitative changes in the economic development environment.

Public officials pursue economic development initiatives to spur job growth, increase income for residents, raise property values, expand the tax base, improve the quality of life, stabilise communities, reduce poverty, and even lower crime rates (Kane, 2004). In the drive to influence regional economies, policymakers commit public resources to economic development efforts. The expected payoffs are growth and development but public resources may be misdirected or wasted if state and local governments engage in economic development efforts without understanding the opportunities and limits regarding public actions and regional growth. State and local economic development efforts work best when they fit the role for public-sector action and build upon local potentials and strengths to improve the long-run prospects for economic growth and vitality, (Kane and Sand, 1988 in Kane, 2004).

2.2.2 The Concept of Development

The concept of development has varied meanings and has been defined differently by different people at different times and at different locations. According to Curle (1995), development means the creation of a form of society in which certain conditions (safety, sufficiency, stimulus and satisfaction) prevail for human beings. Curle argues that development should focus on assuring all

people of sufficient resources to live and flourish, a safe environment, the satisfaction of a rich cultural life, and of stimulus for further growth and human development.

Prior to the 1970s, the concept of development was seen as an economic phenomenon in which rapid gains in overall and per capita Gross National Product (GNP) growth would either “trickle down” to the masses in the form of jobs and other economic opportunities or create the necessary conditions for the wider distribution of the economic and social benefits of growth. Issues relating to poverty, income distribution and unemployment were of less importance. However, in mid 1970s, the concept changed with emphasis on development of the people rather than development of things. For instance in Cocoyoc, Mexico in 1974, the new concept stressed more on human life and the natural environment rather than economic indicators such as Gross Domestic Product (GDP), Gross National Product (GNP) and economic growth UNCTAD/UNEP, (1974).

Seers (1969), states that development occurs when there is reduction and elimination of poverty, inequality and unemployment within a growing economy. To him, Economic growth is an increase in real GDP. GDP is just one dimension of development and so economic growth is a narrow measure of economic welfare. Seers therefore advocates for a sustainable development that meets the needs of the present people without compromising the ability of future generations to meet their own needs. That is, ensuring a better quality of life for everyone, now and for generations to come.

Kokor (2001) states that, development is not a cluster of benefits given to people in need but rather a process by which a populace acquires greater mastery over its own destiny. To him, three implications could be drawn from the above because with this type of development, there is the sharing of the means of production and decision-making which leads to empowerment. First, is a populist concern which stresses a more people and locally- centered dimension of development. Again, there is the need for participatory processes and methods whereby the concerned people are offered considerable scope to introduce their own development agenda, direct the process and control the results. Finally, there is an increase capacity of local people to act in their own interest and take ownership responsibility over their own development.

The researcher cites with Kokor because when the local people are involved in the development processes they tend to see the result as their brainchild and that feel proud to protect it. Again, it is inappropriate for government officials who had no idea about the prevailing conditions in the rural areas to prepare plans for implementation in these areas. The study thus adopts Kokor's definition of development because it talks about participatory processes which allow the concerned people to play a role in their own development agenda. For this study, development occurs when there is improvement in the indicators of human well-being. That is, improved living standard, reduction in poverty, inequality, unemployment and economic growth within the economy as indicated in Figure 2.2.

2.2.3 The Concept of Local Economic Development

“Local Economic Development (LED) is a process by which local governments and/or community-based groups manage their existing resources and enter into new partnership arrangements with the private sector, or with each other to create new jobs and stimulate economic activity in a well-defined economic zone” (Blakely,1988). Bergman and Goldstein (1986) cited in ILO (2001) define local or “the economic zone” as referring to a geographic area composed of a group of government authorities that share a common economic base and are close enough together to allow residents to commute between them for employment, recreation or retail shopping.

Kokor (2001) identifies three levels of locality. The first local level is a set, collectivity or consortium of communities, which have some established patterns of communication, economic exchange and social co-operation potential for collective action. Here, there is a local mode of communication and mobilisation for social development as well as face-to-face relations. Based on this, the district in the Ghanaian situation could be considered as a local level. The next is the community level, equivalent to town or a group of villages and often described as the most important level for development mobilisation and planning efforts. It is defined in geographic context. The last is a group or sub group level, which involves people associating together in clearly face-to – face relationship such as kinship and residential locations, ethnicity or others.

According to ILO (2001), LED is seen as a participatory development process that encourages partnership arrangements between the main private and public stakeholders of a defined territory, enabling the joint design and implementation of a common development strategy, by making use of the local resources and competitive advantage in a global context, with the final objective of creating decent jobs and stimulating economic activity. LED is thus about the indigenous development policies that employ the potentials of local human, institutional, economic and physical resources. This orientation leads to a focus on taking local initiatives in the development process to create new employment and stimulate increased economic activity. The reasons being that the previous economic development theories and programme efforts relied heavily on a belief that the benefits of economic growth and expansion will trickle down to improve the conditions of the poor. Policy formulators thus separated macroeconomic policies and maintenance programmes into two separate and distinct camps (Corporation for Enterprise Development, 1982).

Policy formulators focused almost exclusively on trying to remedy perceived defects in the poor communities in the form of inadequate education or skills, weak community supports, lack of motivation and ignored the very real, potent barriers in the structure of opportunities the poor confront on the demand side of the labour market equation (Corporation for Enterprise Development, 1982). LED is based on local initiative, driven by local stakeholders and it involves identifying and using primarily locally available resources, ideas and skills in an integrated way to stimulate economic growth and development. The aim is to improve quality of life for all (Local Economic Development Network of Africa (LEDNA, 2008).

Whatever form it takes, LED aims to increase the number and variety of job opportunities available to the local people. The local government and/or community groups must take on an initiative, rather than a passive role. In essence, local government with community participation and using the existing resources required can help to assess the potentials and mobilise the necessary resources to design and develop the local economy. For the purpose of this work, LED can be referred to as the process by which community based organisations stimulate or maintain economic activities and/or create employment opportunities. The principal goal for local economic development can thus be to develop local employment opportunities in sectors such as agriculture, industry, commerce, tourism etc. that will aid in the improvement of the lives of community

members using existing human, natural and institutional resources. This means LED aims at promoting participation and consensus building in the economic lives of people at the local level to promote growth and development. The ability to achieve this is based on the capacity to improve the business and productive infrastructure, or create an enabling environment that is favourable for entrepreneurial initiatives and investments, including access to financial resources and credit, in order to harmonise economic development and environmental protection. For a developed local economy, this study expects increased employment opportunities, reduced incidence of poverty and improved living standards of the local people.

National governments make policy and provide funds, research and other support for local economic development. However, local government authorities decide on LED strategies based on the overall vision outlined in their development plans. This should take into account the result of the analysis done to identify problems and prioritise development projects, (LEDNA, 2008).

2.3 Approaches to Local Economic Development

The general objective of LED as a development concept is to take some measure of control of the local economy back from the markets and the state. In pursuit of this, three approaches are conceptualised (Boothroyd, 1991).

These are:

- ❖ Growth promotion approach;
- ❖ Structural change approach; and
- ❖ Localisation approach.

2.3.1 Growth Promotion Approach to LED

The growth promotion approach predates the term LED itself, and places emphasis on the “E” in LED. Traditionally, growth promotion had been considered as economic promotions by chambers of commerce unions and politicians to grasp at any opportunity to attract investment in order to increase the size of the economy Eisinger, (1988). To Clarke et al. (1992), the Growth Promotion Approach is characterised by a focus on industrial recruitment through financial incentives such as tax abatement and loans in order to lower costs associated with land, infrastructure, and labour. This is known as “smokestack chasing”. Under the smokestack form of growth promotion, the role of the

local economic developer has been, first, to attract capital to the locality by pointing out the advantages of the locality to the investor. Secondly, he/she seeks to enhance local advantage by inducing the local government to augment and improve the local infrastructure and to initiate fiscal measures for the benefit of potential industrial investors without comprehensive strategy to minimise the net benefit of this investment for the locality. That is, the developer promotes the location to the potential employer, be it a factory, mine or college and tries to improve the likelihood of the employer locating within the area by providing incentives such as cheap land, labour or lax environmental regulations, (Clarke et al. 1992). This approach merely generates unhealthy competition between localities and develops into a game which there are substantially more players than prizes thereby inevitably leading to a sizeable number of losers.

Boothroyd and Davis (1991) observes in Canada that at worst, the smokestack chase promotion approach to LED has simply set into motion an international jet of con artists, charlatans, and plain crooks who demand grants, incentives, and tax advantages to set up plants that employ workers at low wages. They move in, skim off the cream, and then move on to another disadvantaged area. This approach to development has resulted in expensive fiascos right across Canada. Boothroyd (1991) thus sounds a note of caution to the policy of going all-out to solicit for investment from outside by all means through enticements without proper examination or consideration of local alternatives.

2.3.2 Structural Change Approach to LED

The focus of this approach is on the “D” in LED. Thus, it emphasises development as opposed to economic growth. Proponents of this approach are more concerned with stability and independence. Practitioners use strategies to retain and expand existing firms and also include a focus on small business development through entrepreneurial tools like loans and enterprise zones, (Clarke et al. 1992).

The proponents of the structural change approach claim that there are Strategic options that local authorities can develop to achieve stability and sustainability. These strategic options can be categorised into the following:

- ❖ Diversification of markets, product, job requirements and skills;

- ❖ Import substitution;
- ❖ Support of non-cash economy, for example: housework, traditional hunts and local exchange trading system, labour credit co-operatives and mutual aid;
- ❖ Local investment and ownership through credit unions, employee share- ownership plans, co-operatives and community development corporations;
- ❖ Resource control through resolving land claims and co-management.

Perhaps, the most significant structural change strategy of all is the control gained by local communities over their natural resources threatened by commercial interests which have no stake in any particular local economy. The strategy hence reduces dependence on external investment by increasing local-ownership; reduces dependence on outside decision-makers by increasing local control over resource management; and reduces dependence on traditional export markets.

2. 3.3 Localisation Approach to LED

This approach to LED postulates that structural change is necessary but not sufficient as a goal. A community can be stable and independent but remains exploitative and lonely. The main aim of proponents of this approach is to create a more “just or fair” production and distribution functions. The emphasis is shifted from growth and stability to equity. In other words, “L” is considered more of importance in LED (Boothroyd, 1991). This strategy or approach has been referred to as Sustainable Local Economic Development (SLED) because of the emphasis on local community Clarke et al. (1992).

The localisation approach employs a wide range of strategies, some of which relate to eliminating marginalisation and exploitation of particular groups within the locality such as women, children and the physically challenged. The strategies used can be categorised into the following:

- ❖ Distribution mechanisms devised for fair distribution of both economic benefits and costs;
- ❖ Non – cash mutual aid practices to help the weaker members of the locality;
- ❖ Quality of working life improvements;
- ❖ Democratic management structures.

The localisation approach is based on social development concerns which are based on the assumptions that;

- ❖ The local economy encompasses monetary and non-monetary market transactions just as in the family, economic and social relationships are interwoven;
- ❖ The primary goal of LED is to create equality and strengthen the sense of community among all individual members of the locality;
- ❖ Economic entrepreneurship should evolve more from collectivism than individualism;
- ❖ All members must be empowered to participate in decision-making processes that shape the locality's economic future.

Critics of this approach assert that for an individual, privacy displaces a sense of responsibility for and commitment to the public good. Wilson, (1983) as cited in Boothroyd (1991) alleges that life itself will become a refuge from an anonymous, faceless society. Since it is believed that humans cannot change anything, people create a sanctuary where they can, at least be comfortable by themselves. The approach is therefore, for many, a utopian ideal.

LED is a multi-faceted activity and must therefore respond to social and economic demands of localities. This means that to achieve an all-round development, the concept must be all embracing and borrow from each of the three approaches to LED.

2.4 Local Government Authorities and Local Economic Development

The District Assemblies, according to the local governments Act 462 (1993), are charged with the responsibility to see to the overall development of their areas of jurisdiction. This implies that the Assemblies are to ensure the development of all sectors of the local economies. This requires some investment in three sectors of the economy - the real sector consisting of agriculture and industry; the social infrastructural sector, that is the provision of education, health, housing, sports and recreation and water and sanitation facilities and the economic infrastructural sector comprising the provision of market infrastructure, extension electricity (energy), hospitality, trade, transportation and communication. These constitute what Curle (1995) refers to as certain conditions (safety, sufficiency, stimulus and satisfaction) in his definition of development.

Kokor and Kroes (1996) discuss four roles of local government authorities for local economic development. These are; Participatory, Facilitation, Regulatory and Adjustive.

(a) Participatory

With the participatory role, the local governments act as market entities. This is owners of productive assets. Local government authorities thus participate in equity positions and partnership arrangements which make purposeful use of local public resources directly available to the local economy. The local authorities in this sense can employ the growth promotion approach, structural change or localisation approach to ensure development of the area.

(b) Facilitation

The local government authorities in pursuance of facilitation role use instruments such as subsidies and incentives to encourage economic activities including delivery of public services. For example, the local government may provide electricity, water or roads at a particular locality with the view to attracting investors to the place. It may also be an incentive to retain the young and energetic working population, all for the purpose of LED.

(c) Regulatory

By this role, the local governments use their rating systems and by-laws to monitor the local private market. The local authorities see themselves as key players in an evolving national economic competition. One that requires efforts to shift to free economy and in many instances improves the socio-economic standing of its folks through equity planning during the strategic economic development process. Thus, the focus should be on strategies such as public-private partnerships to create a conducive economic atmosphere for the business entrepreneurs in the locality.

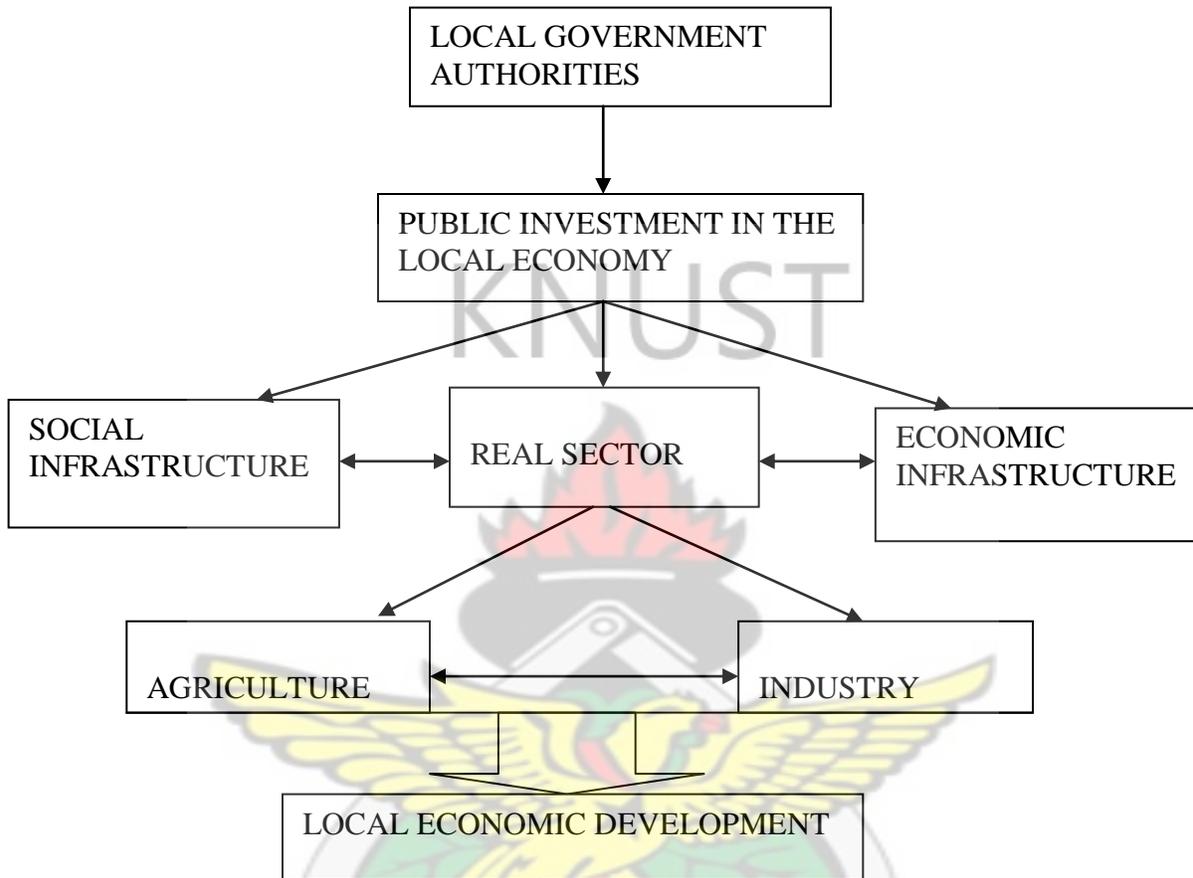
(d) Adjustive

This is a social role by which the local governments get involved in the provision of local public services that mitigate the negative effects of the markets, especially on the disadvantaged groups, reduce the uneven distribution effects of market forces. Market prices act as signals to producers to supply more or less of a commodity according to changing profitability of production. The

efficiency of the market relies on price acting as signals, and suppliers responding, on the mobility of the factors of production which enable supply. These conditions enable markets to perform allocative and creative functions. However, due to market imperfections, prices may not reflect marginal cost. Many developmental goods, which adequately meet social needs and services; where benefits go to entire society, may not be produced at all because markets are incomplete or missing entirely. The state therefore intervenes on behalf of consumers, especially the poor.

For LED, the local government authorities should adopt strategies that ensure the development of all sectors of the local economies. The real sector for instance, has the capacity to provide employment for the local populace and improve the revenue base of the local governments in the country. Unfortunately, most governments in developing countries like Ghana commit the chunk of the country's scarce resources into provision of social infrastructures. Figure 2.1 depicts that the main sectors; social, economic and real are mutually supportive of each other and that attention should be paid to all to serve as a conduit for growth and development. Nonetheless, the social and economic infrastructural sectors should facilitate the creation of an enabling environment for the real sector to bring about the needed development with the collaborative effort of the private sector, civil society and public institutions. The local government authorities facilitate and regulate the social and economic sectors to support the real sector that comprises agriculture and industry to provide employment opportunities with ripple effects in the economy as shown in Figure 2.1.

Figure 2.1: Public Investment and Local Economic Development



Source: Author's Construct May, 2009.

2.5 The Status of Cashew Industry in Ghana

Cashew is grown as a cash crop in the coastal belt (Central, Greater Accra, and Volta Regions), the transitional belt (north of Ashanti, Brong-Ahafo) and guinea savanna belt (parts Northern, Upper West and East regions). The ideal rainfall regime is between 750mm – 1300mm. Cashew is a hard crop which grows well on marginal lands. It is seen as an ideal crop for soil conservation and afforestation, especially in savannah areas (ADF, 2000). The crop is cultivated in all the ten regions of Ghana. The major production districts in the country are listed in Table 2.1.

Table 2.1: The major Cashew Production Districts in Ghana

| Region | Districts |
|----------------|--|
| Greater Accra | Ga West, Dangbe West |
| Ashanti Region | Ejura Sekyeredumase, Sekyere West, Offinso, Sekyere East |
| Central | Gomoa, KEEA, Asikuma, Twifo Hemang |
| Eastern | Afram Plains, Suhum Kraboa, Asuogyaman |
| Western | Ahanta West, Mphohor Wassa, Bibiani, Wassa Amenfi |
| Volta | Nkwanta, Hohoe, Kpandu, Akatsi, Keta |
| Brong Ahafo | Jaman, Wenchi, Kintampo, Nkoranza, Techiman, Atebubu |
| Northen | West Gonja, Bole, Yendi, Mamprusi |
| Upper East | Bawku, Builsa and Kassina-Nankena districts |
| Upper West | Nadowli, Jirapa-Lambussie and Sissala districts |

Source: ADF, 2000.

An estimated 3.24 million ha of suitable land is available for cashew cultivation in the country. Since 2003, the Cashew Development Project (CDP) has been ensuring the availability of improved planting materials or farm inputs, access to extension services, credit facilities for establishment of new cashew farms. This intervention was to overcome the problem of farmers using planting materials from unselected trees/farms for planting which had resulted in a lot of the farms established in the 90s producing uneconomic yields. To enhance the efficiency of cashew marketing in Ghana, Cashew Processors and Exporters Association (CAPEAG) has been formed and registered. The producer associations and processors/exporters associations are currently being trained on quality standards developed by the industry through appropriation of grades and standards, spearheaded by USAID TIPCEE project with support from the MOFA-CDP and other stakeholders (ADF, 2000).

The total installed capacity of the Nasaka group of processors, Winker Agro Processing, Shop Best, Nsuro, CRIG and Krobo Group of Processors is about 377 tonnes annually. However, about 50 per cent of this capacity is only utilised due to the inadequate working capital to purchase and stock raw nut all year round. About 25.6 million Ghana cedis credit facility was disbursed to at least 12,000 small holder farmers under MOFA's Cashew Development Project. But the farmers still do

not have easy access to farm credit to finance maintenance and expansion of their operations (CDP, 2008).

2.6 The Performance of Cashew Industry in some selected Countries

Cashew grows widely across the tropics under a range of conditions from managed plantations, through smallholding plots, to semi-wild or wild populations. Trade in the cashew industry revolves primarily around the raw nuts and kernels, although the cashew apple and the cashew shell present other marketing opportunities.

2.6.1 Cashew Industry in India

African countries produce about 36 per cent of the world's cashew nuts but export 75 per cent of the nuts in raw form, mostly to India. The value of such nuts as imported to India is about US\$900 per tonne. But the export value after processing averages US\$5,300 per tonne, about 489 per cent change. In India, an estimated 500,000 women process cashew nuts for a living in Tamil Nadu and Kerala, two states in Southern India. A report by Action Aid cited by Sijaona M.E.R. (2002) was that about 6,700 tonnes of cashew nuts are exported from India to the UK annually and 80 per cent of it is sold through supermarkets. The Indian Women shelling cashew nuts could produce between 5 and 10kg of nuts per day and export to UK for £9 per 1kg. However, trade liberalisation has had a damaging impact on the cashew processing industries in developing countries. For example, a condition of a World Bank loan to Mozambique was that it liberalised its cashew production, including abolishing subsidies to processing operations. World Bank's condition for abolishing subsidies for cashew processing led to the closure of most processing factories and the loss of 10,000 jobs, (Co-operative College, 2007).

❖ Cashew Products

The kernel is what the tree is primarily valued for. The cashew shell contains a corrosive phenol, Cashew Nut Shell Liquid (CNSL), which must be extracted before the shell can be removed to yield the kernel. CNSL has found many applications in the polymer-based industries -the most important use is in the manufacture of brake linings and clutch facings in the automotive industry. Some of the products of cashew on the international market are displayed in plate 2.1.

Plate 2.1: Cashew Kernels prepared and packaged differently



Source: Chemonics International Inc., 2002.

❖ Consumer Demand

The overall market for edible nuts – walnuts, almonds, macadamia, pecans, etc. has increased, particularly as consumers increasingly consider nuts as health food, albeit one with a high fat content. Products such as honey-roasted peanuts, chili-coated peanuts and tropical nut blends have been introduced into the market to meet consumer demands, and many traditional foods e.g. bread, corn flakes, chocolate, salads and bakery products, are now enriched with nuts.

Cashew kernels are high value luxury commodity with sales growing steadily at an annual rate of 7.0 per cent. There is substantial potential to exploit cashew by-product such as butter (from broken kernels), CNSL and Vitamin C-rich juice of cashew apples among others, (Hammed et al, and 2008).

Although, the sales of some basic nut products, such as peanuts, have been static, the premium nut market, i.e. cashews, pistachios, etc., has been doing well. Cashew is among the most popular nuts, although sales are restricted due to prices. They have low levels of saturated fats and soluble sugars; contain high percentages of proteins and polyunsaturated fatty acids to reduce cholesterol levels in the blood; and have high levels of mineral salts (Topper 2002). Since cashew production is restricted to the tropics, the kernel demand in the temperate markets must

be met through imports. The cashew kernel is used in the snacks, confectionery and bakery industries, with at least 60 per cent of kernels consumed as snacks. Kernels are popular as a roasted and salted nut for snacking, and whole, larger kernels are preferred for this purpose. The remaining 40 per cent, composed primarily of pieces of inferior grades based on size and colour, is supplied to the bakery and confectionary sectors for chocolate and candy making (Ezeagu, 2002). Table 2.2 shows how some cashew products are prepared and used.

Table 2.2: Cashew Products

| Input | Products | Description and Uses |
|--------------|-----------------|---|
| Nuts | Kernels | Raw nuts are processed into kernels by boiling, cracking, decorticating and roasting. |
| Apple | Prunes | Cashew prunes, produced by boiling the cashew apple in molasses, is very similar to dehydrated prunes or dates. |
| Apple | Juice | Cashew fruit is pulped by grating or pounding and the juice is pressed out and strained. Cashew juice has five times more citric acid than orange juice and is thus a good source of preservation acid medium when mixed with other fruit juices or vegetables. |
| Apple | Wine | The juice from the cashew fruit can be processed into wine using the conventional method of producing fruit wines. The alcoholic content averages 18 per cent. |
| Apple | Pulp | The fibrous pulp obtained after extracting juice from the cashew apple can be used as animal feed or dried and processed into diet fiber biscuits. |
| Apple | CNSL | Extracted from the cashew shell, Cashew Nut Shell Liquid (CNSL) is used in the manufacturing of paints, varnishes, resins and brake linings. |
| Shell | Fuel Wood | After extraction of the shell liquid, the spent shells are used as a processing fuel. |

Source: Chemonics International Inc., 2002.

❖ Production

Four producer countries, India, Brazil, Vietnam and Tanzania, dominate the cashew industry. It is difficult to provide an exact assessment of global production, as information could not be accessed. However, figures provided by the Food and Agriculture Organization (FAO) in 2001 suggest a global output of 1.4 million tonnes per year. India is the largest buyer of raw nuts, followed by Vietnam and Brazil, and the raw nut trade is primarily focused on the Indian requirement. India and Vietnam import raw nuts in order to keep processors in operation year-round. Table 2.3, taken from Indian import figures, illustrates that India has been increasing its raw nuts imports. Africa supplied about 90 per cent of India's raw nuts requirement. While Asia has declined in importance as a supplier, West Africa has been the fastest growing source of raw nuts globally.

Table 2. 3: India's Imports of Raw Cashew Nuts in Metric Tonnes (MT)

| Origin/Yr | 1993/94 | 1996/97 | 1999/00 | Trend | % Increase |
|-----------|---------|---------|---------|-------|------------|
| W. Africa | 51,482 | 61,260 | 110,000 | ↑ | 79.6 |
| E.Africa | 80,219 | 88,149 | 109,400 | ↑ | 24.0 |
| Asia | 59,000 | 52,155 | 10,760 | ↓ | -20.6 |
| Other | 621 | 11,288 | 12,523 | ↑ | 10.9 |
| Total | 191,322 | 212,852 | 242,683 | ↑ | 14.0 |

Source: Chemonics International Inc., 2002.

Key: ↑ increasing, ↓ falling, and ↑ increasing over 10 per cent per annum.

❖ Cashew Kernels

Cashew kernels represent the next step in processing of raw nuts, a step that India and Brazil have long profited on, and which is being attempted by many other cashew exporting countries. Vietnam, Tanzania, Mozambique, and others are all seeking to focus on export of processed kernels as the logical step in building their industries.

❖ Processing Technology

Before the nut can be consumed, the shell must be removed to release the kernel. This decortication is difficult and labour intensive. It is not a process that can be carried out by the consumer, as in the case of almonds or walnuts; neither is it viable to shell cashew nuts in developed economies where labour costs are high. It is critical to understand that although the shelling adds value to the product, the increase in value reflects the low yields of kernels, at around 22 - 24 per cent of the raw nuts input. One tonne of raw cashew nuts yields 150kg – 250kg (15-25) of decorticated kernels; this includes all grades, from wholes to pieces. Of these decorticated kernels the yield of wholes will vary from 55 to 85 per cent depending on the process and the skill of the operators, (Ezeagu, 2002). Cashew nuts can be shelled at the village level and there is significant local consumption throughout the growing regions. However, for export, volume output must be consolidated and the fragile kernel requires specialised packaging. Shelling therefore is usually centralised in processing factories, which may be entirely labour-based.

2.6.2 The Cashew Industry in Nigeria

Cashew has tremendous potential as a “cash crop” to generate foreign exchange and to create employment, especially for women, as well as curb desertification. There is a large and growing domestic and regional market for surplus kernels, as well as other cashew by-products. West Africa is now the major supplier of raw materials to the Indian processing powerhouses; co-operation between major exporting countries in West Africa could leverage improved prices. The industry focuses on low-end raw nut production, losing substantial income to countries like India and Vietnam by not focusing on value added products like the cashew kernel, (Ezeagu, 2002).

a/ Cashew Kernels

Nigeria processes approximately the same quantity of kernels as it exports as raw nuts. The majority of the kernels processed, approximately 75 per cent, are processed for the local market. Local kernels vary in quality and grades from those tied in nylons to those packaged in tins and bottles, competing for and in most cases winning shelf space with the few imports. Prices also vary considerably from US\$5-US\$14/kg, depending on quality, packaging and marketing outlet. Surprisingly, Nigeria has made inroads into the U.K., U.S. and the Middle Eastern cashew kernel

markets by consistently providing quality products in a timely fashion. Besides adding value, these facilities employ up to 550 people during peak production, more than half of them women. However, these processors need support to build and strengthen their position in the international market so as to earn more foreign exchange for the country. For example, in 2001 the Government earned a total of US\$ 7.459474 billion from cashew exports as depicted in Table 2.4.

Table 2.4: Income from Cashew Exports, 2000 -2001

| Criteria | 2001 US\$ |
|-----------------|--------------------|
| Cashew Kernel | 0.439,474 bn |
| Raw Nut | 7.02 bn |
| Total | 7.459474 bn |

Source: Chemonics International Inc., 2002.

b/ Market

Local consumption of cashew kernels follows the same market patterns as the international trade. The large sized kernels are consumed as snacks while the smaller splits, bits and pieces are used for cooking by bakeries, confectioneries and restaurants, particularly Chinese cuisine. The suppliers of cashew kernels to the local markets include factory processors (e.g. AgroPro; Cashew Nuts Processing Industry, Ibadan; Fugard, etc.), who supply to the supermarkets and restaurants/hotels while artisan processors process and package the kernels in nylons and recycled bottles for sale at the local markets and streets throughout Nigeria, (Chemonics International Inc., 2002).

c/ Trade

About 30 per cent of recorded Nigerian raw cashew nuts (valued at about US\$12 million) are exported to the major processing countries, such as India, Brazil and recently, Vietnam, for further value-added processing. Approximately, 10 per cent more goes unrecorded through Lagos port and/or neighbouring Cotonou, Benin Republic, where they receive a 20 per cent premium. Roughly 30-40 per cent of raw nuts are processed into kernels, the majority of which is for local consumption. A couple of Nigerian producers currently supply some US and UK

brokers with cashew kernels. There are usually two major buying outlets at the village level - buying centres and local markets. Buying centers are located in major producing areas where farmers can sell their products. These centres usually buy several commodities, depending on the seasonality of the product mix. The raw nuts are either exported or further processed into kernels for local consumption and/or export, (Chemonics International Inc., 2002).

d/ Processing

The local market processors/suppliers are more diverse. There are those that process just up to an intermediate stage, and then sell to finishers that roast, package and retail. Others perform all of the processing, packaging and distribution. These processors vary in size and sophistication from the individual artisans to the semi-automated factory. For instance, Agropro, which is based in Okigwe, Imo State was established in 1998 to process kernels for the export market. However, when kernel prices crashed in year 2001, the company was left with no choice but to focus on the unexploited local market. Surprisingly, Agropro is making much profit by concentrating on the domestic market, (Chemonics International Inc., 2002).

The majority of processing plants in Nigeria employ the labour-intensive Indian processing technology. The Oyo State Cashew Nuts Processing Company Plc. utilises the mechanised Italian process but it has the disadvantage of producing discoloured kernels resulting from the dripping of CNSL during processing. Under the labour-intensive Indian processing technology, a small-scale plant can process about 180 metric tonnes raw nuts per month during peak processing and requires about 550 people. An average of 350 of these 550 employees is women (64 per cent).

e/ Processing Constraints

Although a few processors have successfully supplied the international market, they still need help to strengthen and grow their very small, almost negligible market share. Major constraints include the high cost of capital and high staff turnover; more importantly, the challenges include purchasing and storing raw nuts to process throughout the year. India, the world's largest processor, purchases raw nuts throughout the year at favourable financing rates to supplement their supply. Brazil has a ban on the export of raw nuts and also imports when domestic supplies

are short. Since raw nuts constitute roughly 80 per cent of production cost in Ngeria, there is a need to develop cost effective methods to keep processors stocked with their raw inputs. Again, additional time and labour are needed to peel the testa from the kernel and to upgrade poor hygiene standards, as kernels produced are food products, (Ezeagu, 2002).

f/ Job Creation

In 2000, about 122,000 people were employed in the Nigerian cashew processing sector. This is projected to increase by over 100 per cent to 246,000 people in 2008 (Chemonics International Inc., 2002). This is an indication that the processing industry has the potential to employ a lot of people given the necessary boost. For example, in the view of Kokor and Kroes (1996), the local government authorities could provide public services such as electricity, water or roads at a particular locality to attract and /or retain investors to the place. It may also be an incentive to retain the young and energetic working population, all for the purpose of LED.

2.6.3 The Cashew Industry in Tanzania

Cashew provides an important source of income for some 280,000 smallholder farmers in Tanzania (Mitchell, 2004). It is especially important in the southern coastal region, where the districts of Mtwara, Lind, and Ruvuma account for 80-90 percent of Tanzania's marketed cashew crop. Cashew nuts are also important to the national economy, providing 18 per cent of Tanzania's merchandise export earnings, (World Bank OED, 1998). Marketed production rose to 121,207 tons in 1999/00, from a low of 29,868 tonnes in 1990/91. Export earnings from raw cashew nuts rose from less than US\$4 million in 1990 to US\$107 million in 1998. This recovery has been credited to the economic reforms begun in 1986, especially trade liberalisation and exchange rate adjustments, and to the sector reforms begun in the mid-1990s, which eliminated the monopoly of the Cashew Nut Marketing Board (Mitchell, 2004). Tanzania and Mozambique have been major suppliers of cashew nut to India. Tanzania has been supplying about 41 per cent by value of total Indian imports followed by Mozambique, with about 12 per cent (Topper, 2002).

❖ Constraints

Several major issues in the cashew sector were highlighted by events during the 2000/2001 marketing season. The most important were the deterioration in export crop quality and the corresponding decline in export unit values compared with other exports, farmers' need to finance production costs, the overall taxes on producers and the increases in local taxes. In general, the production and harvesting performance of cashew nut sector are affected by the following factors;

- a/ access to land and the availability of better planting materials and other farm inputs
- b/ farmers training and establishment of village based nurseries operated by farmers
- c/ implementation of a comprehensive agricultural extension approach to complement the national extension service that was particularly aimed at promoting cashew nut production
- d/ market liberalisation of the cashew industry, whereby inputs, crop and processing business were privatised with minimum interference from the government (Topper *et al.*, 1998).

2.6.4 Mutual Link between Cashew Industry and the Economy

A link is established between the cashew industry and the economies of the study areas. This link as deduced from the literature is in the area of employment, income and foreign exchange to the government. The national and/or local authorities adopt certain strategies or policies such as subsidies for farm inputs, removal of taxes for all cashew processing machinery and equipment, the export expansion grant to allow processors and exporters of kernel the opportunity to repatriate 20 per cent of their foreign proceeds (Sijaona, 2002). At times the Government of Tanzania negotiates for credit facilities for cashew farmers or processors to enable them increase productivity.

a/ Employment

Cashew provides an important source of income for some 280,000 smallholder farmers in Tanzania, (Topper et al, 1998). According to Mitchell (2004), about 20,381 workers were engaged to shell about 107,000 tonnes of cashew nuts in Tanzania in 2001. The value added per day of such manual processing was about three times the average wage in Tanzania.

b/ Taxes

Mitchell (2004) states that cashew nuts are important to the national economy, providing 18 per cent of Tanzania's merchandise exports. He claims, in Tanzania the cashew traders are required to pay the district taxes before they purchase cashew nuts and that total taxes on cashew products amount to about 18 per cent of the producer prices. Obviously, the workers in the industry; farmers, traders and others engaged in the cashew related activities pay taxes to the government.

c/ Foreign Exchange

Between 2006 and 2008, Ghana earned US\$42,998.09 for exporting 139,440.75 tonnes of cashew (CDP, 2008). Tanzania received a total of US\$220.7m from cashew export in 2000 and 2001 while Nigeria received a total US\$7.459474 billion, as foreign exchange earnings from cashew exports in 2001 as depicted in Table 2.3 (Ezeagu, 2002).

d/ Access to Credit Facilities and other Incentives

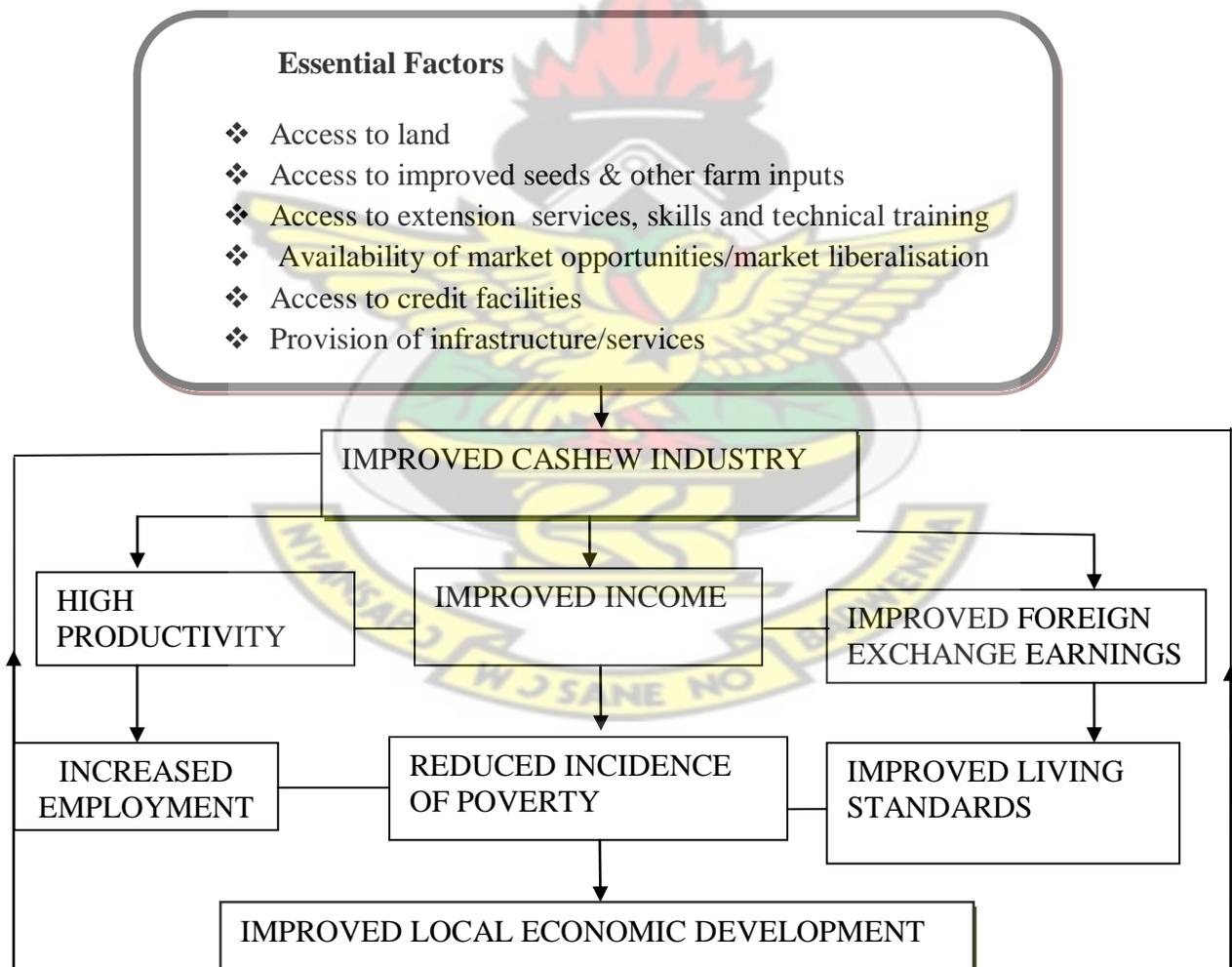
The Ghanaian government through MoFA, in collaboration with the ADB disbursed a total amount of GH¢ 2,417,013.00 to 4,580 farmers under CDP in the study districts between 2004 -2007. The multiplier effects of the credit facilities in the communities include the possibility to boost local economic activities. Again, to promote local processing of cashew nuts, export levy on cashew kernel as well as taxes for processing machinery, equipment and spares were removed in Tanzania. This reduces production cost and indirectly increases the profit of processing firms.

2.7 Conceptual Framework for LED

Based on the performance of the cashew industry in the selected countries above, a correlation between the cashew industry and national or local economies can be conceptualised. That is, the cashew industry affects economic development of the locality and the national or local economy also affects the cashew industry. It is deduced that the cashew industry provides foreign exchange and income for the Government. It also provides employment, with its trickle down effects, for people in the communities. In that same way, the cashew industry also depends on the national and/or local economies for labour (skilled and unskilled), improved seeds and farm inputs, agriculture extension services, skills and technical training, market opportunities, credit facilities as well as socio-economic infrastructure (essential factors) as illustrated in figure 2.2.

From figure 2.2, it is assumed that the availability of the essential factors such as land, improved seeds and farm inputs, agriculture extension services, credit facilities and socio-economic infrastructure will bring about high productivity as well as improvement in income and foreign exchange earnings. It is also assumed that high productivity in the cashew industry, improved incomes for the farmers and processors and increased foreign exchange earnings for the government will help to increase the rate of employment in the study districts and ensure booming economic activities as ripple effects. As a result, there will be an improvement, generally in the living conditions of the producers. However, whether these essential factors required to propel the cashew industry are adequate in the study areas is part of this research.

Figure 2.2: Conceptualised Relationship between Cashew Industry and LED



Source: Author's Construct, 2009

2.8 Lessons learnt from the Review

LED is about local people working together to achieve sustainable economic growth that brings economic benefits and improvement in the quality of life for all people in the locality. The essence of LED is the use of endogenous potentials and resources to ensure the creation of economic activities to bring about an improvement in the living conditions of the people.

Another lesson is that, contrary to the 1970s when development was measured by the gains in the overall and per capita Gross National Product (GNP), in latter times, the concept of development has changed with emphasis on development of the people rather than development of things. Thus development occurs when there is improvement in the indicators of human well-being; reduction in poverty, inequality, unemployment with economic growth within the economy. The new concept of development therefore stresses more on human life and the natural environment rather than economic indicators such as Gross Domestic Product (GDP), GNP and economic growth alone.

It has also been learned that the development process in an economy requires investments in different sectors of the economy, such as the real sector, economic infrastructure sector and the social infrastructure sector. Most Governments in developing countries tend to shift a chunk of their resources to the provision of social infrastructure services but a lesson learnt from the review is that in agrarian economies, there is the need to invest chiefly in the real sector. Thus the social and economic infrastructural sectors should facilitate the creation of an enabling environment for the real sector to bring about the needed development with the collaborative effort of the private sector, civil society and public institutions. Finally, it has been realised that, to attract investors requires the ability to sell or market the available potentials of a locality to the investors and create an enabling environment that is conducive for investment.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter explains the methodology used to conduct this research. The chapter is concerned about how the data were collected and analysed. It is organised in the following order; the introduction which is followed by the research design adopted for the study. Research units is followed by research variables, determination of sample size, sampling methods, data collection techniques and ends with summary of the chapter.

3.2 Research Approach

This study adopted a survey research approach to assess the contribution of cashew production to local economic development. Survey research is a scientific social research method that involves sampling people to answer some questions (Babbie1990). The broad area of survey research encompasses any measurement procedures that involve asking questions of respondents. A "survey" can be any form, a paper-and-pencil feedback form or one-on-one in-depth interview Trochim (2006). Standardised questionnaires were designed and administered to get information about the research question(s) for analysis. A survey research approach was employed because the researcher has no control over the real life situation of the Units to be studied in this research. It also helps to collect information such as attitudes, opinions and behaviours that are not available from other sources

3.3 Research Units

According to Kreuger and Neuman (2006), a research unit is the kind of empirical case that a researcher observes, measures and analyses in a study. Research units for this study were the people and organisations sampled for the study. The population (universe of units) targeted for this study were people and organisations involved in the cashew industry in the study areas. The units for this study are composed of all cashew farmers, buyers and processors in Jaman, Tain, Wenchi and Kintampo districts of Brong Ahafo Region. The units used include cashew farmers, buyers, Agricultural Extension Agents (AEAs) who were in charge of cashew crop in the study

districts, cashew processing factories at Sampa, Kabile, Nsawkaw and Awisa and Ghana Nuts Ltd. Techiman.

3.4 Research Variables

The variables employed for this study include access to farm lands, access to agricultural extension services and training, access to credit facilities and market opportunities in the study districts. The availability or otherwise of these variables have implications for the productivity of the research units. Other variables include employment, farm incomes, women participation in the industry as well as the effects of cashew production on the environment. The indicators used to measure or describe the goodness or otherwise of the variables were excellent, very good, good, fair or poor and friendly or unfriendly.

3.5 Sample Size Determination

The sample size for each district was determined by using a mathematical formula of Dickey Watts (1998), cited in Cochran, W.G. (1977);

$$n = \frac{N}{1+N(\alpha)^2}$$

Where n= sample size,

N= sample frame and

α = confidence level

The sample frames (N) for Kintampo, Jaman, Tain and Wenchi districts were 3305, 2017, 1340 and 1,410 respectively. With 90 percent confidence level (0.10), the sample sizes (n) were estimated as shown in Table3.1;

The sampling frames (list of all units in the population from which samples were selected) were received from the various offices of the MoFA at the district level. Ten names from each district list were randomly picked and rechecked during the day reconnaissance survey in each districts.

Table 3.1: Sample Sizes

| Units | Sample Frame (N) | $N (\alpha)^2$ | $1+ N (\alpha)^2$ | $N/1+ N (\alpha)^2$ | n | Interval |
|--------------------|------------------|----------------|-------------------|---------------------|------------|-------------|
| Farmers (Kintampo) | 3,305 | 33.05 | 34.05 | 3,305/34.05 | 97 | 34.1 |
| Farmers (Jaman) | 2,017 | 20.17 | 21.17 | 2,017/21.17 | 95 | 21.2 |
| Farmers (Tain) | 1,340 | 13.40 | 14.40 | 1,340/14.40 | 93 | 14.4 |
| Farmers (Wenchi) | 1,410 | 14.10 | 15.10 | 1,410/15.10 | 93 | 15.2 |
| DADUs | 4 | 0.04 | 1.04 | 4/1.04 | 4 | 1 |
| Buyers | 19 | 0.19 | 1.19 | 19/1.19 | 16 | 1.2 |
| Processors | 14 | 0.14 | 1.14 | 14/1.14 | 12 | 1.2 |
| Total | 8,109 | | | | 410 | 19.7 |

Source: Field survey, June 2009

3.6 Sampling Procedure

To get a smaller collection of units that is representative of a much larger collection to enable this study to produce accurate generalisations about the larger group, multi - stage sampling and simple random sampling were employed. Multi –stage sampling is a form of cluster sampling. It is a kind of sample design in which two or more levels of units are imbedded one in the other. In some cases, several levels of cluster selection may be applied before the final sample units are reached. Multi –staged sampling method was adopted to reduce cost and sample error. Purposive sampling technique was used to select four districts; Jaman, Tain, Wenchi and Kintampo (collective/ primary units) from a list of districts in Brong Ahafo Region where cashew is produced according to ADF(2000). For each selected primary unit (district), sample frames of farmers were collected from the District Agricultural Development Units (DADUs). With the frames, sample sizes for each district were calculated as shown in Table 3.1. Similarly, sample

frames for cashew buyers, cashew processors and DADUs were used to determine the sample sizes. The final sample units (secondary units) for the study were selected. Systematic random sampling was used to select 378 farmers, simple random and purposive sampling for buyers and processors respectively. In the end, a total of 410 research units were sampled for the study as shown in Table 3.2.

3.7 Sources of Data and Data Collection Techniques

Data for this study were collected from both primary and secondary sources. The primary sources of data include the cashew farmers, buyers and processors. On the other hand, secondary data are the data collected from sources other than the original sources, for instance the internet. Primary data helped the researcher to have firsthand information for the study. The researcher however, complimented the primary data with secondary data to enable him make a better analysis.

Data collection instruments such as questionnaires, interview guides and checklists were used to collect the primary data. These instruments were administered in the field. Secondary data were collected from the regional office of the MoFA, the internet, books like the Economy of Ghana by the Institute of Statistical, Social and Economic Research (ISSER), University of Ghana. The information from these sources was collected in the form of Reports, Articles and Speeches. The techniques used to collect the primary data include;

a/ Exploratory/Familiarisation visits

At least, a day's visit was paid to each research area to familiarise with the farmers, AEAs, purchasing personnel as well as the cashew processors in each study district.

c/ Direct Observation

Observation had been an important technique for this study because it enabled the researcher to study the body language of the interviewees (unit) to ascertain the reality on the ground. The researcher as well observed the situation on the ground as he went about collecting the data. For example the researcher observed how cashew nuts were picked from the farm and the nuts are processed into kernel at the factory.

d/ Photography

The use of photography to support data analysis has been of great importance to this piece. Photographs are supposed to be direct replica of the real situation. It can be considered as one of the best means of recording, keeping and presenting data. This technique is adapted to show photographs of cashew farms, processing factories and several kinds of cashew products to readers.

3.8 Data Analytical Techniques

Data gathered as well as the responses to questionnaires were analysed descriptively. The choice of a particular analytical tool was influenced by the problem statement and the objectives of the study. Frequency distribution, tables, bar charts, simple ranking procedures and methods have been used to present data.

In all, 410 questionnaires were administered to the various groups or clusters sampled for the study as shown in Table 3.2. The response rate was 94 per cent. That is, 385 questionnaires were received for the analyses. The reason for the 6 per cent non response rate was ignorance. The research units, especially the farmers did not see the need to waste time on a study that will neither increase their output nor income.

Table 3.2 Research Questionnaires Response Rate

| Sample Units | Sample size | Questionnaires | | Response Rate % |
|--------------|-------------|----------------|------------|-----------------|
| | | Dispensed | Received | |
| DADUs | 4 | 4 | 4 | 100 |
| Farmers | 378 | 378 | 360 | 95 |
| Buyers | 16 | 16 | 12 | 75 |
| Processors | 12 | 12 | 9 | 75 |
| Total | 410 | 410 | 385 | 94 |

Source: Field Survey June, 2009

3.9 Summary

A research methodology as a guide for understanding how a particular research was carried out, in this piece of work, has been simplified such that whosoever followed it would get the same or similar results. The data gathered and the units involved allowed the use of primary level analysis. Data was analysed straight forward based on variables in the questionnaire without any form of cross tabulation among the variables. Tables, charts and percentages were thus the main analytical tools employed for interpretation of data. In spite of the challenges encountered, the necessary efforts were made to ensure that the outcome of the research is the true reflection of the fact on the ground. It is therefore hoped that, the processes elaborated in this chapter can be followed to replicate the research. The outcome and results of the study are presented in the next chapter.



CHAPTER FOUR

ANALYSIS AND PRESENTATION OF DATA

4.1 Introduction

In this chapter both primary and secondary data collected from the research units are analysed and presented. In addition, the background information, demographic as well as economic characteristics of the study areas are presented in this chapter. This is followed by the discussion of the performance of the cashew industry in the study areas with respect to local economic development. The chapter ends with a summary of the issues discussed.

4.2 Background of Study Districts in Regional Context

The region has a 'young' population characterised by a high proportion (43.1 per cent) of persons under 15 years and a low percentage (4.5 per cent) of persons at age 64 and older. The region's proportion for the under 15 years (43.1 per cent) is higher than 41.3 per cent for the entire country. The distribution of the economically active population in the study districts like that of the region is much concentrated in primary industry and the self-employed with no employees and private informal sector workers dominating the employment landscape, (Ghana Statistical Service, 2005).

4.2.1 Location and Size

The Brong Ahafo Region, formerly part of the Ashanti Region, was created in April 1959 with the capital at Sunyani. With a territorial size of 39,557 square kilometers, it is the second largest region in the country (16.6 per cent) in terms of land area. It shares boundaries with the Northern Region to the north, the Volta and Eastern Regions to the south-east, Ashanti and Western Regions to the south, and Cote d'Ivoire to the west, (Ghana Statistical Service, 2005). Kintampo, the central point of the landmass of Ghana is located between latitudes 8° 45'N and 7° 45'N and longitudes 1° 20'W and 2° 1'E. It shares boundaries with central Gonja district to the north, Bole district to the west; east Gonja district to the north-east. It is bounded to the south by Techiman Municipality and to the south- east by the Pru district.

Wenchi District lies within latitudes 7° 30'N and 8° 05'N and longitudes 2° 15'W and 1° 55'E. In terms of land area, it covers 3,494 square kilometers. It shares boundaries with the Techiman district to the west, Kintampo district to the northwest, Tain district to the east and Sunyani Municipality to the south. Tain district was carved out of Wenchi district and inaugurated on the 19th August 2004. It shares common boundaries to the west with Jaman-north district, to the east with Wenchi municipal, to the south with Sunyani-west district, Berekum municipal to the south-west, and La Cote d'Ivoire to the north-west, (Wenchi District Data base, 2004). Jaman north district is located between latitude 7° 40'N and 8° 27'N and longitude 2° 30'W and 2° 60'W. The district is located to the western part of the region and to the north western fringes of the neighbouring Cote d'Ivoire. It shares local boundaries with Tain district to the north through to the eastern part of the district, Jaman south district to the south west and Berekum municipal to the south east as shown on the Map, appendix 5 (Jaman North District Data base, 2004).

4.2.2 Vegetation and Climate

There are two main vegetation types, the moist semi-deciduous forest, mostly in the southern and south-eastern parts of Brong Ahafo and the guinea savannah woodland, which is predominant in the northern and north-eastern parts of the region. The study districts have guinea savanna woodland vegetation type except Wenchi which has moist semi-deciduous forest. Like the region the study districts have a tropical climate, with high temperatures averaging 23.9° C (75oF) and a double maxima rainfall pattern. The rainfall in the region ranges from an average of 1000 mm to 1400 mm (CDP, 2008). Cashew plantations are found in the Jaman, Tain and Atebubu districts as well as Wenchi, Kintampo, Techiman and Asunafo Municipalities of Brong ahafo region. To add value to cashew to obtain more foreign exchange, raw cashew nuts are roasted for food whilst some of the apples are processed into brandy in the Asunafo north district (CDP, 2008). The study area has comparative advantage and the potential for the production of cashew in the region due to the tropical climate with high temperatures and a double maxima rainfall pattern. The vegetation and climate of the study area are conducive for the cashew crop according to ADF, (2000). The vegetation and the climate thus serve as strength for cashew production.

4.2.3 Population

The Brong Ahafo region has a population of about 1,815,408, accounting for 9.6 per cent of the country's total population. The inter-censal growth rate of 2.5 per cent between 1984 -2000 is lower than the national rate of 2.7 per cent (Ghana Statistical Service, 2005). The population of Jaman district is 78,192 with a growth rate of about 2.9 per cent, (Jaman North District Database, 2004). The Kintampo district has an estimated population of 96,358 with a growth rate of 2.6 per cent. The district has a population density of 18.86 persons per square kilometer, (Kintampo District Database, 2004). The Tain district has a population size of 85,216 as at 2004 with a growth rate of 3.3 per cent. The district's population density is 22.0 persons per square kilometer, which is less than the regional population density of 45.9 persons per square kilometer and the national figure of 49.3 persons/km²(Tain District Database, 2004). The population of Wenchi district is 68,417 with a growth rate of about 3.3 per cent, (Wenchi District Data base, 2004).

4.2.4 Age and Sex Structure

A large proportion (43.1 per cent) of the region's population is under 15 years, with a small proportion (4.5 per cent) older than 64 years. The proportion for the under 15 years for the region is higher than that for the total country (41.3 per cent). Such structure of the population implies a high proportion of dependent population. The age dependency ratios show the relative predominance of persons in dependent ages (youth under 15 years and persons 65 years and older) and those in productive ages (15 to 64 years). The dependency ratios for the region reduced from 100.8 in 1984 to 90.5 in 2000. Jaman district has about 91.5, slightly above that of the region. Wenchi on the other hand recorded 85.7, whilst in Kintampo district; an analysis revealed that only 66.7 per cent of the labour force is working whilst the rest 27 per cent is in school or under training or not working and about 6.3 per cent unemployed (Ghana Statistical Service, 2005).

However, the number of entrants into the work force in the near future may increase. So if steps are taken to attract and retain the youth in cashew production, it will go a long way to boost the cashew industry, (Ghana Statistical Service, 2005).

The Kintampo district has a female population of 49,137 (representing 50.9 per cent) and 47,401 Male, (representing 49.1 per cent). The Tain district has 49.5 per cent male and 50.5 per cent females. About 38.5 per cent of the total population is under 15 years. The economically active population (15-64 years) accounts for 53.75 per cent while 7.75 per cent of the population is 65 years and above. This shows an average district dependency ratio of 1: 0.9 (100:90) which is less than the regional dependency ratio of 100:90.5 but higher than the national figure of 100:87.1, (Tain District Database, 2004). The male and female populations of the Jaman district are 37,904 (48.8 per cent) and 40,288 (51.52 per cent) respectively. The economically active population of age 15-64 years is 64.0 per cent.

In Wenchi, about 7.24 per cent of the population is under 5 years, 35.45 per cent between the ages of 5 and 18 years with 50.12 per cent between 18 and 59 years. Only 6.69 per cent of the population is above 60 years. The district's economically active population is 50.12 per cent, far greater than both the national (24.4 per cent) and regional (23.9 per cent) levels. The 49.36 per cent males is a reduction from 51.5 per cent in 1984, and a rise in females from 48.5 to 50.64 per cent. This may be explained by higher male migration or high male mortality in the district. The sex ratio in the district is 1:1.03. The ratio was 1:06 in 1984 showing the level of decline in the male population.

4.2.5 Employment Status

It is observed that the private informal sector provides employment to about four out of every five members of the workforce in the region. Sene district has the highest (90.9 per cent) with Sunyani having the lowest (73.3 per cent). The employment status of the study districts is no different; the private informal sector employs 84.5, 86.5 and 82.5 per cent of the working force in Jaman, Wenchi, and Kintampo districts respectively (Ghana Statistical Service, 2005).

4.2.6 Industry

Changes in structural composition of economically active population often reflects the course of social and economic development; more than two thirds (68.6 per cent) of the workforce in all districts in the region are in Agriculture, Hunting, and Forestry, except Sunyani (the most urbanised) (48.0 per cent) (Ghana Statistical Service, 2005). This is an indication that the study

areas are agrarian economies and that if cashew industry is well developed it will help increase the rate of employment in the districts.

4.2.7 Occupation

Agriculture and related work is the major occupation in all districts, accounting for 66.4 per cent of the region's economically active population. It is the main occupation for about two-thirds of the economically active group in the study districts. In the three most urbanised districts, Sunyani (45.9 per cent), Berekum (50.9 per cent) and Techiman (57.1 per cent), agriculture and related work account for between 45.0-60.0 per cent. The proportion of self-employed without employees in the region is 74.6 per cent, mainly engaged in small-scale economic activities operated by individuals while others are also peasant farmers engaged in subsistence agriculture. The percentage of employees within the economically active population is 9.7 relatively lower than the national proportion of 15.2 per cent (Ghana Statistical Service, 2005).

4.2.8 Transportation System

The principal mode of transportation in the region is by road. The region's road network consists of highways, urban roads and feeder roads. The villages and small towns are connected to each other by feeder roads, while small towns, large towns are connected by highways. The Department of Urban Roads provides the road network within the urban centres. Sunyani, the administrative capital, is the focal point of most of the roads in the region. The region at present has 1,894.9 kilometres of major roads, which represent 13.1 per cent of the total network of major roads in the country, thus making it the region with the second widest network of major roads after Northern Region (Ghana Statistical Service, 2005).

About a third (33.1 per cent) of the region's major roads are paved, this forms 11.1 per cent of the national paved or asphalted roads. These include the Kumasi-Dormaa Ahenkro road, the Yamfo road, Sunyani-Techiman road, Techiman-Nkoranza road, Techiman-Wenchi road and Kumasi-Yeji road. In addition to the major roads, the region has the longest network of feeder roads (3,463.0 kilometres). In terms of total road network, therefore, the region has the longest road network in the country, measuring 5,357.9 kilometres, followed by the Northern Region,

with 5,170.8 kilometres, the Ashanti Region with 4,782.2 kilometres and Western Region with 4,452.4 kilometres (Ghana Statistical Service, 2005).

Unfortunately, the Researcher observed that the road network in certain parts of the study districts is not good. For instance, in the Jaman North district there is not even a metre of tarred road, and most of the graveled roads linking the production centres are in a deplorable state. This makes conveyance of produce from the production centres difficult. Some farmers, especially in Kojee, Dormoli and Dorbor in the Tain district find it difficult to convey their produce to the buying centres due to bad road network. In spite of the ready market for cashew in the study districts, bad road network can be a disincentive to farmers.

4.3 The Status of Cashew Industry in Brong Ahafo Region.

Cashew cultivation in Brong Ahafo region is largely a small holder activity. Majority of the farmers have an average farm size of between 0.8 – 2.5ha. An estimated 5,564.6 hectares of cashew is cultivated in the region. About 12,000 small holder farmers are engaged in cashew cultivation in the study area (Ghana Cashew Association, Brong Ahafo chapter, 2008). The major producing districts in the region are Jaman, Tain, Wenchi, Kintampo, Nkoranza, Techiman and Atebubu.

In recent years, the interest for the crop has grown nationwide and this is evidenced by the increase in the national demand for cashew seed nuts from about 1 metric tonne in 1994 to about 10 metric tonnes in 2007 (CDP 2008). About 25 per cent of the cashew nuts in the area is processed by the local factories at Nsawkaw, Kabile, Awisa and Sampa. About 75 per cent of cashew nuts is exported and the prices on the world market keep on changing as national figures are shown in Table 4.1.

Table 4.1 Volume and Value of Cashew Exports 2000 – 2008

| Year\Volume & Value | Volume | Value US\$ | % Change in volume | % Change in value | Unit Value per tonne US\$ |
|--------------------------------|---------------|-------------------|---------------------------|--------------------------|----------------------------------|
| 2000 | 3,564 | 2,552.7 | 0 | 0 | 716 |
| 2001 | 419 | 88.9 | -88.2 | -96.5 | 212 |
| 2002 | 3,892 | 1,450.3 | 828.9 | 1,531.4 | 373 |
| 2003 | 6,338 | 51,763 | 62.8 | 3,469.1 | 8,167 |
| 2004 | 2,598.6 | 18,757.6 | -59.0 | -63.7 | 7,218 |
| 2005 | NA | NA | NA | NA | NA |
| 2006 | 34,633.88 | 11,794.82 | | | 341 |
| 2007 | 23,616.40 | 10,779.33 | -31.81 | -8.6 | 456 |
| 2008 | 81,190.47 | 20,423.94 | 243.79 | 89.4 | 251 |

Source: ISSER, 2002, 2004, 2006, 2007, 2008

Table 4.1 shows the volumes and values of cashew exports from 2000 -2008. A general observation is that prices for Ghana's cashew products appear to be volatile on the World market. For instance, in 2003 the unit value per tonne was US\$8,167. This reduced by 11.6 per cent to US\$ 7,218 in 2004. In 2008, a period of five years, the same quantity was sold for just US\$251, indicating about -97 per cent reduction in price. The volatility of the world market prices for the cashew products is due to the fact that Ghana exports mainly raw nuts and therefore a price taker on the global market. This underscores the need to process most of the raw cashew nuts locally.

Table 4.1 also shows that volume of production is erratic. For example, the volume of production declined from 3,564 in 2000 to 419 in 2001. In 2002, it increased by 828.9 per cent to 3,892. This notwithstanding, in 2006, 2007 and 2008, the country recorded so far, the highest volumes of cashew production. That is, 34,633.88 tonnes in 2006, 23,616.40 tonnes in 2007 and 81,190.47 tonnes in 2008. However, the total foreign exchange earned for these years (2006-2008) on the contrary, fell considerably as a result of the drastic fall in the unit value per tonne. For example, in 2003 the volume of production, 6,338 tonnes earned the country US\$51,763. In 2008 the total volume of production increased to 81,190.47 tonnes. That is 1,181 per cent change

in volume of production over the 2003 figure, but this could only earn the country US\$20,423.94, indicating -60.5 per cent change in value for the 2008 exports.

Due to cashew price volatility on the world market, the planning agencies of government would have low level of confidence to forecast or estimate the foreign exchange earnings from the cashew industry. The implication is that the cashew industry would not be reckoned to be important or reliable when government policies are being planned.

4.3.1 Land Acquisition

Farm land in Brong Ahafo is communally owned. Communal land is normally controlled by the lineage or clan based land owning –groups and allocated to individuals or households on a usufructuary basis. The national land policy published in June 1999 provides framework for free access to land by all Ghanaians provided that a) land is available for disposal in any part of the country where a male or female operator seeks to have it; b)the individual agrees with land owners to adhere to the covenants and other customary practices governing the disposal of the land; c) the individual undertakes to put the land to a use which conforms to land use plans for the area and to principles of sound land use and management. Access to land is not restricted to any of the sexes except that the males are traditionally more recognised as tillers of the land than their female counterparts.

From Table 4.2, about 93.1 per cent admitted that they farm on their own or family (communal) land. A total of 4.8 per cent of the respondents hired their farm land but 1.9 per cent claimed they bought their farm land outright. On the average, 88 farmers cultivate on communal land, 5 hire land for cashew production whilst 2 farmers farm on purchased land. Farm land in the study areas are hired either by the “Abusa system” or “Rent payment”. With the Abusa system, the Farmers and the land owners enter into agreement to share the seasonal yields by the ratio 2:1 respectively. On the other hand, the farmers under the rent payment agreement are made to pay lump sums covering periods not less than five years, and depending on the agreement, the farmers are required to make such advance payments at the expiration of the rent paid.

Table 4.2 Land Ownership

| District | Total Respondents | Self/Family Owned | | Hired | | Outright Purchased | |
|----------|-------------------|-------------------|------|-------|-----|--------------------|-----|
| | | N | % | N | % | N | % |
| Jaman | 95 | 89 | 94.7 | 4 | 4.1 | 1 | 1.5 |
| Tain | 93 | 86 | 92.5 | 4 | 4.4 | 3 | 3.1 |
| Wenchi | 93 | 87 | 93.5 | 5 | 5.0 | 1 | 1.2 |
| Kintampo | 97 | 90 | 92.7 | 5 | 5.6 | 2 | 1.8 |
| Total | 378 | 352 | 93 | 18 | 5 | 7 | 2 |
| Average | 95 | 88 | | 5 | | 2 | |

Source: Field Survey June, 2009

4.3.2 Incomes Distribution among Cashew Farmers

The soil type in certain parts of the study areas is such that farmers need to spend so much on chemicals such as fertilizers before they are able to get better yields. However, according to the people, cashew is tolerant of conditions otherwise considered marginal for agriculture. The study identified that 28.8 per cent of the farmers interviewed could not state their last earnings perhaps because they did not want to disclose it or failed to keep records for the year and 3.1 per cent of them had not started harvesting at the time of the study. The remaining 68.1 per cent (262) gave their last earnings which ranged between GH¢100 and GH¢8,000 as shown in Table 4.3.

Table 4.3 Income Distribution

| Income GH¢ | No. of Farmers (Freq.) | Aggregate Income | % No. of Farmers | % Cumulative No. Farmers | % aggregate Income | % Cumulative Aggregate Income |
|------------|------------------------|------------------|------------------|--------------------------|--------------------|-------------------------------|
| 100-1000 | 99 | 31,420 | 38 | 38 | 9 | 9 |
| 1100-2000 | 108 | 127,300 | 41 | 79 | 37 | 46 |
| 2100-3000 | 27 | 59,400 | 10 | 89 | 17.2 | 63.2 |
| 3100-4000 | 10 | 34,700 | 4 | 93 | 10 | 73.2 |
| 4100-5000 | 13 | 60,100 | 5 | 98 | 17.4 | 90.6 |

| | | | | | | |
|-----------|-----|---------|-----|------|-----|------|
| 5100-6000 | 2 | 11,200 | 0.8 | 98.8 | 3.2 | 93.8 |
| 6100-7000 | 2 | 13,500 | 0.8 | 99.6 | 4 | 97.8 |
| 7100-8000 | 1 | 7,650 | 0.4 | 100 | 2.2 | 100 |
| Total | 262 | 345,270 | | | | |

Source: Author's Construct –April, 2009

Mean Income (X) = GH¢1,591

Standard deviation (S) = GH¢2,015

From Table 4.3, the mean (average) income earned by the farmers was GH¢ 1,592. It also revealed a standard deviation of GH¢2,015. Looking at the income distribution by using quartiles, the third quartile (196.5th farmer) has a corresponding income of GH¢ 1,346.20 which is less than the average income of GH¢ 1,592. If a farmer in the third quartile earns less than the average income it implies that income levels are generally low because a greater number of the farmers (75 per cent) are not able to earn the average income at the end of their farming season.

Table 4.3 also reveals that there is a wide income disparity among the farmers considering the range of income of GH¢ 7,900 given a mean income of 1,592 and a Standard deviation of GH¢ 2,015. The Table further reveals 19 per cent of the farmers earn between GH¢ 2,100 – 5,000. Only Five (5) farmers representing 1.9 per cent earn between GH¢5, 100 –GH¢ 8,000. This means there is income disparity among the farmers as shown in Figure 4.1.

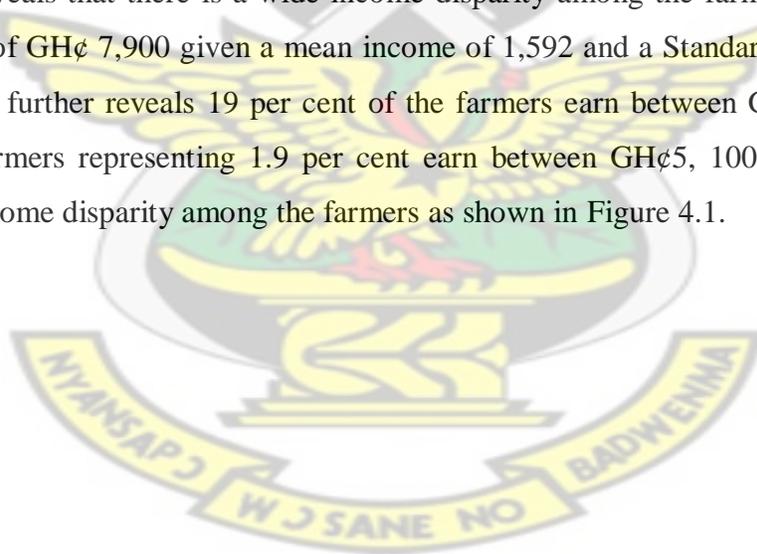
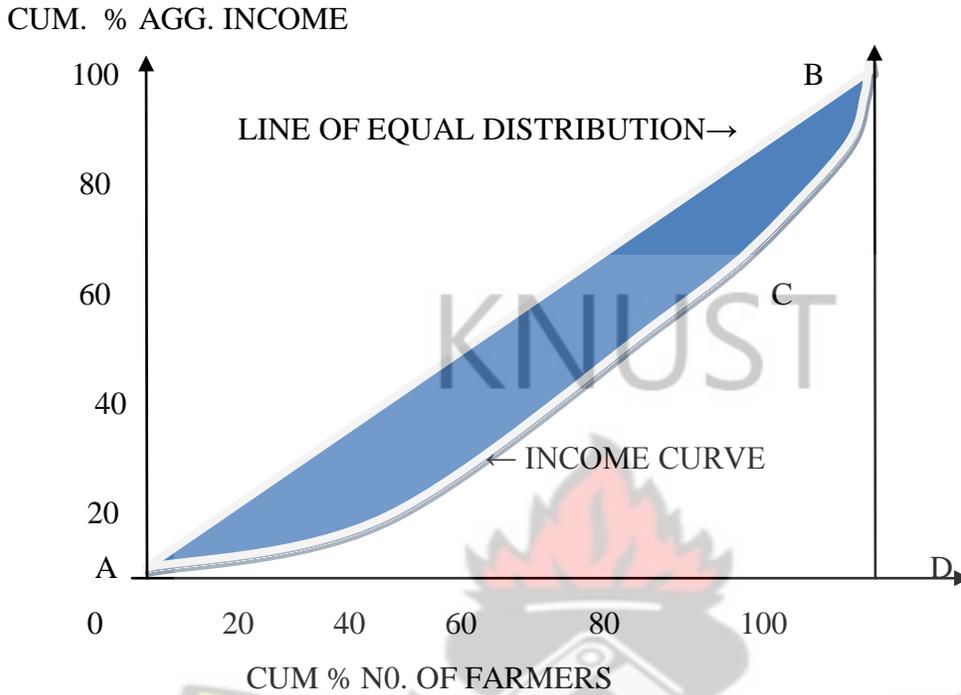


Figure 4.1 Lorenz Curve showing income disparities among Cashew Farmers



Author's Construct –April, 2011

The ratio of the shaded area of triangle ABC in the figure 4.1 to the area of triangle ABD (Gini Concentration Ratio) measures income inequality. That is, $\frac{ABC}{ABD} = \frac{24}{50} = 0.48$

From Figure 4.1 the total income of 50 per cent of the farmers forms only 20 per cent of the aggregate income of GH¢345,270. The total income of 80 per cent of the farmers is only about 47 per cent, below 50% of the aggregate income. This indicates an unequal distribution of income among farmers. The implication is that even though the aggregate income is large, only a few farmers earn the greater part.

4.3.3 Gender Distribution in Cashew Industry

The study revealed no restriction on the basis of sex in the cashew industry. However, it was identified that the study districts recognised the males as more healthier and capable of tilling the land than their female counterparts. This is shown in Table 4.4 where the male –female percentage ratio in cashew production is 87: 13.

Table 4.4 Gender Distribution in Cashew Production

| Study Areas | Farmers | | | | | |
|--------------|------------|-----------|-----------|-----------|------------|------------|
| | Male | % | Female | % | Total | % |
| Jaman | 81 | 85 | 14 | 15 | 95 | 100 |
| Tain | 84 | 90 | 9 | 10 | 93 | 100 |
| Wenchi | 79 | 85 | 14 | 15 | 93 | 100 |
| Kintampo | 83 | 86 | 14 | 14 | 97 | 100 |
| Total | 327 | 87 | 51 | 13 | 378 | 100 |

Source: Field survey, June 2009

Table 4.4 indicates that cashew production is dominated by male in the study area. The processing section was however, found to be dominated by the females. The women perform the majority of quality checks including grading, picking, peeling and sorting. Table 4.5 depicts that 92.1 per cent of the people in the processing factories were identified to be females whilst only 7.9 per cent males were recorded. On average, 50 females as against 4 males were engaged in the cashew nut processing in the study areas.

Table 4.5 Gender Distribution in Cashew Processing

| Factory | Employees | | | | | |
|------------------------|-----------|----------|------------|-----------|------------|------------|
| | Male | % | Female | % | Total | % |
| Nsawkaw Cashew Factory | 3 | 6 | 50 | 94 | 53 | 24.5 |
| Awisa Cashew Factory | 5 | 8 | 57 | 92 | 62 | 28.7 |
| Kabile Cashew Factory | 4 | 9 | 39 | 91 | 43 | 19.9 |
| Sampa Cashew Factory | 5 | 9 | 53 | 91 | 58 | 27 |
| Total | 17 | 8 | 199 | 92 | 216 | 100 |

Source: Field survey, June 2009

Given the circumstance, if cashew processing factories are supported to expand, more people will be employed, and this could help to reduce the poverty among the people, especially Women in the study areas.

4.3.4 Access to credit facilities

The study established that Agriculture Development Bank, as part of the Cashew Development Project, offered credit facilities to farmers in the area. It was revealed that access to these credit facilities started in 2004 and as at the time of this study, 99 per cent of the sampled farmers had accessed the facilities. This is depicted in Table 4.6, where a total amount of GH¢ 2,417,013.00 was disbursed to the farmers between 2004 -2007. About 81 per cent had been recovered as at June, 2009. The impact of these facilities can be linked to the increase in the volume of production from 2006 to 2008 as shown in Table 4.1.

Table 4.6: Access to CDP – ADB Credit Facilities, 2004 -2007.

| Yr | No. of Beneficiaries | | | | Total | Total Amount Disbursed GH¢ | Total Amount Recovered GH¢ | % Loan Recovered |
|---------|----------------------|--------|------------|----------|-------|----------------------------|----------------------------|------------------|
| | Jaman | Tain | Wench i | Kintampo | | | | |
| 2004 | NA | 263 | 411 | 510 | 1,184 | 483,050.00 | 446,356.73 | 87.1 |
| 2005 | 342 | 86 | 265 | 529 | 1,222 | 660,843.00 | 493,104.61 | 68.8 |
| 2006 | NA | 211 | 430 | 390 | 1,031 | 588,570.00 | 413,046.07 | 62.8 |
| 2007 | 911 | 57 | 147 | 28 | 1,143 | 684,550.00 | 607,656.24 | 90.0 |
| Total | 1,253 | 617 | 1,253 | 1,457 | 4,580 | 2,417,013.00 | 1,960,163.65 | |
| Average | 626.5 | 154.25 | 313.25 | 364.25 | 1145 | 604,253.25 | 490,040.91 | 77.2 |

Source: DADUs, June 2009

4.3.5 Access to Market Opportunities

There is ready market for the produce in the study areas. According to the farmers there are more than eight purchasing companies; NASAKA Agro Processing Ltd. Olam (Gh) Ltd., Ghana Nuts

Ltd among others, that operate largely through commission agents and local purchasing agents. The quality of nuts at farm gates is a key issue that largely influences the prices. Proper post-production handling by farmers especially drying, packaging material used and the method of storage have a direct influence on the nut's quality. The competition on the market would have been good for the farmers because it would cause demand to exceed supply there by forcing the price up. Unfortunately, it is not so because the tiny, local (low priced) variety is what is mostly produced in the study districts.

To enhance the efficiency of cashew marketing in Ghana, Cashew Processors and Exporters Association of Ghana (CAPEAG) has been formed and registered. Several producer associations also exist countrywide. Under the CDP, Seven (7) district producer associations have been formed and registered, in close collaboration with Department of Co-operatives. The producer associations and processors/exporters associations are currently being trained on quality standards developed by the industry through appropriation of grades and standards, spearheaded by United States Agency for International Development (USAID) Trade and Investment Programme for Competitive Export Economy (TIPCEE) project with support from the MOFA-CDP and other stakeholders, (CDP 2008). The presence of many purchasing companies in the area brings about competition on the market. In a free market economy where demand and supply operate to determine prices, competition for cashew products, all things being equal, pushes the price up and this serves as a motivation for farmers to increase production.

4.3.6 Raw Cashew Nuts Processing

The four major raw cashew nut processors in the study areas are all under the Nasaka Group of Processors. Their total installed capacity as shown in Table 4.7 is 236.18 metric tonnes. However, about 50 per cent of the capacity is utilised. This is because they do not have enough working capital to purchase raw nuts and stock for work all year round. Meanwhile local processing of cashew nuts has implication for LED. For example, the study revealed that processing of raw nuts into kernels does not only add value to the product but also provide employment opportunities for the rural folk and the vulnerable groups such as the women. The incomes the employees earn definitely have ripple effects on the local economic activities. This is buttressed in Table 4.5 where the 4 processing factories in the study districts provide

employment opportunities for about 216 people. About 92.1 per cent of these employees are women who do the peeling, sorting, roasting, grading and packaging of the kernel at the processing centres.

Table 4.7: Major Cashew Nut Processors in the Study Areas

| Processing Unit | Location | Installed Capacity (MT) | Operational Capacity |
|-----------------|----------|-------------------------|----------------------|
| Nasaka | Kabile | 79.2 | 38.8 |
| Nasaka | Sampa | 47.52 | 24.2 |
| Nasaka | Nsawkaw | 63.36 | 31.7 |
| Nasaka | Awisa | 46.1 | 23.9 |
| Total | - | 236.18 | 118.6 |
| Average | - | 59.0 | 29.6 |

Source: Field survey, June 2009

The 7.9 per cent males cart the nuts from the buying centres, off- load and park them in store rooms as can be seen in Plates 4.1.

Plate4.1: Raw Cashew Nuts being off loaded at Nsawkaw Processing factory



Source: Field Survey, January 2010

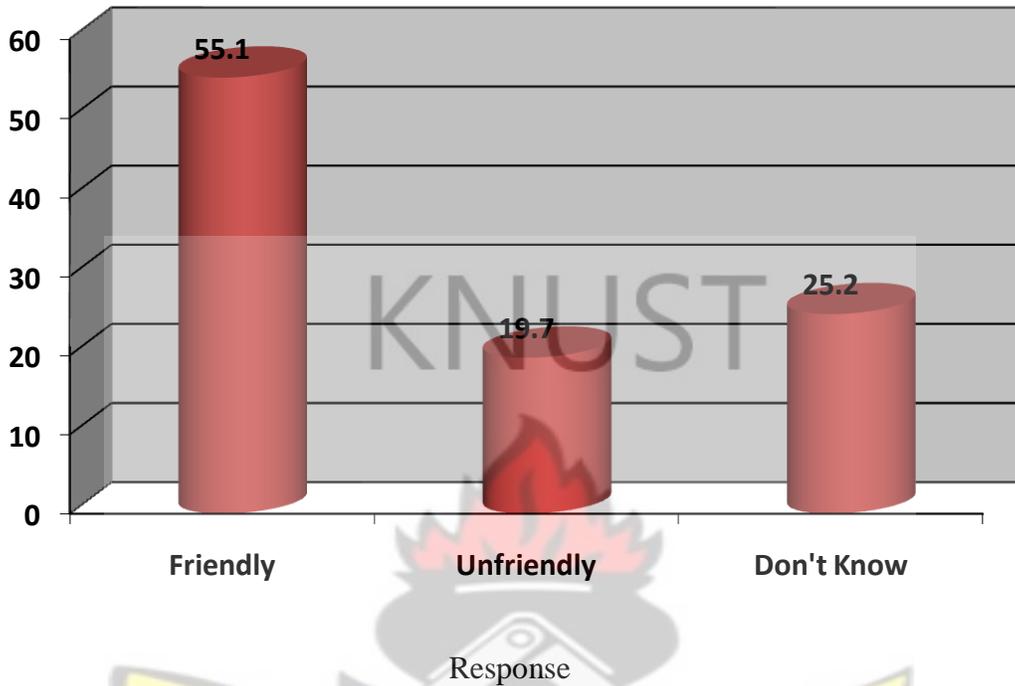
4.3.7 Environmental Situation

The study districts suffer harsh harmattan seasons, which lead to many bush-fires. The 374 respondents cited bush fires as one of the challenges to their work. Surprisingly, the farmers themselves admitted that the bush- fires are normally caused by some of their colleague farmers clearing their farm lands as well as hunters searching for game and charcoal burners. The tree crop cultivation such as cashew is in the right direction as it will help to replenish the depleted land. The cashew production is also helping to curb the ritual bush fires in the area since the farmers themselves have to control the bush fires in order to protect their cashew farms. The environmental sustainability is vital for economic growth of the Brong Ahafo Region where about 70 per cent of the population is employed in agriculture and its related activities. According to the World Bank /IMF report in 2008, environmental sustainability is essential for continued economic growth and poverty reduction.

4.3.7.1 Environmental Impacts of Cashew Production

A total of 25.2 per cent of the respondents for the study, mainly farmers said they did not know the effects of cashew production on the environment, 55.1 per cent said cashew is environmentally friendly. To them the cashew tree serves as a cover crop that protects the soil against wind erosion in the north as well as water, gully and other types of soil erosion in the southern part of the country. On the other hand, 19.7 per cent claimed that the smoke from the factories causes air pollution. Again they claimed that cashew does not do well when planted amidst trees hence its cultivation leads to destruction of trees. For these reasons they claimed that cashew production is environmentally unfriendly. The DADUs see the environmental impact of cashew as positive because of its ability to, at least, check soil erosion. Figure 4.2 illustrates the views of the 400 respondents on the environmental impacts of cashew production.

Figure 4 .2: Environmental Impact rating
Percentage



(Source: Field survey, June 2009)

From Figure 4.2, the people believe that the cashew production is not so detrimental to the environment. In the semi-arid and dry northern regions, it can be cultivated to check desert encroachment, which is a serious threat in the study districts. In the southern part, especially the eastern region, it is mainly cultivated to check gully erosion. Cashew thrives in almost every part of Ghana, including the southern, middle belt and northern regions. It is an important crop in regional, as well as, national agriculture programmes. Development of the cashew industry will assist agricultural efforts in numerous regions, diversifying the benefits accrued. They however, admitted that at times, the bad farm practices of some farmers bring about bush –fires. Notwithstanding this, their general assessment of the cashew production is that it is environmentally friendly.

4.3.8 Access to Agricultural Extension Services

The study revealed that there have been a lot of agricultural extension services for the cashew production. It was identified that the AEAs gave the farmers technical support to enable the farmers improve their productivity.

In all the study areas, the farmers admitted that the AEAs visit them regularly. However, 3 per cent of the farmers claimed they had not had contacts with the AEAs. The remaining 97 per cent admitted having had a number of training programmes organised by the MoFA either under the CDP or sponsored by an NGO such as Adventist Development and Relief Agency (ADRA). Examples of the trainings mentioned are listed in Table 4.8.

Table 4.8 Training Programmes for Cashew Farmers in the Study Areas

| Type of Training | Type of Training |
|----------------------------------|---------------------------|
| Harvesting | Row planting of intercrop |
| Bush fire prevention | Use of agrochemicals |
| Storage | Post harvest technology |
| Use of improved variety | Top working |
| Chemical weed control | Pruning |
| Correct spacing in cashew | Pest and disease control |
| Correct spacing in intercropping | Land preparation |
| Lining and pegging | Fertilizer application |
| Farm sanitation | Weeding |
| Climatic changes and its impacts | Calibration |

Source: Field Survey, June 2009

The 97 per cent farmers, who have undergone the training, were given the chance to assess the extension services they received. From Table 4.9, about 77 per cent of the farmers interviewed think the type of extension services received were very good because, for example, the use of improved seeds, fertilizers and chemical weed control have helped to improve their yields. For instance, in Table 4.1, the volume of production increased from 2,598.6 in 2004 to 34,633.88 in 2006. This figure reduced to 23,616.40 in 2007 but increased considerably by 243.7 per cent to 81,190.47 in 2008. About 19 per cent answered the training was good whilst about 5 per cent

thought it was fair. In general, the farmers’ assessment indicated that the training by the AEAAs had positive impacts on their productivities.

Table 4.9 Farmers’ assessment of Agriculture Extension Services Received

| Assessment of Agriculture Extension Services | District Responses | | | | | | | | |
|--|--------------------|------|------|------|--------|------|----------|------|-----------|
| | Jaman | | Tain | | Wenchi | | Kintampo | | Average % |
| | No | % | No | % | No | % | No | % | |
| Excellent | 26 | 28.6 | 26 | 28.3 | 27 | 29 | 23 | 25.6 | 27.9 |
| Very Good | 44 | 48.4 | 46 | 50 | 47 | 50.5 | 42 | 46.7 | 48.9 |
| Good | 18 | 20 | 16 | 17.4 | 14 | 15.1 | 20 | 22.2 | 18.6 |
| Fair | 3 | 3 | 4 | 4.3 | 5 | 5.4 | 5 | 5.5 | 4.6 |
| Poor | - | - | - | - | - | - | - | - | - |
| Total | 91 | 100 | 92 | 100 | 93 | 100 | 90 | 100 | 100 |

Source: Field Survey, June 2009

4.3.9 Constraints of Cashew Production in Ghana

The study revealed that the cashew industry in the study areas face challenges regarding the variety of seeds produced, post harvest handling as well as processing of the cashew nuts;

a/ Production of low-priced products

From interviews with AEAAs, most of the cashew nuts produced in the study areas are the local (tiny) type which do not attract higher price on the market. According to the AEAAs interviewed, a farmer has to pick about 12,000 local nuts to get one bag (80kg) whilst only 4,000 nuts of the hybrid are needed to fill the same sack. The implication is that the local type is more time, energy and resource consuming, compared to the hybrid. To quote an Agriculture Extension Officer “...my brother this is the fact but how to get the farmers to accept it and be prepared to replace the local type with the hybrid is the hell, however, we are trying our best and with time most of them will understand what we are teaching them”

b/ Post harvest handling

The survey revealed that when the nut is dried too much under the sun, it reduces its economic value. However, if it is not dried at all, it tends to rot. It therefore beholds on the farmers to pay heed to the pieces of technical advice received from AEA's. Two respondents in the Tain district claimed they ignored the post -harvest handling techniques by the AEA's in 2005 and a total of seven bags (560kg) out of forty five bags (3,600kg) got rotten. However, in 2006 when they heeded to the technical advice by the AEA's, only three bags (240kg) got rotten out of a total of 67 bags (5,360kg). The implication is that the farmers realised less income than they would have earned in 2005 if they had heeded to the technical advice by the AEA's.

c/ Processing

Although few processors have successfully supplied the market all year round, they still need help to strengthen their efforts and grow. The Major constraints include the cost of capital, more importantly, the ability to purchase and store raw nuts to process throughout the year. According to the processors, the cost of raw nuts constitutes about 85 per cent of production cost in the study districts. There is therefore the need to develop cost containment techniques to keep processors stocked with raw inputs to be able to stay in business all year round. For example, India, the world's largest processor, purchases raw nuts throughout the year at favourable financing rates to supplement their supply. Brazil also has a ban on the export of raw nuts and rather imports when domestic supplies are short, (Chemonics International Inc. 2002). Additional processing constraints include the cost of labour to peel the testa from the kernel and to upgrade hygiene standards, as kernels produced are final food products and therefore require good hygiene standards.

d/ Social and Economic Infrastructures

The Public Sector is responsible for certain social and economic infrastructures such as roads, schools, hospitals and electricity in the economy. The study revealed that these social and economic infrastructures were inadequate in the cashew producing areas. According to the respondents the existing ones are in a deplorable state. The absence of these amenities makes it difficult for the industry to thrive and this can serve as a push factor for the youth to migrate to the cities.

4.3.10. The Prospects of Cashew Industry in the Study Area

In spite of the challenges of the cashew industry, there are potentials for the industry in the study districts. Firstly, MoFA has offices in all the districts. District Agricultural Development Units (DADUs) are established in the districts to be responsible for administrative, management and implementation as well as supervision of all MoFA activities. The study identified that cashew farmers in the study districts have access to agricultural extension services, hybrid or improved seeds as well as training on good cultural practices. Secondly, the climatic and rainfall conditions in the region are favourable for the cashew cultivation. The ideal rainfall regime for the crop is between 750mm –1300mm meanwhile the rainfall regime in the region ranges from an average of 1000 mm in the northern parts to 1400 mm in the southern parts (CDP, 2008). Thirdly, there is ready market for the produce, especially on the world market. World excess demand is estimated to be 430,000 metric tonnes of raw nuts, valued at US\$270 Million which grows at a rate of 5-8 per cent per annum (Chemonics International Inc., 2002).

In the region, there are more than eight purchasing companies; in the late 1980s, CashPro Limited, a private export company established buying centres in almost all the cashew producing communities in the Brong Ahafo Region including the study areas and other major producing areas. Recently, other companies such as Olam (Gh) Ltd., Ghana National Procurement Agency (GNPA), Ghana Nuts Ltd, Bet Exports, Rals Commodities, 3F Ghana Ltd., Evans Global Investments Ltd., NASAKA Agro Processing Ltd., Asia Commodities Co. Ltd., Grand Mark Co. Ltd., Potrodom International PVT Ltd., Wilmaroel Ltd. and Isacon Co. Ltd. have joined the cashew buying business with buying centres in almost all the major cashew producing areas (ADF, 2000).

4.4 Cashew Industry and Local Economic Development

According to World Bank (2003), the creation of more productive jobs and entrepreneurial opportunity is a key measure to help poor people realise their potentials, and poverty reduction requires that entrepreneurs set up businesses at where poor people can work. The study revealed that the cashew industry has impacted on the lives of the people in various ways. The study identified that the cashew production and its related activities provide employment for over

8,300 people in the study areas. The employment with its ripple effects has implications for local economic development and these are discussed below.

a/ Employment

Cashew production and the presence of cashew factories in the communities have provided employment opportunities for many people in the communities. For example, apart from the 8,288 people directly employed in the industry, there was others employed indirectly such as food vendors at the factory sites and taxi drivers that convey people to and fro the factory sites.

b/ Infrastructural Development

❖ Provision of Water: The study revealed that there were water facilities at the various factory sites. According to the study, apart from the Awisa factory which only extended the water facility to the factory site, the remaining three factories drilled the boreholes with their own resources but it was revealed that the water facilities were open to the people in the vicinity free of charge. The study identified that the people of Ahenfi, a suburb of Nsawkaw for example, had stopped fetching water from the nearby river as a result of the borehole at the factory site. The implication is that the people would be free from water born diseases.

❖ Provision of Electricity: Again, the study revealed that apart from the Kabile factory, the electricity facilities at the various factory sites were extended to the sites by the factories without any contributions from the people in the vicinities.

❖ Extension of Road

The road leading to the Awisa, Sampa and Nsawkaw cashew factories were initially constructed by the factories at their own cost to enable their trucks convey the cashew nuts to the sites.

However, 8 per cent of the respondents identified that the presence of the factories in the communities has brought about an influx of people in their communities. To them, this has been the cause of the high cost of living especially; the pressure on the rooms has caused rent increase.

c/ Revenue to the District Assemblies

The Assemblies receive revenue from the cashew production in the form of taxes paid through the revenue collectors in the various communities. Table 4.10 shows the study districts' annual revenues from cashew produce from 2006 – 2008. From the table, the study districts received a total of GH¢19,484.43 as revenue in 2006. This increased to GH¢21,954.66 and GH¢28,429.88 in 2007 and 2008 respectively. In Tain district, the finance officer disclosed that the revenue from the cashew produce form about 60 per cent of the total revenue from the total farm produce every year. This means that in deprived districts like Tain and Jaman, the cashew production is one of the major sources of revenue to the Assemblies.

Table 4.10 District Assemblies' Revenue from Cashew Produce

| District/Year | 2006 GH¢ | 2007 GH¢ | % Change | 2008 GH¢ | % Change |
|---------------|------------------|------------------|-------------|------------------|-------------|
| Jaman | 5,876.64 | 6,068.27 | 3.2 | 9,166.08 | 51 |
| Tain | 5,598.48 | 5,596.80 | -.03 | 8,870.98 | 58.5 |
| Wenchi | 3,811.2 | 3,732.19 | 2.0 | 5,601.22 | 50 |
| Kintampo | 4,198.11 | 6,557.40 | 56.1 | 4,791.60 | -26.9 |
| Total | 19,484.43 | 21,954.66 | 12.6 | 28,429.88 | 29.4 |

Source: Field Survey, June 2009

d/ Foreign Exchange to the Government

In 2006, Ghana received US\$11,794.82 as foreign exchange from the cashew exports. This reduced to US\$ 10,779.33 in 2007 and almost doubled to US\$ 20,423.94 in 2008 (ISSER, 2006, 2007, 2008). However, it was revealed that the four major processing factories at Nsawkaw, Kabile, Sampa and Awisa produce at about 50 per cent capacity. The available data at the Nsawkaw cashew processing factory indicates that on the average, about 564 bags were processed yearly. This means the country exports mainly raw cashew nuts. The value of such nuts as imported to India is about US\$900 per tonne. But the export value after processing averages US\$5,300 per tonne, (Co-operative College, 2007). The implication is that the country stands the chance to earn more foreign exchange if the nuts are processed before exporting.

4.5 Summary

The analyses of the performance of cashew production in relation to LED revealed that cashew industry provides employment opportunity for over 8,000 people in the study area. A total of 216 employees; 7.9 per cent males and 92.1 females, were engaged in cashew processing. The analyses in the chapter also depict that the people's impression about the environmental impacts of cashew production is that it is not harmful even though 19.7 per cent of the respondents think cashew cultivation leads to the destruction of large trees and as a result collapses the timber industry. Again, the data presented shows that access to farm land is not a problem in the study area. However, there is inadequate capital to expand the business; despite there is enough world demand for the cashew produce. The key issues that emerged are presented in the next chapter.



CHAPTER FIVE

KEY FINDINGS, RECOMMENDATIONS AND CONCLUSION

5.1 Introduction

The chapter covers the key issues that emerged after analysing the data. It also covers suggestions, policy and research recommendations as well as conclusion for the study.

5.2 Key Findings

The study revealed a number of key development issues. Some of these issues deserve special attention in order to bring about local economic development. These issues are listed in the study purposely to provide basic information for a pragmatic restructure of the cashew industry in the country.

5.2.1: The Role of the Cashew Industry to LED

The study revealed that the main role of the cashew industry to LED in agrarian economies like those of Jaman, Tain, Wenchi and Kintampo was to provide employment opportunities for the people in farming, processing and marketing of cashew nuts. This role was identified to have enhanced economic activities in the study areas. For instance, the study revealed that over 8,233 people earn incomes from the cashew production and its related activities. In 2008 for example, the aggregate income for 262 farmers was GH¢345,270.00 as shown in Table 4.3.

The research established that the cashew industry contributes to the provision of certain socio – economic infrastructures in the study area. For instance, the study revealed that water and electricity were extended to certain parts of the communities as a result of the presence of the cashew processing factories in these communities. The costs for extending these facilities to the sites were borne by the factories.

5.2.2 Effects of Cashew Production on the Environment

The general impression about the environmental effects of cashew production was that cashew is an environment-friendly crop.

a/ Protection against Erosion, Bushfires and Desertification: In the semi-arid and dry northern regions, cashew is an economic crop cultivated to check desert encroachment, which is a serious threat in the area. In the southern region, especially the eastern region, it checks gully erosion. It was also identified that for the sake of the cashew plantations the farmers tend to fight against bushfires. They however, admitted that at times, their bad farm practices bring about bushfires.

b/ Air Pollution: Smoke comes out during the processing of cashew nuts into kernels. This has health implications not only for the workers at the factory sites but also the people in the vicinities concerned.

5.2.3 The Extent to which MoFA facilitates Cashew Production in the study areas

a/ Technical support

It was established that the farmers received some technical support during the period under review. The supports such as training programmes were sponsored by ADRA and ran by the MoFA. In addition, the AEAs facilitated the farmer's access to the ADB credit facilities from 2004 – 2007.

b/ Credit Facilities and Rate of Repayment

The credit facilities were available to farmers in groups. It was Agricultural Development Bank loan facility to cashew farmers under the Cashew Development Project (CDP) in some selected districts. The four districts selected for the study, Jaman, Tain, Wenchi and Kintampo were included in the CDP. The research revealed that the farmers needed no collaterals for the loans hence they needed to form groups. The implication was that the members were guarantors of each other. That is, if a member failed to pay back the loan, the group members were collectively held responsible for the debt. This has both merits and demerits;

Merits;

- i. The farmers did not have to provide collaterals to enable them access the facility.
- ii. The members in a group serve as watch dogs for each other to make sure the loans are paid back to enable them access it any time there is the need. As a result of the collective responsibility, about 90 per cent of the loan facilities in 2007 had been recovered.

Demerits;

- i. A single defaulter lands all the group members into trouble.
- ii. The farmers claim that the loan was not enough for them to manage their farms effectively.
- iii. Those farmers whose farms had not started producing faced problems in accessing the facility.

(c) Agriculture Extension Agent – Farmer Relationship

The study revealed that the farmers are in close relations with the DADUs. The AEAs render technical services to the farmers to ensure production of best quality produce and an increase in production. Some of these services are training programmes for cashew farmers, sale of improved seeds to farmers, linking farmers to Non Governmental Organisations such as ADRA, and also assisting farmers to get access to credit facilities where possible. The result is the increases in the volume of production from 2006 to 2008 in Table 4.1.

5.3. Recommendations

Local economic development requires the creation of an enabling environment capable of stimulating new opportunities in rural and urban areas where opportunities for economic growth may be limited. Local economic development programmes should thus identify and recommend sustainable income generating opportunities such as cashew production, for the local community. In order to boost or revamp the cashew industry, DADU on behalf of the district assemblies, should encourage cultivation of improved varieties to transform the study areas from a low-priced commodity producer to an exporter of high quality cashew products (organic kernels, etc).

5.3.1 Production and Harvesting of Cashew Nuts

With respect to production and harvesting, the Government and/or NGOs such as ADRA and African Development Bank can assist the cashew sub sector in the form of;

- ❖ Sponsorships for training programmes for cashew farmers to expose them to the best agronomic practices, post-harvest handling, marketing and quality control and management.
- ❖ Promotion of certified organic cashews to improve the export value of cashew products and open new niche markets to Ghanaian exporters.

- ❖ Distribution of improved cashew seeds and disease resistant varieties to Farmers. All farmers but not only those under the CDP should be sponsored to acquire the improved seeds.
- ❖ Processing of raw nuts before exporting. The government should negotiate with ADF to extend the financial assistance (credit facilities) to processing factories to add value to the raw nuts before exporting. This will help to increase the price and as a result increase the country's foreign exchange earnings.

These could be achieved through individual endeavours or cashew stakeholders - including producers, processors, exporters and financiers joining hands with the government to provide the needed social and economic support in the cashew producing areas to retain and entice the energetic youth to farm.

5.3.2 Formation of Ghana Cashew Board (GCB)

There is the need for the formation of Ghana Cashew Board (GCB) like the Cocoa Board to ensure sustainability and betterment of the industry. In the mean time, however, the existing cashew associations in the region could arrange and negotiate for befitting policies and initiatives for the industry. If the Cashew Board is formed, it would take the burden of providing higher-level coordination between the industry and the policy formulators so as to ensure that it develops to its fullest capacity. For instance, the Cashew Board of Tanzania regulates and promotes quality in the marketing and export of raw and processed cashew nuts. It is also responsible for advising the government on matters relating to the cashew nut industry and for carrying out other functions deemed necessary by the Ministry of Agriculture (Sijoana 2002).

5.3.3 Encouragement of Non-Governmental Organisations

The Non-Governmental Organisations such as ADRA should be encouraged by the government to continue to support MoFA to provide technical assistance to the farmers. Accessing credit facilities from the financial institutions is difficult but through the collaborative efforts of MoFA and ADRA, the farmers were mobilised in groups to access loan facilities from the Agricultural Development Bank with ease. More of such facilities could come to them if they are serious and prove credit wealthy.

5.3.4 Price Regulation/ Producer Price Stabilization.

The producer price is a function of many considerations and influences, the most important of which are production cost structure, the international cashew supply and demand dynamics, the domestic market situations, the effectiveness of regulation mechanism and the tax structure on the agricultural sector. The government could thus operate a buffer stock system whereby the produce are purchased and stored to make sure supply does not exceed demand on the local market to force the price down.

5.3.5 Production of Small-Size Cashew Nuts

The bulk of the produce in the study districts is the local (tiny, low-priced) type however, the AEAs are trying all they can to educate the farmers on the need to replace them with the hybrid plants. There is the need for MoFA to intensify the awareness on the need to use improved planting materials.

5.3.6 The Role of the Public Sector for LED

The Local government authorities are responsible for certain social and economic infrastructures such as roads, schools, hospitals and electricity in the communities. These are what Hirschman (1958) refers to as Social Over head Cost (SOC). The study revealed that this is inadequate in the cashew producing areas. The absence of these amenities makes it difficult for the industry to thrive. The local government authorities in the study districts through their participatory, facilitation, regulatory and adjustive roles should provide the rightful social and economic infrastructure that is be capable of creating enabling environment for LED.

5.4 Conclusion

The study set out to assess the contribution of cashew production to the economic development of Jaman, Tain, Wenchi and Kintampo districts of the Brong Ahafo Region in particular and the Ghanaian economy as a whole. It was revealed that the study districts are captured under the cashew development project started in 2003 and which assists the farmers with hybrid seeds, technical and financial supports.

A mutual link was identified to exist between the cashew industry and the societies (economies) of the study areas in particular and the nation as a whole. That is, the cashew industry provides food, employment and income for the people, and foreign exchange for the country as a whole. On the other hand, the societies provide the cashew industry with farm land, labour, technical support and at times subsidies and tax incentives.

It was also revealed that over 8,000 people engaged in the cashew production in the study districts complain of low producer prices and resultant low incomes from the cashew production. The major causes identified for the low prices of cashew nuts were; first, the production of local (tiny, low – priced) varieties in the area, second, lack of proper pricing policy for the product, unlike that of cocoa and finally, export of nut in its raw state.

On the whole, it was established that the cashew industry has been the source of income for over 8,233 people in the study districts, and it has the potential to expand when given the necessary support. The study thus recommends that the government or her agencies take pragmatic strategies to create an enabling environment for the sector to thrive. This requires support from all cashew stakeholders. For instance, the Cashew Board of Tanzania regulates and promotes quality in the marketing and export of raw and processed cashew nuts. The GoG could set a cashew board to operate in that direction to ensure that the cashew industry expands to provide income for more people in the local areas.

References

African Development Fund, (2000) Cashew Development Project Appraisal Report
GHA/PAAA/2000/01

Babbie E. (1990), Survey Research Methods, 2nd ed. California: Wadsworth Publishing
Blakely, E. J. (1988), Planning Local Economic Development. Theory and Practice Sage
Publications Inc. Available at
[http://www.alibris.com/search/books/qwork/5157362/used/PlanningLocalEconomic
Development.](http://www.alibris.com/search/books/qwork/5157362/used/PlanningLocalEconomicDevelopment) A Theory and Practice. (Accessed in April, 2008)

Boothroyd, P. (1991). The Meaning of Community Economic Development The Paradigm of
Community Development, Available at <http://cdj.oxfordjournals.org/content/30/1/21.full.pdf/>
(Accessed in April, 2008)

Boothroyd, P. and Davis H. C. (1993), Community Economic Development: Three Approaches.
Journal of Planning Education and Research 12. Available at
<http://jpe.sagepub.com/content/12/3/230.abstract> (Accessed, January 10, 2011)

Cashew Development Project (2008), The Status of Ghana Cashew Industry. Available at
[www.ghanacashewproducts.com.](http://www.ghanacashewproducts.com)(Accessed in June,2009)

Chemonics International Inc. (2002), Subsector Assessment of the Nigerian Cashew Industry.
Available at [http://pdf.usaid.gov/pdf_docs/PNACY675.pdf.](http://pdf.usaid.gov/pdf_docs/PNACY675.pdf) (Accessed April 18, 2008)

Clarke, Susan E; Gary L. Davis (1992), Post federal Local Economic Development strategies;
Economic Development Quarterly — 6 (2): 187–198. Available at
[http://en.wikipedia.org/wiki/Waves_of Economic Development.](http://en.wikipedia.org/wiki/Waves_of_Economic_Development) (Accessed, January 10, 2011)

Cochran, W.G. (1977), sampling techniques. New York: John Wiley & Sons. Available at
[http://www.cals.ncsu.edu/agexed/ae577a/Class11/sample.html.](http://www.cals.ncsu.edu/agexed/ae577a/Class11/sample.html) (Accessed on April 20, 2008)
Company.

Co-operative College, (2007) Issues of Cashew Nuts Production, fair and square. Available at
<http://www.fairandsquare.coop/?q=node/321> (Accessed, January 10, 2011).

Corporation for Enterprise Development (1982), Investing in poor communities. Washington D.C, Oxford University Press

Curle, A. (1995), Another Way: Positive response to contemporary violence, Oxford: Jon Carpenter Publishing.

Eisinger, P. K. (1988). The rise of the entrepreneurial state: State and local economic development policy in the United States. The University of Wisconsin Press.

Ezeagu, W. (2002), Assessment of the Situation and Development Prospects for the Cashew Nut Sector . Available at <http://www.unctad.org/infocomm/francais/anacarde/Doc/nigeria>. (Accessed, August 18, 2008).

FAO (2001), Cashew Production in Africa, Food and Agriculture Organisation of the United Nations Production Database. Available at <http://apps.fao.org/page/collections>. (Accessed, November 20, 2010).

Ghana Cashew Association Report, Brong Ahafo chapter, September 2008, unpublished Document.

Ghana Statistical Service (2005), 2000 Population and Housing Census.

Hammed L.A., Anikwe J.C. and Adedeji A.R. (2008), Cashew Nuts and Production Development in Nigeria. Available at [http://www.idosi.org/aejsr/3\(1\)08.11](http://www.idosi.org/aejsr/3(1)08.11) Accessed in February, 2011.

Hirschman, A. O. (1958). The Strategies of Economic Development. New Haven, C T; Yale University Press.

International Labour Organisation (2001), Local economic development: a tool for supporting locally owned and managed development processes that foster the global promotion of decent work, Job Creation and Enterprise Development Programme of the ILO, Geneva. By White, S.; Gasser, M.

Kane, M. (2004), Public - Sector Economic Development: Concept and Approaches, Northeast – Midwest Institute.

Kane, M. and P. Sand (1988), Economic Development: what works at the Local Level. Washington, DC: National League of Cities.

Kokor J.Y (2001), Local Governance of Development in Ghana. SPRING Research Series No. 30, SPRING Centre, Dortmund.

Kokor J.Y and Kroes G. (1996) Expenditure Pattern Ghanaian Districts: How do local communities benefit? SPRING Research Series No. 10 UST, Kumasi.

Krueger L. and Neumann W. (2006), Social Work Research Methods: Qualitative and Quantitative Approaches, New York, Pearson Education.

Local Economic Development Network of Africa (2008), Sharing Expertise for Growth, <http://www.linkedin.com/in/connieledna>. (Accessed in May, 2010).

Local Government Act of Ghana, Act 462 (1993), Ghana Publishing Corporation.

Mitchell, D. (2004). Tanzania's Cashew Sector: Constraints and Challenges in a Global Environment. Available at <http://www.worldbank.org/afr/wps/index.htm>. (Accessed, April 16, 2009).

Nigerian Cashew Industry. Cashew Unpublished Document, January, 2002, Abuja – Nigeria. Available at http://pdf.usaid.gov/pdf_docs/PNACY675.pdf (Accessed August 18, 2008).

Seers, D. (1969), The Changing meaning of Development. Available at <http://www.palgrave-journals.com/development/journal/v50/n1s/full/1100386a.html>. (Accessed January 10, 2011)

Sijaona M.E.R. (2002), Assessment of the Situation and Development of the Cashew nut Sector in Tanzania. Available at <http://www.unctad.org/infocomm/francais/anacarde/Doc/tanzania.pdf>. (Accessed, January 10, 2011)

The Ghanaian Chronicle paper, April 4, 2008 . Available at <http://allafrica.com/stories/200804040676.html>. (Accessed, October, 2008)

The Institute of Statistical, Social and Economic Research (ISSER) (2002), The State of the Ghanaian Economy. University of Ghana, Legon.

The Institute of Statistical, Social and Economic Research (ISSER) (2004), The State of the Ghanaian Economy. University of Ghana, Legon.

The Institute of Statistical, Social and Economic Research (ISSER) (2006), The State of the Ghanaian Economy. University of Ghana, Legon.

The Institute of Statistical, Social and Economic Research (ISSER) (2007), The State of the Ghanaian Economy. University of Ghana, Legon.

The Institute of Statistical, Social and Economic Research (ISSER) (2008), The State of the Ghanaian Economy. University of Ghana, Legon.

Todaro, M. (2003), Sample Essay on Economic Development Definition. Available at <http://homework.placefeedback.com/sample-essay-on-economic-development-definition-definition-essay/>. (Accessed 10th November,2010)

Topper, C.P (2002), Issues and Constraints related to the Development of Cashew Nuts from five African countries . Available at <http://www.untad.org/information /francais/anacarde/Doc>. (Accessed, November 20,2010).

Topper, C.P., Martin, P.J., Katinila, N., Kikoka (1998), The historical and institutional background of the Tanzania Cashew Industry, proceedings of the international cashew and coconut conference; Trees for life- the key to Development. Biohybrids International Ltd. Reading UK. Available at linkinghub.elsevier.com/retrieve/pii/. (Accessed, January 10, 2011).

Trochim, M.K. (2006), Social Research Methods. Available at <http://www.socialresearchmehods.net/kb/survey.php>. (Accessed on March 11, 2009).

UNCTAD/UNEP (1974), Patterns of Resource Use, Environment and Development Strategies, Cocoyoc, Mexico. Available at <http://www.jstor.org/pss/2706353> . (Accessed April 20, 2008)
Unpublished Document of Brong Ahafo Region.

WB/IMF (2008), Global Monitoring Report 2008, MDGs and the Environment: Agenda for Inclusive and Sustainable Development, Washington DC.

William, M. and K. Trochim, (2006). Research Methods Knowledge Base. Available at (<http://www.socialresearchmethods.net/kb/order.php>). (Accessed on March 11, 2009).

World Bank (2003), World Development Report, Available at <http://econ.worldbank.org/wdr/wdr2003/>. (Accessed on August 18, 2008)

World Bank OED, (1998), Tanzania, Agriculture, and the World Bank. An Operations Evaluation Department Review. Report 18111. Washington D.C.



Appendix 1: Questionnaire for District Agriculture Development Units

**Department of Planning
College of Architecture and Planning
Kwame Nkrumah University of Science and Technology, Kumasi.**

I am Peter Kwasi Sarpong, a student, Master of Science “Development Policy and Planning” at the above mentioned institution. I am conducting this study as part of the requirements for the award of the degree. Your participation in this interview will enable me provide accurate and fair view about the situation on the ground. You may choose not to take part in this interview, but if you do, I guarantee that all information you provide will be treated as confidential and that no statement you make in this interview will be identified with you personally.

SECTION A

Background Information

- 1.1 Name of District 1.2 Date of interview
- 1.3 Rank/position 1.4 Age of Respondent.....

SECTION B

Land Acquisition

2. Do farmers face any problem in acquiring land for cashew production? Yes [] No []
- 2.1 If Yes, what are the problems?
- 2.2 How many farmers are under your programme in the District?
- 2.3 What is the total acreage cultivated in the district.

SECTION C

Access to Credit Facilities

3. Do Cashew farmers in the district have access to credit facilities? Yes [] No []

3.1 If Yes, from which source?

- a) Government []
- b) Financial Institutions []
- c) NGO []
- d) Personal Arrangements []

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3.2 If No why?

SECTION D

Marketing

4. How do farmers sell their Cashew Products in the district?

.....

4.1 Do farmers get fair producer prices for their produce? Yes [] No []

4.2 Explain your answer in 4.1

.....

4.3 How does your answer in 4.1 affect the farmers' income at the end of the seasons?

.....

SECTION E

Cashew Production and Local Economic Development (LED)

5. What role do you think the Cashew Industry is expected to play in LED?

.....

5.1 What benefits do farmers in the district derive from Cashew production?

.....

5.2 Does Cashew Industry contribute to the development of the locality? Yes [] No []

5.3 Explain your answer in 5.2

.....

5.4 Do Cashew Farmers receive any form of support from any NGOs in the District? Yes []

No []

5.5 If Yes, what kind of support?.....

5.6 If Yes, name the NGOs concerned.....

5.7 What are the effects of Cashew production on the environment?

.....

5.8 What is the ratio of Male to Females cashew farmers?

SECTION F
Challenges of Cashew Production

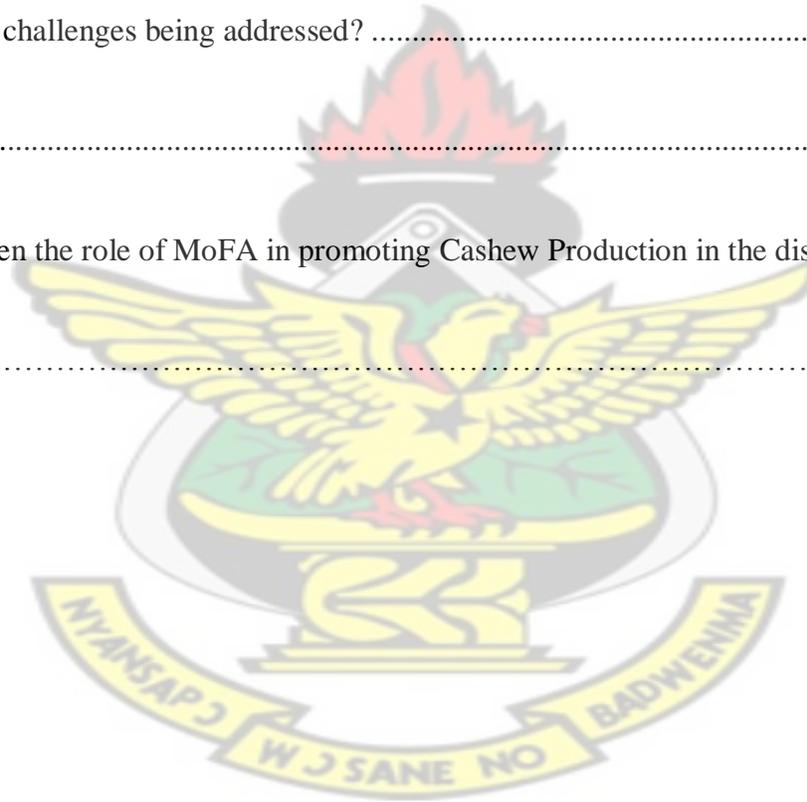
6. Do Farmers face any challenges in producing cashew in the district? Yes [] No []

6.1 If Yes, what are the challenges?
.....

6.2 How are the challenges being addressed?
.....

6.3 What has been the role of MoFA in promoting Cashew Production in the district?
.....

Thank you.



Appendix 2: Questionnaire for Cashew Farmers

**Department of Planning
College of Architecture and Planning
Kwame Nkrumah University of Science and Technology, Kumasi.**

I am Peter Kwasi Sarpong, a student, Master of Science “Development Policy and Planning” at the above mentioned institution. I am conducting this study as part of the requirements for the award of the degree. Your participation in this interview will enable me provide accurate and fair view about the situation on the ground. You may choose not to take part in this interview, but if you do, I guarantee that all information you provide will be treated as confidential and that no statement you make in this interview will be identified with you personally.

SECTION A

Background Information

- 1.1 Name of District 1.2 Date of interview
- 1.3 Gender of Respondent M [] F [] 1.4 Age
- 1.5 Level of terminal formal education of respondent
- a) Nil []
 - b) Basic []
 - c) Secondary/Vocational []
 - d) Tertiary []
- Others, specify

SECTION B
Land Acquisition

2. How did you acquire land for Cashew production? Hired Family Owned Outright purchase

2.1 How long have you been farming cashew?

- a/ 0-5 years
- b/ 6-10 years
- c/ over 10 years

2.2 What is the land size of your farm?

2.3 Do you do any other work(s) apart from Cashew production? Yes No

2.4 If Yes, what are the other work(s) that you do

SECTION C
Access to Credit Facilities

3. Do you have access to credit facilities? Yes No

3.1 If Yes, from what source? Government Financial Institutions NGO Personal arrangements

3.2 If No why?

SECTION D
Marketing of Cashew Products

4. How do you sell your products?

4.1 Do you find the Marketing system convenient to you? Yes [] No []

4.2 If No, what are your reasons?

4.3 Do you get fair producer prices for your produce? Yes [] No []

4.4 Explain your answer

4.5 How does your answer in 4.3 affect your end of season income ?
.....

SECTION E
Cashew Production and Local Economic Development

5. How many People do you employ?

5.1 How many of your employees are Women?

5.2 Do you have access to Agriculture extension services in your farm activities? Yes [] No []

5.3 If No, why?

5.4 If Yes, what are some of the services that you receive?

5.5 How many bags do you harvest a year?

- a/ 1-5 bags []
- b/ 5 -10 bags []
- c/ 10 – 15 bags []
- d/ over 15 bags []

5.6 Do you derive any benefit from the cashew production? Yes [] No []

5.7 If Yes, state examples of the benefits.....

5.8 What is the contribution of the Cashew Industry to the Local Economic Development?

.....

5.9 What are the effects of Cashew production on the Environment?

.....

SECTION F

Challenges of Cashew Production

6. Do you face any challenges in Cashew Production? Yes [] No []

6.1 If Yes, what are the Challenges?.....

.....

6.2 What initiatives have been taken to address the challenges?

.....

Thank you.

Appendix 3: Questionnaire for Cashew Buyers

**Department of Planning
College of Architecture and Planning
Kwame Nkrumah University of Science and Technology, Kumasi.**

I am Peter Kwasi Sarpong, a student, Master of Science “Development Policy and Planning” at the above mentioned institution. I am conducting this study as part of the requirements for the award of the degree. Your participation in this interview will enable me provide accurate and fair view about the situation on the ground. You may choose not to take part in this interview, but if you do, I guarantee that all information you provide will be treated as confidential and that no statement you make in this interview will be identified with you personally.

SECTION A

Background Information

1.1 Date of interview 1.2 Gender of Respondent M [] F []

1.3 Age

SECTION B

Land Acquisition

2. Do you face land acquisition problem? Yes [] No []

2.1 If Yes what is the problem?

.....

SECTION C

Access to Credit Facilities

3. Do you have access to credit facilities? Yes [] No []

3.1 If Yes, from which source? Government [] Financial Institutions [] NGO [] Personal arrangements []

3.2 If No why?



SECTION D

Marketing of Cashew Products

4. How do you get the Cashew products to buy.....

.....

4.1 How many bags are you able to buy every year?

- a. 5- 50 bags []
- b. 50 -100 bags []
- c. over 100 bags []

4.2 What measurement is used to purchase the cashew produce?

- a) Special Sucks and containers []
- b) Measurement Scale []
- c) Others, specify

4.3 On average, how many bags are you able to buy yearly?

.....
4.4 Do you get the required quantity? Yes [] No []

4.5 If No, what do you think are the reasons?

.....
4.6 Does Government regulate the prices of cashew products like that of cocoa? Yes [] No []

4.7 If No how are the prices of cashew products determined?

- a/ by demand and supply (invisible hand) []
- b/ by farmers []
- c/ by buyers []
- d/ Others, specify

4.8 Are you satisfied with the pricing system? Yes [] No []

4.9 State reason (s) for your answer

.....
4.10 What do you do to the products you purchase? They are;

- a. resold locally []
- b. exported []
- c. processed []

SECTION E

Cashew Production and Local Economic Development

5. How many People do you employ?

5.1 How many of your employees are Women?

5.2 What benefit do you derive from the cashew Industry?

.....

5.3 What is the contribution of the Cashew Industry to the Local Economic Development?

.....

SECTION F

Challenges of Cashew Production

6. Do you face any challenges in the Cashew Industry? Yes [] No []

6.1 If Yes, what are the Challenges?.....

.....

6.2 What do you think can be done to overcome the challenges?

.....

Thank you.

Appendix 4: Questionnaire for Cashew Processors

**Department of Planning
College of Architecture and Planning
Kwame Nkrumah University of Science and Technology, Kumasi.**

I am Peter Kwasi Sarpong, a student, Master of Science “Development Policy and Planning” at the above mentioned institution. I am conducting this study as part of the requirements for the award of the degree. Your participation in this interview will enable me provide accurate and fair view about the situation on the ground. You may choose not to take part in this interview, but if you do, I guarantee that all information you provide will be treated as confidential and that no statement you make in this interview will be identified with you personally.

SECTION A

Background Information

1.1 Date of interview 1.2 Gender of Respondent M [] F []

1.3 Rank/Position Age

SECTION B

Land Acquisition

2. How did you acquire the land for your factory? Hired [] Family owned [] Outright purchase []

2.1 Do you face any problems about land acquisition? Yes [] No []

2.2 If Yes, what are the problems?

.....

SECTION C
Access to Credit Facilities

3. Do you have access to credit facilities? Yes [] No []

3.1 If Yes, from which source? Government [] Financial Institutions [] NGO [] Personal Arrangements []

3.2 If No why?

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SECTION D
Marketing

4. Into what do you process cashew?

a. Roasted kernel [] b. Brandy/ Gin [] c. Others, specify

4.1 How do you get (Raw materials) Cashew Products for your work?

a. Buy directly from the farmers [] b. Buy from the middlemen [] c. Buy through agents [] d. Others, specify

4.2 Do you get enough quantity? Yes [] No []

4.3 If No, what is /are the reason (s) ?

.....

4.4 What is your target market? Local market only [] Foreign Market (Export) only [] Both Local and Foreign markets []

4.5 Do you get fair prices for your processed products? Yes [] No []

4.6 If No, State reason (s)

.....

SECTION E

Cashew Production and Local Economic Development



5. How many People do you employ?

5.1 How many of the employees are Women?

5.2 What benefit do you derive from the Cashew Industry?

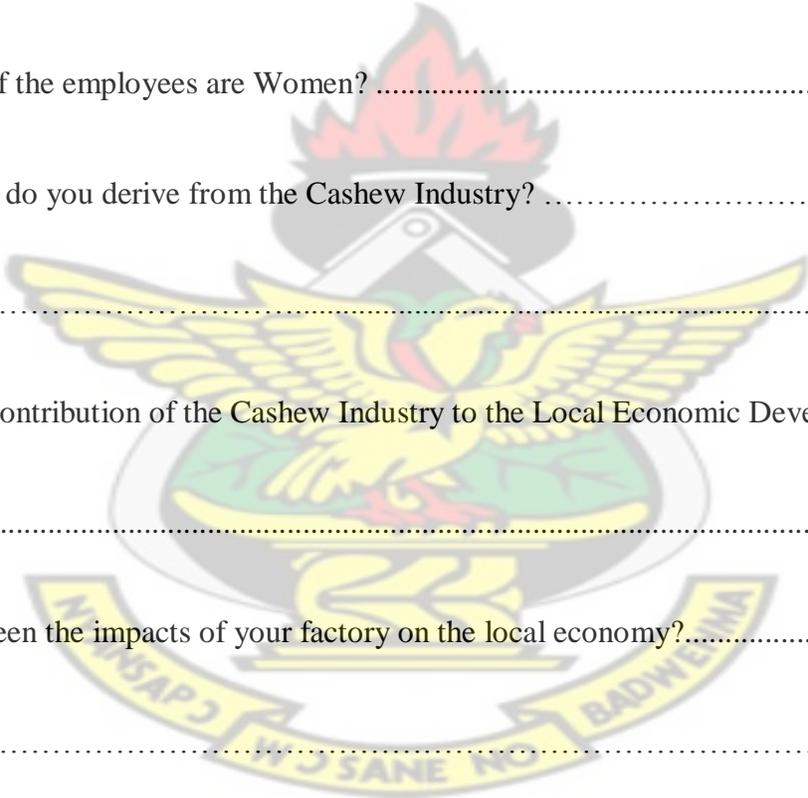
.....

5.3 What is the contribution of the Cashew Industry to the Local Economic Development?

.....

5.4 What have been the impacts of your factory on the local economy?.....

.....



SECTION F

Challenges

6. Do you face any challenges in the Cashew Industry? Yes [] No []

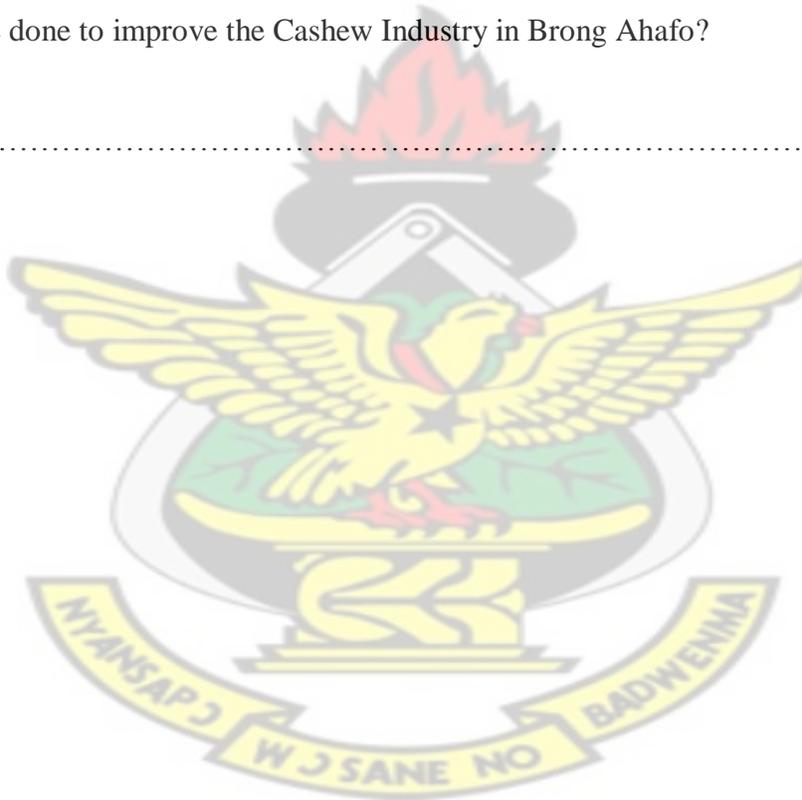
6.1 If Yes, what are the Challenges?.....

6.2 What can be done to address the challenges?

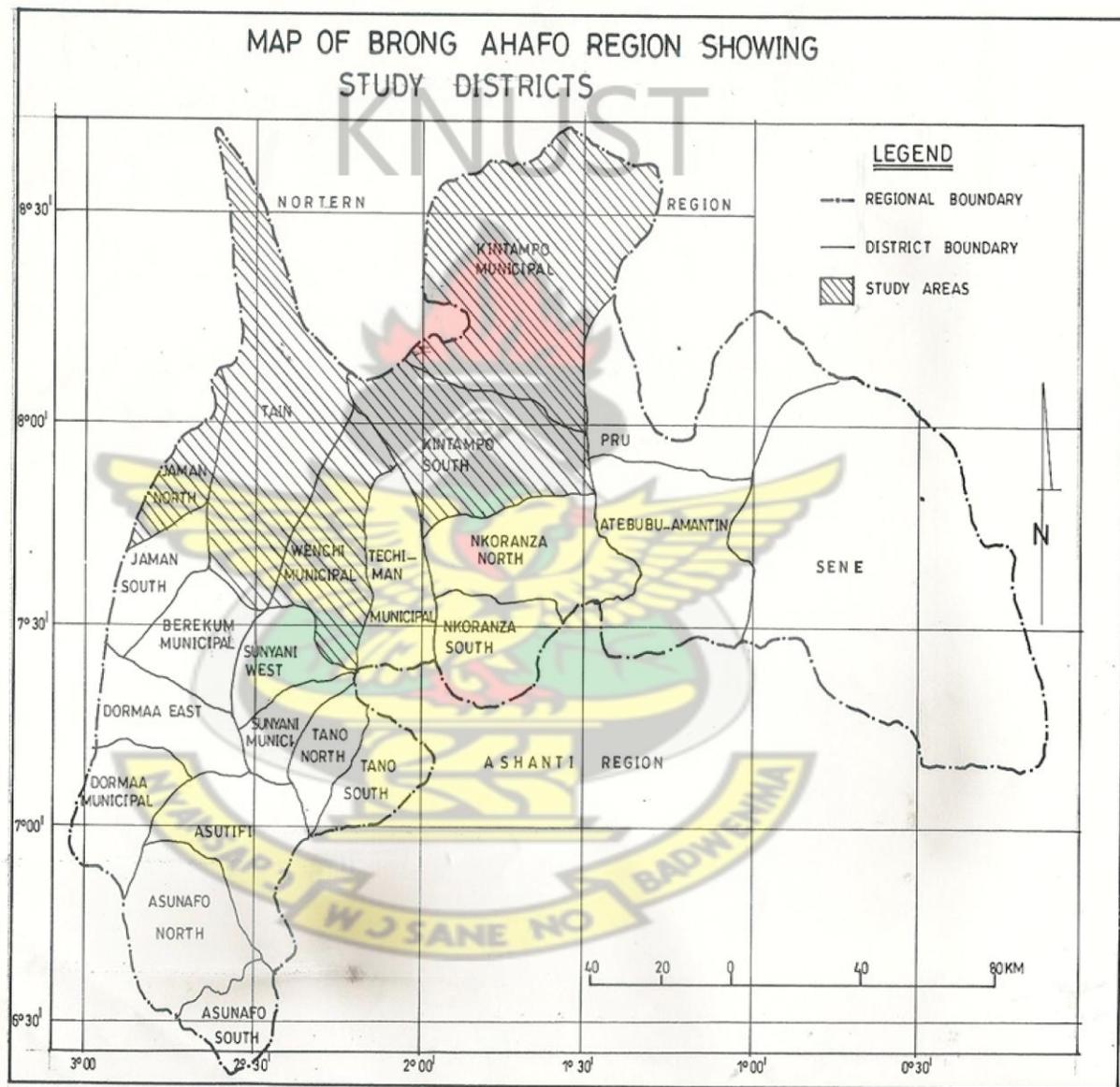
.....
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6.3 What can be done to improve the Cashew Industry in Brong Ahafo?
.....

Thank you.



Appendix 5: The Map of Brong Ahafo showing Study Districts



Appendix 6: Cashew Tree



Source: Chemonics International Inc., 2002.

Appendix 7: Cashew Fruits



Source: The Ghanaian Chronicle Paper, 2008.