

UNIVERSITY OF CAPE-COAST

COCOA FARMING BUSINESS, FINANCIAL LITERACY AND SOCIAL
WELFARE OF FARMERS IN BRONG-AHAFO REGION OF GHANA

BY

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DECLARATION

Candidate's Declaration

I hereby declare that this dissertation is the result of my own original research work and that no part of it has been presented for another degree in this university or elsewhere.

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Supervisors' Declaration

I hereby declare that the preparation and presentation of this dissertation was supervised in accordance with the guidelines on supervision of dissertation laid down by the University of Cape-Coast.

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ABSTRACT

Government of Ghana has put in place many measures to improve the well-being of cocoa farmers in the country through increase in the income they receive from cocoa produce. Despite this, cocoa farmers in Ghana do not earn the quality premium received by Ghana cocoa on the international market. This study examined the influence of cocoa farming business and financial literacy on the social welfare of cocoa farmers in the Brong-Ahafo Region of Ghana. The study employed both qualitative and quantitative methods in the study and data collection was done using questionnaire and interview. A total of 106 cocoa farmers were selected using simple random sampling technique. Analyses of the data were done by using both descriptive and influential analyses. The study revealed that cocoa farmers depend mostly on the income from cocoa, and since most of them are peasant cocoa farmers and the income they receive is not much, it has an adverse effect on their living standards. Also, the study found that, (65%) of the respondents do not save, thus, having a negative effect on their well-being. The study showed that, financial literacy level of cocoa farmers have a positive effect on their well-being. The study also found that educational level has a positive effect on cocoa farmer's well-being whereas number of dependents of cocoa farmers and age have negative impacts on the well-being of cocoa farmers. The study therefore recommends government must increase the cocoa producer price which will help raise the income of cocoa farmers in order to enhance their well-being. Also, COCOABOD and government must offer financial literacy education to cocoa farmers.

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DEDICATION

To my parents, Mr. Samuel Adu-Asare and Emelia Adu-Asare as well as my wife Rebecca Adu-Asare and sibling Nana Yaw, Nana Yaa Mantse Asare, Akua Adu-Asare Charlotte Adu-Asare.

TABLE OF CONTENTS

	Page
DECLARATION	ii
ABSTRACT	iii
ACKNOWLEDGEMENTS	iv
DEDICATION	v
TABLE OF CONTENTS	vi
LIST OF TABLES	ix
LIST OF FIGURES	x
LIST OF ACRONYMS	xi
CHAPTER ONE: INTRODUCTION	
Background to the Study	1
Statement of the Problem	5
Purpose of the Study	8
Research Objectives	8
Research Questions	8
Hypotheses	8
Significance of the Study	9
Delimitations	9
Limitations of the Study	10
Organisation of the Study	10
CHAPTER TWO: LITERATURE REVIEW	
Introduction	11
Theories Underpinning the Study	11
Exchange Theory	11

Learning Theory	12
Resource Based View Theory	13
Theory of Planned Behavior (TPB)	14
Cocoa Production in the Brong Ahafo Region of Ghana	15
Producer Price Indexes (PPI)	16
Financial Literacy	16
Empirical review	17
Relationship between Financial Literacy and Cocoa Farmers’ Well-Being	17
Age, Marital Status, Level of Education, and Number of Dependents and Well-Being	22
Chapter Summary	25
CHAPTER THREE: RESEARCH METHODS	
Introduction	26
Research Approach	26
Research Design	26
Study Area	27
Target Population	28
Sample and Sampling Procedure	28
Data collection Instruments	28
Data Collection Procedure	29
Reliability and Validity Testing	29
Model Specification	30
Data Processing and Analysis	30
Ethical Considerations	31

Chapter Summary	31
CHAPTER FOUR: RESULTS AND DISCUSSION	
Introduction	32
Demographic characteristics of the Respondents	32
Financial Literacy Level among the Cocoa Framers	37
Having Written Financial Objectives of what to Achieve Personally	38
Comparison of Financial Objectives with Financial Plans	39
Effect of Financial Literacy on the Well-Being of Cocoa Farmers	40
Influence of Cocoa Farming Business on the Well-Being of Cocoa Farmers	42
Chapter Summary	47
CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	
Introduction	49
Summary	49
Conclusions	
51Recommendations	52
Suggestions for Future Research	54
RFERENCES	55
APPENDIX	66

LIST OF TABLES

Table	Page
1 Socio- demographic characteristics	33
2 Results of the effect of Financial Literacy on the Well-Being Cocoa Farmers	42
3 Influence of Cocoa Farming Business on the Well-Being of Cocoa Farmers	43

LIST OF FIGURES

Figure	Page
1 Preparation of a Written Budget for Income and Expenditure Regularly	37
2 Have Written Financial Objectives of what to Achieve Personally	39
3 Comparison of Financial Objectives with Financial Plans	40

LIST OF ACONYMS

ASAP	Agricultural Structural Adjustment Policies
COCOBOD	Ghana Cocoa Board
CCR	Cocoa Commodity Report
CHED	Cocoa Health and Extension Division
CEC	Commission of the European Communities
CMB	Cocoa Marketing Board
ECA	Economic Commission for Africa
FOB	Free on Board
GAIN	Global Agricultural Information Network
ICCO	International Cocoa Organisation
IFPRI	International Food Policy Research Institute
IMF	International Monetary Fund
LBAAs	Licensed Buying Agents
LBCs	Licensed Buying Companies
MAFAP	Monitoring African Food and Agricultural Policies
NCSC	National Cocoa Stakeholders' Conference
NHIS	National Health Insurance Scheme
OECD	Organisations for Economic Cooperation Development
PPRC	Producer Price Review Committee
PPIs	Producer Price Indexes
SAP	Structural Adjustment Programme
UNCTAD	United Nations Conference on Trade and Development
WCF	World Cocoa Foundation

CHAPTER ONE

INTRODUCTION

Financial knowledge and its application improves the well-being of consumers and also reduces the rate and possibility that consumers at any income level, will be persuaded to buy goods and services that does not serve their interests by unethical sales people and (Atia, 2012). This section thus, presents the overview on the study which includes the background to the study, statement of problem, objectives of the study, hypotheses of the study, significance of the study, limitation and delimitation, and organization of the study.

Background to the Study

In recent years, a lot of attention has been given to the subject of financial literacy in widespread financial institutions, such as government organisations, consumer and public awareness groups, and other administrations among others in relation to the wellbeing of the people (Braunstein & Welch, 2002). The complex nature of financial products and the awareness on the part of the individual to take responsibility for their financial security have raised the interest shown in financial education (Hilgert, Hogarth & Beverly, 2003). According to Braunstein and Welch (2002), consumers who have better financial education and have adequate financial information take good decisions that increase their social as well as economic well-being. Moreover, families that are secured financially are better positioned to make vital contributions to the economic development of their communities.

Governments in developed and developing countries have become more concerned about the level of financial literacy of their citizens (Van

Rooij, Lusardi & Alessie, 2011). This has stemmed in particular from shrinking public and private support systems, shifting demographic profiles including the ageing of the population, and wide-ranging developments in the financial marketplace (Gerardi, Goette & Meier, 2010). The concern has also been heightened by the 2007-08 financial crisis, with the recognition that lack of financial literacy was one of the factors contributing to ill-informed financial decisions and that these decisions could, in turn, have tremendous negative spill-over (OECD, 2009). As a result, financial literacy is now globally acknowledged as an important element of economic and financial stability and development (INFE, 2009).

In relation to cocoa production, one of the most essential commodities on the world market today due to its diverse nutritional value is cocoa. The main cocoa producing countries in the world include Ghana, Indonesia, Nigeria, Cote d'Ivoire and Cameroon. There are approximately 5-6 million cocoa smallholder farmers globally and 40-50 million people depend upon cocoa for their livelihood (World Cocoa Foundation (WCF), 2010). However, financial or economic well-being of cocoa farmers has been the subject of interest for researchers. The issue is more striking in the context of developing economies particularly Ghana where incomes received by farmers from cocoa output are not adequate to meet the basic need of these farmers them (Boddy, Dokko, Hershbein & Kearney, 2015).

Ghana, Cote d'Ivoire, together with other West African countries produce about 70 percent of the world's cocoa product thereby generating about \$13 billion annually (Roldan, Ingrid & Aidoo, 2013). Cocoa is a key contributor to government revenue and contributes to the Gross Domestic

Product (GDP) which generates about \$2 billion in foreign exchange annually and employs about 800,000 farm families spread all over the country (Rudolph, 2015).

Cocoa producer price determination is done by the government prior to each cocoa buying season. The main aim of the 1984/85 cocoa sector reforms was to prevent the reduction of cocoa production in the country; which involved institutional and operational reorganization in several areas such as reduction in heavy government taxation and payment of better producer price to cocoa farmers as an incentive to increase production (Quartey, 2014).

Indeed, faced in the period 2002/03 to 2004/05 with a (45%) increase in producer prices, cocoa producers in Ghana responded by more than doubling output. The long-term growth prospects in the cocoa sector are dependent on whether the increase in output responds the lifting of constraints on farmer's production possibilities or whether it simply reflects a short-term response to the windfall gains of strong cocoa prices especially the producer price(Andrew, Zeitlin, Teal & Vigneri, 2004) in their research on the cocoa sector.

The Brong Ahafo region of Ghana is renowned for its large cocoa production. About (70%) of Ghana's population live in rural areas with a sizable number being cocoa farmers (Brooks 2004). However, according to Bulir (2006), those who benefit from the profits of the cocoa industry are usually not the farmers who do all the back breaking work. A study conducted by Vigneri (2007), further revealed that the real profits go to the huge multi-national corporations and officials of state who are the managers of the cocoa

sector. Cocoa farmers produce an average of only eight bags of the beans per season. At a producer price of GHc562,500.00 Cedis per bag, this works up to only about GHc4.5 million Cedis per season. It is from this same income that the cocoa farmer pays for the cost of extra-labour needed on his farm and the school and medical bills of his or her dependents.

Social welfare issues in relation to the cocoa farming business in the region are very critical. Studies conducted by McMillan (2014), revealed that, one of the major problems facing farmer's welfare in the region is the long delay in effecting payment for their produce. Sometimes, it takes up to six weeks for the farmers to get paid. On some occasions they go to the rural banks for more than thrice before they get paid. At other times they have to surrender their Akoafo cheques to officials who pay them for less than the face value of their cheques.

Cocoa farmers protest that the government has made them poor and COCOBOD officials rich; making the occupation unappealing to the youth (Ofosu-Asare, 2011). It is obvious that even the cocoa clinics that are supposed to help cocoa farmers are located in Accra and Kumasi which is far from the rural cocoa growing communities / villages. According to Lusardi and Tufano (2015), most people in debt are usually low in terms of financial knowledge. That is, without proper financial literacy, citizens run into debts. A study by Van Rooij, Lusardi and Alessie (2011) has revealed that individuals who do not have much financial literacy are less likely to participate in indirect financial investments.

Financial literacy in the cocoa growing communities especially Brong Ahafo region of Ghana is very low (Atakora, 2013). Studies have shown that

rural dwellers exhibits lowest level of financial knowledge (Dahlia 2015). Cocoa farmers in Ghana especially the Brong Ahafo region are of no exception. Most of these cocoa farmers do not have any idea as to how much time is required for any type of financial services and issues related to the use of money. Ironically, financial practioners and professional bodies make little effort in educating them. Those who are financially literate acquired them from their parent (Lusardi 2016).

From the above discussions, this currentexamines the effect of cocoa farming business, financial literacy on the well-being of cocoa farmers in the Brong Ahafo region of Ghana since this research will contribute to already existing knowledge in the sector.

Statement of the Problem

Agriculture, especially cocoa, is the mainstay of Ghana's economy, accounting for (2.1%) of GDP in 2015, (1.7%) in 2016 and (1.8%). Cocoa exports in 2001 contributed (16%)(246.7 million) of GDP. During the 2015/2016 harvesting season, the country produced approximately 800,000 metric tonnes of cocoa, which was (20%) of the total world harvest. In 2014, cocoa was the third largest export product with a share of (20%) (US\$ 2.6 billion) in total exports (US\$ 13.2 billion)(GSS, 2016).Also cocoa exports from Ghana produced almost a fifth of commodity exports revenues (18%) and a competitive percentage of world cocoa exports (7.8%) (GSS report, 2011).Ghana is also the world's second largest producer of cocoa accounting of about (19%) of the world's total export of the product. Throughout the world the standards against which all cocoa is measured are those of Ghana cocoa. This makes Ghana an important player in the cocoa sector in the world

(COCOBOD Report, 2016). Although, Ghana benefits from cocoa it is not clear whether the farmers and their communities enjoy the share in the benefit.

Adjei (2013) revealed that in the year 2012 alone, the exportation of cocoa in Ghana generated over US\$2.8 billion in revenue to the country. However, according to the Monitoring African Food and Agricultural Policies (MAFAP) (2013), cocoa farmers do not earn the quality premium received by Ghana cocoa on the international market. Most of Ghana's cocoa output is cultivated from small farm holdings and these farmers are financially illiterate have a low propensity to save and poor access to efficient saving instruments thus, they live in poverty (Duncan, 2011). Over the centuries, revenues from cocoa have been used to embark on a lot of developmental projects in the country. Examples of these projects are: construction of roads, cocoa clinics in Accra and Kumasi, secondary schools among others (Ofosu-Asare, 2011). In spite of the revenues generated from cocoa and the yearly increment of the producer price by past and present governments, welfare of the cocoa farmers, and the development of these cocoa growing communities have not seen much improvement (International Cocoa Organisation Report, 2016).

In all this, financial well-being of cocoa farmers in Ghana which is defined as a state of being wherein a person can fully meet the current and ongoing obligation, can feel secure in their financial future, and is able to make choices that allow enjoyment in life is a challenge (OECD, 2015). Thus, it comprises feeling in control of your finances, having the capacity to absorb financial shock, being on track to achieve financial goals, and having the flexibility to make choices that allow life to be enjoyed. Lusardi and Mitchell (2011) show that financial well-being is a function of financial literacy. Little

income amidst soaring cost of living makes financial decision prudent for cocoa farmers because the decline in income requires that they are financially literate as espoused by the life-cycle theory of consumption and savings.

Further, acquiring financial experience by cocoa farmers and the application of this knowledge reduces the likelihood that consumers at any income level will fall prey to unscrupulous salespersons and purchase products or services that are not included in their best interest (Atia, 2012). Since the act of planning may enhance the financial experience, those who want to plan for retirement may invest in attaining financial literacy (Lusardi, 2015). Literature posits that increasing financial literacy is a means to financially empower people and improve their quality of life (Voydanoff, 1990). Lusardi and Mitchell (2011) reported that people who are financially experienced are much more likely to plan for retirement. This reflects the life course perspective theory which stipulates that a retirement experience might be influenced by previous events in life. However, little is known about the financial literacy and well-being of cocoa farmers. This could be worrying since cocoa farmers in their old age who will be part of the elderly in the society constitute one of the most vulnerable groups in society (Stewart & Yermo, 2009). Nevertheless, studies on financial literacy and well-being have concentrated on the youth and young adults other sector of the Ghanaian economy (Ansong & Gyensare, 2012; Mireku, 2015) at the neglect of cocoa farmers. In as much as financial literacy is relevant for cocoa farmers in their financial planning and well-being little is known about how financially literate individuals perform financially during old age and how this affects their financial well-being. The study, therefore, examines the effect of cocoa

business, financial literacy on social welfare or well-being of cocoa farmers in the Brong Ahafo Region of Ghana.

Purpose of the Study

The main purpose of this study is to examine the effect of cocoa farming business, financial literacy on social welfare of cocoa farmers in the Brong Ahafo Region of Ghana using survey data.

Research Objectives

The specific objectives are to:

1. determine the influence of cocoa farming business on the social welfare of cocoa farmers in the Brong Ahafo Region of Ghana.
2. determine the financial literacy level among cocoa farmers in the Brong Ahafo Region of Ghana.
3. examine the effect of financial literacy on the well-being of cocoa farmers in the Brong Ahafo Region of Ghana.

Research Questions

The following is the question the study would attempt to answer based on the above first objective:

1. What is the level of financial literacy level among cocoa farmers in the Brong Ahafo Region of Ghana?

Hypotheses

H_0 : There is no significance association between cocoa farming business and social welfare of cocoa farmers.

H_1 : There is a significance association between cocoa farming business and social welfare of cocoa farmers.

H_0 : There is no significance association between financial literacy and well-being of cocoa farmers.

H_1 : There is a significance association between financial literacy and well-being of cocoa farmers.

Significance of the Study

The justification of this study is how important financial education role plays in Ghana. Since the introduction and continuous implementation of financial products in Ghana, there is a need to have some evidence of financial literacy among cocoa farmers. It is in the light of the above that a study of this nature seeks to examine the effect of financial literacy on the well-being of cocoa farmers in the Brong Ahafo Region of Ghana. The study will provide stakeholders in the finance industry with vital information that will enhance decision making and policy directions. This will assist policy makers such as COCOBOD and government in embark on financial education for cocoa farmers which in effect help them to be financially sound in order to improve their livelihood. Academically, this study will serve as a source of reference to enhance research in this field since it provides a rich source of literature.

Delimitations

This study seeks to examine the effect of cocoa farming business, financial literacy on the social welfare of cocoa farmers in the Brong Ahafo Region of Ghana. The study concentrated on this region since it is believed that, it fairly represents the varying characteristics of the population of Ghanaian cocoa farmers as this region is a major cocoa producing region in the country. The data collection was restricted to Brong Ahafo region only due to the limited time at hand to conduct the investigation.

Limitations of the Study

Resource, access to information and time were the main limitations to this study. The financial resource needed to conduct this study was quite substantial and combining studies with this research was a challenge. Access to the cocoa farmers posed another challenge for this study. Their busy schedules posed a daunting challenge in accessing reliable and in-depth knowledge from them. The issue of illiteracy among the farmers may also posed a challenge since the some farmers were not able to perceive the intent and purpose of the research and the researcher may need to devote more time to enlighten them. It was also time consuming travelling from Accra to the Brong Ahafo region for the data.

Organisation of the Study

The study is organised into five chapters. Chapter one contains the background to the study, statement of the problem, purpose of the study, objectives of the study, research questions/hypotheses, significance of the study, delimitations of the study, limitations of the study, and organisation of the study. Chapter two contains the review of literature on related topics. Chapter three examines research methods that have been utilized in this study to enable the researcher to meet the specified aims and objectives of the study. Chapter four captures the discussion and analyses the findings for the study. Chapter five presents the summary, conclusions, and recommendations as well as suggestions for future research.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter presents the relevant theoretical and empirical literature on farming business, financial literacy and social welfare among cocoa farmers in the Brong-Ahafo region of Ghana. The first section explores the theoretical underpinning of the study including the exchange theory, learning theory, resource based view theory and theory of planned behaviour and other theories linking cocoa farming business and social welfare issues. The second section examines empirical literature of interest to the topic, while the last section draws conclusions from both the theoretical and empirical literature.

Theories Underpinning the Study

This study was based on the growth poverty nexus theory, credit market imperfection, theory of planned behaviour and resource based view as it seeks to determine the impact of cocoa farming business on social welfare issues among cocoa farmers in the Brong-Ahafo region of Ghana.

Exchange Theory

The theory was proposed by Robson and Ladner (2006) who used it to incorporate all dimensions of obtaining financial literacy knowledge. They argued that procedural, interactional, interpersonal, and informational factors were related to acquiring literacy skills. According to this theory, individuals' financial literacy level will depend on the mode of exchange of the knowledge, the level of interaction and the type of information and how it is obtained. The theory is also supported by Lusardi and Mitchell (2008) findings that financial literacy is also higher among those who are working, and in

some countries among the self-employed, compared to those who do not work. This difference in literacy levels is explained in part as a result from financial education programs offered in the workplace and also be the effect of learning from colleagues or skills acquired on the job.

Learning Theory

This theory offers a methodical study of the observable influences of behaviour and how people acquire habits (Goldhaber, 2000). Pavlov (1960) documented that behaviour can be learned, modified, and extinguished by altering the conditions (including immediate stimuli) in which the behaviour occurs. Learning theory evolved most notably with the work of Skinner. Skinner determined that once the behaviour is associated with a consequence, whether to reinforce or punishment, the likelihood of the action continuing changes. Skinner argued that positive reinforcement and punishment are not equal; with the former providing longer lasting results and the latter having negative side effects (Skinner, 1953). Therefore according to learning theories, financial literacy can be learned and hence support financial education programs. Going by the theory, educated people are expected to be more financially literate and will be motivated to take use financial services so as to make more money since money can promote behaviour, such as working, because it enables a higher standard of living (Skinner, 1953). On the other hand, loss of money has been found to be equally effective as a shock in deterring behaviours. Skinner found that time mattered that a lapse of even a few seconds affected the association between behaviour and the consequence (Skinner, 1954). Learning theory, intentionally or not, dominates many financial transactions. Undesirable financial behaviour, such as over drafting a

bank account, is typically punished by fees and taking credit by interest, thus, if financial charges are high, according to learning theory, households will not use them. This theory was adopted because it links how people can learn to be financially sound to improve their living conditions.

Resource Based View Theory

The resource- based view (RBV) argues that farm owners possess resources, a subset of which enable them to achieve competitive advantage, and a subset of those that lead to superior long-term performance. Resources that are valuable and rare can lead to the creation of competitive advantage (Barney & Hesterly, 2015). The theory states that as a basis of competitive advantage a business lies primarily in the application of a bundle of valuable tangible or intangible resources at the firm's disposal (Eniola & Entebang, 2014).

Cocoa like many other resource or commodities is often differentiated by country of origin, and this in turn is associated with a reputation based on average quality. The reputation, a national public good, enables the country (Ghana) to earn a premium in the local market for the crop it is producing. Generally, Ghana receives a price premium for its cocoa in the world markets because of the slightly higher-than- average fat contents; low levels of debris, which results in higher cocoa butter yields than beans containing high levels of debris, and low levels of bean defects, which generate a cocoa liquor favor preferred by some end users. Gilbert (2009) suggests that Ghanaian cocoa draws a premium of 3 to 5 per cent receptive to Cote D'Ivoire, quality is also maintained by quickly collecting properly fermented and dried beans from smallholders farmers and promptly shipping them to avoid the buildup of

moisture, mold, and free-fatty acids that can rapidly deteriorate the quality of the beans.

Theory of Planned Behavior (TPB)

The theory of planned behavior abbreviated (TPB) is a theory that links beliefs and behavior. The concept was proposed by Ajzen(1975) to improve on the predictive power of the theory of reasoned action by including perceived behavioral control. It is a theory explaining human behaviour. It has been applied to studies of the relations among beliefs, attitudes, behavioral intentions and behaviors in various fields such as advertising, public relations etc. The theory states the attitude toward behavior, subjective norms, and perceived behavioral control, together shape an individual's behavioral intentions and behaviors.

Moreover, saving money has proven to be a challenge for many low and moderate income Ghanaian families especially in the case of cocoa farmers. Behavioral research suggests that people incorporate non-financial factors such as values, emotions, early life experiences, psychological characteristics and misconceptions into their financial decision making. According to Maton and Martin (2010), financial literacyconcept has the ability to create positive changes in financial behaviors. In addition, this can give people a sense of accomplishment and motivation to maintain those behaviors. According to Turnham (2010), people in general are encouraged to save. However a participant's ability to save is affected by the lack of opportunity, lack of knowledge, lack of will power, and attitudes towards savings and savings institutions.

Cocoa Production in Brong-Ahafo Region of Ghana

Growth in cocoa production became more pronounced starting in 2011 possibly driven by a combination of record high world prices increased share being passed onto farmers, and a set of interventions rolled out by the COCOBOD to improve farming practices, mass spraying program and subsidy packages to promote the adoption of higher and more frequent application of fertilizer (Vigneri & Santos, 2008).

Since 2001, a significant share of Ghana's agricultural productivity gains have been generated by exports crops, with cocoa accounting for 10 percent of total crop and livestock production values. (World Bank, 2011) and contributing to 28 percent of agricultural growth in 2006 up, from 19 percent in 2001. At the same time economic growth has been solid, averaging more than 5 percent since 2001 and reaching 6 percent in 2005 to 2006 coupled with the effects of greater access to education, health services, and land ownership (World Bank, 2012). In the Brong-Ahafo region cocoa farming is picking up. The situation is attributed to the incentive packages like free distribution of seedlings and fertilizers by government, coupled with the free cocoa disease and pest control programme (CODAPEC) and extension services being provided to farmers (COCOBOD, 2016).

The Extension Division of the Ghana Cocoa Board has revealed that the Brong-Ahafo Region is regaining its position as one of the nation's highest cocoa growing areas because most indigenous farmers, who migrated to engage in cocoa farming at Sefwi in the Western Region after the 1983 national bush fire disaster were back to establish new cocoa farms (COCOBOD, 2016).

Producer Price Indexes (PPI)

The Producer Price Index (PPI) measure the average changes in prices obtained by domestic producers for the production of goods and services within a period of time (GSS, 2014). According to the Organizations for Economic Cooperation and Development (OECD) (2014), the producer price index (PPI) does not attempt to measure the actual level of prices, but rather the measurement of the average change in price from one period to another. The PPI does not value or cost of production but can be used to measure either the change in output prices due to changes in the basic prices obtained by producers (OECD, 2014).

Financial Literacy

The President's Advisory Council on Financial Literacy (PACFL) of United States of America defined financial literacy to be the individual's capability to make use of his skill and knowledge to effectively manage their resources for their financial well-being throughout their lifetime. Definitions for financial literacy differ in context as well as in source (Hung et al., 2009). Most of these definitions originate from developed countries where the concept is much more developed than in developing countries. The basis, however, is having the skills and knowledge in making informed financial decisions. The U.S. Government Accountability Office (GAO) defined financial literacy broadly as: "The ability to make informed judgments and to take effective actions regarding the current and future use and management of money. It includes the ability to understand financial choices, plan for future, spend wisely, and manage the challenges associated with life events such as a job loss, saving for retirement, or paying for a child's education". It should be

noted however, that different people perceive and define financial literacy differently.

Whereas people in the developed world would perceive financial literacy as their knowledge of complex financial instrument and products such as derivatives, bonds, stocks, tax codes, use of credit cards and insurance requirement, for those in the developing world the concept may be defined by their knowledge in basic secure saving, borrowing wisely and budgeting. Going by the literature, the definitions of financial literacy encompasses the following: That financial literacy is a specific type of knowledge; An individual needs to have certain skills and ability to make use of the knowledge; The individual have to behave in a financially sound manner; The individual's financial experiences count and add up to the body of acquired knowledge.

Empirical Review

This section presents the empirical studies conducted in the area which forms the basis for this study. The cocoa farming business, financial literacy and social welfare of cocoa farmers is a critical component of the Ghanaian economy and very essential to the long-term success of the cocoa industry.

Relationship between Financial Literacy and Cocoa Farmers' Well-Being

Joo and Grable (2004) conducted a study aimed at determining factors that influence financial satisfaction. The survey results showed that educational level, financial literacy, risk, financial ability, financial activity, and financial pressures have a direct impact on financial satisfaction. The results showed that in high levels of knowledge and financial skills, the

strengthening of the financial behaviors leads to higher levels of financial satisfaction. Therefore, their study indicated that financial literacy had a direct effect on well-being.

O'Neill, Sorhaindo, Xiao and Garman (2005) examined the relationship between financial activities, financial well-being, and health among 3,121 customers of a financial consulting organization. Their results showed that people with higher financial well-being will experience less stress, are more motivated in financial activities, have a better family relationship and are physically and mentally healthier, making pecuniary well-being very necessary in the lives of elderly cocoa farmers since they are old and very vulnerable. A little financial stress could affect them either mentally or physically.

Huston (2010) in a study measuring financial literacy showed that a person who is financially literate, that is he/she has the knowledge and the ability to utilise the knowledge, may not exhibit predicted behaviours or increases in financial well-being because of certain influences. Such impacts could come from behavioural/cognitive biases, self-control problems, family, economic, community, and institutional factors. However, Sabri, Cook and Gudmunson (2012) found that financial literacy significantly influenced students' perceived financial well-being. Taft, Hosein, Mehrizi & Roshan (2013) in their study on financial literacy, financial well-being, and financial concerns revealed that higher financial literacy leads to greater financial well-being. Thus, for financial well-being to be achieved financial literacy is needed.

Connolly and Hajaj (2001) state that low levels of financial literacy have been closely linked with financial and social exclusion, resulting in increasing levels of wealth inequality in society. Bernheim and Garrett (2003) established that high percent of consumer financial literacy programs started in the late 1990s or 2000. Lack of financial literacy and capability has particularly serious consequences for those on low incomes, for whom costly mistakes can have grave consequences.

Hilgert, et al. (2003) found a very strong and significant link between knowledge and behaviour across the range of personal finance activities. Further, the most effective ways to learn personal financial management skills were identified to be the media and video presentations, while informational seminars and formal courses were rated lowest. Personal experience, friends and family were the main sources of knowledge while formal education like high school education and educational sessions either to the job or outside of a school environment was rated lower across all financial practices and skill levels. Unfortunately, the study does not provide conclusive evidence that financial literacy leads to sound personal finance. Moore (2003) also shows that borrowers who took out high-cost mortgages display little financial literacy. Financial literacy is positively related to investment behaviour. Individuals who answer all three financial literacy questions correctly are more likely to have an investment related custody account and a voluntary retirement savings account.

Campbell (2006) argues that with financial education that leads to financial literacy, poor financial decisions are likely to be reconciled with economic theory given that households have been found to make sub

optimal decisions which deviate from what economic theory suggests. Campbell posits that households with higher education levels (high school, college, graduate school) are likely to be more active in capital markets due to reduced information asymmetry. Through regression evidence, higher education levels were found to be significantly related to equity ownership by households. He also found that the educated Swedish households were able to diversify their portfolios more efficiently than less educated households. The poorer and less educated households were found to have a higher probability of making mistakes than wealthier and better educated households. Dixon (2006) refers to this as „the motivation gap“, where there is a difference between „what people say is important and their actual behaviour. Dixon (2006) identifies two main approaches in motivating financial capability. The first and most common approach is financial education, advice and guidance. The second relates to infrastructure, which involves „providing the best possible structures to make it easier for people to act in more financially capable ways, thereby enabling them to become more engaged and interested in improving their financial capability.

Lusardi and Mitchell (2007) observed that households with low levels of financial literacy tend not to plan for retirement, acquire fewer assets, borrow at higher interest rates (Lusardi & Tufano, 2015; Stango & Zinman, 2007), and participate less in the formal financial system relative to their more financially literate counterparts (Alessie, Lusardi & Van Rooij, 2007). Studies have confirmed the positive association between financial literacy and financial returns. Stango and Zinman (2007) show that those who are unable to correctly calculate interest rates out of a stream of payments end

up borrowing more, having reduced financial returns and accumulating lower amounts of wealth. Lyons and Neelakantan (2008) emphasise the critical importance of basic financial management skills, particularly for low-income households. He however warns that while keeping track of finances is particularly important for those on low income, people on higher incomes can also experience difficulties in „making ends meet“ and, proportionately, are equally inclined as individuals on lower incomes to run out of money before payday. Although individuals express concern about financial matters, they often lack the motivation to build their personal financial capability.

Empirical findings indicate that financial literacy differs by population subgroup (Lusardi & Mitchell, 2008). Age patterns are notable, in that financial knowledge follows an inverted U-shaped pattern, being lowest for the young and the older groups, but peaks in the middle of the life cycle. In addition, the study found that in most cases, women have are less financially knowledge than men.

Lusardi and Mitchell (2008) further found that in all countries studied, higher educational attainment was strongly correlated with financial knowledge, but even at the highest level of schooling, financial literacy tended to be low and hence concluded that education was not a good proxy for financial literacy. When they included education and financial literacy in a multivariate regression models, both tended to be statistically significant, indicating that financial literacy had an effect above and beyond education. Financial literacy was also found to be higher among those who are working, and in some countries among the self-employed, compared to those who

were not working. This difference was in part due to financial education programs offered in the workplace and also as an effect of learning from colleagues or skills acquired on the job.

Age, Marital Status, Level of Education, and Number of Dependents and Well-Being

Regarding age which is one of demographic characteristics which describe how long a person has been in existence. Young farmers are ardent to get knowledge and information than older farmers. It might also be that older farmers want to avoid risk and are not likely to be flexible than younger farmers and thus have a lesser likelihood of information utilization. But several studies report different results. Nkamleu, Coulibaly, Tamo and Ngeve (1998) reports of older farmers being more experience and have accumulated more capital as a result they are more likely to invest in innovation. Similarly, Yenealem (2006) reported positive relationship between age and adoption behaviour of farmers. However, Haba (2004) suggest that older people were unwilling to pay for agricultural information delivery technologies such as print, radio, farmer-to-farmer, expert visit, and television. He revealed that, as age increased, the willingness to pay for these agricultural information delivery technologies decreased, meaning that older farmers were less willing to get information than younger ones. Old age also increases with conservativeness and negatively impact on adoption while young farmers tend to be more innovative and risk adverse (Zhang, Li, Xiong & Xia, 2012; Adesina, Mbila, Nkamleu & Endamana, 2000). A study conducted by Deribe (2007) on diary women farmers proved that age has a negative influence on agricultural information network of farm women. The study is that older women do not

seek many new ideas, since they try to conform to practices they have followed for a long time in their life. Ayele and Bosire (2011) also found out that both younger and old tried new things introduced to them thus there was no significant relationship between age and the use of improved inputs and practices. Marriage is considered as an important social institution in the Ghanaian society.

In the case of marriage as an institution which can be found in every human culture. Nambiro, Omiti and Mugunieri (2006) working on the topic “Decentralization and access to Agricultural Extension services in Kenya” established that the marital status of farmers significantly influenced their access to extension services and well-being. Opara (2008, 2010) also noted that there was a positive association between marital status and agricultural information access and use. However, marital status of the farmer was found by Koskei, Langat, Koskei and Oyugi (2013) to negatively affects the probability of access to information, signifying that the single farmers had access to agricultural information more than married farmers which could be attributed to the fact that un-married farmers take part in more socialactivities due to limited responsibilities, while married farmers stay in house to attend to family issues.

Educationallevel also influences the well-being of cocoa farmers. This variable generally is associated with receiving and absorbing of agricultural information and use of the information. Because education is believed to increase farmers’ ability to obtain, process and analyze information disseminated by different sources and helps him/her to make appropriate decision to utilize agricultural information through reading and analyzing in a

better way. The ability to read and understand sophisticated information that may be contained in a technological package is an important aspect of access to agricultural information (Zuta, 2009). Rehman et al. (2013) found out that education of respondent had a significant relationship with their access to agricultural information; an increase in the educational level of the respondents increased their access to agricultural information. Better education according to Okoye et al. (2008) would lead to improved access to knowledge and tools that enhance productivity. However, Julius, (2013) established that irrespective of farmers educational level it had no influence on their access to agricultural extension services. With regard to the use of agricultural information, Ofuoku et al. (2006) posit a positive significant relationship between level of formal education of fish farmers and information use. According to Waller, Hoy & Henderson (1998), education is expected to create a favourable mental attitude for the acceptance of new practices especially of information-intensive and management intensive practices.

Number of dependents on the cocoa farmer also has an effect on the well-being of the farmer. It is generally agreed that increase in household size comes with extra hands to work on the farm thus more use of agricultural innovations. On the other hand increase in household size also put extra burden on the family as not being able to invest in the farm. Koskei et al. (2013) asserts that an increase in size of household increases the probability of access to information. The increases in household size put pressure on the demand for household needs and hence the need to produce more for family and earn more to cater for the household which could lead to agricultural information seeking and use. Techane (2002) has also found family labour as

positively related to adoption and intensity of fertilizer use which is determined by the family size. However, Christiaensen and Demery (2007) established no significant betweenhousehold size and agricultural extension services access.

Chapter Summary

This study examines the effect of cocoa farming business, financial literacy on social welfare or well-being cocoa farmers of the Brong-Ahafo Region of Ghana. Thus, the purpose of the above literature review was to shed light on the well-being of cocoa farmers and how their financial knowledge help them manage the incomes they receive from cocoa business. Perspectives of different scholars and researchers were presented so as to establish what had already been done that was relevant for the study. On both the theoretical and empirical side, the literature revealed that well-being of cocoa farmers is greatly influenced by financial literacy. Indeed, empirical studies on analysing the relationship between financial literacy and the well-being of cocoa farmers for developing countries cases including Ghana in general and Brong-Ahafo Region in particular using quantitative approach have been very elusive.

CHAPTER THREE

RESEARCH METHODS

Introduction

The study investigates the cocoa farming business, financial literacy and social welfare of cocoa farmers in Ghana specifically, in the Brong-Ahafo Region. This section presents a detailed account of the methodology that was used for the research. This includes; research approach, research design, study area, target population, sample and sampling technique, data collection instruments, data collection procedure, reliability and validity testing, tools for data processing and analysis, and ethical considerations.

Research Approach

The study adopted a deductive approach which builds on a theory to generalise the findings of the study. Also, this approach helps to study the actual relationship among the variables and finally it would provide in-depth information to address the objectives.

Research Design

A research design is the rationale behind the research which enables the researcher to effectively draw general conclusions. A research design is a blueprint or detailed plan which shows how a research is to be conducted (Oppenheim, 1992; Malhotra & Birks, 2007; Oforu-Asare, 2011). Hence, a research design shows which individuals will be studied as well as when, where and in which context (McMillian & Schumacher, 2001). This current study combines both the descriptive and explanatory research designs to carry out the research. These research designs are considered as the most appropriate used for studies where there will be description of data collected

from a large population and examine the relationships among the variables under study.

Study Area

The study focused on the Brong-Ahafo Region of Ghana. Brong-Ahafo region is the second largest region in Ghana with a land area of 39,558 km² with 22 administrative districts/municipalities. It covers (16.6%) of the country's total land area. The region has varied vegetative cover, ranging from forest, transitional to savanna, roughly representing the southern, middle, and northern parts of the region respectively. It has a bi-modal rainfall with an average annual total rainfall of 1,088 mm-1,197 mm. The region had an estimated population of 1,824,822 (2000 census). The 2010 Population and Housing Census estimated region's population at 2,282,128 (GSS, 2010) with an estimated growth rate of (2.2%) against (2.4%) national average. The region is bordered on the north by the Northern Region, Ashanti and western on the south Eastern and Volta on the Southeast and Western on the South, Eastern and Volta on the Southeast and east respectively, and the Republic of La Cote D'Ivoire to the west. It is a great agricultural region with cocoa plantations and extensive Forest reserves. It is also known for its wildlife and wood processing. The region has a multiplicity of ethnic groups, physical features and cultural practices. Sunyani, the capital of the Brong-Ahafo Region is linked to Accra by a first class road and is about seven hours driving between them, at a relatively regular pace. From Sunyani you may then begin your tour, which will take you to the major tourist attractions of Brong-Ahafo. The region also has access to economic trees estimated at 29 million m³-(17%

of national stock). The region is selected because the city is an urban area with a lot of cocoa farmers and with dominance presence in the country.

Target Population

The population of this study included the entire cocoa farmers in the Brong-Ahafo region of Ghana. The target population comprised of cocoa farmers in the Nkrankwanta District in the Brong-Ahafo Region. The Brong-Ahafo Region has been chosen by this study because majority of Ghana's cocoa production comes from the Bron-Ahafo Region (GSS, 2016).

Sample and Sampling Procedure

The study drew a sample of 106 cocoa farmers from the Nkrankwanta District in the BrongAhafo Region which was determined using the Krejcie and Morgan (1970) sample size determination table. The simple random sampling technique was used in selecting the sample or group of subjects from the population for the study. This method was chosen to enable the researcher to elicit vital and quality information from respondents who have reasonable knowledge about the issues under investigation and are in position to provide the information needed for the study. The simple random sampling also ensures that each case in the population has an equal chance of being included in the sample.

Data Collection Instruments

In an effort to address the research questions; questionnaire, interview and personal observation were used as data collection instruments. The questionnaire contains four (4) parts; which included socio-demographic characteristics, influence of cocoa farming business on the living standards of cocoa farmers, influence of financial literacy and well-being of cocoa farmers.

Apart from the questions pertaining to the socio-demographic characteristics, some of the remaining questions were designed in the form of a rating scale with responses ranging from least agreement to highest agreement.

Data Collection Procedure

To extract the maximum attention and involvement of the respondents in the study, data were collected by administering the interview guide and questionnaires to the participants at their homes. The procedure involves the steps below. First a letter of consent was dispatched to seek the approval of the study. The participants were not only briefed on the purpose of the study with no use of deception but also informed on the academic purpose of the study, hence, encouraged to provide their candid information on the questions. A period of about two weeks was set for the collection of the data from the stakeholders in order to gain information regarding the topic of interest.

Reliability and Validity Tests

These are very important concepts in research especially in primary studies. When results from a study are not reliability and valid, the conclusions and recommendations are void. To achieve reliability of the results, the study follows the widely used statistical test known as Cronbach alpha to assess the level of reliability. Although studies do not have a specific Cronbach alpha score, a score of closer to 0.7 and above is assumed to be relatively reliable (Pallant, 2007). The study also relies on both theoretical indicators and empirical measurements which have been validated to design the questionnaire to enhance the validity. Moreover, pre-test is also conducted to ascertain any shortcomings in the instrument and subsequently review the instruments to reflect the needed changes.

Regression Model Specification

Aside the descriptive analysis, a regression analysis was conducted to show the effect of financial literacy as well as control variables such as age, number of dependents and level of education on well-being of cocoa farmers. The regression equation is specified below:

$$WB = f(FL, AGE, ND, LE, e) \quad (1)$$

Where WB is the well-being of cocoa farmers, FL is financial literacy, AGE is the age of the respondents, Number of Dependents of cocoa farmers and LE is the level of education.. Therefore, equation (1) can be expressed as an econometric model as;

$$WB_t = \alpha + \beta_1 FL_t + \beta_2 AGE_t + \beta_3 ND_t + \beta_4 LE_t + \varepsilon_t \quad (2)$$

Assumption about the model;

Where $\varepsilon_t \sim iid(0, \sigma_\varepsilon^2)$ and

α = Constant (the intercept, or point where the line cuts the Y axis when X= 0)

β = Regression coefficient (the slope, or the change in Y for any corresponding change in one unit of X)

ε_t = Error term at time t

t = time

The apriori expected signs of the variables in two models are:

$$\beta_1 > 0, \beta_2 < 0, \beta_3 < 0 \text{ and } \beta_4 > 0$$

Data Processing and Analysis

The Statistical Package for Social Sciences (SPSS) software was used in processing the data collected from the respondents. The data were analysed using descriptive and inferential statistics. The results were represented in frequency tables, pie and bar charts.

Ethical Considerations

The study assured the respondents that whatever they would say by way of information would remain confidential. The researcher explained the purpose of the study to the respondents. This was done to avoid deception. Not only the above, the researcher was also sought consent of the appropriate authorities before collecting the data. As a result, the respondents gave out information voluntarily for the study. The goal of ethics in research is to ensure that no one is harmed or suffered adverse consequences from participating in research activities.

Chapter Summary

Chapter three mainly dealt with the appropriateness of the research methods and research design. It also dealt with the population for the study, the sampling and the method used for the sampling, the data collection method used, as well as how data were collected. It again discusses ethical considerations as well as how data will be analysed. The next chapter, which is chapter four dealt with the data analysis and the results of the study.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter presents and discusses the results obtained from the study. The data collected from the research field from the questionnaire, interview and personal observation was processed using the Statistical Package for Social Science (SPSS) software and data analyses was done using both descriptive and inferential statistics such as regression. The results were presented in the form of tables and pie charts for easy understanding and better appreciation.

The chapter begins by looking at the demographic characteristics of respondents included in the study. It continues with the influence of annual cocoa producer price increment on the living standard of cocoa farmers in Ghana. This chapter is however guided by the objectives of the study.

Demographic Characteristics of the Respondents

This section of the study presents the results of the socio demographic characteristics of respondents and a profile of the cocoa farming business of cocoa farmers in the Brong-Ahafo Region of Ghana. The main profile of the respondents discussed were the hectares of cocoa farmland, other forms of occupation, religious affiliation, gender, age, number of children they had, marital status and level of education. The results of the profile of the cocoa business and respondents are presented in Table 1.

Table 1: Socio- Demographic Characteristics

Variables		Frequency	Percent
Age	19-30	13	12.3
	31-40	17	16.0
	41-50	8	7.5
	51-60	32	30.2
	Total	106	100
Marital status	Married	31	29.2
	Divorced	26	24.5
	Single	13	12.3
	Separated	12	11.3
	Widow/widower	24	22.6
	Total	106	100
No. of children	None	11	10.4
	1	11	10.4
	2-4	28	26.4
	5-7	22	20.8
	Above 7	34	32.1
	Total	106	100
Gender	Male	62	58.5
	Female	44	41.5
	Total	106	100
Education	Primary	14	13.2
	JHS/Middle School	21	19.8
	Sec/Tec	19	17.9
	Tertiary	7	6.6
	Uneducated	45	42.5
	Total	106	100
	Hectares of cocoa	Below 10	40
10-20		23	21.7
20-30		21	19.8
Above 30		22	20.8
Total		106	100
Occupation	Mason	9	8.5
	Carpentry	18	17.0
	Painter	12	11.3

	Driver	16	15.1
	Teacher	10	9.4
	Others	41	38.7
	Total	106	100
Number of years			
	1-5	26	24.5
	5-10	16	15.1
	10-15	14	13.2
	15-20	19	17.9
	Above 20	31	29.2
	Total	106	100
Religion			
	Islam	18	17.0
	Catholic	13	12.3
	Protestant	36	34.0
	Hinduism	12	11.3
	African	21	19.8
	Traditional Religion		
	Others	6	5.7
	Total	106	100
How long you have been a cocoa farmer			
	5-9 years	32	30.2
	10-20 years	22	20.8
	21-40 years	28	26.4
	Above 40	24	22.6
	Total	106	100

Source: Field Survey, Adu-Asare (2018)

The results in Table 1 show that (12.3%) of respondents are within the ages of 19-30 bracket, (16%) fell within the ages of 31-40 bracket, followed by (7.5%) within 41-50 bracket, (30.2%) within the age 51-60 bracket while (34%) were above 60 years. It is therefore evident that majority of the cocoa farmers interviewed in the Nkrankwanta District of the Brong-Ahafo region were old men and women. A large number of respondents namely (29.2%) were happily married and living with their spouses. About (24.5%) were divorced, 22.6 % were widow/widower, and (12.3%) were single whilst

(11.3%) were separated. This reveals that majority of the cocoa farmers interviewed were married. The number of children born to cocoa farmers indicates that (20.8%) of the respondents had 5-7 children, (32.1%) had above seven (7) children, and (26.4%) had 2-4 children, whilst 11 respondents respectively had (10.4%) for those who had no children and one (1) child. This concludes that majority of the cocoa farmers interviewed had 5 and above children born to them and in most cases assisted them in the cocoa business.

The gender of cocoa farmers revealed that about (58.5%) of respondents interviewed were males while (41.5%) were females. In conclusion, majority of the cocoa farmers interviewed were men which implies that the cocoa farming is dominated by men in the region. Majority of cocoa farmers had no formal education. (42.5%) of respondents indicated that they had no formal education/uneducated. (19.8%) were had Junior High/Middle School leavers certificates, (13.2%) attained primary education, (6.6%) had tertiary education and (17.9%) attained secondary/technical education. It is therefore clear that majority of the cocoa farmers interviewed did not attain any basic education and are highly illiterate to the extent that they could not read and write. A large number of cocoa farmers interviewed had below 10 hectares of cocoa farmland representing (37.7 %). Further, (21.7%) also had 10-20 hectares of cocoa farmland. (20.8%) of cocoa farmers had above 30 hectares of cocoa farmland and only (19.8%) had ((20-30 %) of hectares of cocoa farmland. It is therefore obvious that majority of cocoa farmers had below 10 hectares of farmlands for the reason that it represents farmers who are new in the cocoa business and did not had enough resources to acquire bigger farmland.

Despite the cocoa farming business been lucrative, cocoa farmers in the Brong-Ahafo region do not depend solely on cocoa farming alone as an occupation. (8.5%) of cocoa farmers are engaged in masonry, (17.0%) are into carpentry, (11.3%) are engaged into painting, (15.1%) are drivers, and (9.4%) are also into teaching whilst a majority of them engaged into other occupation representing (38.7%.) The occupation that fell within the (38.7%) constituted welders, hair- dressing, tailoring, barbering, petty trading and growing of other cash crops apart from cocoa. This goes to prove that cocoa farmers do possess numerous occupations that fetch them income rather than solely depending on the cocoa farming business as the only occupation. This is due to the fact that the cocoa business is seasonal and it is not advisable to solely depend on it as the only major occupation. The number of years cocoa farmers have been in the cocoa business is very significant. This is because it has a direct relationship on whether their living condition has improved or not. Majority of cocoa farmers, representing (29.2%) have been in the business were above 20 years. Those who are new in the business fell within 1-5 years representing (24.5%). (17.9%) of farmers were within 15-20 years. (15.1%) also indicated that they have been in the business for about 5-10 years and lastly (13.2%) fell within 10-15years. This explains the fact that majority of respondents have been in the business for long and are gradually handing over to their children and other family members to continue the business.

Religion plays a key role in the cocoa farming business in the Brong-Ahafo region. Some of the respondents are of the view that their religious affiliation (faith practices) helped them to enable their cocoa business to be more productive and devoid of pests and other diseases that affects their cocoa

trees. Christianity dominated the religious affiliation of cocoa farmers. Christianity was categorized into two; namely catholic and protestant. The percentage of catholic and protestant cocoa farmers in the region was (12.3%) and (34.0%) respectively. This goes to prove a point that that majority of cocoa farmers are protestant faith believers. The African Traditional Religion was also highly practiced with a percentage of 19.8, followed by Islam with (17.0%). Hinduism was also practiced in the region with (11.3%) whilst (5.7%) represented others. The others constituted atheists, pagans and freemasons. About (30.2%) revealed that they have been a cocoa farmer within 5-9 years, (20.8%) also indicated that they have been cocoa farmers within 10-20 years. (26.4%) have been cocoa farmers from 21-40 years. Lastly, above 40 years fell within (22.6%). This therefore shows that majority of cocoa farmers have not really been cocoa farmers for long.

Financial Literacy Level among the Cocoa Framers

The study wanted to find more about the financial literacy level of cocoa farmers and how it affects their cocoa farming business. Figure 1 reveals further details.

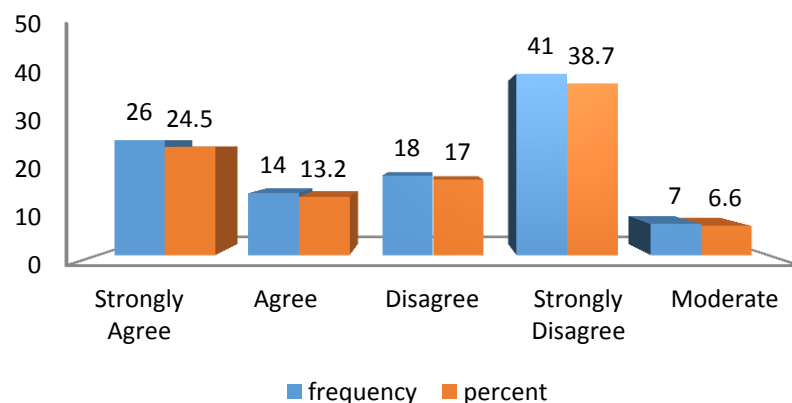


Figure 1: Prepare written budget for income and expenditure regularly
 Source: Field Survey, Adu-Asare (2018)

The respondents were about whether they prepare a written budget for their income and expenditure regularly. 26 respondents signifying (24.5%) strongly agreed to the fact that they do prepare written budget for their income and expenditure regularly. 14 respondents, representing (13.2%) also agreed to the question asked. However, 41 respondents, also representing (38.7%) strongly disagreed and indicated that they did not prepare a written budget for their income and expenditure regularly. Moreover, 18 respondents, signifying (17%) also disagreed to the question asked. Only 7 respondents, representing (6.6%) did claim they moderately did prepare a written budget for income and expenditure regularly. From the above analysis, it is clear that majority of cocoa farmers do not prepare any written budget for income and expenditure regularly.

Having Written Financial Objectives of what to Achieve Personally

To be financially literate, one key element is to have written financial objectives of what you want to achieve personally. To find out whether this is achieved, 21 respondents which represent (19.8 %) strongly agree to the fact that they have written financial objectives of what to achieve personally. 17 respondents, signifying (19.8%) also agreed to the same fact. However, 34 respondents, representing (32.1%) strongly disagree to the fact that they have written financial objectives of what to achieve personally. Moreover, 20 respondents, totaling (18.9%) also disagreed to the question asked. Finally, 14 respondents, representing (13.2%) claimed they moderately do have written financial objectives of what they want to achieve personally. It is clear that, majority of cocoa farmers do not have any written financial objectives of what to achieve personally.

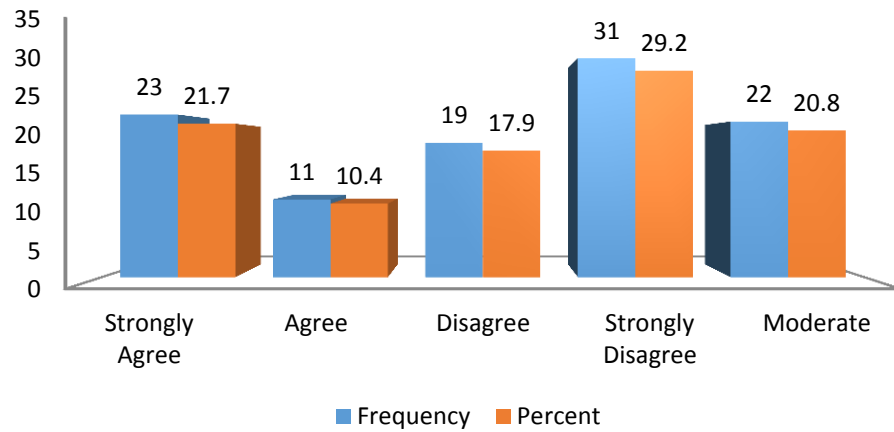


Figure 2: Have Written Financial Objectives of what to Achieve Personally

Source: Field Survey, Adu-Asare (2018)

Comparison of Financial Objectives with Financial Plans

Lastly, the researcher sought to know if respondents also compared their financial objectives with their financial plans. As a result, 23 respondents representing (21.7%) strongly agree that they compared financial objectives with their financial plans. 11 respondents representing (10.4%) also agreed to those who have already indicated that they strongly agree. Conversely, 31 respondents indicating (29.2%) strongly disagreed and did indicate that they do not compare their financial objectives with their financial plans. 19 respondents signifying (17.9%) also disagreed to the question asked. Finally, 22 respondents representing (20.8%) indicated they did compare their financial objectives with their financial plans moderately. This is a clear indication that majority of cocoa did not seek the need to compare their financial objectives with their financial plans.

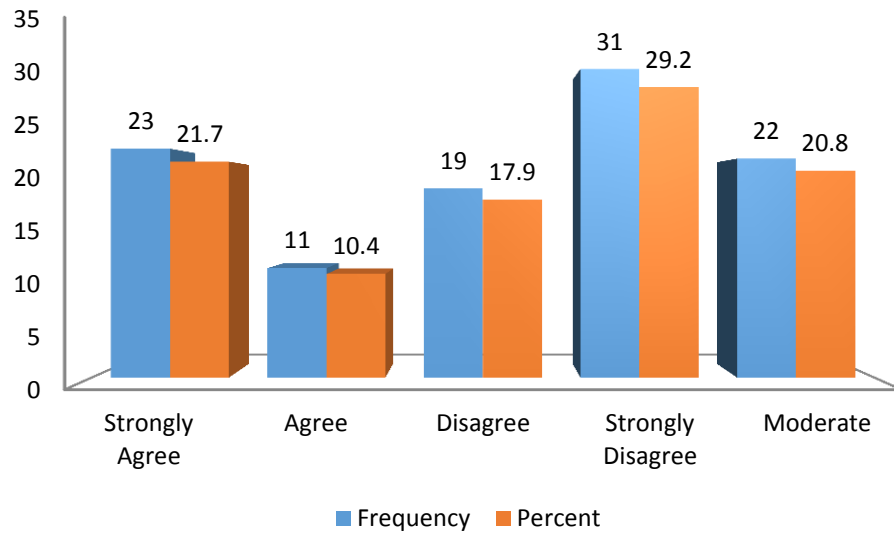


Figure 3: Compare financial objectives with financial plans

Source: Field Survey, Adu-Asare (2018)

Effect of Financial Literacy on the Well-Being of Cocoa Farmers

This section presents the results concerning the effect of financial literacy on the well-being of cocoa farmers in the selected study area which addressed the study’s last objective and the hypothesis. The results are presented in Table 2. From the results, the coefficient of financial literacy is positive at 0.116 and it is statistically significant at 1 percent significance level. This means that 1 percentage increase in the financial literacy level cocoa farmers will increase their well-being by 0.116 percentage point holding all other factors constant. This implied that as cocoa farmers become financially literate in their dealing it positively impacts on their well-being or living conditions. The result confirmed the studies by Huston (2010), O’Neill, Sorhaindo, Xiao and Garman (2005), Joo and Grable (2004).

Furthermore, the coefficient of the number dependents of the cocoa farmer is negative and statistically significant at 1 percent significance level implying that as the number of dependents increases by 1 percent, their well-

being will decrease by 0.130 percentage point holding all other factors constant. This also implied that as household size of the cocoa farmer increases without proper management will worsen his living conditions. This confirmed the theorized sign and studies by Koskei et al. (2013) and Christiaensen and Demery (2007).

In addition to the above analysis, the coefficient of Age variable is statistically significant at 5 percent significance level and it is 0.100. This means that as the age of the cocoa farmer increases by a year, the well-being of the cocoa farmer decreases by 0.100 holding all other factors constant. This implied that as cocoa farmers approach old age, without proper future arrangement for him/herself will negatively impact on his/her well-being. In a study by Yenealem (2006), Deribe (2007) and Haba (2004) confirmed the results of this study.

Finally, the coefficient of educational level of the cocoa farmers is positive and statistically significant at 5 percent significance level and it is 0.069. This means that as the level of education of the cocoa farmer increases by 1 percent, their well-being will also increase by 0.069 holding all other factors constant. This implied that as cocoa farmers have some level of education to carry out their cocoa activities will positively impact on their well-being. In a study by Rehman et al. (2013) and Zuta (2009) confirmed the results of this study.

Table 2: Regression Results (Dependent variable: Well-Being)

Variable	Coefficient	Std. Errors	T-statistic	Sig.
Constant	1.502	0.205	7.327	0.000***
FL	0.116	0.038	3.053	0.003***
ND	-0.130	0.038	-3.452	0.001***
AGE	-0.100	0.046	-2.184	0.030**
EL	0.069	0.031	2.223	0.027**

Note: *** and ** denote significance levels at 1% and 5%.

Source: Field Survey, Adu-Asare (2018)

Influence of Cocoa Farming Business on the Well-Being of Cocoa

Farmers

This section of the chapter discusses the extent to which the cocoa farming business has impacted the well-being of cocoa farmers using rating scale questions. The critical areas to be examined included whether the yearly producer price of cocoa paid by government is appropriate, encourages farmers to increase their output, enhances their income in real terms, enables them to meet their basic needs and lastly to determine whether earnings from the cocoa farming business enables them to save some of their income, afford their health needs and that of their family too. The results of the section are presented in Table 3.

Table 3: Influence of Cocoa Farming Business on the Well-Being of Cocoa Farmers

Variables	Ranks	Frequency	Percentage
The yearly producer price of cocoa paid by the government is appropriate.	1 2 3 4 5 Total	11 10 23 17 45 106	10.4 9.4 21.7 16.0 42.5 100
The annual increment in producer price of cocoa encourages me to increase my output	1 2 3 4 5 Total	22 18 16 17 33 106	20.8 17 15.1 16 31.1 100
The annual producer price of cocoa increases by government enhances my income in real terms	1 2 3 4 5 Total	22 15 30 16 23 106	20.8 14.2 28.3 15.1 21.7 100
The increment in producer price of cocoa enable me to meet my basic needs	1 2 3 4 5 Total	18 12 29 17 30 106	17.0 11.3 27.4 16.0 28.3 100
Table 3, continued			
There is supply of basic amenities like portable water,clinics/hospitals, schools, roads etc.	1 2 3 4 5 Total	14 11 19 17 45 106	13.2 10.4 17.9 16.0 42.5 100
There are good linking roads from my village /community to the nearby town/city	1 2 3 4 5 Total	3 4 27 22 49 106	2.8 4.7 25.5 20.8 46.2 100

Earning from the cocoa farming business enables me to save some of income	1	10	9.4
	2	12	11.3
	3	40	37.7
	4	22	20.8
	5	22	20.8
	Total	106	100
Earnings from the cocoa business enables me to afford my health needs	1	8	7.5
	2	13	12.3
	3	24	27.4
	4	29	27.4
	5	32	30.2
	Total	106	100
Earnings from the cocoa business enables me to afford the health needs of my family	1	23	21.7
	2	14	13.2
	3	23	21.7
	4	18	17.0
	5	28	26.4
	Total	106	100

Rank (Highest Agreement = 5, 1= Least Agreement)

Source: Field Survey, Adu-Asare (2018)

Opinions of cocoa farmers were implored on the level of impact of the increment in the producer price as well as the extent to which cocoa farming business has impacted on their living standards. Thus, how cocoa farmers see the increment; whether they indicate highest agreement to least agreement in terms of meeting their basic needs. The questions posed to respondents especially the cocoa farmers in relation to the yearly producer price of cocoa paid by government if appropriate yielded the following results. (42.5%) indicated least agreement to the notion. (10.4%) were of the view that they highly agree to the notion. (21.7%) of respondent insisted that the yearly producer price of cocoa paid by government is moderate. Also, (9.4%) moderately agreed and (16.0%) least agreed to the payment of prices of cocoa beans by government as appropriate.

The views of cocoa farmers concerning the annual increment in producer price of cocoa encourage them to increase the output of their cocoa business. (20.8%) of them strongly agreed whilst (17.0%) also agreed likewise. However, (31.1%) respectively strongly disagreed and (16.0%) disagreed to the fact that it does not encourage them to increase output. Only (15.1%) seems to accept the fact that it is very moderate and thus enable them to increase their output.

Out of the 106 respondents interviewed to find out the level of the producer price increment by government in enhancing their income in real terms, 23 respondents which constitute (21.7%) strongly disagreed. 16 of the respondents also disagreed and stated that it does not enhances their income in real terms. 30 said it was moderate representing (28.3%) and (20.8%) strongly agreed whiles (14.2%) further agreed that it does enhances their income in real terms. From Table 3, it can be seen that majority of the respondents indicated that the level of the cocoa producer price in augmenting their real income from the cocoa was very moderate.

The level of influence of cocoa producer price increment on meeting the basic needs such as daily meals and clothing by the respondents indicated that (27.4%) respondents saw a moderate impact in meeting their needs, (28.3%) expressed least agreement to this, whiles representing (17.0%) highly agreed and finally (16%) least agreed whilst (11.3%) also moderately agreed to meeting their basic needs. Hence, majority of the respondent indicated that it had a very low impact in meeting their daily basic needs.

To find out the level of provision of basic social amenities in the various communities/villages such as potable water, electricity, roads and schools. 45

of the respondents which constitute (42.5%) indicated that the supply of the above social amenities was very low and moderately agreed. (16%) also expressed least agreed, but (17.9%) pointed out that it was moderate and 11 agreed representing (10.4%) whilst 13.2 % highly agreed. Most of the respondents asserted that the level of provision of basic social amenities in their communities/villages was very truncated and they expressed least agreement.

The nature of roads linking one cocoa growing community/village to another yielded the following results; 49 respondents representing (46.2%) specified that the nature of their roads were very bad and expressed least agreement to the fact that there are good linking roads from one growing community/village to another. 22 said it was bad representing (20.8%) and the remaining said it was moderate, representing (25.5%). It is clear that most of the respondents were of the view that the roads in the communities/villages were of a very bad nature or in a very poor conditions. This made it difficult to transport their cocoa beans to the appropriate producer buying centers.

Majority of the respondents 40 constituting (37.7%) indicated that the earning from the cocoa farming business is moderate and as such enables them to save some of their income. However, those who expressed least agreement constituted 22 respondents respectively representing (20.8%). But 10 respondents expressed highest agreement to save enough from earnings from the cocoa farming business and this was seconded by those who also agreed with (11.3%). This means that the income that they earn from the cocoa income is moderate and even when the producer price was increased for the previous years, it is not enough to meet their basic needs before saving some.

It is evident that majority of the respondents constituting about (30.2%) indicated that the earnings from the cocoa farming business does not enable them to meet their health needs and expressed least agreement, with (27.4%) also stating that they somehow agree, while (22.6%) indicate it is moderate, with only (7.5%) highly agreeing that it does and the remaining (12.3%) stating same (they agree).

Respondents were asked if earnings from the cocoa business enabled them to afford the health needs of their families. 28 respondents representing (26.4%) expressed least agreement, 18 respondents also representing (17.0%) did indicate least agreement. Conversely, (21.7%) did indicate that it was moderate, and this was supported by 23 respondents also representing (21.7%) who highly agreed to the notion with (13.2%) also agreeing. It is clear that majority of respondents interviewed expressed least agreement to the fact that earnings from the cocoa business does not enable them to afford the health needs of their families.

Chapter Summary

This chapter looks at the results and discussions of the field data collected from respondents. The cocoa farming business in the Brong Ahafo Region is characterized by a male dominated field, a large number of respondents namely (29.2%) were happily married and living with their spouses. Majority of the cocoa farmers interviewed were old men and women and 34 were above 60 years. Christianity dominated the religious affiliation of cocoa farm in the region, majority of respondents have been in the business for long and are gradually handling over to their children and other family members to continue the business.

Cocoa farmers do possess numerous occupations that fetch them income rather than solely depending on the cocoa farming business as the only occupation. This is due to the fact that the cocoa business is seasonal and it is not advisable to solely depend on it as the only major occupation. Majority of cocoa farmers in the region have below 10 hectares of farmlands based on the fact that these were farmers who are new in the cocoa business and did not had enough access to a bigger farmland. On financial literacy, (65%) of cocoa farmers do not save.

This is due to the fact that they do not have enough income to save after their cocoa beans are bought. Most of the cocoa farmers interviewed have not even heard about any investment scheme which will even propel them to save or invest. Only a few had bank accounts, and even these accounts were dormant. However, majority of cocoa farmers indicated that they did not prepare a written budget for their income and expenditure regularly.

Majority of the cocoa farmers interviewed did not attain any basic education and highly illiterate to the extent that they could not read and write. Majority of the cocoa farmers interviewed had 5 and above children born to them and in most cases assisted them in the cocoa business majority of the respondents indicated that the level of the cocoa producer price in augmenting their real income from the cocoa was very moderate.

The results further showed that there is a positive relationship between financial literacy and well-being among the cocoa farmers. Further, the results also showed that cocoa farming business has had less effect on the well-being of cocoa farmers.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter outlines the summary, conclusions and recommendations of the study. Based on the analysis and discussions, summarized answers were provided for the research questions. The inferences drawn from the review of literature coupled with the empirical findings form the basis for the conclusions made. The study is however guided by its objectives.

Summary of findings

This study investigated the effects of cocoa farming business, financial literacy on social welfare of cocoa farmers in the Brong-Ahafo region of Ghana. The study employed both descriptive and causal research designs in studying the variables under study. A simple random sampling technique was adopted to obtain primary data by the use of questionnaire and interview to solicit for information from cocoa farmers in the Brong-Ahafo Region of Ghana. Brong-Ahafo Region was chosen because empirical evidence shows that it has been one of the leading producers of cocoa in Ghana from the crop year 1984/85 to date. Currently, Ghana leads Ivory Coast in cocoa price. Ghana's cocoa price is \$1,720 per tonnes whilst Ivory Coast is \$ 1,290 per tonnes. A sample of 106 respondents was taken with a response rate of (56.2 %) with the view that the yearly increment in the producer price of cocoa by the government was very low. The respondents consisted of 67 males and 38 females out of which 88 were married, 9 were widows, 5 were singles, 2 were divorced and 1 was separated. The findings concerning financial literacy level in relation to the savings of cocoa farmers in the region revealed

that(55.7%)of the respondents did not prepare a written budget for their income and expenditure regularly. Also, majority of cocoa farmers have not heard of any investment scheme and those who did do not even have any investment scheme. The results further indicated that (65%) of respondents do not save.

Regarding the first objective which discussed the extent to which the cocoa farming business has impacted the well-being of cocoa farmers using rating scale questions. The study revealed that(42.5%) of the cocoa farmers indicated least agreement to the notion that cocoa farming business has impacted their well- beingwhile (10.4%) were of the view that they highly agree to the notionin a positive manner. Further, (21.7%) of respondent insisted that the yearly producer price of cocoa paid by government is moderate and that it has impacted their well-being somehow. Also, (9.4%) moderately agreed and (16.0%) least agreed to the payment of prices of cocoa beans by government as appropriate in influencing the well-being. Thus, it was evident that majority of the respondents constituting about (30.2%) indicated that the earnings from the cocoa farming business does not enable them to meet all their basic needs with only (7.5%) highly agreeing that it does and the remaining (12.3%) stating same (they agree).

In the case of the third objective concerning the effect of financial literacy on the well-being of cocoa farmers, the study revealed that financial literacy was positive and statistically significant,indicating thatan increase in the financial literacy level among cocoa farmers will increase their well-being holding all other factors constant. Furthermore,the number dependents of the cocoa farmers was negative and statistically significant implying that as the

number of dependents increases, their well-being will decrease holding all other factors constant.

In addition, the study showed that Age variable was negative and statistically significant implying that as the age of the cocoa farmer increases by a year, the well-being of the cocoa farmer decreases holding all other factors constant.

Finally, the results indicated that educational level of the cocoa farmers was positive and statistically significant. This means that as the level of education of the cocoa farmer increases, their well-being will also increase holding all other factors constant. This implied that as cocoa farmers have some level of education to carry out their cocoa activities will positively impact on their well-being.

Conclusions

Based on the findings of the study the following conclusions can be drawn. It was found that financial literacy level among the cocoa farmers relating to savings was low. Also, majority of cocoa farmers have not heard of any investment scheme and those who did do not even have any investment scheme.

Regarding the first objective, the study revealed that majority of the cocoa farmers indicated least agreement to the notion that cocoa farming business has impacted their well-being and only a few were of the view that they highly agree to the notion in a positive manner. Further, in relation to the producer price as having positive impact on their well-being, majority of the respondents insisted that it is moderate and that it has impacted their well-

being somehow and only a few of them least agreed to the fact that it has influenced their well-being.

In the case of the third objective concerning the effect of financial literacy on the well-being of cocoa farmers, the study revealed that financial literacy has a positive influence on their well-being holding all other factors constant. Furthermore, the number dependents of the cocoa farmers had a negative influence on their well-being holding all other factors constant.

In addition, the study showed that Age variable also had a negative impact on the well-being of the cocoa farmers holding all other factors constant. Finally, the results indicated that educational level of the cocoa farmers had a positive influence on the well-being of cocoa farmers holding all other factors constant. This implied that as cocoa farmers have some level of education to carry out their cocoa activities will positively impact on their well-being.

Recommendations

Based on the conclusions drawn the following recommendations were made.

Since financial literacy level among the cocoa farmers relating to savings was low the government in collaboration with COCOBOD should offer some level of financial education to enable the cocoa farmers save for their future contingencies. This can be done through community radios, information centres, televisions, farmer groups. Financial literacy should be incorporated into educational system. Thus, financial literacy should be incorporated into the primary and secondary school curricula where there will be the development and dissemination of supplementary materials and the training of teachers in promoting financial literacy.

Moreover, the National Commission for Civic Education should establish Financial Literacy Information Sharing Group. This group will comprise a wide range of stakeholders and other partners including government institutions, banks and other stakeholders in the financial industry. This group would provide a forum for the broad community of stakeholders and partners to discuss developments and potential developments, to highlight examples of good financial practices from which others can learn useful lessons and to provide feedback.

Also, government should set up special financial institutions that will cater for the financial needs of cocoa farmers by giving soft loans in order to expand their business.

The government in collaboration with the COCOBOD should setup educational programmes that seek to educate cocoa farmers on basic financial principles that will go a long way to help them to boost their investments and savings rates.

Increases in the cocoa producer price was seen as having impact on the well-being of cocoa farmers, therefore it is recommended that government should increase the cocoa producer price again for cocoa farmers since the existing increment of GHc475 is inadequate and does not enhance their wellbeing.

Finally, since number of dependents, age educational level variables have a potential influence on the well-being of cocoa farmers, the government and COCOBOD should educate the cocoa farmers to put in place proper measures to check these variables.

Suggestions for Future Research

The current study investigated the effects of cocoa farming business, financial literacy on the well-being of cocoa farmers. Since well-being is influenced by other factors, future studies consider the other determinants of cocoa farmers' well-being with the use of a different econometric technique in studying their relationships with the well-being of cocoa farmers.

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5. Please indicate your level of education a) Primary
b) JHS/Middle Sch. c) Sec. /Tech d) Tertiary
e) Others, please specify.....

6. How many hectares of cocoa farmland do you have?

- a) Below 10 hectares b) 10-20 hectares c) 20- 30 hectares
d) Above 30 hectares

7. Any other form of occupations? a) Mason b) Carpentry
c) Painter d) Driver e) Teacher

Others please indicate

8. How long have you been in the cocoa farming business?

- a) 1- 5years b) 5-10 years c) 10-15 years d) 15-20 years
e) Above 20years

9. Religious affiliation.

Please tick your religious affiliation

Islam

Christianity:

Catholic

Protestant

Hinduism

African Traditional Religion

Others, specify.....

10. How long have you been a cocoa farmer?

- a) 5-9 years b) 10-20years c) 21-40 years
d) Above 40 years

B. Social welfare issues

i. Influence of cocoa farming business on the living standards of cocoa farmers

Instructions: Please indicate the extent to which cocoa farming business has impacted on your living standard by ticking the appropriate box using the rating scale 1- 5, where; 1 = least agree and 5 = highly agree.

Statement	1	2	3	4	5
11.The yearly producer price of cocoa paid by the government is appropriate					
12. The annual increment in producer price of cocoa encourages me to increase my output.					
13. The annual producer price of cocoa increases by government enhances my income in real terms.					
14. The increment in producer price of cocoa enables me to meet my basic needs.					
15.There is supply of basic amenities like potable water, clinics/hospitals, schools, roads, etc.					
16.There are good linking roads from my village/community to the nearby town/city					
17. Earning from the cocoa farming business enables me to save some of my income.					
18. .Earning from the cocoa business enables me to afford my health needs.					
19. Earning form the cocoa business enables me to afford the health needs of my family.					

C. Healthcare issues

20. Is there a government clinic/hospital in your village/community?

- a) Yes b) No

21. If No, where do you go for health assistance when the need arises?

- a) Private clinics b) Use herbs c) Government clinics/hospital at
different place

d) Others, please specify.....

22. Have you heard about the National Health Insurance Scheme?

- a) Yes b) No

23. Have you registered with the National Health Insurance scheme?

- a) Yes b) No

24. If “No” why?

- a) I cannot afford the registration amount b) There is no NHIS centre or
office in this village/community c) Others, please specify.....

25. What is the principal source of financing the healthcare?

- a. NHIS b.)Family c.) Personal finance d) Others,
please specify.....

26. Are you able to afford drugs not covered under the NHIS? Yes No

**D. Influences of cocoa farming business on cocoa farmers’ ward’s
education**

27. How many of your children are in tertiary education?

- a) None b) 1 c) 2 d) Above 3

28. What is the highest educational level of your children?

- a) Primary b) JHS/Middle c) Secondary d) Tertiary

29. Does your ward attend private basic school? a) Yes b) No

30. Which type of basic school does /did or your ward attend / attended?

- a) Public b) Private

31. Have your children been sacked from school for the non- payment of fees before?

- a) Yes No b)

32. Have you heard about COCOBOD educational scholarship?

- a) Yes b) No

33. Has any of your children benefited from the COCOBOD scholarship?

- a) Yes b) No If yes indicate the number?

Instruction: Please indicate your view on the following by ticking the appropriate

1=never, 2= seldom, 3=sometimes, 4= often 5= 1 2 3 4 5
always

34. I use COCOBOD educational scholarship to pay for my wards school fees

35. Income from cocoa business help me pay my wards school fees or I rely on income from cocoa business to pay my wards school fees.

E. Influence of cocoa business on asset acquisition of cocoa farmers

36. Please tick where appropriate in relation to the properties you have acquired from the cocoaFarming business.

Yes No

Car

Motorcycle

Land

Bicycle

Building

Others specify.....

37. Which of the properties was acquired from the income of your cocoa business?

- a. Vehicle
- b. Motorcycle
- c. Land
- d. Bicycle
- e. Building
- f. Others please specify.....

F. The effect of financial literacy on the savings of cocoa farmers

38. Have you heard of the following investment schemes?

Yes No

Treasury bills

Mutual funds

Savings

Shares

Pension

Insurance

Yes No

39. Do you save?

40. Do you have a personal bank account?

41. What is the bank account for?

- i. Cashing Akafo cheques
- ii. Savings
- iii. Others specify

42. Have you any investment in the above?

43. If you need finance for your cocoa business, are you aware of where you can get finance?

- i. Commercial banks
- ii. Micro finance
- iii. Rural banks
- iv. Co- operative societies

44. Are you aware of the requirements of obtaining loans from financial institutions

45. Are you aware of some government agencies that provide financial and non- financial assistance to SMEs

(eg. Yes and MASLOC)

46. Has your savings or investment enabled you to plan and expand your business?

G. Financial literacy and well-being of cocoa farmers

(Tick the most appropriate box, reference to your financial literacy and well-being using the rating scale 1= least agree and 5= highly agree)

Statement	1	2	3	4	5
47.I prepare a written budget for income and expenditure regularly					
48.I have a written financial objectives of what I want to achieve personally					
49.I compare my financial objectives with my financial plans					
50.My financial literacy level has helped me to save for my upkeep					
51. My financial literacy level has improved my well-being					

Remarks

THANK YOU