

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY,**

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**KNUST**

**Investigating the Challenges of Cocoa Purchasing Process in Ghana**

**By**

**Samuel Ato Kumi (BSc Economics)**

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**DECLARATION**

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

**SAMUEL ATO KUMI (PG3585515)**

Student's Name & ID

.....

Signature

.....

Date

Certified by:

**DR. GABRIEL NANI**

Supervisor(s) Name

.....

Signature

.....

Date

Certified by:

**DR. THEOPHILUS ADJEI-KUMI**

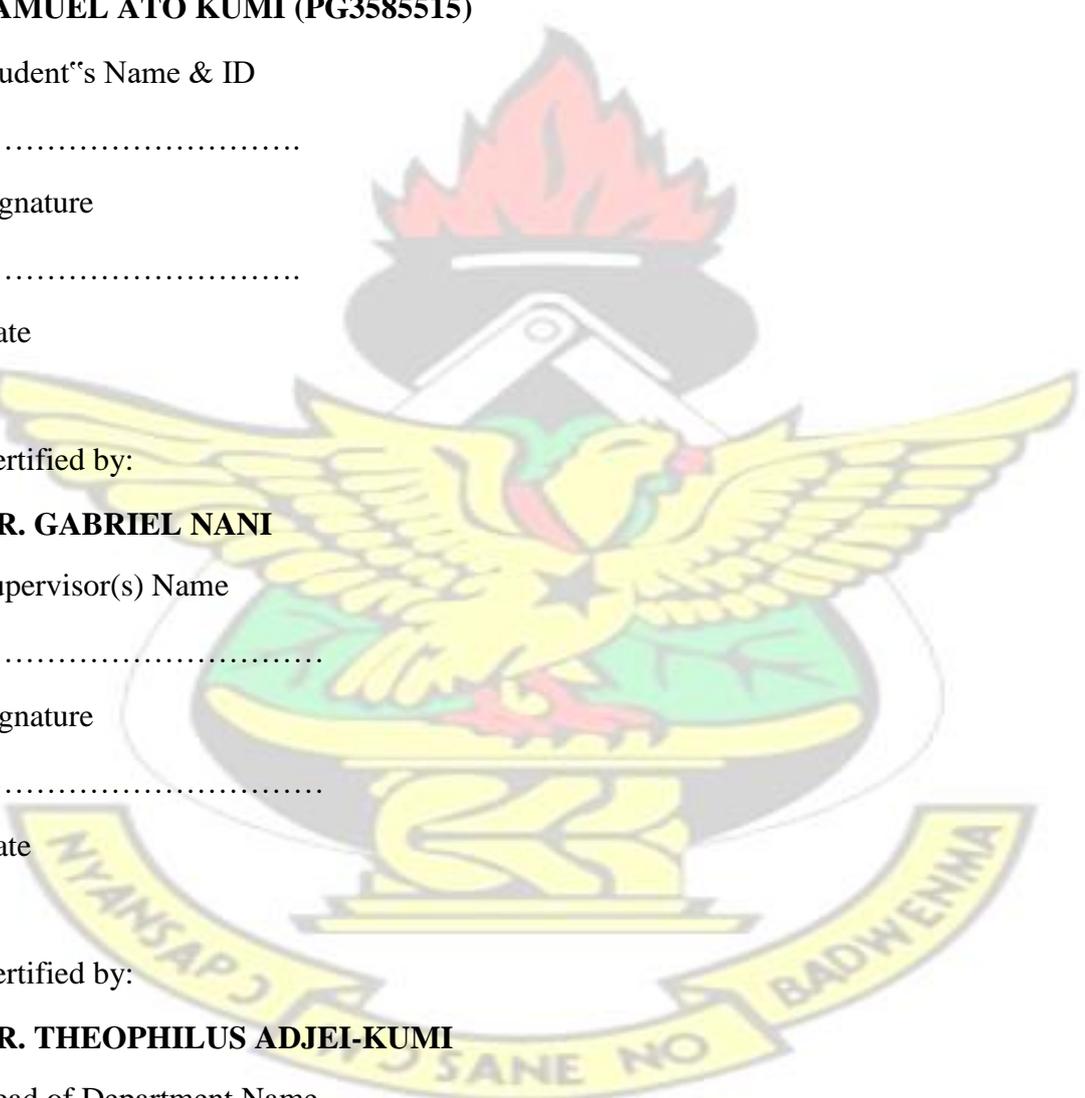
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## ABSTRACT

The study sought to “Investigating the Challenges of Cocoa Purchasing process in Ghana”. The main aim of the research was to determine the challenges of cocoa purchasing process in Ghana. Specifically the study sought to achieve the following objectives: (1) Identifying the challenges that affect cocoa purchasing process in Ghana. (2) Assessing the effects of the challenges on Licensed Buying Companies and COCOBOD. (3) Proposing a checklist for controlling the challenges faced at the various stages of cocoa purchasing process. Primary data were collected using questionnaire as the main source of data for the study. Based on the heterogeneous nature of the study area a purposive random sampling method was used to select the managements and staffs for both COCOBOD and Licensed Buying Companies forming the main variables under study. The study employed descriptive data analysis method. The descriptive statistics for the analysis employed SPSS version 20 in obtaining the frequencies, percentage, the mean and the standard deviation scores. The study specifically observed that both Cocobod and Licensed Buying Companies face many major challenges which tend to affect their operations and effectiveness. The high rate of agreement to the perceived challenges outlined in the research questionnaires by both management and staff of COCOBOD and LBC attest to the validity of the perceived challenges. The average mean score for the perceived challenges responded by both LBC and Cocobod registered a high mean score averaging 1.4 with relatively lower average standard deviation score averaging 0.5. The severity of impact on Cocobod and LBCs operations and effectiveness is very high. The major challenges identified have high probability of occurrences with very high severity of negative impact on Cocobod and LBC operations. This made the conclusions for the study both valid and reliable. Some major challenges identified constituting the dependent variable for the study include: high operational cost, cocoa price instability, high interest rate, high collateral security, poor road networks, inadequate warehouse, smuggling of cocoa across borders, congestion at various cocoa Taken-Over Centres, bad weather conditions, pest and disease, inadequate quality control officers. Significant investments are recommended to overcome the challenges facing cocoa purchasing and the cocoa sector in general. The study recommends adequate investments in warehousing facility across all cocoa growing districts and all cocoa growing regions in Ghana, cocoa price volatility can be controlled by COCOBOD through hedging and forward contracts, smuggling of cocoa by formulating anti-smuggling laws, dialogue with cocoa farmers, increase cocoa price. The study makes a significant contribution to literature on cocoa purchasing within Ghana’s Cocoa Sector by developing a checklist identifying probable challenges at each stage of cocoa purchasing supply contract process and how each challenge can be evaluated, and mitigated. This is expected to help ensure purchasing performance among LBCs and thereby improves the overall efficiency and effectiveness of COCOBOD, and all partners directly involved in the entire cocoa supply chain process.

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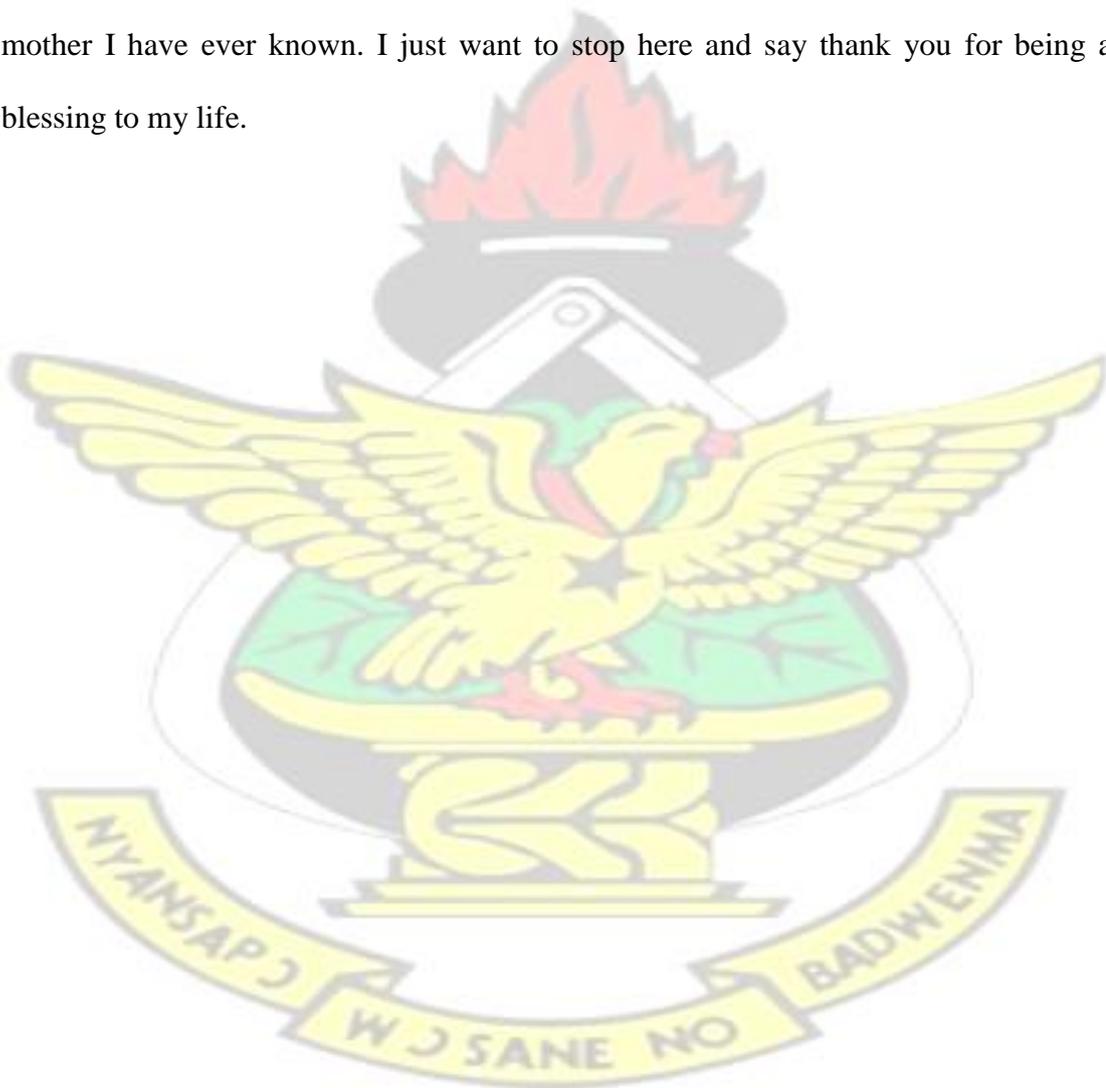
I cannot bring this acknowledgement to an end without mentioning Mr. Anthony Kojo, Ansah Chief Executive Officer of Donajos Company Limited, my father, my life coach, my mentor and my role model for his assistance and guidance throughout my study and the huge investments made in my life. Daddy Sir, you have been very instrumental in bringing me to this far through the numerous opportunities you have granted me in life.

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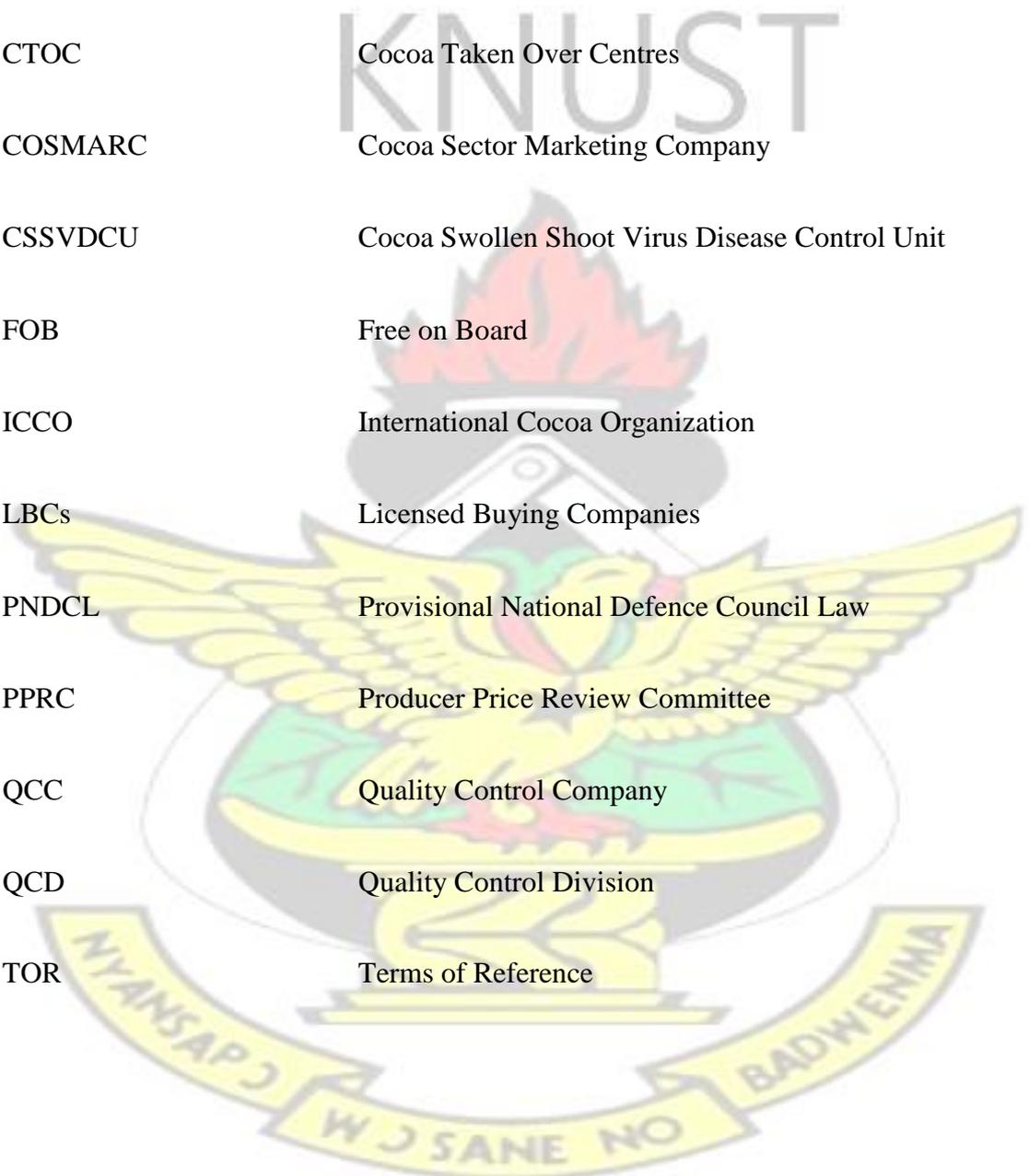
## DEDICATION

With love and, grateful heart I dedicate this work to my lovely mother; Agnes Ansah. I just want to say I love you Mum for your support and encouragements. You are the best mother I have ever known. I just want to stop here and say thank you for being a blessing to my life.



## LIST OF ABBREVIATIONS

BOG	Bank of Ghana
COCOBOD	Ghana Cocoa Board
CMC	Cocoa Marketing Company
CTOC	Cocoa Taken Over Centres
COSMARC	Cocoa Sector Marketing Company
CSSVDCU	Cocoa Swollen Shoot Virus Disease Control Unit
FOB	Free on Board
ICCO	International Cocoa Organization
LBCs	Licensed Buying Companies
PNDCL	Provisional National Defence Council Law
PPRC	Producer Price Review Committee
QCC	Quality Control Company
QCD	Quality Control Division
TOR	Terms of Reference



## CHAPTER ONE

### INTRODUCTION

In this chapter the researcher sought outline a brief history of Ghana's cocoa sector and the various cocoa transformations that has taken place in the Ghana Cocoa sector for the past decades. This is followed by the statement of problem, the aim of the study, objectives of this research, significance of the study, research questions, limitations of the study, and the organization of the chapters.

#### 1.1 Background of the Study

Cocoa production has been the mainstay of Ghana's economy for more than six decades now and continues to be the major foreign exchange earner to the Ghanaian economy. The Ghana's cocoa sector employs over a million people throughout the country's cocoa growing regions and remains the major source of livelihood for over six million people in the country (Tutu, 2009; Ghana Cocobod, 2010). The government of Ghana spends huge sums of money yearly for the purchase of cocoa as well as supplying of farm inputs such as cocoa seedlings, fertilizers, and mass cocoa spraying exercise to farmers. Nevertheless, the cocoa sector is still beset with a lot of challenges which reduces annual yield and thereby affecting the efficiency and effectiveness of the entire cocoa sector significantly.

In order to increase annual yield and improve the cocoa sector efficiency, it is important that post production challenges facing the cocoa sector should be identified, investigated and addressed early enough to restore the level of productivity and improve the cocoa sector sustainability. The aim of this study work was to

“investigate the challenges of Cocoa purchasing process in Ghana”. In this study, challenges facing Ghana's cocoa sector was identified investigated and addressed

accordingly and recommendations based on the finding from the study was be offered to address the effect of identified challenges. The importance of Ghana's cocoa sector to the nation cannot be overestimated. As stated by Bank of Ghana (2012,) the cocoa sector contributes more than 9% of the nation's Gross Domestic Product (GDP).

History credits the large scale cultivation of Ghana's cocoa to Tetteh Quarshie, a citizen of Ghana who journeyed to Fernando Po (now Bioko in Equatorial Guinea) and returned with Amelonado cocoa pods in 1879. In 1908 Ghana's cocoa supply to the world market increased quickly to 20,000 Metric Tonnes (MT) and in 1911 Ghana was the world's principal producer of cocoa with trade volume of over 41,000 Metric

Tonnes (MT). The agricultural sector is a major contributor to Ghana's economy, the sector contribute about 45 percent to the country's Gross Domestic Product (GDP) in

2014, cocoa sector alone contributes about 25 percent  
<https://www.newsghana.com.gh>.

The cocoa sector contributes about one-third of all export incomes generated in Ghana accounting for between 25 to 30 percent of total export earnings and contributes about 10% to GDP (Anang, 2015). Cocoa production supports the livelihoods of more than 800,000 smallholder households (Anim-Kwapong and Frimpong, 2004) and many others depend on it for a significant share of their income. Cocoa production has been the backbone of Ghana's economy for more than six decades.

In 1947 the Cocoa Marketing Board (CMB) was established and was given a singular obligation of exporting cocoa through its supplementary company the Cocoa Marketing Company (CMC). After the nation's independence in 1957 the tasks of the CMB in the reorganize of the cocoa sector stayed unchanged till 1961 when the many buying method were substituted by a monopsony system. This method was abandoned

in 1966 and licensed buying companies were reinvented to replace it. At the same period the government buying company, the Produce Buying Company (PBC) was founded; to be involved in the internal purchasing of cocoa from the cocoa farmers across all the cocoa growing regions in Ghana.

The first stage of the cocoa sector restructuring was instigated in 1984/85 and focused on restructuring the CMB. The Cocoa Marketing Board was restructured to be more efficient by downsizing staff membership from 100,000 employees to 6,000. As a result the name CMB was changed to Ghana Cocoa Board (COCOBOD).

The second stage, of Ghana's cocoa sector restructuring was instigated in 1993, which led to reinstatement of several LBCs to engage in cocoa purchasing together with the Producer Buying Company-PBC (Varangis and Schreiber, 2001). In Ghana there are many partners who involve in the cocoa purchasing process these include: Ghana Cocobod which is the regulating body of the Ghana's cocoa sector; while Quality Control Company (QCC) ensures the total quality of Ghana's cocoa beans; Cocoa Marketing Company (CMC) is accountable for the marketing and sales of Ghana's cocoa as well as providing administrative services and other supporting responsibilities as specified by Cocobod; Licensed Buying Companies (LBCs) are companies directly involves in the cocoa purchasing process from the cocoa farmers upcountry and evacuate purchase beans to CMC warehouses. The COCOBOD is the governing body which controls all the activities of all key partners involved in the internal and external marketing of Ghana's cocoa by ensuring high quality standard, issues and hands out licenses to LBCs as well as financing and controls the activities of LBCs, sets producer prices margins and formulates sales and exports policies for the sale of cocoa both local and international to manufacturing and processing companies. It is essential to know that the private involvement in purchasing of cocoa through liberalization of the sector

have provided benefits to all the stakeholders involves in the cocoa sector. The participation of many cocoa buying companies in the cocoa purchasing process demands an equal treatments and benefits to all participants so as to ensure sustainable cocoa sector growth and overall sector performance.

The Ghana's cocoa supply chain will only be sustainable if it functions in a wellorganized and competitive chain and at the same time deliver fair and mutually economic benefits to all key stakeholders involved the sector. Source: ICCO (2006)

“Supply Chain Management for Total Quality Cocoa”. Based on the numerous economic benefits the cocoa sector provide to the Ghana economy it is worth investigating and assessing the challenges facing the sector so that rapid corrective measures can be established for the sector to improve productivity and increase foreign revenue for the economy. It is for these reasons which motivated the researcher to undertake this study to investigate the challenges confronting the cocoa purchasing process in the Ghana's Cocoa sector.

## **1.2 Statement of the Problem**

Cocoa production continues to be the mainstay of Ghana's economic developments since independence. The sector employs over a million people throughout the country and remains the major source of income for several individuals in the country. The government of Ghana spends huge sums of money yearly on cocoa purchasing and other inputs to farmers but the sector is still beset with many challenges which affect total cocoa output significantly. The move towards improving the sectors efficiency and effectiveness several reform structural adjustment programs was instituted in the form of Ghana cocoa sector liberalization Laven (2007). The main aim of the Ghana cocoa sector liberalization was to encouraged competition through multiple buying system to

allow more participants to be involved in the cocoa purchasing process which was dominated by the Produce Buying Company (PBC) the state own enterprise. As a result of the cocoa sector liberalization the sector is now dominated by about 28 other LBCs Vigneri, and Santos (2001). Ghana cocoa sector has gone through several transformations but the purchasing process is been controlled entirely by Cocobod and its subsidiaries as a requirement under Ghana's Structural Adjustment Programs. Hence government of Ghana liberalized Ghana's cocoa sector to allow LBCs to participate in the internal cocoa marketing process. Ghana continued to exist as the only country among all the cocoa growing economies in the world which fully control and partial liberalization of its cocoa sector (Cocobod 2010). This allows government to decide how much to purchase cocoa beans from cocoa farmers. As a result of the cocoa sector liberalization the number of LBCs has increased in competing for the market profit share without control over price as Cocobod fixes prices floor LBCs has to purchase cocoa beans from cocoa farmers. However must study concerning Ghana's cocoa sector focuses on increasing production output with limited literatures discussing cocoa purchasing process and challenges. In order to maximize the sectors efficiency and effectiveness, it is important that challenges affecting the sector are being identified, assessed and dealt with early enough to improve the sectors performance in becoming world number one producer and supply of high quality cocoa beans. The aimed of this study is to investigating the challenges of cocoa purchasing process in Ghana's cocoa sector. The effects of the identified challenges were evaluated accordingly and recommendations were offered to address these challenges. All other things being equal considering the level of investment made into the cocoa sector by government, the sector is expected to have experienced much growth than it is today as the sector still finds it difficult in achieving its target of producing over one million metric tonnes of cocoa

annually. Anang, (2015) recognized the sector's inability to meet its total annual cocoa supply target is attributed to the following factors: aging cocoa trees and aging cocoa farmers, widespread pest and disease outbreaks, poor farming practices, cocoa smuggling, cocoa price volatility, input price volatility For instance Ghana produced one million tonnes of cocoa during the 2010 to 2011 crop year, which was good against the board's set target. From some time past, Ghana's annual cocoa output has declined as result of bad weather condition and unimproved farming techniques causing total production to declined to about 850,000 tonnes. The cocoa sector is weakened by the devaluation of the Ghana cedi due to cocoa price instability. Contrary good cocoa prices are being accessible in some close cocoa growing countries such as Cote d'Ivoire thereby encouraging smuggling of cocoa beans across the country's borders depriving Ghana huge sum of revenue. Another major challenge facing the sector is the substitution of large tract of cocoa farms to illegal miners, a practice known as "galamsey" in Ghana. The International Cocoa Organisation projected a reduction in Ghana's total cocoa productivity by 22 percent for the 2014-2015 cocoa crop seasons. An approximation for Ghana's cocoa produce, as the world's second major producer of cocoa, was decreased by 114,000 tonnes to 696,000 tonnes indicating 22% fall yearly (Daryl., 2015). The International Cocoa Organization (ICCO) blamed this on structural factors. This has caused the sector regulator, to Cocobod undertake several reforms to maintain its objective which aimed to *poised to maintain Ghana premium quality cocoa* but this is largely threatened by many other factors which are of high risk severity and impact level. It's for these reasons the researcher was motivated to investigated the impact of these perceived challenges identified on Cocobod operations and offer alternative mitigation measures to counter them to help improve the overall effectiveness and efficiency of Cocobod

### **1.3 Research Questions**

The specific research questions are to determine:

- i. The challenges that affect cocoa purchasing process in Ghana?
- ii. The challenges at the various stages of cocoa purchasing?
- iii. The effect of challenges on effectiveness of Cocobod?

### **1.4 Aim of the Study**

The aim of this study is to investigate the challenges of Cocoa purchasing process in Ghana's cocoa sector.

### **1.5 Objectives of the Study**

The general objective of the study was to investigate the challenges of Cocoa purchasing process in Ghana's cocoa sector with specific objectives aim at:

- i. Identifying the challenges that affect cocoa purchasing process in Ghana.
- ii. Assessing the effects of the identified challenges on License Buying Companies and COCOBOD.
- iii. Proposing a checklist for controlling the challenges faced at the various stages of cocoa purchasing process

### **1.6 Significance of the Study/Justification of the Study**

Primarily, the results of the study will significantly help improve Ghana's internal cocoa purchasing process. Thus; i. Factors that constrain efficient Cocoa procurement process would be laid bare in this study so that appropriate steps would be taken to mitigate those challenges, ii) again, the recommendations from the study findings would be

useful to Ghana Cocoa sector and other commodities trading entities. Most importantly, several practical and theoretical contributions are expected to be made by this study. Theoretically, the results from this study are expected to deepen the understanding of Cocobod in developing better procurement process and procedures in cocoa purchasing process in the cocoa sector. It is expected that the outcome of this research will serve as a guiding strategy for COCOBOD managements, and government against risks identified facing the cocoa purchasing in Ghana. It is also anticipated that the results of this study will help Government of Ghana and COCOBOD to develop a complete cocoa sector purchasing (supply chain) sustainability administration policy. This expected will help strengthen the sector's attractiveness to both LBCs and other stakeholders while ensuring the sector's profitability.

### **1.7 Limitations of the Study**

A lot of hard work was required in investigating and establishing the challenges faced by cocoa purchasing process in Ghana in ensuring sustainable production and purchasing practices in the cocoa sector. This was because the study employed questionnaire interview surveys in gathering data for this study work. This study method was centred on some perceived variables facing the Ghana's cocoa sector. Hence, the method of analysis heavily depends on detail research and interviews among variables forming the sampling size for this research work. The sample size for this study is made up of some selected management and staffs of: LBCs, and Cocobod (QCC and CMC) which requires a lot of time. Again, most previous studies have continually looked at the impact of cocoa sector on the Ghanaian economy with little or no consideration of investigating the challenges of the post production challenges. As a result, literatures

focusing on this study area in investigating the challenges of cocoa purchasing process are limited.

## **1.8 Organization of the Study**

This study is organized into five chapters. Chapter one presents the introduction and the background of the study which comprises a brief background of the study area, problem statement, aim and objectives, research questions, justification of the study, scope of the study area and the organization of the study; Chapter two is made up of the literature review by defining key concepts; Procurement, purchasing, procurement-cycle, Supply Chain Management and Risk Management, Cocoa sector Reforms in Ghana. Chapter three is made up of the research methodology comprising the source of data and the research techniques whiles Chapter four presents“ results and discussions of the results. Finally, Chapter five comprises the summary of the study findings, conclusions and recommendations based on the results obtained from the study.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter reviews literature on the key concepts in Procurement, Purchasing, Supply chain management and Risk Management. This chapter reviews some empirical works previously carried out by various authors, and available publications on the same subject under investigation. The general objective of this study is to investigate the challenges affecting Cocoa purchasing process in Ghana.

“Cocoa is Ghana and Ghana is Cocoa” as the saying goes, can never be overemphasized.

This is because cocoa plays a major role in Ghana”s economy compared to any other

resources. The Cocoa sector employs around 800,000 cocoa farmers spread over six out of the ten regions in Ghana. The cocoa sector alone employs about 60 out of a hundred of the nation's farming population in Ghana (Tutu, 2009; Ghana Cocobod, 2010). The cocoa export generates about 2 billion Dollars in terms foreign exchange annually and contributes about 75% to the nation's Gross Domestic Product out of the total export earnings. The Cocoa sector has been the mainstay of the Ghanaian economic developments for a century and plays a major role in employment, foreign exchange earnings, government revenue, infrastructural development amongst others (Amoah, 2008). However, Ghana's cocoa sector has over the years been confronted with some major challenges which have unfortunately contributed to the country losing its glory as the world leading producer and supplier of cocoa beans in the world between 1964/1965 according to (Anim-Kwapong and Frimpong, 2005).

Cocoa was first brought to Ghana by the Dutch missionaries at the opening of the 19th century. The extensive cultivation of cocoa in Ghana is still credited to Tetteh Quarshie's a Ghanaian blacksmith from Osu in Accra. He traveled and worked at Fernando Po for several years and on his return to Ghana in 1879, brought with him the Amelonado cocoa pods. Tetteh Quarshie established a farm at Akwapim Mampong in the Eastern Region which turned into a nursery for all pioneering cocoa farmers in Ghana. Tetteh Quarshie, legacy is the cocoa bean that has become the backbone of the Ghana's economy.

Cocoa cultivation, after Tetteh Quarshie assumed profitable proportions and spread to all forest areas of the country, predominantly Eastern, Ashanti, Brong Ahafo, Volta, Central and Western Regions. Most of Ghana's Cocoa is produced by around 1.6 million small farm holders on farmland average between three-five hectares in Ghana's forest

areas (Naminse. et. al.). Cocoa production is carried out in about six out of the ten regions in the Ghana which amount to about fifty 50 percent of the annual cocoa production in Ghana (Anim - Kwapong and Frimpong, 2005).

The mature Cocoa pods are harvested by cutting the ripe pods from the cocoa trees, breaking the cocoa pod open and scooping out the fresh beans. The fresh cocoa beans are then fermented for three or four days before drying them naturally in the sun on a weave mat made from a raffia palm tree. The dried cocoa beans are sent to designated cocoa shed to be sold by cocoa farmers to purchasing clerks. The dried cocoa beans are further certified and approved by the Quality Control officer in the district and cocoa beans are then bagged with quality seal.

Finally, sealed cocoa are transported by the LBC and other haulage companies to the approved Cocoa Take-over Centers either Takoradi, Tema or Kumasi inland port where such deliveries are kept in the custody of CMC. Sales or shipment of any certified graded and sealed cocoa in Ghana is solely controlled and regulated by Cocobod in conjunction with its subsidiary CMC responsible for sales and marketing. In acknowledgment of the impact of the cocoa to the national growth of Ghana, the governments of Ghana instituted the Cocoa Marketing Board (CMB) now Cocoa Marketing Company (CMC) in 1947, as the main agency responsible for the internal and external marketing and sales of Ghana's cocoa.

## **2.2 Definition of Purchasing:**

Purchasing has been well-defined by Lyson (2005) as “the function responsible for obtaining by purchase, lease or other legal means, equipment, material, components, supplies and service required by an undertaking for use in production or resale”.

### **2.2.1 Definition of the term Procurement**

The term Procurement comprises the whole method of acquiring property and or services. It arises when an entity identified a necessity, plan in the acquisition of the need and finally decided on the acquisition of such need. Procurement remains through the processes of risk assessment, seeking and evaluating alternative solutions, contract award, delivery of goods and services and payment.

Sound public procurement policies and practices are among the essential elements of good governance. According to Thai (2001), the basic ethics of good procurement practice include: accountability, where effective strategies must be in place in order to enable procuring entities use the limited resources carefully, knowing clearly that they are accountable to the public or the institution; competitiveness, this requires the that procurement process should be carried out by competition unless there are convincing reasons for single sourcing; and consistency, which emphasizes the equal treatment of all bidders irrespective of race or nationality. The overall purpose for following the due process in any procurement activity is to achieve Value for Money. Hence the procurement procedure should be sustained with honesty by ensuring that it is free from misconducts; but informed decision-making which requires public bodies to base choices on accurate information and ensure that requirements are being met.

The objectives of Procurement are to obtain goods and services: of the right quality; at the right time; delivered to the right place; in the right quantity; at the right price, and from the right source. Thai, K. V (2004) attested that irregular procurement activities in public organizations provide the main gap through which public funds are misappropriated. The term Procurement is also defined as the acquisition through purchase, rental, lease, hire purchase, license, tenancy, franchise or any other contractual means of any type of works, assets, services or goods including livestock or any

combination; according to Public Procurement Act, 663 (2003) as amended Act 914 (2016).

Procurement is the acquisition of goods and services of the right quality, quantity from the right source, delivered to the right place at the right time at the right price, according to Baily and Farmer, (1989). The Procurement cycle refers to the end to end stages in the entire procurement process or the activity. Among the major duties of procurement or purchasing processes are: identifying supplies; negotiating contracts; maintaining a database of suppliers; obtaining goods and services in a timely and cost efficient manner; managing suppliers. Finally, there should be transparency aimed at increasing openness and clarity on procurement procedure and its supply (Public Procurement Act 203, Act 633 as amended of Act 914, 2016). The procurement initiative constitutes an essential role in the purchasing process in any organisation. Therefore, procurement is concerned with: reducing the supplier base and selecting, coordinating, appraising the performance of and increasing the potential of suppliers and, where suitable building long term joint relationships Thai, K. V (2004).

### **2.2.2 The Clear Distinction between Purchasing and Procurement**

The terms *Purchasing* and *Procurement* are been used interchangeably by many scholars, authors, businessmen, professionals and others.

Purchasing is the process of how goods and services are ordered. Purchasing is a procedure within the main procurement process. In general, purchasing denotes to the procedure involved in obtaining goods and services.

Contrary, Procurement is the process of obtaining goods, works and services resulting in the award of contracts under which disbursements are made in the execution of the defined tasks. Procurement process arises with sourcing activities, negotiation and

planned selection of goods and services which are of importance to an entity. Procurement can also be referred to as the procedure by which government; corporate individuals purchase goods, works and services using public, corporate or personal funds. For the purpose of this study both procurement and purchasing would be used interchangeably to avoid any misunderstanding on their difference since there is similarity between procurement and purchasing. <http://purchasinginsight.com>.

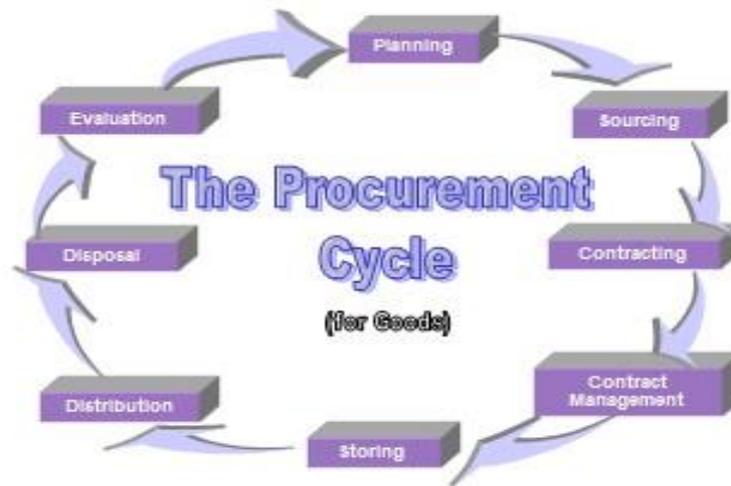
## **2.3 Procurement (Purchasing) Cycle/Process**

### **2.3.1 Introduction**

The Procurement cycle shows the end-to-end stages involves in a particular purchasing or procurement activity follows in achieving an organizational needs.

Lysons and Gillingham (2005) described a process as a set of activities which interrelate together in achieving a certain desire goal or an outcome. Procurement process is the stages which shows the activities of obtaining a given need for an organization and is for tactical purpose. Emmett and Crocker (2008) maintain that the process comprises of flow chart design to define a process in images using symbols with arrow lines linking each operational step. The procurement process is cyclical which starts with; Planning includes defining specification, Sourcing constitutes invitation and evaluation of bidders, Contracting constituting awarding and Managing Contract, Storing, Distribution, Disposal, Evaluation (of process).

# Procurement Cycle



**Figure 2.1: Show the procurement cycle**

Source: Emmett and Crocker (2008).

## 2.3.2 Identification of Need

Identification of need is done after proper planning has been duly done to determine what to be procured, what quantity to procure, where to procure etc. Planning stage considers: Annual procurement requirements planning aim at achieving economies of scale. Before the identification of need, individuals, organizations should clearly identify what they are looking for with right specification, of the right quality; at the right time; delivered to the right place; in the right quantity; at the right price, and from the right source. The need of an organization is determined by its operational objectives. Thus what the organization does, what it stands for, and what factors that inform its business operations.

## 2.3.3 Determine Specification

A specification defines what the entity or the organization desires to procure or acquire and, subsequently, what the supplier is expected to provide. A specification should have

adequate details to confirm that the product or service fits the user's needs. Specifications of items should refer to the following three objectives in accordance with basic procurement principles: their particular function is to be described with accuracy and precision of the products, works, or services which the procurer wishes to obtain; they must be written in a way that will promote competition among potential suppliers; and tenders evaluated in an objective and transparent way. This activity should start during project, or supply service preparation. There are several types of specification which include technical, functional, performance, sample, brand and design (Lysons and Gillingham 2003, Burt et al 2006).

A good specification must: must clearly specify the item to be procured, briefly, reasonably and unmistakably; with detail to enable the supplier with only the important features or characteristics of the items to be procured.

#### **2.3.4 Sourcing**

Sourcing is determining the potential suppliers in relation to the need of the procurement entity. Supply sources include: suppliers already registered with the procurement; existing suppliers in the market; trade sources or website; or through pre-qualification or expressions of interest. After detail specifications have been designed a method of procurement is considered in the acquisition of goods or services contract. Method of procurement includes: competitive or restricted 2-stage tendering; international or national; request for quotations or single source procurement; request for proposals for consultancy services Emmett and Crocker, (2008).

#### **2.3.5 Evaluation**

Evaluation of bids is conducted before an award of any contract. Criteria for evaluation must be met by any potential bidder before a contract is awarded. An award may be

stated based on lowest bidder, quality and cost based, margin of preference or any other criterion that meets the organization standard which is in the overall interest of achieving value for money in the long run. This phase is very essential in the acquisition of goods and services since the quality of the product to be acquired is determined by importance attached to the evaluation process. Supply contractors are required to give detailed information about their: organization operations, financial statements, logistics and facilities investment and organization experience in similar services showing competences in partaking in similar procurement activity Emmett and Crocker (2008). Most importantly, at this stage technical competencies and financial capabilities of each bidder are identified to determine the capability of the bidder for any given procurement activity.

### **2.3.6 Negotiating**

Negotiation is establishing area of agreement. Procurement entities begin to negotiate with the potential seller after evaluation process which consequently leads to an award of contract. Nevertheless, in the public sector, some conditions must be met before negotiation, according to Thai (2009).

### **2.3.7 Ordering and Progressing**

After evaluating and negotiations a contract is awarded to the most economically responsive bidder whose bid meets the terms and conditions or the agreement already spelt out in the tender document before bidding. A notification of an award of contract is sent to the successful supplier or contractor for the formal signing of the contract documents before executing the contract work, supply contract or service contract. After signing of the contract documents, both parties are expected to perform their obligations and commitments in order to avoid delays and to complete the contact terms on

schedule. In Ghana, the public procurement Act, (663, 2003) demands that a standard tender document designed for a particular procurement activity must be used and adhered to.

### **2.3.8 Delivery of Goods**

One major principles of procurement is to ensure that goods or services are supplied at a right time, with right quantity and quality to serve intended need. For this reason both supplier and the procurement entity must ensure cooperation in respective roles and commitments to avoid the delay of the contract. Early delivery of goods or services in accordance with the specification, quality and meeting the basic objectives of procurement activity is recommendable under contract terms. Accepting a delivery of goods or service involves thoroughly checking of the products or the services quality in relation with the agreed specification before issuing final certificate or receipts for payments. The receiving authorities should contact technical department or experts if they lack detail specification knowledge of the product, or the service.

### **2.3.9 Payment and Receiving**

Payment of goods or services contracts offered is mainly governed by the terms and conditions of the contract and payment terms. A contract term may make provision for pre-finance or mobilization fund to enable the supplier respond to the contract at the initial stage of the procurement before goods are delivered. Importantly, contract payment terms uphold payments after supply or completion of a contract.

### **Procurement Performance**

According to Emmett and Crocker (2008). Procurement performance is simply defined by how “well” the procurement process is conducted and how “good” the outcome is. Procurement performance is considered to be the result of two elements: procuring

effectiveness and procuring efficiency. Evaluating procurement outcome offers the foundation for an organization to assess how well it is progressing towards its predetermined objectives, identifies areas of strengths and weaknesses and decides on future initiatives with the goal of how to initiate performance improvements. CIPS Australia (2005) defined the difference between efficiency and effectiveness. Efficiency describe whether organization is “doing things right” while effectiveness explains whether organization “doing the right thing”. It can be said that an organization can be effective but inefficient the challenge is the difference between the two.

### **Why Investigating Procurement (purchasing) Performance?**

It is important to investigate the performance of every organization to determine how well organizations uses their funds and why they should assess procurement performance (Muhwezi, 2006). The London centre of excellence proposed the following reasons why organizations should evaluate their performance: to identify areas where it needs development, particularly around contracts and enhanced quality of services; to ensure that procurement directly adds to the execution of the entity’s goals; to establish the value added, after changes (i.e. to justify its existence); and to evaluate the impact to enhance outcomes for the entities directly and its participants

### **Supply Chain**

Supply chain is the process of meeting the demand of the customer in each of the stages of the supply chain. A supply chain entails all parties involved, directly or indirectly, in satisfying a customer demand. The supply chain does not only include manufacturer and supplier, but also transporter, warehouses, retailers and even the customers themselves. These functions include, but are not limited, to new product development, marketing, operations, distribution, finance and customer service (Chopra and Meindl, 2007).

The term supply chain consists of all stages involved, either directly or indirectly, in fulfilling a customer request. The objective of supply chain management is to maximize the overall value generated rather than profit generation. Supply chain also is the movement of goods and services from one place to another.

Supply chain management (SCM) aims at enhancing competitive deliveries of goods and services by carefully combining the internal functions within an entity and successfully connecting them with the external operations of suppliers, and other members to be successful. Supply chain activities end when a satisfied customer has paid for his or her purchase.

#### **2.4 The Cocoa Purchasing Process**

The entire Ghana's cocoa sector purchasing process is strictly regulated and it's extremely different from many Cocoa producing countries like Côte d'Ivoire, Indonesia, and Nigeria etc.

In Ghana the COCOBOD and its subsidiaries are exclusively authorized by government to certify interested registered companies to be involved in the cocoa purchasing process. A Company expressing an interest to engage in the internal marketing of cocoa must apply to COCOBOD first. There is a committee called the Cocoa Sector Marketing Committee (COSMARC) which is approved by COCOBOD in discussion with the Minister OF Finance. The duties of COSMARC include: Evaluating applicants willing to participate in the internal marketing of cocoa and offer recommendations to COCOBOD for issuing license to the evaluated participate to be involved in the internal marketing of cocoa. The assessment and the evaluation for the award of the supply contract as License Buying Company considers: Whether the entity expressing the

interest have the capacity to participate in the internal purchasing of cocoa for at least two years (thus two cocoa crop seasons).

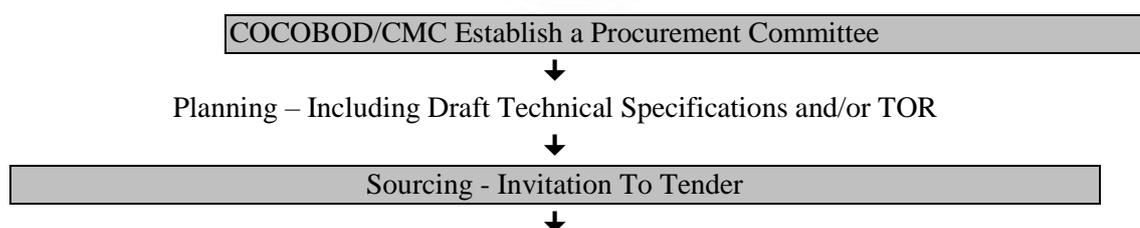
The entity expressing the interest must prove financial capability to be involved in the cocoa purchasing. That is financial resources to purchase at least 10,000 metric tonnes of cocoa for two successive crop seasons. The entity must have adequate workforces who have the applicable practical knowledge and experience in commodity purchasing and internal marketing. Source: Ghana Cocoa Board Law, 1984, (PNDC.L.81).

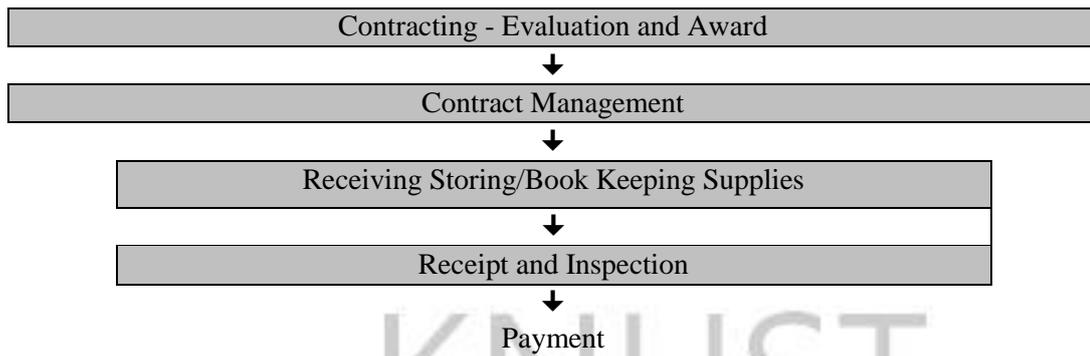
Cocobod issues cocoa purchasing license to the successful company as Licensed Buying Companies to engage in the internal marketing of Cocoa. Additional financial support in the form of Seed Funding usually called the Stabilization Funds is given to successful company by Cocobod. Cocobod requests an advanced performance bond in the form of bank guarantee to protect itself in the event of non-performance or default by the LBC. Some of the license buying companies include: Produce Buying Company Limited (PBC), Armajaro, Akuapa, Cocoa Merchant, Cocoa Abrabopa, etc.

Secondly, after certification of a company as a LBC, COCOBOD issues a purchasing order in the form of *Seed Fund* to enable eligible companies to engage in the cocoa purchasing business. LBC employs District Officers and purchasing clerks as representatives in the cocoa growing areas to purchase cocoa directly from the farmers based on the purchasing guidelines and regulations. The Purchasing Clerks receive funds from the LBCs through the District officers to purchase cocoa from farmers directly. Farmers sell their dry beans to the Licensed Buying Companies Clerks. The cocoa purchasing clerks are responsible for sorting and bagging the dry beans in Cocobod customized cocoa jute bag branded Ghana Cocobod Cocoa, produce of Ghana with right quality and weight of cocoa average 67 Kg per bag. This follows certification

of cocoa by grading and sealing quality beans after thorough checks by quality control officers. The beans are stored temporarily in the LBCs warehouse commonly called the Cocoa shed and later evacuated to the district depots or cocoa sheds where quality is certified again by Quality Control Officer from Quality Control Division of COCOBOD. This first transportation to the district cocoa shed is called *primary evacuation*. The *second evacuation* takes place when LBCs transport cocoa from their District warehouse to Cocoa Take-over Centers to be stored in the custody of Cocoa Marketing Company warehouse. The Cocoa Marketing Company (CMC), a subsidiary of COCOBOD receives the beans whilst the Quality Control Unit of COCOBOD further grades the beans into standard, substandard, with each cocoa bag tagged with quality seal, and station identification number. Cocoa beans which do not meet the quality standard set by Quality Control department are rejected. Rejection of cocoa beans can be as a result of beans not thoroughly dried insect's infestation, mixed beans, chaffs and unwanted materials. Quality Control department also engaged in documentation of received cocoa to ascertain the total stocks of cocoa at hand in tonnage. Importantly, QCD further engaged in a fumigation exercise to protect cocoa bean from incents insects. At this point under the supply chain, a final grading and quality checks are done preparing the cocoa ready for sale and export. The bagged beans are then sent to the port and received by the CMC and rechecked for quality by QCC before final export. This process is also referred to as secondary evacuation.

### OVERALL PROCUREMENT PROCESS

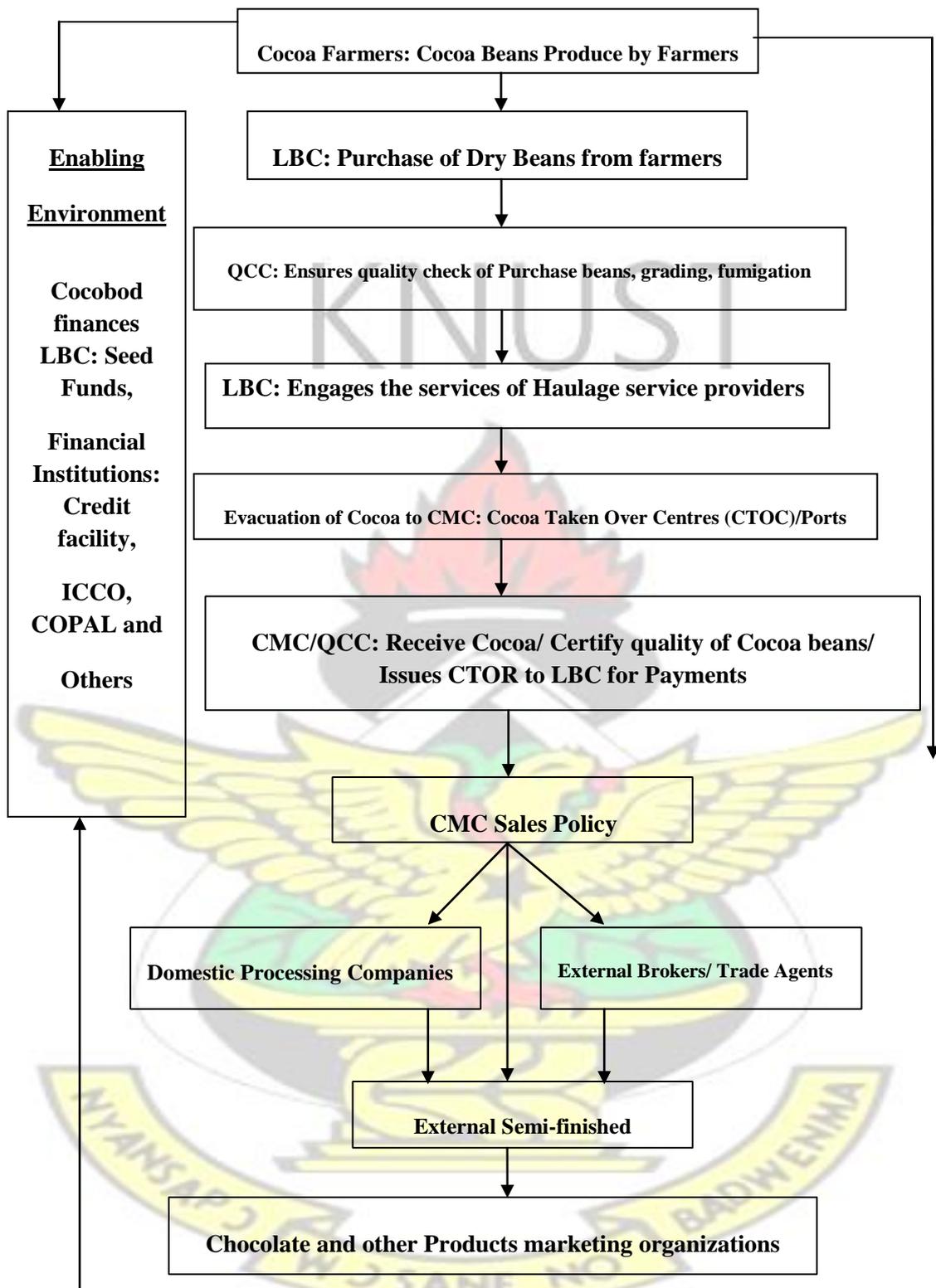




**Figure 2.2: Shows the overall procurement or purchasing process.**

Source: Adopted from Dan Church Aid Procurement and Logistic Division Manual





**Figure 2.3: Shows the Cocoa Purchasing Mapping along the Supply Chain Process**

Source: Adopted from Osei, Issac. (2007). Cocoa Supply Chain Process in Ghana

#### **2.4.1 Major Challenges Perceived Affecting Cocoa Purchasing Process and its**

## **Impact on Cocobod effectiveness**

The study investigates the challenges facing the cocoa purchasing process and its effects on Ghana Cocobod operational effectiveness and Ghana's cocoa sector's sustainability. With reference to World Bank (2011) report on Ghana's Cocoa sector The World Bank report identified some challenges facing the Ghana's cocoa sector. However, this study focuses on investigating the challenges of cocoa purchasing process in Ghana. The challenges perceived facing cocoa purchasing process in Ghana include the following: Cocoa price instability and exchange rate instability, depreciation of the Ghana cedi due to macroeconomics instability, lack of adequate funds to license buying companies, inadequate logistics and warehouse facilities, poor transportation network hinders efficient evacuation of cocoa beans from the cocoa growing communities to various cocoa takeover centres

Most considerably environmental challenges such as; bad weather conditions, bush fires, flood etc., also stands as thoughtful challenges to Ghana's cocoa sector's growth and sustainability. The cocoa sector is also challenged with a communication gap and lack of supply chain integration among Cocobod, LBC, farmers, and other stakeholders in the cocoa sector. Inadequate staffs, congestion at various cocoa takeover centres, poor road networks, lower buyers profit margin, counterparty risk- the tendency of one party in a contract agreement and many others. The challenges that affect Cocoa purchasing process in Ghana are many and therefore should be given the needed attention it deserves in order to improve the sector's total growth and sustainability.

### **2.4.2 Cocoa Price Instability**

One major challenge associated with cocoa production and purchasing process in Ghana is the cocoa price instability. Cocoa price on the international market over the years has

been unstable and unpredictable. The uncertainty of cocoa price on the world market constitutes a major problem facing Ghana's cocoa sector. The global price of cocoa in 2000 was \$714 per ton over the time increased to \$1,280 per ton in 2002 and average of about \$1,600 in the second quarter and in 2003/04 global price of cocoa improved significantly high. Conversely the third quarter of the 2005/06 price of cocoa season showed great instability in prices according to ICCO, report (2006). The instability of cocoa price affects COCOBOD as it guaranteed upward cocoa price yearly at the beginning of each cocoa season to cocoa farmers even if international cocoa price falls.

In line with cocoa price instability tendencies on international market Cocobod has established what is called the Stabilization fund. The sustainability of the stabilization fund is subject to efficient administrative and financial managements of the board. As result Cocobod carried out a prudent and substantial cash flow responsibilities to enable it carry out its role more effectively. When world market prices for cocoa rises, profit margin COCOBOD pays to cocoa farmer rises and vice visa. The 2011/12 crop year opened on 14th October 2011 with an upward revision of the producer price of cocoa from GH¢3,200 per tons to GH¢3,280 per tons representing a 2.5% increase from the previous year's price (Ghana Cocoa Board 43rd Annual Report, 2012). According to the World Bank Report in 2011, during crisis years where major world cocoa producing countries faced intermittent unfavourable climatic changes, civil wars as in the case of Cote d'Ivoire, coupled with bush fire, poor farming management resulted in the reduction of cocoa price margin drastically and at times even turn negative. Cocoa prices on the global market faced a descending trend during in 2011 and 2012 cocoa season. The regular global cocoa prices as measured by the ICCO settled at US\$2,396, a decrease of 22.81% over the 2010/11 price of US\$3,104. Price movements were asymmetrical during the 2011/12 season as a result of the

unresolved European debt crisis and its rippling effect on cocoa consumption as well as the bearish news of falling demand in European markets.

Again the increasing weather deterioration conditions in West Africa also contributed to an essential cause in global cocoa price volatility. International prices of cocoa improved increasingly throughout the 2013/14 season, gaining 24% to average US\$ 3,313/Metric Tonnes at the end of September, 2014. However, on October 29th in the same year, the international price of cocoa declined significantly to US\$3,104/Metric Tonnes. The degree of cocoa prices variation is a major concern to the cocoa sector particularly to Cocobod, and other key stakeholders such as farmers and LBCs in the entire cocoa sector. Most importantly, cocoa prices tend to change from time to time, making it problematic to predict price as a result of market forces influenced by demand and supply. In addition cocoa price changes as a result of markets speculations which tend to create artificially of cocoa on shortage the world market to force price to move upward, according to International Cocoa CO, report 2006.

Nevertheless, Ghana Cocobod in its bid to controlling the cocoa sector sustainability fixes cocoa purchasing price locally as the board remain the single regulator and the marketer for Ghana's cocoa produce both locally and internationally. In order to encourage cocoa farmers to increase production levels independent of the volatility of world cocoa price government through the board has established Cocoa Stabilization Fund. The purpose of the cocoa stabilization fund is to maintain local price stability even when the world market price of cocoa falls. In sum the stabilization fund was set up by the Cocobod to safeguard that prices paid to cocoa farmers are maintained even if prices of cocoa fluctuate on the International market. To mitigate the negative impact of price fluctuations on cocoa farmers, the government through Cocobod in consultations with authorizes bodies comprising representatives from farmers, LBCs, and diverse business

groups fixed producer price yearly by the Producer Price Review Committee (PPRC), according to COCOBOD guidelines. The cocoa purchasing price floor set by Cocobod is the minimum prices level at which LBCs are allowed to purchase cocoa and LBCs are not allow to purchase an agreed unit of cocoa less or above the purchasing price floor.

Procurement of cocoa below or above the Cocobod set price is illegal and constitutes a breach of Ghana Cocobod regulations and operation guideline.

However, LBCs offers incentives in the form of short term credits to cocoa farmers to influence cocoa farmers to sell their cocoa produce to them. This is because LBCs profit in the cocoa purchasing process is largely based on total quantity of cocoa they purchase within the crop season. Ghana cocoa sector is partially liberalized and is continue controlled Cocobod As a result Cocobod fixes price floor for LBCs to purchase cocoa from farmer LBC increases their market share of profit by initiating buying strategies to increase total quantity to increase their profit as is dependent on their total purchase. To this effect LBCs adopts cocoa purchasing strategies to increase their market share as indicated in as study conducted by Poku and Lamptey (2014). The study revealed that cocoa purchasing promotional strategies help increase the total purchases of cocoa by LBCs and influence the choice of LBCs by the cocoa farmer. LBCs influence cocoa farmer by offering free gifts in the form of fertilizers, wellington boots donation and repairs of spraying machines, mosquito nets scholarships, solar panel streetlights, construction of bridges, and pre-financing These free gifts some LBCs offers to cocoa farmers help build stronger relationship between them as well as help decrease their expenditure and therefore keep the LBC in memory throughout the cocoa seasons by cocoa farmer selling their cocoa produce.

Most agricultural commodities such as cocoa are largely influenced by price instability.

There exist three factors explaining why most agricultural commodities are by price instability. First, agricultural produce differs in price from time to time because of challenges such as bad weather condition, pest and diseases, and low price paid to farmers due to the cocoa sector liberalization tend to be disincentive to cocoa farmers hence the decrease in total cocoa productions

Secondly, the speculation of future increase in cocoa price various actors within the global market also influence price. This is because the degree or responsiveness to changes in quantity demanded is comparatively significant to price in the short run.

Price instability is integral part of agricultural product market relatively due to supply and demand dynamics which tend to influence price negatively

Thirdly, agriculture produce takes longer maturity period in, thereby cocoa farmers cannot respond quickly to fluctuations in price in the short term. Poor farming practices and low investments in farming inputs also tend to decrease output significantly.

*Effect of price volatility on Cocobod Effectiveness:* there exist high severity level of negative effect on Cocobod and on the entire cocoa sector with respect to cocoa price volatility both on internal and external actors due to influence caused by the cocoa price. With reference to Ghana Cocobod Act 1984 all issues regarding the entire cocoa sector are been control and regulated by Cocobod. The risk as a result of cocoa price volatility is highly probable with very high severity impact level since cocoa price is unpredictable in the world market. In ability of Cocobod to offer best cocoa price to cocoa farmer demotivate many people to grow cocoa and hence huge revenue loss to the state, As a

result of disincentive of cocoa price fixed by Cocobod as it continues to regulate and control the cocoa sector.

In order to ensure a sustainable cocoa sector in Ghana, challenges facing the sector can be mitigated through appropriate risk control mechanisms. These challenges or risks can be controlled by COCOBOD through marketing hedging strategies (future, option call, forward contract) by selling large proportion of the crop in advance through Cocoa Marketing Company Ghana Limited. Hedging is a supply side risk management strategy. Hedging is undertaken by having a globally isolated portfolio of suppliers and amenities such that a natural disaster or fluctuations in currency will not affect the entire entities operations at the same time. Price instability can be controlled by risk management strategy using private insurance and hedging instruments. Before Ghana's cocoa sector liberalization Government controlled cocoa price and continue till date through Cocobod. Government fixes price cocoa price because of revenue it obtained both internal and external marketing. Hence government through Cocobod instituting the stabilization fund to help address the challenge of cocoa price instability. Most importantly good policy aim at mitigating these challenges will help improve productivity and the sector's sustainability through: (1) increase government and private investment will help boost cocoa production, (2) increasing transparency in Ghana's cocoa sector market, (3) eliminating domestic trade policies (such as high tax on commodity products) will help reduces trade distortion and market instability (Staatz and Weber 2011).

Market based instruments can also be resort to by Cocobod to help reduce the effects of price instability. The aim of these market based instruments or tools is to prevent price instability from causing income instability (which have tendencies to affect production and consumption). In real-world terms, this means Cocobod empowering itself to insure

its operations against risks related to price disparities through forward contracts, futures, put options, and call options harvest variations crop insurance, and weather index insurance) CRMG (2008). Galtier (2009) in his study finding concluded that the causes of price instability are a critical factor in the performance of price stabilization policies and strategies.

### **2.4.3 Lack of Adequate Credit Facilities**

An inadequate credit facility for LBCs is a major challenge facing the cocoa sector. The challenge of LBCs securing adequate funds to purchase dry cocoa beans from the cocoa growing areas is very difficult for many local Ghanaian LBCs. Most banks and financial institutions in Ghana and across Africa require adequate collateral security and guarantees before any financial credit would be granted. This is coupled with high interest rate which average 18.4% (Bank of Ghana, 2016). Some LBCs manage to get financial assistance from local and foreign financial institutions at a negotiated interest rate to enable them to remain in business. In effect most LBCs experience unfavourable bank loan terms as they regularly feel cheated in their bid to secure adequate finance to purchase cocoa. The cost of borrowing in Ghana is very high and cumbersome. The time it takes to obtain loan or credit funds from banks and financial institutions makes it very difficult to access loan to remain in business as a good standing LBC in Ghana. The challenge of Cocobod inadequately financing the activity of LBCs results in bankruptcy and leading to the collapse of many LBCs.

Cocobod only issue cocoa purchasing authorization certificate to LBCs is largely based on their strong financial capability, adequate physical infrastructural investments in warehouses and other logistics investments as guarantee against any default of non-performance on the part of the LBC. Many cocoa License Buying Companies in Ghana are faced with uncertainty over the costs of borrowing as a result of high interest rate

unpredictability makes it difficult for License Buying Companies, in particular, to borrow and manage their resources effectively. It is evident that most Licensed Buying Companies lack sufficient capital to fully finance the purchasing contract as they highly rely on COCOBOD seed fund. Licensed Buying Companies face high interest rate in both local and foreign financial markets and this constitute major risks for LBCs.

*Effect of Lack Adequate funds on Cocobod:* Inadequate fun constitute a high risk with higher impact severity level and negatively impact on Cocobod operations. Inadequate fund availability to Cocobod will affect the cocoa purchasing process negatively. This is because LBCs depends on the seed funds granted them by Cocobod to purchase cocoa. The challenge of high interest rate also affects domestic borrowing and this is a disincentive to LBCs. The multiple effects are that LBCs will be unable to purchase cocoa and this would force cocoa farmers to smuggle and sell their cocoa to neighboring countries like Côte d'Ivoire where they received higher price for their produce.

To mitigate the high rate of effect of on Cocobod which negatively impact on the entire cocoa sector as a result of inadequate funding is a right policy to sustain the sector which provides the largest foreign exchange earnings and employs over a million people in Ghana.

Adequate funding availability will improve efficiency and effectiveness of all stakeholders involved on the cocoa purchasing process. There exist a positive relationship between input and output. Government should provide adequate credit guarantee to Cocobod to enable them source for both local and international funds. Cocobod can also hedge its cocoa with international market by floating share to raise adequate capital to fund its marketing activities.

#### 2.4.4 Low Buyer Profit Margin

The results of a study on Ghana cocoa farmer's dated between 2001 to 2004 cocoa season indicated that six LBCs operating in 2001/2002 has stopped operating between 2003/2004 according to Zeitlin. (2006) confirm this as an evident in concluding that there exist high rate of insolvency among LBCs over the years. The high rate of exiting from the cocoa purchasing business by many LBCs is attributed to; high interest rate, high operational cost, inadequate government support, high level of competition, low buyer profit margins paid by COCOBOD to LBCs for purchasing and delivery of cocoa which is woefully inadequate and unsatisfactory to encourage them to remain in business. The cocoa price margin fixed by government to pay cocoa farmer through LBCs is considered to be the least when compared to other major cocoa growing countries in the sub-region like Côte d'Ivoire as reported by Vigneri and Santo (2007). For instance in Côte d'Ivoire the minimum cocoa price average 750 CFA francs (\$1.55) per kilo allocated to farmers for the 2013 and 2014 main crop was upheld to 2014 source: ICCO secretariat report July, 2014 on *The Cocoa Market Situation*. Contrary in Ghana it's different as price is relatively lower than that of their counterpart in the same Cocoa sector like Côte d'Ivoire this is attributed to high export tax margin instituted by the government. There exists a direct association between increased cocoa prices and increased farmers outputs. High cocoa prices encourage cocoa farmers to conduct good farming practices, replant withered cocoa trees, improve pesticides and fertilizers applications to help increase outputs as a result of increased incentives to farmer. The low price margin which makes up the LBCs profits discourage more people to invest into the cocoa purchasing process which tend to affect the entire cocoa supply chain negatively. The effect of price instability on the global market serves as disincentive to all cocoa farmers. A fall in cocoa prices during the season, affect Cocobod since it

cannot reduce purchasing price. The reason has been that when cocoa price on global market increases Cocobod still pay the fixed price to cocoa farmers irrespective of the increased price and vice versa. Nevertheless, the COCOBOD ability to manage this challenge has determined its efficiency over the years as it remains the only cocoa producing country practicing partial liberation of the cocoa sector. The Ghana's cocoa sector is confronted with certain challenges, for instance earnings of cocoa farmers are being weakened by the devaluation of the Ghana cedi. This is contrary in neighboring cocoa producing countries. As a result trafficking of cocoa beans to some neighbouring countries has become an alternative for some cocoa farmers resort to in order to get better price for their cocoa produce. Another threat facing the sector is illegal mining, a practice locally known as „*galamsey*“ as a result of many farmers selling their cocoa farm land to these illegal miners. Source: ICCO Secretariat.

*Effect of Lower Price Margin on Cocobod:* Mitigation plan to address the effect of Lower Buyer Profit Margin which has a higher probable negative impact on the Ghana cocoa sector is encouraging open market competition. A competition in the cocoa purchasing process through cocoa sector liberalization (open market structure) is expected to increase price throughout the cocoa season. This is unattainable since the sector is not partially liberalized and Cocobod fixes price floor for purchasing cocoa at the beginning of each cocoa seasons. LBCs in Ghana only make profit based on the total graded and certified (quality checks) quantities of cocoa purchase and delivered to appropriate Cocoa Take-over Centers. There exist excessive competition among LBCs in Ghana which is highly driven by profit motive since profit accrue to LBCs is dependent on total volume of cocoa purchase within the crop season. This is as a result of excessive power exercise by Cocobod which most LBCs complain to influence their

operations negatively. Reference: Section 4 of Ghana Cocoa Law 1984, clearly state - Only Authorized Persons or Organizations is to Purchase Cocoa.

#### **2.4.5 Ageing Cocoa Farms and Ageing Cocoa Farmers**

The cocoa yields in Ghana are relatively low in recent times partly because of the old age of farmers, their farms and the cocoa trees (Laven 2010). The productivity of cocoa trees generally decline after a period of about 20 years; what aggravates the problem is that cocoa production is also labour intensive. Farmers perceive that the cost of destroying old plants and replanting new ones is so high as compared to the cost of maintaining old trees; coupled with the old age and lack of enough strength by most farmers, they decline to do replanting. The Aging Cocoa farming population is also a major challenge facing the Ghanaian cocoa sector. Large numbers of cocoa farmers are old and affecting the general output of cocoa produce in Ghana. The cocoa yields in Ghana are relatively low in recent times partly because of the old age of farmers, their farms and the cocoa trees (Laven, 2010).

The productivity of cocoa trees generally decline after a period of about 20 years; what aggravates the problem is that cocoa production is also labour intensive. Farmers perceive that the cost of destroying old plants and replanting new ones is so high as compared to the cost of maintaining old trees; coupled with the old age and lack of enough strength by most farmers, they decline to do replanting. There exist higher correlation impact between cocoa farm size, cocoa farmer's age and total outputs. All other things being equal as output improves as active youth involve engages in cocoa production as more farm size are cultivated.

## **Effect of Aged Cocoa Farms and Age Cocoa Farmers on Cocobod**

There exist high probability of risk impact on the Cocobod and the sectors stakeholder since the whole sector is highly dependent on the availability of cocoa beans. Non availability of cocoa farms means no foreign exchange from cocoa to government and a higher unemployment rate in Ghana since the sector employs over sixty percent of people in the agricultural sector. The high severity impact of ageing cocoa farms can be mitigated by government initiating cocoa sector structural programs which aims at resourcing cocoa farmers by giving them frees improve cocoa seedlings, farm inputs such as fertilizers, insecticide and spraying machines. The increasing number of cocoa farmers aging has high tendency of affecting Ghana's cocoa production and the entire cocoa supply chain. Research had established that most cocoa farmers are growing old in relation of most cocoa farming reaching 55 years. This condition has negative consequences on sustainability of Ghana's cocoa production since old ageing farmers can not contribute adequately into production to affect total outputs. The active youth are to be encouraged to take up cocoa agri-business as a profitable industry. This will also help improves Ghana's cocoa production outputs and at the same time reducing youth unemployment. It is predicted that, over 100,000 Ghanaian youth will enter into cocoa farming to help the country attain a continuous output averaging of one million metric tons yearly.

### **2.4.6 Agriculture Unattractive to Active Ghanaian Youth**

The cocoa sector should involve more youth in cocoa agri-business to replace the aging farmers. This should be of major concern to Cocobod in improving in taking advantage of the global cocoa needs. The government through Cocobod and the Ministry of Agriculture should initiate incentives and new programs to draw more active youth into the cocoa sector and resourcing them by means of farm inputs and funds to enable them

undertake large-scale cocoa farms to help transform the sector sustainably for greater profitability levels. The difficulty in obtaining basic farm inputs such as seedlings, cutlass, seedlings, and other simple farm implements such as cocoa spraying machines couple with difficulty in land acquisition de-motivate cocoa farmers to expand the size of their farms for lack of funds (Laven, 2010). These factors constitute the reasons why many Ghanaian active youth are unwilling to go into agriculture let alone cocoa farming.

#### **2.4.7 Lack of Motivation (Contributory Insurance Schemes) to Cocoa Farmers**

The board failure in implementing a contributing insurance scheme for Cocoa farmers contained by the framework of the Cocoa farmers pension scheme in agreement with the Ghana Cocoa Board Law 1984 (PNDC, L. 81). However the Board is yet to come out with the modalities of how farmers can benefit from it since its establishment in 1984. The Ghana Cocoa Board Law 1984 (PNDC L. 81): The Board has not complied with Section 26(1) of the Ghana Cocoa Board Law 1984 (PNDCL. 81) which requires the Board to establish a contributing insurance scheme for Cocoa farmers within the framework of the Social Security Scheme. Notwithstanding, pressure from cocoa farmers, the Board has with effect from the 2009/2010 financial year approved the establishment of the insurance scheme its technical committee has not been able to implemented it since it was announced in January 2010. Ghana's cocoa production is own by small farm holders and Cocoa farming is generally their main source of income. Farm sizes are very small in acres and normally most cocoa farmers cannot afford basic farm inputs such as fertilizer, quality seedlings. The end result of these small hold farmers is low and poor harvest. A reduced farmer's output means low standard of living since basic expenditures largely depends on income obtained from selling their cocoa produce. In recent time most cocoa farmers have complain bitterly as result of the Board in ability to implement section 26(1) of the Ghana Cocoa Board Law 1984 (PNDCL.

81) which requires the Board to institute a contributing scheme for Cocoa, farmers as a pension benefits. Nonexistence of insurance or pension scheme benefits as a guarantee to cocoa farmer's giving their contributions to the Ghanaian economy serves as disincentive to them as they contributes a greater percentage of foreign exchange earnings to the economy. Research indicates that, foreign earnings generate over 2.8 billion United State Dollars in 2012 and contributes about 10 percent to Ghana's GDP. All other things being equal more people would be motivated to enter into cocoa farming if the Cocoa Farmers Welfare Fund is established by the Cocobod law. The section 27 of the Ghana Cocoa Board Law, 1984 (PNDCL 81) does not explicitly make any provision for cocoa farmers insurance or pension scheme in old age as a motivation for their contribution to the Ghanaian economy. The farmer's welfare fund only makes provision of *bonus* to cocoa farmers based on their annual sales of cocoa. Ghana Cocobod Board at the end of each fiscal year pays bonus cocoa farmers which is shall be assessed by Cocobod Board management base on the annual cocoa tonnes sales by farmers to LBCs. As it stands now the criteria to determine amount to be paid to each farmer is not known generally attributed to poor relationship between the cocoa sector regulatory bodies and cocoa farmers and other key player. This serves as a disincentive to encourage more people into cocoa farming as there is no guarantee of pension scheme for them in their old age. The supposed cocoa farmer's welfare fund has failed to encourage more people into cocoa farming as a result of Cocobod inability to implement Section 27 of Cocoa Law 1984. The law clearly states: Cocobod shall establish a fund to be known as "the Farmers' Welfare Fund at the end of each financial year, and that such funds shall be handover to the farmers' welfare fund a sum of money averaging ten percent (10%) of the net profit of Cocobod annually. Inability of Cocobod to implement this section of the Cocobod act shows there is lack of clear criteria in determining the

acclaimed reasonable bonus paid to cocoa farmers at the end of each fiscal year as per the cocoa law.

#### **2.4.8 Pest and Diseases**

Cocoa plantations are vulnerable to many kinds of diseases, this is said to destroy cocoa farms from 30-40% of the world cocoa production every year (Basso et. al., 2012). Pests and diseases pose the greatest challenges in cocoa production in Ghana. Nonetheless, farmers may find it high cost it less expensive to increase their farm size against replanting aged cocoa tress and unhealthy plants, since it takes lengthy time to maintain old cocoa trees (Kolavalli and Vigneri, 2011). Scientific study carried out by CRIG a subsidiary of Cocobod during the 2011/12 crop year concluded the following. Under the cocoa fungal diseases management studies, a black pod survey showed that *Phytophthora palmivora* was common disease affecting cocoa farms. Disease free or resistant cocoa seedlings trees are now produce by CSSV for improvement on cocoa plantation for greater yield. This is expected to increase Ghana's overall output significantly.

#### **2.4.9 Bad Weather Conditions – Global Worming**

World cocoa production as reported by the International Cocoa Organization (ICCO) was estimated to have declined by 8% from the 4.30 million metric tonnes in 2010 to 2011 to 3.96 million metric tonnes in 2011 to 2012. The decline in global production could be attributed to the erratic rainfall and severe hamattan related weather conditions which prevailed mostly over the period. Similarly, bad weather conditions prevailed across the West Africa sub-region which affected output expectations from the sub-region. Nonetheless, Côte d'Ivoire and Ghana, maintained their positions as world major producers of world cocoa by contributing about 60% of the global production.

Source: Ghana Cocobod 2012 year report.

## 2.5 The Excessive Power of Cocobod

The excessive power exercised by Cocobod remains a high negative threat with high severity of impact on the LBCs and other stakeholders directly involved in the entire cocoa purchasing process under the sectors partial liberalization Section 4 of Ghana Cocoa Law 1984 clearly states only authorized persons or organizations are to purchase Ghana's cocoa. No individuals shall purchase cocoa apart from its subsidiary buying company or organization authorized in writing by the Board to purchase cocoa for sale to the Board. The exclusive control exercise by Cocobod confirm the protests most LBCs makes against the board in the sense that their exclusive control affect their profit efficiency levels and overall operational effectiveness. This is because LBCs profit in the cocoa purchasing process is solely based on total quantity of cocoa they purchase within the crop season. Ghana cocoa sector is partially liberalized and is continue controlled by Cocobod It was expected that the partial liberalization of the cocoa sector will help increase cocoa prices significantly through competition. Contrary to the purpose of trade liberalization Cocobod fixes price floor for LBCs to purchase cocoa from farmer LBC only exist as price takers under the partial liberalization of Ghana cocoa sector with no influences on price. LBCs only increases their market share of profit by initiating buying strategies to increase total quantity of annual cocoa purchase since their profit is dependent on total cocoa purchase. Most LBCs are of the view that cocoa purchasing guidelines and regulations as enforced by Cocobod and its subsidiary such as Quality Control Company and Cocoa Marketing Company are hard-pressed on them with little or no consultation. For instance Cocobod defines the annual total tonnes of cocoa beans should be purchased LBCs in order to maintain its license to participate in the internal purchasing of cocoa.

### **2.5.1 Inadequate Infrastructure (such as Warehouse Facilities)**

Inadequate storage facility own by Cocobod through Cocoa Marketing Companies and most LBCs have high probable of occurrence and high critical negative impact on Cocobod. This is the evident of the serious congestion in most cocoa takes over centres over the years. The congestion brings about delays at designated Cocoa Takeover Centres. Inadequate infrastructure especially storage warehouse space for cocoa delivery to the ports is a major challenge facing the Ghana's cocoa sector. Notably are the congestions at the ports increase between October to December each year which is cocoa peak season leading to large quantities of cocoa being locked up in stocks upcountry with no fault of LBCs. It is reported that sometimes trucks load with cocoa beans wait very long time before unloaded. The storage facilities at the various ports have not seen any significant growth with respect to expansion. About 60% of Ghana's cocoa is delivered to Takoradi port and this is where there is purported extortion and other malpractices are at its peak against Cocobod and its subsidiary staffs and officers. Congestion at the ports is usually at its peak from October to December each year. According to Adu-Gyamerah., Daily Graphic (November 8, 2007), the multiple effects is that most LBCs rent trucks for evacuation of cocoa to those receiving centres. Hence each day their load delay increases the cost of transportation cost as a result of congestion at the port. Cocobod has insufficient warehouses and has only 400,000 Metric Tonnes warehousing capacity at Tema port, is inadequate to accommodate high volume of cocoa receive for stocking. The issue of delay at the port is compounded due to lacks of adequate storage space at the shipping port. In addition most external shipping companies and agents fail to honour their cocoa contracted shipment date. Transportation service are mostly provided by individual transport companies and they are contracted to deliver purchased cocoa

beans from the districts to three “take over centres” namely Tema port, Takoradi port and the Kumasi inland port at Kaase by these LBCs. Hauliers companies receive profit based on daily stable price regulate by a Producer Price Review Committee (PPRC) in relation to day. The effect of inadequate warehousing facility has a high impact on the Cocobod the board spend huge sum of money in renting private warehouses. This challenge can be mitigated through prudent administration structures to invest in modern warehousing facility to eliminate the high level of congestion at the various cocoa take-over centres.

### **2.5.2 Poor Road Networks Linking Cocoa Growing Areas to CTOC**

Poor road networks linking cocoa growing areas have higher severity effect on the entire cocoa purchasing process supply chain through road transportation. Most road networks in Ghana linking most cocoa growing areas are very remote and deplorable making it difficult for cocoa farmers to transport their fermented cocoa from farm to their drying points or home as in the case in Ghana. The reason has been that most cocoa are grown by many small-farm hold farmer. The challenge continues as how to get their dry beans to cocoa sheds or weighing centres in their communities. Similar license buying companies also face the challenges of evacuating purchase cocoa from various local communities to District warehouses due to poor road network. The challenges continue right from the primary to the secondary evacuation supply chain process until cocoa reaches the Cocoa Take-over centres. The effect of poor road networks can be mitigate through investments in road construction across all the villages, communities and districts where cocoa is massively grown to link up with major regional roads networks by Cocobod and the Ghana Urban Roads Department through the ministry of transport to partner and developed rural roads. This will ensure an efficient transportation of cocoa to the various take over centres without any accident. This challenge can be controlled

through prudent administration structures to invest in rural roads to eliminate the high level of congestion at the various cocoa take-over centres.

### **2.5.3 Human Resources/Labour force-Attitude**

There exist high negative effects on our operations exhibit by Cocobod (CMC and QCC) as a result of unprofessional attitude. The constraints of fixed quantity of cocoa to be graded and sealed per day by the QCC officials at the district level result in an increasing stockpile of unsealed cocoa leading to extortion of money from LBCs. The inspection and sealing of cocoa is free has been not to be so as some QCC officials are reported charging money from LBCs. Restrictions to number of trucks allow at the port for offloading also negatively affect LBC influenced by the port official and CMC staffs. Report by some interviewed LBC representative's alleged extortion of large sums of money by Quality Control Officer and other port clerks and officials under the explanation of short weight, small beans fast document processing right from sourcing of cocoa at the community level, district level and at various Cocoa take over centres is evident increasing etc. Delays in the processing of documents at the ports before and after delivering is very high since such practices demotivate and create unbearable financial costs to LBCs. On documentation processes Cocobod activities are not fully automated as result of large human interface against investments in Information Communication technologies and innovative supply chain technologies. Documentation of invoice and issuing of receipts depend on handwritten and an officer may take between 5 to 10 days just to append his signature to a document. COCOBOD determines the producer price of cocoa, margins or commission to be paid to LBCs as well as how much to pay to transporters. These three elements form the invoice value sent to COCOBOD by LBCs.

According to an officer of LBC engaged in interviewing concerning the challenge of documentation, he attested that the LBCs have been advocating for a system where payments could be effected over a shorter possible time, thus the producer price and the buyers' margin for cocoa delivered to the ports. The, LBC representative: said it is not out of place because it is possible to determine cocoa taken over by CMC from each LBC on daily basis at each port through appropriate investments in Technology and supply chain software's. Mostly during the cocoa peach seasons LBCs wait for between 5 and 60 days to be given Cocoa Taken over Receipts (CTOR) and their original official papers before LBCs can also prepare bills on cocoa supplied to COCOBOD before payment. Source: Adu-Gyamerah., Daily Graphic (November 8, 2007) The researcher is of the view that Cocobod should learn from the good example of Banks networking all their branches across the nation where they operates and globally without any restriction or whatsoever should be emulate to improve its administrative and operation efficiency and effectiveness. For these reasons Cocobod should invest in appropriate technologies and software's to link-up with its all offices and subsidiary companies as well as LBCs for efficient documentation systems, for easy communication and information sharing to facilitates efficient supply chain management process in the Ghana's cocoa sector. These inefficiencies in human resource at Cocobod and its subsidiaries through unnecessary delays in documentations, extortion of high sum and other related issues from LBCs are very serious problem and needed to be address accordingly. Cocobod should invest in modern supply chain technology and increase its quality workforce to improve efficiencies and effectiveness in supply chain management process in the Ghana's cocoa sector.

## **2.5.4 The Reforms and Structures of Ghana's Cocoa Sector**

### **2.5.4.1 Background**

The arrangement of Ghana's cocoa sector prior to the cocoa sector reform was characterised by comprehensive control market structure. The market was controlled by government through Cocoa Marketing Board as the sole authorised national buyer and exporter of cocoa beans. The Cocobod carried out its mandates through its subsidiaries and the LBCs. For instance Quality Control Company (QCC) as Cocobod subsidiary is responsible for controlling the cocoa quality (Laven, 2005). QCC carried out check sampling activities to certify the purity of every consignment of sealed cocoa delivered by the LBCs to CMC at the Take-Over Centers. Additionally, QCD re-check samples prior to delivery to both local and internationally.

The first stage of Ghana's cocoa sector reform begun in 1984. The restructuring of the sector focused on retrenching of Cocoa Marketing Board (CMB) staff from around 100,000 employees to 6,000. The operational and institutional changes of the CMB led to its name changed to Ghana Cocoa Board (COCOBOD). Throughout the early phase efforts were made to increase cocoa production outputs which were supported by providing farmers with seedlings to substitute old trees (Van Duursen and Norde, 2003).

The second phase, which was instigated in 1993, entailed the re-introduction of the several buying companies which mean that individual LBCs are allowed to be involved in internal together with the PBC in the (Varangis and Schreiber, 2001).

### **2.5.4.2 Ghana Cocoa Board (COCOBOD)**

Ghana's cocoa supply chain is well-known described by its exceptional selling procedure different from major cocoa producing countries. It incorporates features of liberalization with an efficient government control and regulation. The Ghana Cocobod

is the main regulatory body of the Ghana's cocoa sector and does so through its (CMC and QCC). COCOBOD's post production policies are implemented through the following specialized divisions. Ghana Cocobod (2010).

#### **2.5.4.3 Cocoa Marketing Company (Ghana) Limited (CMC):**

CMC is exclusively subsidiary of COCOBOD with the sole obligation of selling and exporting of Ghana's cocoa beans to both internally and externally. Its main tasks comprises: purchasing of categorized and sealed cocoa beans from the LBCs; 2) keeping of cocoa before to supply; 3) safeguarding best prices and take full advantage of foreign exchange revenue; 4) handling sales and revenues; and 5) resolving differences among actors in the purchasing process through negotiation. CMC continued to market and ship cocoa on sales contract to local and overseas buyers from Takoradi and Tema ports cocoa Ghana Cocobod, (2010).

#### **2.5.4.4 Quality Control Company (QCC)**

The Quality Control Company's core functions include the following; grading, sealing and disinfestation of cocoa purchase through COCOBOD throughout each cocoa season. QCC carried out quality assurance of Ghana's cocoa produce through selection activities to confirm the quantity of purchased cocoa supplied by the LBCs to CMC at the Taken -Over Centers. The Company also inspected and certified the storage spaces of Cocoa CMC, and Licensed Buying Companies warehouses across the country in accordance with Cocoa Industry Regulations 1968/LI 598. The company, as part of its responsibilities, also helps educating cocoa farmers on the best known farming practices which at improving the finest quality of Ghana's cocoa.

#### **2.5.4.5 Licensed Buying Companies (LBCs)**

The LBCs are companies granted permit to be involved in the internal marketing of

Ghana's cocoa beans bases on the assessment and certification criteria specified by Quality Control Division of Cocobod. LBCs are group of companies, approved by Ghana Cocobod to be involved in the internal purchasing of Ghana direct from cocoa farmer to be sold to Cocoa marketing company. Farmers sell their thoroughly dried cocoa beans to Licensed Buying Companies (LBCs). LBCs are controlled by COCOBOD, and are in charge for purchasing cocoa beans from farmers at a definite price (i.e., the 'producer price') and for conveying them to various cocoa takeover centres. They share a firm obligation in supplying only cocoa that meets COCOBOD's strict quality standards. LBCs are mandatory to grade the beans for similar size, colour and quality. Once the bag is sealed, the cocoa remains in the custody of the LBCs warehouse until they are evacuated to CMC Taken OverCentres. LBCs' profits are based on tonnes of cocoa purchase. Since LBCs face a floor price for farmers and a fixed sale price from COCOBOD, they effectively receive a set amount of revenue per quantity of cocoa delivered. At the opening of each cocoa buying season, Cocobod pre-finance LBC financially exclusively for purchasing cocoa. The number of registered LBCs has been steadily growing since internal marketing was opened up to competition since 1990. Currently, there are about 28 LBCs actively in operation. Cocobod has consistently been raising syndicated loans through local and international financiers for annual cocoa purchases. In 2014 and 2015 crop season the Ghana Cocoa Board (Cocobod) raise US\$ 2 billion from a pre-export syndicated facility to enable it purchase about 900,000 metric tonnes of cocoa beans in the 2016 and 17 cocoa seasons. The approved syndicated facility only attracts an interest rate of 1.19% repayable at the end crop season. The loan is to enable Cocobod pre-finance the purchase of cocoa beans from farmers through license buying companies (LBCs). Source: <http://www.thebftonline.com>. The government through Cocobod pre-finance the cocoa

purchasing activities of LBCs in the form of loans. Such loans are paid from the net total outputs of cocoa supply to Cocobod through its subsidiary company CMC. COCOBOD has strict established guidelines and principles that govern the loan usage as well as sanctions to guide the conducts and operations of LBCs involves in Ghana's cocoa supply chain process. Cocobod allocates the funds to Licensed Buying Companies (LBCs) at prime rate averaging between  $\pm 1\%$  against the prevailing open market interest rate of 18.5%. In order to obtain a licence and operate as LBC, company must meet and observe criteria established by COCOBOD related to the company's registration certificates, its working plan and the monetary capability of the company.

Again, it is required that interested company must demonstrate high investments in warehousing facilities and logistic transport facilities as well as competent and qualified human resources. Company expressing interest in the cocoa purchasing contracts, should have the financial strength to purchase at least 2 000 metric tons of cocoa for initial year. LBCs satisfying COCOBOD's requirements are required to provide bank guarantees against default of internal purchasing terms and conditions Cocobod insure itself against any credit risk. COCOBOD's allocate funds to LBCs based on their previous performance and market share has also helped maintain the status quo sources: Cocobod Research. The qualified LBC must satisfy requirements detailed by the Quality Control Division before granted authorization licenses or, temporary licenses. This certification is subject to revocation by Managing Director of QCC, if the premises become unsuitable for the storage of cocoa for any other reason which seems to contradict with the Cocoa sector Regulations Act. The application to become a LBC is revised by the CSMC, comprising of representatives from Cocobod managements, and other stakeholder. The license granted to a LBC is upgraded annually centred on the effectiveness of the LBC in accordance with the target specify by the Cocobod. If the

LBC fails to meet quantity specified throughout each crop seasons for two consecutive times the company's license is revoked for lack of capacity as a result of non-performance. According to Laven (2007) the LBCs hire Purchasing Clerks (PCs) to purchase cocoa at hinterland communities and villages on commission at a specific price per bag of cocoa purchased. The LBCs transport the cocoa from the hinterland cocoa growing communities after quality checks certified by the QCC to designated take-over centres when cocoa are convey to the appropriate Cocoa Take-over Centres.

## **2.6 The Purpose of Ghana's Cocoa Sector Liberalization**

The aim of the liberalization transformation was to bring about competition in the internal marketing of cocoa and increase the supply chain. The reforms, aimed at ensuring efficiency of the cocoa sector. The internal market of Ghana cocoa sector has been partly liberalized, but it is strongly regulated by the government of Ghana. Fold, 2008, p 103. Cocobod as the regulator of the Ghana cocoa sector ensure that suitable sanctions are imposed on LBCs that violate the rules and regulations guiding the internal procuring of cocoa to maintain discipline within the cocoa sector.

### **2.6.1 Internal Marketing and Purchasing of Cocoa in Ghana**

Purchasing and marketing of cocoa in Ghana is strictly regulate and manage by Cocobod and its subsidiary companies and any other entity found marketing, selling and exporting cocoa in Ghana constitute a great offence punishable by law in accordance with Cocoa Board Law, 1984 (PNDCL 81). The section 2 of Ghana Cocoa Board Law, 1984 2 outline the board objectives as follows and it strictly reserves the marketing and purchasing of Ghana cocoa to the board.

### **2.6.2 External Marketing of Ghana Cocoa Beans.**

As it stands now no export licenses have been granted full permits to export cocoa although government have plan to allow license buying companies who have sound financial capability to apply. Interview with some staffs and management from COCOBOD indicates that there is no intention of the government to implement the reform. The reason advanced by the government for maintaining the controlling structure of the sector is to guarantee high quality Ghana's cocoa produce for the purpose of receiving a price premium on the world market. It is believed that difficult to monitor export activities through full liberalization of the cocoa sector, the government fears that quality will deteriorate and that Ghana will lose the premium quality of cocoa as globally recognized. Other reasons put forward by COCOBOD is that the LBCs are not ready or interested in exporting and that the government, and hence the country, now directly benefits from cocoa exports. Source: field Interview.

Marketing and selling of Ghana's Cocoa is solely controlled by Cocobod and it is illegal for any other entity to engage in any form of internal and external market without the legitimate approval or authorization by the Cocobod. As a result all internal and external marketing and sales of cocoa either locally or abroad are under the direct control of the Cocoa Marketing Company (CMC), subsidiary of the Cocobod. Source: Ghana Cocoa Board Act of 1984.

### **2.6.3 The Liberalization of Ghana's Cocoa Sector and - Competition in Cocoa Purchasing**

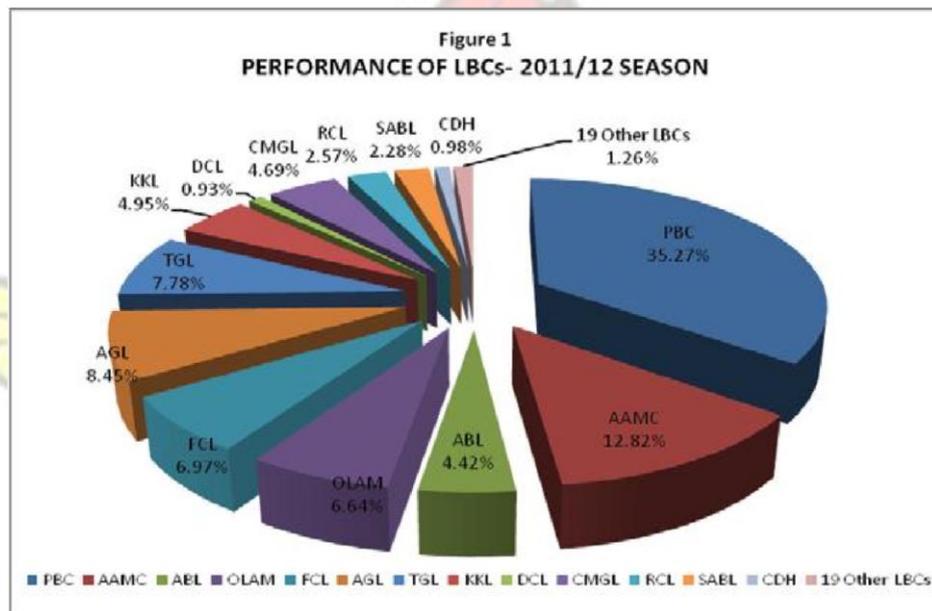
Many researches on cocoa sector recommend Ghana cocoa sector to have very strong structure. According to (Vigneri and Santos, 2007; Laven, 2007) Ghana continue to be the sole cocoa producing country without a fully liberalization. Ghana's cocoa sector is partially liberalized (Vigneri and Santos, 2007; Laven, 2007). The institution of LBCs was planned to increase efficiency of the cocoa sector. The deregulation of Ghana's

cocoa sector was expected to bring about competition among LBC (Vigneri and Santos, 2009). Zeitlin, (2005) contended that competition among licensed buying companies, is an essential element of improving efficiency in the Ghana's cocoa sector. Market competition in the cocoa sector was meant to increase effectiveness (Varangis and Schreiber, 2001). The partial liberalization of the Ghana cocoa sector enable firms to enter into the sector resulting in an increase competition and a loss of market share of the top buyers. The reform in the cocoa sector have resulted in increase in producer price of cocoa from 56% to 70% free on board price from 1998 to 2005. Similarly, researchers by Virangis and Schrieber 2001:75 disagree with the assertion that cocoa liberation has resulted in escalation in producer's price cocoa rather it has resulted in increasing participation and unfriendly competition. The introduction of liberalization of internal marketing has caused a reduction in annual output of cocoa purchase by some top LBC that hold a larger market share like PBC. In theory many researcher are of the view that in higher cocoa price result to increase output. Amoah (1998) also remarked that improved farming practices, and pest control can also lead to increase in output.

#### **2.6.4 Cocoa Purchase Performance among Licensed Buying Companies**

The internal purchasing of quality cocoa in Ghana is facilitated by Licensed Buying Companies (LBCs). The organization of Ghana's cocoa sector is involved by many players along the entire supply chain process. Ghana's cocoa sector is said to be concentrated meaning it comprises of several LBCs. Each cocoa season is marked with participation of many LBCs involves in the purchasing of cocoa. For instance during the 2011/2012 crop season thirty-two (32) out of thirty-five (35) registered LBCs purchased cocoa during the year COCOBOD (2013). The cumulative cocoa purchase for the 2011/12 crop year under review was 879,348 tonnes, as compared to 1,024,553 tonnes recorded in 2010/11. This quantity in tonnage represented 14.17% decrease in output

over the 2010/11 crop year purchases. The Produce Buying Company Limited (PBC) persistent to be the top purchaser of cocoa with total purchasing share of 35.27%. Akafo Adamfo and Armajaro Ghana Limited followed in second and third places with market shares of 12.82% and 8.45% correspondingly. The other 29 companies accounted for 43.46% of the market. The pie chart below detailed the percentage of each LBCs cocoa purchasing performance for the year ended 2011/2012 crop season. Source: Research Department, Ghana Cocoa Board (2012).



**Figure 2.4: Shown the Performance of the respective LBCs during 2011/2012 season**

Source: Research Monitoring & Evaluation Department., Ghana Cocoa Board (2012)

### 2.6.5 The Impact Analysis of Ghana's Cocoa Sector After liberalization

Liberalization of Ghana's internal cocoa sector took place in the 1980s as solution to achieve economic growth as adopted by other West Africa cocoa growing countries. Even though Cocobod has gone through extensive reforms over time, but it remains the

central regulatory body of Ghana's cocoa sector. Marketing of cocoa both locally and internationally as well as all fixing of annual cocoa price in Ghana is done by Cocobod. Cocobod continue to regulate the operations of all LBCs other stakeholders directly involved in Ghana's cocoa sector. The impact of the Ghana's cocoa sector after liberalization includes the following.

### **Increased Cocoa Production**

The Ghana cocoa sector liberalization seems to have profited cocoa farmers. Zeitlin (2006) observed a positive relationship between the existence of many licensed buying companies (LBCs) in a cocoa growing communities and cocoa farmers overall production outputs. Ghana's cocoa sector recovery and expansion initiatives began with the implementation of Economic Recovery Programs in early 1990s to 2008. These helped incorporated special programs to improve Ghana's cocoa sector through the Cocoa Rehabilitation Project. During the period some policies aimed at improving cocoa production were initiate which included: (1) increasing the cocoa purchasing prices paid to cocoa farmers relative to the price paid to their counterparts in some cocoa growing countries like Cote d'Ivoire. That initiative by Ghana government helped to reduce the challenges of cocoa smuggle, and (2) devaluation of the Ghana Cedi also helped to reduce the size of taxation on cocoa farmers. (3) Cocoa farmers were rewarded for replanting trees infected with Cocoa Swollen Shoot Virus (CSSV).

These policies encouraged significant improvements in Ghana's cocoa production output, with a greater number of farmers replanting their low yielding cocoa tress with higher yielding cocoa tree varieties developed by the Cocoa Research Institute of Ghana (CRIG). Annual cocoa production increased to 400,000 tons by 1995/6 as a result of improved productivity from 210 to 404 Kg/ha.

More so, Ghana's cocoa sector reform in 1992, which led to the renamed of CMB to Cocobod in 1984, helped improved cocoa outputs significantly. There after Ghana cocoa production growth became more evident from 2001 onwards, probably motivated by exceptional increased in world market cocoa prices and by an efficient administrative policies made by Cocobod to improve farming practices: through mass cocoa spraying programs, high tech subsidy packages and regular applications of fertilizer by cocoa farmers supplied to them by Cocobod (Vigneri and Santos, 2008), and an increasing share of the international prices passed on to producers. It is undisputable that, Ghana's cocoa sector liberalization has not only led to an increase in many LBCs to compete among them without control over cocoa purchasing price. But have contributed in Ghana premium quality cocoa produced, increase cocoa productions and guarantees stable cocoa price independent of falling world market cocoa price instability. This has therefore led to in an intense rivalry among LBCs to increased market share in cocoa purchases. The ability to purchase more cocoa beans from cocoa farmers by LBCs determines their profitability level by these license buying companies. A study conducted by Lundstedt and Pärssinen (2009) concluded that liberalizations have positive relationship among variables such as: production output, producer prices, and incomes levels, without compromising on quality. A comparison with other cocoa producing nations that practices comprehensive liberalization reforms like Cote d'Ivoire, the overall performance of Ghana's cocoa sector is sluggish comparatively insignificant and believed that the researcher also supports that full liberalization of the Ghana's cocoa sector will help increase price per each kilogram of cocoa through competition. This is believed to serves as an incentive to encourage more people into cocoa farming hence increase the total production of cocoa. supplied to the global market.

### **Improved Quality of Cocoa Beans:**

The Quality of Ghana's cocoa bean is as a result of proper fermentation of fresh beans after harvesting of matured cocoa pods which tends to improve cocoa bean quality significantly. The fermentation of fresh cocoa beans last for about three days, before drying them in the sun for about one week. Drying cocoa beans naturally in the open sunshine improves the quality of the dried beans while decreasing the acidity content in the beans. Quality is essential since it controls prices and status of cocoa. The quality standard of Ghana's premium cocoa is as a result of COCOBOD's regulating the sector which encourages the use of acceptable farming practices and bean drying procedures. This is coupled with Total Quality Management (TQM) system in quality assurance of Ghana's cocoa along the entire supply chain process.

### **Improved Producer's Price:**

One main objective of Ghana's cocoa sectors liberalized was to improved prices. Liberalization of internal purchasing of cocoa in Ghana has opened the door for more firms (LBCs) to enter the cocoa sector causing an increasing competition among LBCs without control over price as Cocobod fixed price for purchasing cocoa each year. According to Anang (2011) there has been a reduction in the market share of major LBCs in the Ghana's cocoa after privatization. Benjamin Tetteh Anang., (2011). The reforms of the Ghanaian cocoa sector have caused a surge of the producer price, but continuing macroeconomic difficulties affect cocoa price negatively. Nevertheless, prices of cocoa have been fairly constant as a result of the establishing of the *Stabilization Fund* which takes care of paying cocoa farmers an appreciable constant price even when world cocoa price fluctuate downwards. Ghana obtains higher prices for its extraordinary quality cocoa through quality price it benefits.

### **2.6.6 Theory of Internal Control**

A system of active internal control is an important element in an organization's management and form basis for its operation efficiency and effectiveness. A system of strong internal control supports in achieving the objectives of an organization. Such a system make sure that the entities will observe rules and guidelines as well as procedures, to reduce risk with high severity impact on the organization's operations.

The Public Procurement Act, 2003 (Act 663) as amended Act 914 (2016) by the parliament of Ghana offers satisfactory control over all public institutions and agencies procurement activities The legal framework that governs the activities of Ghana's cocoa sector is the Ghana Cocoa Board Act of 1984 as amended Act 914

(2016), Also the auditing of the sector's accounts and procurement activities is embedded in Ghana's Constitution Article 187 to 189; Audit Services Act, 2000 (Act 584); and any other Act consistent with the provisions of the Ghana's constitution.

### **2.6.7 Conceptual Framework**

A conceptual framework is a brief explanation of a subject under study supplemented by a graphical representation of the major variables under study. The interconnection of these blocks completes the framework for certain expected outcomes under any given study. A variable is a quantifiable characteristic that assumes different values among subjects. Independent Variables are changes that occur in an experiment that are directly caused by the experimenter. An independent variable is that variable which is presumed to affect or determine a dependent variable. It can be changed as required, and its values do not represent a problem requiring explanation in an analysis, but are taken simply as given (Dodge, 2003). The independent variables in this research are as follows: Cocoa price volatility and exchange rate volatility, high interest rate, inadequate government

supports, lower buyers' profit margin, lack of adequate inadequate logistics infrastructures and warehouse facilities, poor transportation, congestion. A dependent variable is a variable that dependent on other variable. A dependent variable is what is measured in the experiment and what is affected during the experiment. The dependent variable responds to the independent variable. It is called dependent because it depends on the independent variable. Procurement (purchasing) is the dependent variable in this study as a function of independent variables as indicated above.

### **2.6.8 Summary and Research Gap**

Most of earlier studies have continually looked at the impact of the Ghana's cocoa sector to national development without or little interest in investigating the challenges confronting the cocoa sector procurement procedures and compliance .Hence, literatures focusing on these study area measuring procurement performance are limited.



## CHAPTER THREE

### METHODOLOGY

#### 3.1 Introduction

This chapter centres on the method used in obtaining important data for achieving the study objectives: investigating the challenges of cocoa purchasing process in Ghana. It comprises the study area, research design, population and sample size, sampling method, sources of data and instruments, data analysis and presentation of the study. Method refers to all experiments and other procedures that aid data generation, collection, recording and analysis. Such method and procedures were used extensively to help bring out the true outcome of this research. The research methodology chose enabled the researcher obtained data, present and analysis the result in order to make informed recommendations towards the study area.

#### 3.2 Background of the Study Area

The study area focuses on Ghana's cocoa sector by "investigating the challenges of cocoa purchasing process in Ghana."

#### 3.3 Research Design

Descriptive method was used in study which is a technique of gathering information through administering of questionnaire to a sample of individuals. This was because the study mainly relies on primary data research approach; thus qualitative research. Primary data constitutes the original evidence that was obtained for the purpose of research study. Primary data was be gathered through questionnaire method in the form of semi-structured questionnaire (open and closed ended questions), and four likert scale. This study used descriptive design since it offers a chance for a given aspect of the research question to be studied detailed with least resources spending, effort and, time.

It is a practical method of study whereby data are collected and analyzed in order to define the existing situations, or relationships concerning a question (Kothari, 2005). Kombo and Tromp (2006) stressed that descriptive investigation is a process of gathering evidence through interviewing or administering of a questionnaire to a sampled individuals. The aim of this study is to investigate the challenges of cocoa purchasing process in Ghana.

### **3.4 Population**

Considering the varied nature of the study area (Ghana cocoa sector) the population forming the entire study area limited its scope on managements and staffs of:

Cocobod (CMC and QCC), and LBCs in Ghana's cocoa sector. For the purpose of this study a purposive sampling method was used in selecting the study variables. The study population consists of major entities directly involved in Ghana's cocoa sector and consist of: managements and staffs from: COCOBOD (CMC, QCC) and licensed buying companies (LBCs). The main aim of the study focuses on investigating the challenges of Ghana's cocoa purchasing process.

### **3.5 Sample Size**

The sample size for the study was purposively selected consisting of individuals who are directly involved in Ghana's cocoa sector cocoa.

However, the study used a simple random sampling method in the selection of the study variables which is made up of major entities directly involved in Ghana's cocoa sector. These entities are entail: managements and staffs of: COCOBOD (CMC, QCC) and licensed buying companies (LBCs).

In all 100 respondents comprising managements and staffs were randomly selected for the purpose of the study as a result of heterogeneous nature of Ghana's cocoa sector. The sample size consist of 50 managements and staffs from Cocobod (CMC and QCC) and 50 managements and staffs selected from various LBCs. Table 3.1 shows the categories of the respondents included some selected managements and staffs from: COCOBOD (CMC, QCC) and licensed buying companies (LBCs).

**Table 3.1: Sample Size Selection and Category of Respondents**

<i>Category of Respondents</i>	<i>Sample Size</i>
License Buying Companies Managements and Staffs)	50
COCOBOD (CMC and QCC) Managements and Staffs <b>Total</b>	50
	<b>100</b>

### **3.6 Sampling Procedure**

Descriptive research design was used in this study which is a method of gathering information by administering a questionnaire to sampled individuals thoughts on the identified perceived challenges. This study used self-administered questionnaires method. A questionnaire is a study instrument that collects data over a large sample

A questionnaire is a study tool comprising a series of questions and others prompts for the purpose of collecting information from respondents. This research work considered questionnaires method in gathering data which have benefits over other types of research tools. They are moderately cheaper, and often have uniform answers that make it simple to gather data. According to Saunders et al. (2007), sampling procedures provide a range of methods that enable a researcher to reduce the amount of data needed to be collected by considering only data from a subgroup rather than all elements. In this study qualitative technique was used. The data obtained from the research instruments was

analysed using descriptive statistics such as frequencies, percentages, the mean, and standard deviation.

### **3.7 Source of Data and Instrument:**

The researcher used questionnaires as the main primary data source. Primary data was used to represent the actual information that was obtained for the purpose of the study through questionnaire. Primary data was collected from 100 respondent randomly selected from the entire population consisting of staffs and management of LBCs, and Cocobod (QCC and CMC). Primary data was gathered through the use of questionnaire method in the form of semi-structured questionnaire (open and closed ended questions).

### **3.8 Data Analysis**

The Statistical Package for Social Sciences (SPSS) version 20 computer software was used specifically for the purpose of analysing the qualitative data and presenting them based on their average mean scores, and average standard deviations scores obtained. A qualitative data was employed to analyse data gathered using open-ended questionnaires. Data analysis process was entailed in the following steps; gathering of questionnaires issued to all respondents forming the sample size, checking questionnaires for completeness, coding the data, designing data collection templates such as tables, entering the numerical data in the templates, calculating response percentages, mean, standard deviation and variance, checking data for errors, presenting data on pie charts, bar graphs and tables.

### **3.9 Questionnaires Development**

Mode of data collection in this study was largely based on primary data source. As a result semi-structured questionnaire (open and closed ended questions) and a four likert

scale rating were used and administered to respondents to gather insightful information that addressed the research question. The questionnaire design was structured in conformity with the research questions taking into consideration all ethical conditions.

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## CHAPTER FOUR

### RESULTS AND DISCUSSIONS

#### 4.1 Introduction

This chapter presents analysis relative to the research objectives and research questions. Firstly, the major area this chapter discusses include respondents' demographic data followed by data identification of the perceived challenges that affects cocoa purchasing process, and evaluating its impacts on Licensed Buying companies and Cocobod operations. All respondents' responses were coded and entered into SPSS (Statistical Package for Social Sciences).version 20 computer software. The software aided in the presentation of the primary data in the form of average mean scores, and average standard deviations scores to best describe the responses obtained from the respondents within the study area. In all one hundred questions were distributed to the study respondents out of which 88 were received.

#### 4.2 Demographic Data

The demographic data considered in this study includes respondents' educational background, qualification and working experience. The respondents' responses are as follows.

##### 4.2.1 Respondents' Educational Qualifications

From table 4.1 it is evident that a total of 30 respondents representing 68.2% of the managements of LBCs have first degree as their qualification serving in various capacities as officers, clerks. Similarly 4 respondents representing 9.1% of the respondents' interviewed hold post graduate qualifications, while about 23% of the respondents interviewed hold academic qualification in Higher National (HND) and

Diploma in various fields of study. The study also discovered that about 13 respondents have 1 to 5 years working experience representing 30% of staffs and management of LBCs. In the same way about 70% representing 41 respondents made up of staffs and managements of LBCs have working experience from 5 years and 11 years above. The study finding revealed that majority of managements and staffs from both LBCs and Cocobod have significant educational backgrounds and long term working expertise. This knowledge and experience can be translated into good policies to ensure operational efficiency of the Ghana cocoa sector.

Table 4.2 represents educational background and working experience of the respondent from Cocobod (staffs and management's). The study revealed that about 64% representing 28 respondents of the staff and managements hold various qualifications in first degree. In addition, about 30% of the respondent interviewed holds qualification in Higher National Diploma and Diploma constitute 13 respondents out of the 44 respondents interviewed from COCOBOD. The study also observed that about 7% of Cocobod staffs and managements hold postgraduate qualifications.

Again, about 61.4% representing 16 respondents of Cocobod staff and managements have significant working experience between 5 years to 10 year. Similarly about 36.4% representing 15 respondents have working experience above 7 years. The long years of working experience indicates that respondents have a sustainable employment by both LBCs and Cocobod within the cocoa sector respectively. The high level of educational background among staffs and management of both Cocobod and LBCs have positive effects on their operations and effectiveness. Hence it can be therefore be concludes that both management of LBC and Cocobod employs highly educated resource personnel's serving in various capacity as management and staffs in a sector which is highly

competitive. This can be translated into building efficient and sustainable cocoa sector. The reliability of the study is also based on the findings in relation to the personnel's who responded to the research questionnaires and interviews aimed at gathering information in answering the research questions.

**Table 4.1: Shows LBCs Respondents Educational Background and Working Experience**

*Number of observations=44*

	<i>Frequency</i>	<i>Percent (%)</i>
<b><i>Educational Background</i></b>		
Postgraduate	4	9.1
First Degree	30	68.2
HND/Diploma	10	22.7
<b><i>Working Experience (Years) 1-5</i></b>		
Years	13	29.5
5-10 Years	16	36.4
11 Years Above	15	34.1
<b>Total</b>		<b>100.00</b>

Source: Field Survey, 2016

**Table 4.2: Shows COCOBOD Respondents Educational Background and Working Experience**

*Number of observations=44*

	<i>Frequency</i>	<i>Percent (%)</i>
<b><i>Educational Background</i></b>		
Postgraduate	3	6.8
First Degree	28	63.6
HND/Diploma	13	29.5
<b><i>Working Experience (Years)</i></b>		
1-5 Years	13	2.3
6-10 Years	16	61.4
11 Years Above	15	36.4
<b>Total</b>	<b>44</b>	<b>100.0</b>

Source: Field Survey, 2016

#### **4.3 Licensed Buying Companies Managements and Staffs Views on Cocoa Purchasing Process and Ghana's Cocoa Sector Reforms**

**Table 4.3: Licensed buying companies views on cocoa purchasing and Ghana's cocoa sector reforms**

*Number of observations=44*

*Scale: Strongly Agree =1; Agree = 2; Neutral = 3; Disagree =4*

<u><i>Cocoa Purchasing and Reforms</i></u>	<u><i>Mean</i></u>	<u><i>Std. Deviation</i></u>
Annual total tons of cocoa purchased by LBCs	2.9773	.15076
How profitable is the cocoa business	1.6136	.75378
Direct marketing of cocoa by LBCs	1.3636	.48661
Will direct export of cocoa by LBCs make the cocoa sector more profitable	1.2045	.40803
Capacity of LBCs to export cocoa directly	1.7955	.40803
Full liberalization of cocoa sector	1.2727	.45051
Cocobod assistance to LBCs	1.6364	1.01365
LBCs responds to Cocobod assistance to them	1.0000	.00000
LBCs and farmer overall output impact on Cocobod	1.0000	.00000
Cocobod relationship with LBCs	1.0000	.00000
Is Cocobod satisfied with its role as the sector regulator	1.8636	.34714
In event of accident does LBCs Cocobod share risk	2.1591	.36999
Does LBCs delayed delivery of cocoa to CTOC	2.0000	1.25754
<b><i>Average Scores</i></b>	<b>2.01</b>	<b>0.43</b>

Key: (Std = Standard Deviation)

Source: (Authors' fieldwork, 2016)

Table 4.3 shows LBCs respondent's views on Ghana's cocoa sector reforms and the challenges of cocoa purchasing process. From table 4.3 above it is observed that almost all the respondents from LBCs strongly agreed to the research questions asked. This is based on the positive high average mean score of 2.01. with a corresponding average low standard deviation of 0.43 indicating strong agreement to the perceived challenges by LBCs managements This suggest that the outlined perceived challenges are significant variables and have tendency to affects LBCs operation and effectiveness. For instance all the respondents strongly agreed that, their overall outputs have greater significant impacts on COCOBOD's operations and

effectiveness. This is a clear evident exhibit by respondents in agreement to the perceived challenges as standard deviation registered a significantly low score value of 0.000 with relatively low mean score of 1.000. In general there exist low standard deviations values among all the perceived questions asked respondents. In relation to perceived challenge concerning the full liberalization of Ghana's cocoa sector the standard deviation registered a low score of 0.000 which indicate a high significant impact on Ghana cocoa sector reform. That is majority of the LBCs respondents were strongly in agreement to the full liberalization of the Ghana cocoa sector. Annual total cocoa purchasing for LBCs registered a mean score of 3.0 and a relatively low standard deviation score of 0.151 indicating a strong agreement to the annual purchasing target as set by Cocobod. Concerning the question of whether direct involvement of LBCs in the cocoa export will help make the cocoa sector more profitable? The outcome of the study revealed a very strong disagreement confirming the variable insignificant registering 0.41 value score standard deviation with relative mean score registering 1.20. Again it is observed that about 44 respondents from LBCs agree to the full liberalization of the Ghana cocoa sector. LBCs respondent strongly agree that full liberalization of the sector will increase competition and make the sector more profitable as they believed that about 90% of the profit on FOB would be equally enjoyed by them. Hence it is believed that cocoa famers will also enjoy high price for their produce as in the case of Cote d'Ivoire and many other countries practicing full liberalization of their cocoa sector. The study finding indicated that respondent's show high knowledge about the cocoa sector as respondents strongly in agreement to poor relationship that between Cocobod and LBCs as mean score to this effect registered 1.6 affirming a poor communication or supply chain integration among LBCs and Cocobod.

#### 4.4 Cocoa Purchasing Challenges Perceived by LBCs Managements and Staffs

**Table 4.4: Cocoa purchasing challenges perceived by Licensed Buying Companies' LBCs**

*Number of observations = 44*

*Scale: Strongly Agree =1; Agree = 2; Neutral = 3; Disagree =4*

<b>Challenges Perceived</b>	<b>Mean</b>	<b>Std. Deviation</b>
Cocoa price instability	1.4545	.72991
Lower buyer price margin	1.1591	.36999
Lack of adequate credit facility	1.1591	.36999
Large collateral Security requirement by Cocobod from LBCs	1.3182	.47116
Inadequate warehouses	1.0682	.25497
Lack of compliance by LBCs	1.3182	.47116
Smuggling of cocoa	1.1591	.36999
Poor road networks	1.2727	.45051
Congestion at various cocoa taken over centres or ports	1.2045	.40803
High operation cost	2.7500	1.31406
Inadequate quality control officer staffs and off loaders	1.5682	.50106
High interest rate	1.2727	.450511
High level of competition among LBCs	1.1818	.390154
Inadequate governments supports	1.7955	.50942
Low investment in ICT and innovative technologies by Cocobod	1.2727	.45051
Lack of communication or integration between Cocobod and LBCs	1.6136	.89484
Poorly organized farmers association sand high illiteracy rate	1.4773	.76215
Bad weather condition pest and diseases	2.2045	1.15294
Scale adjustments by LBCs purchasing clerks	1.2045	.40803
<b>Average Score</b>	<b>1.44</b>	<b>0.56</b>

Key: (Std = Standard Deviation)

Source: (Authors' fieldwork, 2016)

From table 3, it is evident that all the respondents from LBC strongly agree to the perceived challenges facing the cocoa purchasing process and the cocoa sector as whole.

The high average means score of 1.44 with a relatively low standard deviation score of

0.56 indicate that respondents from LBCs strongly agree to the questionnaires answering the research questions.

#### 4.5 The Effects of the Perceived Challenges on Licensed Buying Companies (LBCs)

**Table 4.5: The Effects of the Perceived Challenges on Licensed Buying Companies (LBCs)**

*Number of observations=44*

*Scale: Strongly Agree =1; Agree = 2; Neutral = 3; Disagree =4*

<i>Challenges Perceived</i>	<i>Mean</i>	<i>Std. Deviation</i>
Inability to meet set annual purchase target of cocoa by LBCs	1.1591	.36999
Falling Cocobod revenue	2.0909	.98402
High debt owed by Cocobod	1.1591	.36999
Difficulty in raising fund or credits by Cocobod	1.3409	.47949
Decrease in financial commitment like stabilization funds to LBCs	1.1818	.39015
Decrease in workforce in the cocoa sector	1.9318	1.16933
Low motivation to LBCs and cocoa farmers	1.2273	.42392
Delayed payments to LBCs	1.1364	.34714
High operational cost	1.1591	.36999
<b><i>Average Score</i></b>	<b><i>1.41</i></b>	<b><i>0.54</i></b>

Key: (Std = Standard Deviation)

Source: (Authors' fieldwork, 2016)

From the table 4.5 above LBCs face the following effects as a result of the major challenges agreed affecting their operations. The effect of the challenges has resulted in LBCs: inability to meet the annual cocoa target set to them by Cocobod, falling revenue, difficulty in raising funds from financial institutions, high operational cost, low motivation to LBCs, delayed payments of Seed funds interest to Cocobod and decrease workforce. The study result confirmed the outlined perceived challenges faced by LBCs through the high mean scores averaging 1.41 with relatively low standard deviation averaging 0.54 distributed among the entire variable under the study questionnaires.

This is very significant as respondents interview strongly agreed to the perceived challenges having a high negative effect on their operations.

#### 4.6 Cocobod Managements Views on Cocoa Purchasing and Ghana’s Cocoa Sector Reforms

**Table 4.6: Cocobod management’s views on cocoa purchasing and Ghana’s cocoa sector reforms**

*Number of observations=44*

*Scale: Strongly Agree =1; Agree = 2; Neutral = 3; Disagree =4*

<i>Cocoa Purchasing and Reforms</i>	<i>Mean</i>	<i>Std. Deviation</i>
Minimum tons of cocoa to be purchased by LBCs annually	1.000	.0000
How profitable is the cocoa purchasing business	1.4091	.69276
Should LBCs be allowed in the Direct marketing of cocoa	1.1364	.34714
Will LBCs direct export make the cocoa sector more profitable	1.79545	.408032
Capacity of LBCs	1.97727	.456918
Should the cocoa sector be Fully liberalized	1.7500	.43802
Importance of Cocobod assistance to LBCs	1.0000	.00000
LBCs responses to Cocobod assistance	1.0000	.00000
LBCs overall output impact on Cocobod	1.0000	.00000
Cocobod relationship with LBCs and cocoa farmers	1.0000	.00000
Is Cocobod satisfied with its role as the sector regulator	1.7500	.43802
Does LBCs and Cocobod share risk in event of accident	1.1591	.36999
Does LBCs delayed delivery of cocoa to CTOCs <i>Average</i>	1.4318	.89955
<b>Scores</b>	<b>1.34</b>	<b>0.32</b>

Key: (Std = Standard Deviation)

Source: (Authors’ fieldwork, 2016)

From table 4.6 the low averages standard deviation score of 0.32 and a relatively high average mean score of 1.34 clearly indicate that LBCs perceived all the outlined challenges facing Ghana’s cocoa sector. It is observed from table 4.6 that, minimum tons of cocoa to be purchase by Cocobod is significant to the requirement of Cocobod assistance provide to LBCs, and Cocobod relationship with LBCs have a strong

relationship with COCOBOD's effectiveness and efficiency. This is proven by higher average mean score of 1.34 comparatively low standard deviation average score of 0.32 indicating a high significant knowledge about cocoa purchasing process and the various reforms within the cocoa sector. However, management and staffs of Cocobod strongly agree that LBCs do not have the capacity to be directly involved in the external marketing of Ghana cocoa produce abroad. This is as a result of high capital requirement involved in the export of cocoa and as such most LBCs largely depend on COCOBOD seed fund and credit from banks to finance their operations. The challenge of difficulty in assessing credit facility both local and external makes it difficult for LBCs to raise large sums of capital to finance direct marketing and export of Ghana's cocoa abroad. Base on the study results, management and staffs from Cocobod strongly disagreed with the full liberalization of Ghana's cocoa sector. The study results revealed strong agreement to these perceived challenges with reference to the lower standard deviation score average 0.32 and a higher mean score average 1.34 indicating a strong disagreement to the full liberalization of Ghana's cocoa sector. Cocobod management and staffs' view on the profitability of the cocoa purchasing business indicate a strong agreement of the cocoa purchasing business been profitable. The mean score in reference to how profitable is the cocoa purchasing business registered a high mean score of 2.1 with a relatively low standard deviation of 0.41 attesting to the validity of the perceived challenge. The result from the study affirms the profitability of the cocoa purchasing business as respondents as respondent agree, although LBCs are faced with numerous challenges.

#### **4.7 Cocoa Purchasing Challenges Perceived By Cocobod Staffs and Managements**

**Table 4.7: Cocoa purchasing challenges perceived by Cocobod staffs and managements**

*Number of observations = 44*

*Scale: Strongly Agree =1; Agree = 2; Neutral = 3; Disagree =4*

<i>Challenges Perceived</i>	<i>Mean</i>	<i>Std. Deviation</i>
Cocoa Price Instability	1.1591	.36999
Lower Buyer Profit Margin	1.9318	.78940
Lack of Adequate Credit Facility	1.1364	.34714
Large Collateral Security requirement by COCOBOD from LBCS	1.1364	.34714
Inadequate Warehouses Facilities	2.2727	1.42018
Smuggling of Cocoa across Ghana borders	1.1591	.36999
Poor Road Networks linking cocoa growing communities	1.2273	.42392
Congestion at various Cocoa Taken-Over Centres	1.1778	.38665
High Operational Cost	1.1333	.34378
Inadequate Quality Control Officers Staffs And Off loaders	2.0222	1.32268
High Interest Rate	1.1333	.34378
High Level of Competition among Licensed Buying Companies	1.1778	.44153
Inadequate Government Supports	1.1556	.36653
Low Investment in ICT and Innovative Technologies by Cocobod	1.1333	.34378
Poor Organized Farmers Associations and High Farmers Illiteracy	1.1136	.32104
Scale Adjustments by LBCs Purchasing Clerks	1.1333	.34378
Lack of Communication or Integration between Cocobod and LBCs	1.1556	.36653
Bad Weather Condition Pest and Diseases <i>Average</i>	2.2444	1.41671
<b>Scores</b>	<b>1.24</b>	<b>0.60</b>

Key: (Std = Standard Deviation)

Source: (Authors' fieldwork)

Table 4.7, show Ghana Cocobod managements and staffs responses to the perceived challenges facing Ghana's cocoa sector indicated a very strong agreement to the perceived challenges. For instance managements and staffs from COCOBOD strongly agree to the following as factor major challenges affecting their operations negatively: cocoa price instability, lower buyers profit margin, lack of adequate credit facility, smuggling of cocoa beans, low investments in ICT and innovative technology technologies, bad weather condition pest and diseases and among others were considered as main challenges affecting the cocoa purchasing and the cocoa sector as a whole. This is evident as average mean scores among most of the perceived challenges

registered a high average mean score of 1.24 with relatively low standard deviation averaging 0.60. This specifies respondent's strongly in agreement to the perceived challenges facing the cocoa sector.

However, the challenges of inadequate warehouse facilities, inadequate quality control officers, bad weather condition pest and diseases, lower profit margin and large collateral security requirement by Cocobod from LBCs prior to the award of supply contract registered the highest mean score among all the perceived challenges facing the cocoa purchasing business as affirmed by Cocobod management and staffs in this study. These major challenges perceived by Cocobod registered a high mean scores averaging 2.0 to 2.3 with relatively low mean averaging between 1.1 to 1.4 respectively distributed among most variables interview on in relation to the research objectives. The high standard deviation scores registered indicate COCOBOD's those perceived challenges thereby negatively affecting its operations and effectiveness n.

#### 4.8 The Effect of the Perceived Challenges on Cocobod Operations and Effectiveness

**Table 4.8: The effect of the perceived challenges on Cocobod operations and effectiveness**

*Number of observations = 44*

*Scale: Strongly Agree =1; Agree = 2; Neutral = 3; Disagree =4*

<i>Challenges Perceived</i>	<i>Mean</i>	<i>Std. Deviation</i>
Inability to meet annual total Cocoa purchase target	1.1333	.34378
Falling Revenue	1.1111	.31782
High debt owed by Cocobod	1.1333	.34378
Difficulty in raising Fund or Credits by Cocobod	1.0889	.28780
Decrease in Financial Commitment like Stabilization Funds To LBCs	1.0000	.00000
Decrease in Workforce in the Cocoa Sector	1.0000	.00000
Low Motivation to Licensed Buying Companies LBCs	1.0444	.29814
Delayed Payments to License Buying Companies LBCS	1.2222	.67044
High Operational Cost	1.2667	.44721
Difficulty in Assessing Loans and Credit Facility	1.1111	.31782

Breach of Security owed to Creditors	1.4222	.81153
Falling Quality Standard of Ghana's Cocoa Produce	2.7778	1.41243
<b>Average Score</b>	<b>1.30</b>	<b>0.04</b>

Key: (Std = Standard Deviation)

Source: (Authors' fieldwork, 2016)

With reference to table 4.8 it is evident that Cocobod experience many operational challenges as respondents were strongly in agreement to the perceived challenges confronting the cocoa purchasing process and the cocoa sector as a whole. Some of the major challenges affecting COCOBOD's operations and effectiveness as of the effects of the perceived challenges include the following: inability to meet its annual target of cocoa beans to be purchase from the farm-gate through LBCs, high operational cost, decrease in revenue to Cocobod means difficulty in paying workers force employ by Cocobod , increase debt, delay payments and decrease supports to LBCs in the form of pre-financing their purchasing activities as a result of difficulty in assessing local and external credit facility. The outcomes of the study indicate a very strong agreement to the perceived challenges by both managements and staffs of Cocobod with a corresponding negative impact on Cocobod's operations and effectiveness. This is evident by high average mean score in respect to the effects of the perceived challenges on COCOBOD's effectiveness registered a positive average mean score with a low standard deviation averaging 0.60 among all variables considered in the research questionnaires. The high mean scores among all the variables indicated strongly agreement by Cocobod staffs and managements meaning a high level of negative impact on COCOBOD's operations and effectiveness. As a result drastic measures should be established to mitigate the identified challenges. Respondents agree to perceived challenges having negative impacts on COCOBOD's operations and

efficiency. However, managements of Cocobod strongly disagree to a falling quality standard of Ghana cocoa produce notwithstanding the challenges faced in their operations. The high average mean score of 1.30 with relatively average standard deviation score of 0.04 represent COCOBOD's managements and staffs responses.

The study result indicates that, COCOBOD's respondents disagree to the falling quality standard of Ghana's cocoa produce. This shows that quality assurance for Ghana's cocoa produce remains a very important strategic marketing factor to Cocobod as it constitute its objective of producing premium high quality cocoa beans. Quality Control Division of Ghana Cocobod sole responsibilities remain: ensuring high quality standard of Ghana's cocoa beans for both internal and external marketing. As a result respondents strongly agree that, the quality of Ghana's cocoa produce is not exposed to quality deteriorating. The Quality Control Division of Ghana Cocobod closely monitor the operations of LBCs by grading and sealing purchase cocoa by LBCs highly subject to quality checks on quality of any cocoa beans received at the various cocoa taken over centers. Again, cocoa beans both for internal and external shipments are further subject to quality checks before export by Cocoa Marketing Company a subsidiary of Ghana Cocobod. The study result clearly indicates that decrease in financial commitment like Stabilization Funds pay to cocoa farmers through LBCs aim at controlling cocoa price instability, and decrease in workforce employment in the cocoa sector are highly significant to Cocobod operational effectiveness and the overall sustainability of Ghana's cocoa sector.

Checklist Identifying Potential Challenges at Various stages of Cocoa Purchasing Process in Ghana

**Table 4.9: Checklist Identifying Potential Challenges at Various Stage of Cocoa Purchasing Process in Ghana**

<i>Step</i>	<i>What has to be done (COCOBOD)</i>	<i>Who should do it: purpose/policy (COCOBOD)</i>	<i>Challenges Identified under each purchasing process</i>	<i>Effect on Cocobod: high/low</i>
1	Plan Purchase and acquisition	Cocobod should Plan annual Metric Tons of cocoa to be purchase base on Cocobod/ COSMARC budget	Under or overstatement of need,	<b>High:</b> COCOBOD failure to plan the season purchasing contract will affect annual purchasing target outcome badly
2	Sourcing	COCOBOD/COSMARC: should advertise expression of interest in News Papers for three time to solicits service providers to be involved in the internal marketing of Cocoa by solicit competent service providers with capacity and the needed financial capability	Method of selecting service providers must be based on the provision of the Public Procurement Act 2003, Act 633 as amended of Act 914 2016 restrictive competition.	<b>High:</b> COCOBOD failure to advertise and screen potential supply contractors will affect the outcome of entire procurement activity and the year supply contract outcome negatively.
3	Evaluation and Contract Award	Procurement committee approved by COSMARC should evaluate potential supplier's based on TOR or requirement specified in accordance with the provisions of the Act 2003, Act 633 as amended of Act 914 2016 in conformity with the Ghana Cocoa Board Law, 1984 (PNDC L. 81) by COSMARC. Thus supplier must meet requirement based on: financial capability, human resources expertise and logistics capability should be selected Formal contract	Failure to follow effective evaluation procedures, leads to awarding contract to inappropriate suppliers or ( <b>LBCs</b> ), Terms and conditions unacceptable to tenderers, Evaluate supply contract, identify risks with regard to probabilities, impact and urgency, evaluate and establishes if interested company is registered, have financial capability, have adequate experience human resource to be engage in the supply contract, adequate logistics	<b>High:</b> Lack of adequate; financial capability, inexperience human resources capacity and lack logistics investments is a major threats to Cocobod with high negative impact on cocoa supply contacts. As a result suppliers should be awarded contract base on their financial capability and other requirements to ensure a successful supply contract.

		should be signed between interested supplies and Cocobod or COSMARC. All supply	
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		contractors major materials or document should be checked to see if they comply with evaluation requirements as required	
4	Contract Management	COCOBOD and its subsidiary companies CMC and QCC should insist on compliance of all contractual obligations and highlight areas where LBCs fail to meet them to ensure terms and conditions specified under the contract terms are duly followed to ensure monthly performance proper supply contact management team should be active to check quality of cocoa delivery. Through monitoring and evaluation.	<p>Lack of details of agreement, between COCOBOD and supplier or contractors have high probable effect on COCOBOD operation efficiency thus failure in preparing Prepare a checklist to assess both reviews and audits of good received, failure to identify new risks and apply contingency plans to mitigate such challenges or risks</p> <p><b>High:</b> failure of QCC and CMC managements insisting on supply contract quality by insisting on contractual obligation with regard to specification may result to delay delivery of cocoa, increase cost overruns leading to poor supply contract management which has a financial loss Value for Money to the Board.</p>

5	Receipt and Inspection of Receiving and Storing goods	CMC and QCC: Should inspect cocoa supply received in accordance with the specification made in the contract terms. Both parties should accept if cocoa received comply with set out specification requirement, CMC and QCC should reject cocoa supply by LBCs if quality and specification do not comply. Proper Book Keeping of all Supplies received should be documented to facilitate easy reference.	Inspection of received cocoa against specifications set out in the contract document	High: for Quality checks may result in loss of premium benefit enjoy by Cocobod and consequently downgrading of Ghana cocoa produce
6	Payment	Cocobod and CMC: Contract payment terms uphold in every contract is either payment before delivery or completion of a contract.	LBCs' revenues are based on volumes of cocoa purchase within the cocoa season.	Failure to check LBCs delivery based on volumes of cocoa purchase leads to loss of revenue and funds misappropriation

**Source:** Adopted from Tasmanian Government Department of Public Works and Services Manual.



## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter comprises summary of the research findings, conclusions and recommendations and further areas of study. The overall objective of this study is to investigate the challenges of Cocoa purchasing process in Ghana. The specific objectives for this study aim at identifying; the challenges that affect cocoa purchasing process in Ghana, assessing the effects of the identified challenges on Cocobod effectiveness and proposing checklist for controlling the challenges faced at the various stages of cocoa procuring process

#### 5.2 Summary of the Study Findings

The findings from the study revealed that, most personnel engaged in the cocoa purchasing process have significant high level educational backgrounds. The result from the study indicated that 30 respondents from LBCs representing about 68.2% of the respondents have first degree serving in various capacities. It was also observed that 9.1% and about 23% of the respondents hold qualifications in postgraduate and HND or Diploma respectively. Giving working experience 34.1 % of respondents have worked over 11 years in various capacities within the cocoa sector Similarly about 36.4% of the respondents interviewed have between 6 years to 10 years working experience with LBCs. Cocobod representing 31 respondents from total respondents of 44.

However, 30 % of the respondents from Cocobod have qualification in Higher National Diploma or Diploma. More so, about 64% representing 28 respondents from Cocobod have first degree and about 7 % representing 3 respondents hold postgraduate

qualification serving in various capacities. Based on the study results it can be concluded that, there exists a sustainable working environment for respondents within the cocoa sector giving the respondent's long years of working in their respective entities. Base on the study finding both Cocobod and LBCs can improve the sectors productivity with their experience and proper administrative policies to ensure the sectors overall sustainability.

The study findings also indicate that, all the perceived challenges identified constitute major challenges by both Licensed Buying Companies and Cocobod negatively affecting their operational efficiency and effectiveness. Major challenges or variable found significantly affecting Licensed Buying Companies and COCOBOD includes: Cocoa price instability, Lower buyer profit margin, Lack of adequate credit facilities, Large collateral security requirement by Cocobod, Inadequate warehouse facilities, Smuggling of Cocoa beans outside Ghana , Poor road networks, Delay and Congestion at the various Ports (CTOCs), High operational cost, Inadequate personnel's (Quality Control Officers, clerks and other supportive staffs, High interest rates and inflation rate and instability of local currency, High level of competition among LBCs, Inadequate government support, Low investments in ICT and innovation technologies by Cocobod, Lack of communication or Supply chain integration between Cocobod and LBCs, Scale adjustment by cocoa purchasing clerks, delay payments to farmers, Bad weather conditions, Pest and diseases, Poorly organized farmers associations and high rate of illiteracy among Cocoa Farmers.

This finding is supported by an overall average respondents mean score of 1.41 with relatively standard deviation of 0.56 from respondents of LBC regarding challenges perceived facing the cocoa purchasing and the cocoa sector in general. Similarly, an overall average mean score of 1.34 was recorded with relatively standard deviation

registered 0.32 for Cocobod management and staffs responses. The highest mean score indicates that, managements of Cocobod strongly agree to the perceived challenges

The study objectives are achieved by high average mean score of 1.30 with relative standard deviation or probability of 0.04 from the respondents of COCOBOD strongly in agreement with the perceived challenges answering the research objectives.

The findings from the study also indicate that Cocobod failure in planning annual cocoa purchasing targets through proper procurement process affect its annual purchasing target. It was also purported that Cocobod failure to advertise its cocoa purchasing activities by COCOBOD and COSMARC with reference to the Public

Procurement Act (2003) Act 633 as amended Act 914 in 2016 to attract potential LBCs in its supply contracts have adverse effects on annual cocoa purchasing target by of Cocobod. The researcher proposes that all procurement activity should be adequately planned prior to each cocoa crop season. Proper sourcing of all cocoa supply contracts should be conducted in conformity with the Public Procurement Act (2003) Act 633 as amended Act 914 in 2016 by Cocobod procurement committee and COSMARC to help to obtain the best suppliers for the supply contract.

Similarly, failure to evaluate potential supplying contractor or companies expressing interest to participate in the purchasing of cocoa based on their capacity to be involved in the supply contract, financial capability, and human resources, and most importantly an adequate investments in warehouse and other logistics investments have a greater negative consequences on COCOBOD's operations and effectiveness

Failures to evaluate companies expressing interest in the cocoa purchasing supply contract constitute major risk with high probability of negative impacts on Cocobod operations and effectiveness. The researcher proposes expert management's skills to

exercise by Cocobod staffs to help ensure, proper contract management regarding cocoa supply contracts offered by Cocobod.

### **5.3 Conclusion**

The study concludes that cocoa price instability, high cost of operations, lack of adequate credit facility, high interest rate, inadequate government supports, poor road network, smuggling of cocoa, bad weather condition, congestions at various cocoa taken over centers, inadequate warehouse facility, low investments in ICT and enable technologies, misappropriation of Seed-Funds, and other challenges found having strong negative impact on the effectiveness and efficiency of both Cocobod and License Buying Companies operations and the overall sustainability of Ghana's cocoa sector.

The result from the study is based on the research question indicates that, respondents interviewed strongly agree with the perceived challenges and its negative impact on Cocobod. And Licensed Buying Companies operations and efficiency These identified challenges can be mitigated through proper administrative management policies by Cocobod: firstly by ensuring a substantial increase in cocoa price, smuggling of cocoa beans to neighbouring countries can be prevented by antismuggling initiatives and proper border control policies should be established to curb the challenge of cocoa smuggling across the borders of Ghana.

The study result base on the questionnaires showed strong agreements to the identified challenges and affirmed by respondents that those perceived challenges do have negative impacts on Cocobod and LBCs operation and effectiveness and the entire Ghana's cocoa sector. The study concludes that increase purchasing price of cocoa increased support for LBC and investments in ICT, warehouse and innovative,

technologies, training of more Quality Control Officers will go a better way to mitigate the major challenges perceived by Ghana's both Cocobod and LBC.

#### **5.4 Recommendation**

Based on the study findings, it is recommended that COCOBOD increase its support to Licensed Buying Companies by increasing the Stabilization Funds granted them to purchase cocoa at the beginning of the cocoa purchasing season.

It is also commended that government should offer competitive price for cocoa farmers to encourage more people into cocoa farming as well as ensuring prompt payments of annual bonus to both LBCs and farmers cocoa to serves an incentive to attract more active youth into cocoa farming. As a result of this initiative by government it is believed will discourage cocoa smuggling to neighbouring countries for competitive price by cocoa farmers and other interested parties.

Again it is recommended that government should also increase its support to LBCs to adequately secure credit facilities at a minimum rate from both public and private financial institution.

More importantly, it is recommended that Cocobod should increase its investment in warehouses facilities both at major cocoa growing districts and the Cocoa Taken Over Centers to facilitate smooth delivery of cocoa delivery without any congestion or delays. Addressing the infrastructure inefficiency in the cocoa sector value chain will improve Cocobod operations efficiency and effectiveness.

It is also recommended that, Cocobod should also make adequate investments in rural and urban road construction project to mitigate the challenge of cocoa left up country as a result of poor road network leading to those cocoa growing areas.

The researcher also recommends that Cocobod should also make adequate investments in Information Communication Technologies and other supply chain innovative technologies to modernize documentation, which is expected to alleviate the challenges of congestion at various CTOC and improve payments process of funds and bonuses due LBCs and other service providers to Cocobod.

More so, it is recommended that Cocobod should strengthen effective communication and strong supply chain integration between the Licensed Buying Companies and all other stakeholders to facilitate easy flow of information to the benefit of all participants involved in the entire cocoa sector supply.

The researcher also recommends that, procurement processes and procedures use by COCOBOD in contracting LBCs should be based on Public Procurement Act, Act 663 as amended in Act 914 of 2016 and not on the internal process of soliciting contractors in the procuring of supply contract to Cocobod. Right sourcing process and procedures should be engaged in by authorities responsible for all supply contracts for the purpose of achieving Value for Money. Under each stage of the contracting, purchasing entities require adequate preparations, planning of annual cocoa purchasing through sourcing, evaluation and contracting of potential suppliers, contract management, and storing which ends the purchasing process. The various challenges identified under the procurement process could be mitigated by implementing effective and efficient contract management. It is recommended that management responsible for all cocoa procuring activities should issue a supply plan monitoring LBC weekly and monthly supplies of cocoa to the appropriate cocoa taken-over centres. The responsibility of the procurement committee is to ensure best

“value for money” and ensure that the cocoa purchasing process or supplying contract is done in harmony with the current amended Public Procurement Act 914 of 2016.

The researchers conclude by admonishing management of Cocobod to adopt the designed checklist this study has also designed a checklist to regulate and guide its supply contracts in reducing risk of default supply contracts. The designed checklist when followed by Cocobod will ensure efficient and effective cocoa purchasing or procurement process. The developed checklist identifies some potential major risks or challenges under each stage of the cocoa procurement process, who should do risk assessments impact on cocoa purchasing or supply contracting to mitigate such challenges or risks if occurs activity descriptions, purpose and scope. See appendix for the designed checklist identifying major potential challenges under each stage of the purchasing process.

### **5.5 Suggestion Area for Further Research**

This study, focus on investigating the challenges of cocoa purchasing process in Ghana's cocoa sector. It is recommended that further research would be conducted to investigate Ghana's cocoa sector procurement process, marketing and pricing systems

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## APPENDICES

### APPENDIX A

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY,  
KUMASI DEPARTMENT OF BUILDING TECHNOLOGY MSC  
PROCUREMENT MANAGEMENT**

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#### CONFIDENTIAL QUESTIONNAIRE SURVEY

Dear Sir/Madam,

#### **QUESTIONNAIRE FOR LICENSE BUYING COMPANIES (LBCs) STAFFS AND MANagements**

This questionnaire has been designed to enable the researcher carry out a research on a topic *“Investigating the challenges of Cocoa purchasing process in Ghana’s cocoa sector”*. The study is purely an academic exercise. It is in partial fulfillment for the award of MSc in Procurement Management at Kwame Nkrumah University of Science and Technology, Kumasi.

Your contribution will be appreciated and all information provided would be treated confidential.

Note: Respondent should please tick [] in the box which corresponds to the statement which in your opinion best answer to the relevant question or explain further if necessary.

Thank you for agreeing to participate in this study work.

#### **A. DEMOGRAPHIC DATA**

1. Name of Company.....
2. Position/Title.....
3. Number of years worked with a LBC  
1-5 [  ] years      6-10 [  ] years      11 years above [  ]
4. Please indicate your educational qualification level  
Postgraduate [  ]      First degree [  ]      HND/Diploma [  ]  
Senior High School [  ]      If other Specify.....
5. Annual tons of cocoa purchase at the end of each cocoa season  
2000-3500 [  ]      5000-6500 [  ]      6500 and above [  ]

6. How will you describe the Cocoa purchasing business?

Very profitable [ ] Normal Profit [ ] Break-even Profit [ ] Not Profitable [ ]

**B EXTERNAL COCOA MARKETING, EXPORT AND SALES POLICIES**

7. Should LBCs be allowed to engage in the external or direct marketing of Ghana's cocoa produce? Yes [ ] No [ ]

8. Do you think LBCs direct involvement in cocoa export will make the business more profitable? Yes [ ] No [ ]

9. If Yes, does your company have the capacity to engage in direct export of Ghana's cocoa? Yes [ ] No [ ]

10. Should the Ghana's cocoa sector be fully liberalized? Yes [ ] No [ ]

**C LICENSE BUYING COMPANIES RELATIONSHIP WITH COCOA FARMERS**

11. Your organization or company assists cocoa farmers farming activities by giving them farm inputs or short term loan?

Yes [ ] No [ ] sometimes [ ] Not at all [ ]

12. Do farmers appreciate such inputs and short term financial assistance given them? Yes [ ] No [ ]

13. Does cocoa farmer's output affect your organizations? Yes [ ] No [ ]

14. Does your company periodically evaluate the importance of its good relationship with cocoa farmer? Yes [ ] No [ ]

15. Is your organization satisfied with Cocobod role as the regulator of Ghana's cocoa sector? Yes [ ] No [ ]

16. Is your organization affected by the overall outputs of Cocoa farmer's outputs?  
Yes [ ] No [ ]

17. Does your company share risk with Cocobod or bare risk alone in event of accident? Yes [ ] No [ ] It depend [ ]

18. Does your organization delays delivery of purchase cocoa to appropriate Cocoa Taken-over centers? Yes [ ] No [ ] Sometimes [ ] At all-times [ ]

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## D. MAJOR CHALLENGES PERCEIVED FACING LICENSE BUYING COMPANIES

To what extent do you agree with each of the following (Table 1) perceived challenges which affects cocoa purchasing process in Ghana. Please kindly circle the score that best represent your opinion for each question that follows.

**1-Strongly Agree (SA); 2-Agree (A); 3-Neutral (N); 4-Disagree (D)**

Perceived Challenges	SA	A	N	D
Cocoa price instability	1	2	3	4
Lower buyer profit margin				
Lack of Adequate Credit Facilities				
The excessive power exercised by Cocobod				
Bad or poor road networks				
Inadequate Warehouse Facilities				
Congestion at the various ports or Cocoa Taken-Over Centers due to limited off loaders etc.				
Huge collateral security prerequisite by Cocobod				
Smuggling of Cocoa outside neighbouring countries				
High operational cost, transportation and labour handling cost along the entire supply chain				
Noncompliance of high quality of cocoa beans as specified by Cocobod (QCC & CMC)				
Inadequate personnel's (Quality Control Officers, clerks and other supportive staffs				
High level of competition among LBCs				
Inadequate Government support				
Delay due to low investments in ICT and innovative Technologies by Cocobod				
Lack of communication/Supply chain integration between Cocobod and LBCs				
High rate of illiteracy among Cocoa Farmers				
Pest and diseases, bad weather conditions				

Noncompliance to high total quality of cocoa bean as specified by Cocoa farmer

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Total Mean score for major challenges facing LBCs [ ]



**E. THE EFFECT OF THE PERCEIVED CHALLENGES ON LBC EFFECTIVENESS.**

To what extent do you agree with each of the following (Table 2) observed challenges impact or effects on the effectiveness of License Buying Companies (LBCs) operations? Please kindly circle the score that best represent your opinion for each question that follows.

**1-Strongly Affected (SA) 2-Agree (A) 3-Less Affected (LA) 4-Unaffected (D)**

Effect of the Perceived Challenges on LBCs	AS	A	N	D
Inability of LBC to meet the cocoa purchasing target set for the season	1	2	3	4
Decrease or loss in revenue to License Buying Companies (LBCs)				
High likelihood of liquidation or insolvency of LBCs				
Tendency of losing cocoa purchasing license issue by Cocobod				
Decrease staffs and workforce employability levels				
Decrease or total elimination of assistances gives to farmers by LBCs				
Delay in receiving payments				
High investments in logistics				
High interest rate				

Total score for major challenges facing LBCs of 25 [ ]



## APPENDIX B

### KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI DEPARTMENT OF BUILDING TECHNOLOGY MSc PROCUREMENT MANAGEMENT CONFIDENTIAL QUESTIONNAIRE SURVEY

Dear Sir/Madam,

#### QUESTIONNAIRE FOR STAFFS AND MANAGERMENTS OF COCOBOD (COCOA MARKETING COMPANY-CMC AND QUALITY CONTROL COMPANY-QCC)

This questionnaire has been designed to enable the researcher carry out a research on a topic *“Investigating the challenges of Cocoa purchasing process in Ghana’s cocoa sector”*. It is in partial fulfillment for the award of MSc in Procurement Management at Kwame Nkrumah University of Science and Technology, Kumasi.

Your contribution will be appreciated and all information provided would be treated confidential.

Note: Respondent should please tick [] in the box which corresponds to the statement which in your opinion best answer to the relevant question or explain further if necessary.

Thank you for agreeing to participate in this study work.

#### A DEMOGRAPHIC DATA

1. Name of Company.....
2. Position/Title.....
3. Number of years worked with Cocobod(QCC/CMC)  
1-5 [] years      6-10 [] years      11 years above []
4. Please indicate your educational qualification  
Postgraduate []      First degree []      HND/Diploma []  
Senior High School []      If other Specify.....
5. Minimum annual tons of cocoa to be purchase by LBCs at the end of each cocoa season 2500 [] above 2500 []
6. How will you describe the Cocoa purchasing business?  
Very profitable []      Normal Profit []      Break-even Profit []  
Not Profitable []

**B EXTERNAL COCOA MARKETING, EXPORT AND SALES POLICIES**

7. Should LBCs be allowed engaging in the external or direct marketing of Ghana's cocoa produce? Yes [ ] No [ ]
8. Do you think LBCs direct involvement in cocoa export will make the sector more profitable? Yes [ ] No [ ]
9. If Yes/No, do your LBCs have the capacity to engage in direct export of Ghana's cocoa? Yes [ ] No [ ]
10. Should the Ghana's cocoa sector be fully liberalized? Yes [ ] No [ ]

**C COCOBOD RELATIONSHIP WITH LICENSE BUYING COMPANIES AND COCOA FARMERS**

11. Does Cocobod assists LBCs and cocoa farmers farming activities by giving them farm inputs or short term loan? Yes [ ] No [ ] Sometimes [ ] Not at all [ ]
12. Do LBCs and farmers appreciate such financial assistance and inputs supports?  
Yes [ ] No [ ]
13. Is Cocobod affected by the overall outputs of Cocoa farmer's and LBCs operations?  
Yes [ ] No [ ]
14. Does your company periodically evaluate the importance of its good relationship with LBCs and cocoa farmer? Yes [ ] No [ ]
15. Is Cocobod satisfied with its role as the regulator of Ghana's cocoa sector? Yes [ ] No [ ]
16. Does Cocobod share risk with LBCs or bare risk alone in event of accident?  
Yes [ ] No [ ]
17. Does your organization delays delivery of purchase cocoa to appropriate Cocoa Take-over Centers CTOCs? Yes [ ] No [ ]  
Sometimes [ ] At all-times [ ]

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## D. MAJOR CHALLENGES FACING THE LICENSE BUYING COMPANIES IN COCOA PURCHASING PROCESS OBSERVED BY COCOBOD (QCC AND CMC)

To what extent do you agree with each of the following (Table 1) perceived challenges which affects cocoa purchasing process. Please kindly circle the score that best represent your opinion for each question that follows.

**1-Strongly Agree (SA); 2-Agree (A); 3-Neutral (N); 4-Disagree (D)**

<i>Perceived Challenges</i>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>
Cocoa Price Instability	1	2	3	4
Lower buyer profit margin				
Lack of Adequate Credit Facilities				
Large collateral security requirement by Cocobod				
Inadequate Warehouse Facilities				
Lack of compliance of high quality of cocoa beans as specified by Cocobod				
Smuggling of Cocoa outside Ghana				
Bad or Poor Road Networks				
Congestion at the various Ports (CTOCs) due to limited clerks, off loaders etc.				
High general operational cost, transportation and labour handling cost				
Inadequate personnel's (Quality Control Officers, clerks and other supportive staffs				
High interest rate and inflation rate and instability of local currency				
High level of competition among LBCs				
Inadequate Government support				
Delay due to low of investments in ICT and innovation Technologies by Cocobod				
Lack of communication/Supply chain integration between Cocobod and LBCs				
Poor organized farmers associations and high rate of illiteracy among Cocoa Farmers				
Bad weather conditions, Pest and diseases				
Scale adjustment by cocoa purchasing clerks and delay payments to farmers				

### E. THE EFFECT OF THE PERCEIVED CHALLENGES ON COCOBOD EFFECTIVENESS.

To what extent do you agree with each of the following (Table 1) perceived challenges impact or effects on the effectiveness of Ghana Cocobod operations? Please kindly circle the score that best represent your opinion for each question that follows.

**1-Strongly Affected (SA); 2-Affected (A); 3-Less Affected (LA); 4-Unaffected (U)**

The Effect of the Perceived Challenges on Cocobod	SA	A	LA	U
Inability to meet the season total cocoa purchasing target set by Cocobod				
Fall in Cocobod revenue and profitability which tend to affect its ability to secure loan				
High likelihood of liquidation or insolvency of Cocobod				
Tendency of Cocobod finding it difficulty in raising funds to purchase cocoa				
Decrease in financial commitment to LBCs in the form of Stabilization funds				
Decrease in labour workforce employed by Cocobod				
Lack of motivation to LBCs as result of limited government supports				
Difficulty and delayed in honouring payments and bonus due LBCs				
High cost in general operational expenses				
High interest rate resulting in insufficient access to loans or credit facility from bank				
Breaches of securities own international creditor				
Loss of global recognition for quality of Ghana cocoa produce as result of falling quality				

Total Mean score for major perceived effects on Cocobod [ ]

Thank you for your responds

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