

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

KUMASI, GHANA

COLLEGE OF ART AND SOCIAL SCIENCES

KNUST SCHOOL OF BUSINESS

**DISSERTATION
(EMBA)**

**AN ASSESSMENT OF INBOUND SUPPLY CHAIN MANAGEMENT IN
GUINNESS GHANA
BREWERIES
LIMITED.**

**A THESIS PRESENTED TO THE SCHOOL OF GRADUATE STUDIES,
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD
OF EXECUTIVE OF MASTER BUSINESS ADMINISTRATION DEGREE.**

BY

CHARLOTTE ACQUAH

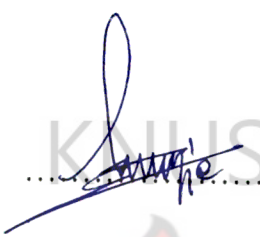
AUGUST, 2008

LIBRARY
KWAME NKRUMAH UNIVERSITY OF
SCIENCE AND TECHNOLOGY
KUMASI-GHANA

DECLARATION

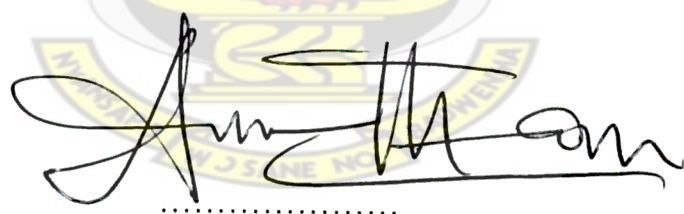
I hereby declare that I have personally, under supervision, undertaken the study herein submitted

ACQUAH CHARLOTTE
PG97919-06
Student

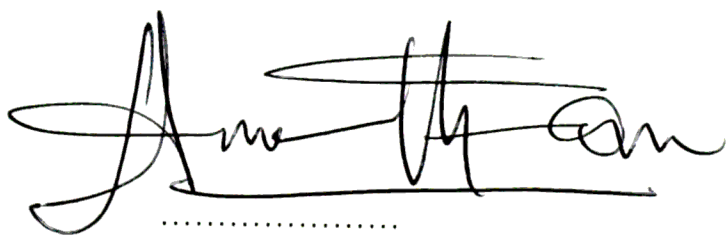

.....

I declare that I have supervised the student in undertaking the study submitted herein.

Certified by:
Jonathan Annan
Supervisor


.....

Certified by:
JONATHAN ANNAN
~~Supervisor~~
HOD


.....

ABSTRACT

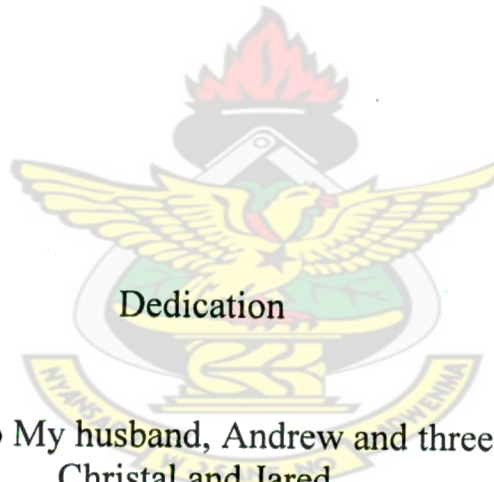
Supply chain management is a network of suppliers, customers, the organisation made up of procurement and manufacturing teams, wholesalers and retailer. For an organisation to function, raw materials, spare and equipment would have to be sourced from suppliers by procurement team processed by manufacturers and then distributed to final customers either through wholesalers and retailers or directly. The inbound supply chain has to do with procurement team selecting right suppliers, evaluating their performance with respect to the organisation's goals and objectives and sustain the relationship by paying suppliers when due.

The study showed the impact of inbound supply chain management on the performance of Guinness Ghana Breweries limited (GGBL) using the annual reports and financial statements. From the analysis GGBL's turnover increased by 60% from 2003 to 2007 indicating that adequate purchases of raw materials, spare parts and equipment were acquired leading to the increase in growth.

However, 47% of GGBL employees disagree that procurement pays suppliers on time after correct and complete receipt of invoice. Also, 48% of suppliers from the survey likewise indicated that there are delays in payment. This has serious implications in that a purchase order once generated is a binding document, which can lead to legal dispute by the aggrieved supplier, in case of delays in payment.

To resolve this challenge a committee made up of stakeholders from the various departments and procurement needs to be formed to supervise all purchases (from budget) such that unwanted purchases are not encouraged to increase GGBL debts and also management must be committed to settle all payment issues as scheduled.

KNUST



This Work Is Dedicated To My husband, Andrew and three kids Andrew Junior,
Christal and Jared.

ACKNOWLEDGEMENT

I wish to express my heartfelt appreciation and profound gratitude to my project supervisor, Mr Jonathan Annan for his support. May God richly bless him and grant him success.

I would also like to express my sincere thanks to my husband and family for their support and encouragement throughout the course.

Worthy of acknowledgement is the management and staff of Guinness Ghana Breweries Limited, Chef Delight, Sudchemie company limited, Vintaq and Mearsk Sealand Transporters.

Much thanks also go to Dr Oduro for the guidelines given me during the first three chapters.

The greatest thanks however is directed to the Almighty God Jehovah for his sustenance, protection and guidance which made my dream of success a reality.

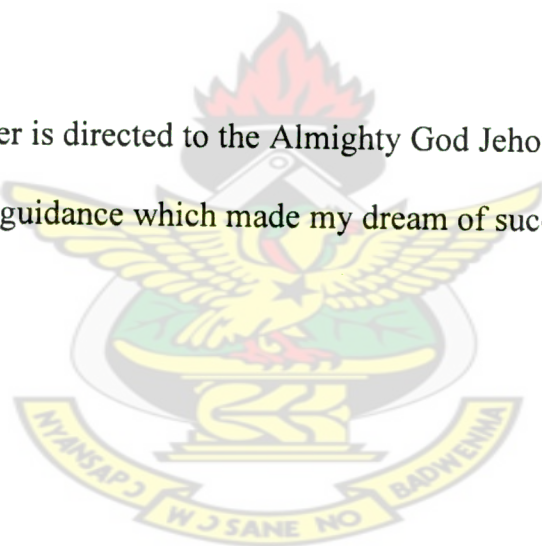


TABLE OF CONTENTS

	Page
Declaration.....	i
Abstract.....	ii
Dedication.....	iii
Acknowledgement.....	iv
Table Of Contents.....	v
List Of Tables.....	xi
List Of Figures.....	xiii

KNUST

CHAPTER ONE

INTRODUCTION

1.0	Introduction	1
1.1	Background Of The Company.....	1
1.2	Statement Of The Problem.....	3
1.3	Objectives And Purpose Of The Study	4
1.4	Significance And Justification.....	5
1.5	Methodology.....	6
1.6	Scope of study.....	7
1.7	Limitations Of The Study	7
1.8	Organisation Of Study.....	8

CHAPTER TWO

LITERATURE REVIEW

2.0	Introduction.....	9
2.1	Basic Terminology.....	9
2.5	Evolution Of Procurement.....	19
2.5.1	Product centred procurement (1940- 1946).....	20
2.5.2	Process Centered Procurement (1947 – 1970s).....	20
2.5.3	Relational Procurement (1970 –1990).....	21
2.5.4	Performance Centred Procurement (1990 –2000s).....	21
2.6	Procurement Process.....	22
2.6.1	Procurement Objectives.....	22
2.6.1.1	Support Operational Requirements.....	23
2.6.1.2	Management of the purchasing process.....	24
2.6.1.3	Sources Of Supply.....	24
2.6.1.4	Relationship with other functions.....	25
2.6.1.5	Support Organizational Goals And Objectives.....	25
2.6.1.6	Procurement and Organisational Strategy	26
2.7	Purchasing Span Of Control	26
2.8	Evaluate And Select Supplier.....	26
2.9	Review Specifications.....	27
2.10	The Procurement Cycle.....	28
2.11	Identify Or Anticipate Material And Service Needs.....	28
2.12	Purchase Requisitions.....	29
2.13	Forecasts And Customer Order.....	29

2.14 Reorder point system.....	29
2.15 Stock Checks.....	30
2.16 Cross-Functional Team.....	31
2.17 Evaluate Suppliers.....	31
2.18 Selection of Suppliers.....	32
2.19 Bidding.....	32
2.20 Negotiation.....	33
2.21 Release And Receive Purchase Requirements.....	35
2.22 Performance Evaluation of Suppliers.....	35
2.23 Procurement As A Process.....	36
2.24 Request For Quotation.....	36
2.25 Purchase Order.....	37
2.26 Purchase Release.....	38
2.27 Bill Of Lading.....	39
2.28 Make Payment.....	39
2.29 Type Of Purchases.....	40
2.30 Improving The Purchasing Process.....	40

CHAPTER THREE

METHODOLOGY

3.0 Introduction.....	42
3.1 Research Design.....	42
3.2 Questionnaire Design.....	43
3.3 Population Of The Study.....	43
3.4 Sampling Procedure.....	44
3.5 Instruments For Data Collection.....	44

3.6	Pretesting.....	45
3.7	Data Analysis Procedures.....	46
3.8	Company Profile.....	47
3.8.1	Investment And Creating Value (Innovation).....	48
3.8.2	High Quality Brands.....	48
3.8.3	Supplier Relationships.....	48
3.8.4	Customer Relationship.....	49
3.8.5	Procurement Process.....	49
3.8.6	Buying Process.....	50
3.8.7	Supplier Selection.....	51
3.8.8	Approval Of Supplier.....	51
3.8.9	Performance Reviews.....	51
3.8.10	GGBL Supplier Performance Management.....	54
3.8.11	Pa yment Terms	54

CHAPTER FOUR

ANALYSIS OF RESULTS

4.0	Introduction.....	57
4.1	Analysis Of GGBL Employees Response To Questionnaire.....	57
4.1.1	Area Of Work.....	57
4.1.2	Length Of Service.....	59
4.1.3	Gender.....	60
4.1.4	Status In The Company.....	61
4.2	Purchase goods at right time and in full.....	61
4.3	Purchase Requisition.....	64

4.4	Purchases From The List Of Preferred Suppliers.....	66
4.5	Quality Assurance Procedure.....	68
4.6	Selection of Supplier.....	70
4.7	Review Meetings For Suppliers.....	72
4.8	Payment System For Suppliers.....	74
4.9	Overall Performance Of Procurement Team.....	74
4.10	Effect of SAP in GGBL.....	76
4.11	Analysis Of Supplier Questionnaire.....	77
4.12	Efficiency of Supply Process.....	77
4.13	Purchase Order Process.....	78
4.14	Purchase Order Procedure.....	79
4.15	Quality Assurance In Purchasing.....	81
4.16	GGBL Supplier Relationship.....	82
4.17	Selection Of Suppliers.....	83
4.18	Suppliers Review.....	84
4.19	Payment Of Supplies.....	86
4.20	Discussion of results from questionnaire.....	88
4.21	Published Financial Performance Indicators To Show Growth.....	89
4.22	Profit After Taxation.....	89
4.23	Dividend Per Share.....	90
4.24	Net Asset Per Share.....	91
4.25	Net Assets.....	92
4.26	Turnover.....	93
4.27	Retained Profit.....	93
4.28	Earnings Per Share.....	94

4.29	Property And Equipment.....	95
4.30	Discussion Of Financial Performance Indicators.....	96

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.0	Summary of Findings	
5.1	Conclusion.....	99.
5.2	Recommendations.....	100

REFEERENCES

Appendix 1: Questionnaire for GGBL employees.....	107
Appendix 2: Questionnaire for GGBL suppliers.....	110
Appendix 3: Hypothesis Testing.....	113

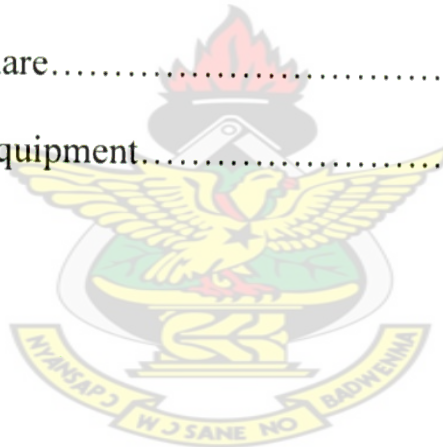


LIBRARY
KWAME NKRUMAH UNIVERSITY OF
SCIENCE AND TECHNOLOGY
KUMASI-GHANA

LIST OF TABLES

Table 4.1.1	Area Of Work.....	58
Table 4.1.2	Length Of Service.....	59
Table 4.1.3	Gender.....	60
Table 4.1.4	Status In The Company.....	61
Table 4.2	Purchase goods at right time and in full.....	62
Table 4.3	Purchase Requisition.....	65
Table 4.4	Purchases From The List Of Preferred Suppliers.....	67
Table 4.5	Quality Assurance Procedure.....	68
Table 4.6	Selection of Suppliers.....	70
Table 4.7	Review Meetings For Suppliers.....	72
Table 4.8	Payment System For Suppliers.....	74
Table 4.9	Overall Performance Of Procurement Team.....	75
Table 4.12	Efficiency of Supply Process.....	77
Table 4.13	Purchase Order Process.....	78
Table 4.14	Purchase Order Procedure.....	80
Table 4.15	Quality Assurance In Purchasing.....	81
Table 4.16	GGBL Supplier Relationship.....	82
Table 4.17	Selection Of Suppliers.....	83
Table 4.18	Suppliers Review.....	84
Table 4.19	Payment Of Supplies.....	86
Table 4.21	Profit After Taxation.....	89

Table 4.22	Dividend Per Share.....	90
Table 4.23	Net Asset Per Share.....	91
Table 4.24	Net Assets.....	92
Table 4.25	Turnover.....	93
Table 4.26	Retained Profit.....	94
Table 4.27	Earnings Per Share.....	95
Table 4.28	Property And Equipment.....	96



LIST OF FIGURES

Figure 2.2.1	Supply chain.....	10
Figure 2.2.1	Supply Chain network.....	11
Figure 2.23	Purchasing Process Chain.....	36
Figure 3.8.9	GGBL Suppliers Performance Review.....	53
Figure 3.8.12	GGBL Process of Procurement.....	55
Figure 3.8.13	GGBL Organogram.....	56
Figure 4.1.1	Area of work.....	58
Figure 4.1.2	Length Of Service.....	59
Figure 4.13	Gender.....	60
Figure 4.1.4	Status In The Company.....	61
Figure 4.2	Purchase goods at the right time and in full.....	62
Figure 4.3	Purchase Requisition.....	65
Figure 4.4	Purchases From The List Of Preferred Suppliers.....	67
Figure 4.5	Quality Assurance Procedure.....	69
Figure 4.6	Selection of Suppliers.....	70
Figure 4.7	Review Meetings For Suppliers.....	73
Figure 4.8	Payment System For Suppliers.....	74
Figure 4.9	Overall Performance Of Procurement Team.....	75
Figure 4.12	Supply Process Efficiency.....	77
Figure 4.13	Purchase Order Process.....	78
Figure 4.14	Purchase Order Procedure.....	80
Figure 4.15	Quality Assurance In Purchasing.....	81
Figure 4.16	GGBL Supplier Relationship.....	83

Figure 4.17	Selection Of Suppliers.....	84
Figure 4.18	Suppliers Review.....	85
Figure 4.19	Payment Of Supplies.....	86
Figure 4.21	Profit After Taxation.....	89
Figure 4.22	Dividend Per Share.....	90
Figure 4.23	Net Asset Per Share.....	91
Figure 4.24	Net Assets.....	92
Figure 4.25	Turnover.....	93
Figure 4.26	Retained Profit.....	94
Figure 4.27	Earnings Per Share.....	95
Figure 4.28	Property And Equipment.....	96



CHAPTER ONE

1.0 INTRODUCTION

“Supply chain is a network of downstream and upstream linkage and it is important that this chain is adequately managed to result in an efficient relationship. In other words, it is a network between suppliers i.e. upstream, the organisation and customers i.e. downstream” (Monczka, 2000).

In Ghana most companies have seen the need for the management of this network hence directors and managers have been appointed for these roles within organisation. The benefits are that it results in superb coordination, efficiency and effective network between organisation, suppliers and customers.

The inbound section which is made up of the suppliers and the company is very key since the organisation in partnership with suppliers determine what raw materials, maintenance, etc should be used (Mentzer, 2001). The best quality of raw materials and equipments purchased could result in the best products, which would satisfy customers consistently.

1.1 BACKGROUND

Deloitte and Touché (2003), states that “supply chain is a network of suppliers supplying goods, services and labour needed by operations through the procurement department where it is processed and supplied to the final customer with so much value for his or her money.”

Effective management of supply chain enhances the coordination and systematic way of working in an organisation.

In Ghana most companies especially manufacturing ones realising the importance of supply chain have created supply chain departments. These departments coordinate the activities of the procurement team with respect to goods or services supplied from suppliers to the

operations as well as finish products that are distributed to the final consumers through the logistics or transportation team.

A strategic policy clearly identifies production patterns based on customer needs as well as adequate stocks provided for distribution centres and warehouses to avoid overstocking locking capital. Efficient supply management also leads to prudent expenditure pattern. Systematic payment terms are arranged with suppliers as well as customers.

“The inbound supply chain network principally is a relationship between the suppliers and the organisation through the procurement team” (Deloitte and Touché, 2003). The key processes which need to be adhered to are the ability of supplier to supply goods on time, right quantity, quality and right cost, supplier selection, evaluation and payment terms.

Guinness Ghana Breweries Limited (GGBL) is a manufacturing company, which produces both non-alcoholic and alcoholic beverages in Ghana. Guinness Ghana Breweries Limited (GGBL) is the sixth largest Guinness market in the world and it is listed on the Ghana stock exchange. Guinness Ghana has three sites, one each at Achimota in Accra, Ahensan and Kaasi in Kumasi and has an employee capacity of four hundred.

Moreover, to be able to beat competition and gain market share, GGBL invested capital into its operations by investing modern equipment. These include tanks, refrigerator plant, new brew house and ultra modern packaging plant. This investment is in line with the company's objective of achieving one million, five hundred thousand hectolitres of beer per annum. GGBL purchases about 1500 metric tonnes of sorghum from the northern part of Ghana, about 3000 metric tonnes of malt and barley from UK as the main raw materials for brewing. Furthermore, in 2006 a new packaging plant was installed on the Kaasi site, and the plant was well supported with back up spares and world-class maintenance practises and asset care management. Packaging components such as crown corks, labels and bottles are used on a state of the art fully automated specialised packaging lines.

These automated brewing and packaging systems require raw materials and packaging components of specific criteria enabling the system to be set for smooth operations. Compromised raw materials and components (i.e. poor quality goods) could result in changes in set up and long downtimes, in view of this the business will be unable to meet customer demands on time and resulting in a decline in profit. To be able to sustain a well-coordinated inbound supply chain system the right and adequate numbers of suppliers need to be sourced, evaluated periodically and realistic payment terms agreed.

This company also has a procurement team responsible for purchases of raw materials, spares for the production unit as well as for the other functions such as sales, marketing finance etc. The logistics team are involved in transporting finished goods to distributors as well as raw materials to production unit.

In this study, questionnaires will be administered to assess the purchase of goods at the right time, cost, quality and quantity, as well as supplier selection and evaluation and payment terms are discussed. However, financial trends are used to analyse the financial pattern of GGBL from 2003 to 2007.

The responses from the questionnaire and the financial trends are analysed, conclusion and recommendations are made after the results are briefly discussed.

1.2 STATEMENT OF THE PROBLEM

Supply chain elements, are made up of the suppliers, organization, customers and sometimes retailers hence these elements needs to be managed efficiently and effectively resulting in supply chain management (Monczka, 2000). Supply chain management is the effective coordination of information, materials and funds across the supply chain such that we can maximize profit, efficiency and systematic way of working with no chaos (Wales, 2003). However, the inbound supply chain management is primarily made up of the upstream

section of supply chain, which is made up of suppliers and the organization (Trent, 2002).

Lack of superb coordination in the inbound supply chain could result in low quality goods and services supplied at inappropriate time and probably insufficient quantities. However, overpricing of goods can arise if the purchasing procedure is not well structured resulting in the procurement team making personal gains to the detriment of the company. Emergency purchases made by stakeholders results in overpricing due to high courier charges and low quality or wrongly specified goods since the process is hurriedly executed.

However, when the due process of bidding and negotiation during supplier selection, is not adhered to, suppliers eventually become inefficient. The lack of a transparent supplier selection process arises due to a skewed panel, which does not include all key stakeholders such as end users or heads of department.

The absence of periodic evaluation and review of supplier performance results in complacency from the suppliers. In such situations the procurement team could connive with the suppliers to fix prices such that both parties can make personal gains. As a result goods of poor quality at higher cost would be supplied incurring cost to the business.

Prompt payment of suppliers also sustains the relationship and does not damage the company's reputation.

Ineffective and lack of efficient management of the chain as a result of the above will lead to the business incurring cost whereby the company's profit would decline.

1.3 OBJECTIVES OF THE STUDY

The following are the objectives of the study:

- ❖ To find out the workers and suppliers' perception about the supply chain

management system of Guinness Ghana Breweries and its impact on them.

- ❖ To review Growth of Guinness Ghana Breweries using historical data on growth, dividend per share, retained profit, net asset per share, Net assets, profit after taxation, turnover, Retained profit, Earnings per share and property and equipment from 2003 to 2007.
- ❖ To make recommendations that will enhance the inbound supply chain management process in Guinness Ghana Brewery Limited and its key suppliers

1.4 JUSTIFICATION OF STUDY

Proper management of the supply chain will lead to increase in profit as a result of reduction in cost. This comes about by proper procurement procedures which includes

- Ability of suppliers to deliver goods of right quality, quantity, time and cost
- Good supplier selection process
- Efficient supplier evaluation system
- Reliable payment terms

Any delays in supplying specified goods of right quality and cost causes our competitors to gain upper hand eventually rendering the company redundant in the long term

Moreover, an efficient supply chain improves the company's productivity hence its turnover and enabling the company to be easily listed on the stock market if it chooses to do so.

The study will show that even though investing and managing industries such as manufacturing company or a typical brewing industry is expensive, time consuming and

capital intensive there is value added and maximization of shareholder price.

The benefits of managing and sustaining an efficient and effective supply chain management network are enormous hence the study is relevant to the development of the Ghanaian economy.

1.5 METHODOLOGY

In this study, two structured questionnaires were used to source opinions of Guinness Ghana Breweries Limited's inbound supply chain management system. One of the questionnaires was designed primarily for only GGBL's employees and the other GGBL's key suppliers. The employees included both unionized staff and managers. Mearsk Sealand transporter, Techno Serve company limited, Qualipack Limited, Pelliconi Crown Limited, Cargil grains Limited, Chef Delight, Vintaq cleaning company, Keclean Cleaning Company, Kwame Kwarteng Chemical accessories Limited, Sudchemie detergent Limited, L'iane Services Limited, Kronos Ghana Limited and Ahinsan Carpentry Shop participated as suppliers.

Graphical methods involving SPSS analytical tool and simple frequency percentages in EXCEL were used to analyze the data and pie charts and bar charts are used in presenting the pictorial view of the data.

Secondary data from financial reports of GGBL was considered for key financial indicators such as profit after taxation, dividend per share, net assets per share, turnover, retained profit, earnings per share and property and equipment are discussed. The performances of these parameters were analyzed using EXCEL and displayed in bar charts.

1.6 SCOPE OF THE STUDY

The inbound supply chain of GGBL covered the key areas of procurement that are:

- Ability of suppliers to deliver goods of right quality, quantity, time and cost
- Good supplier selection process
- Efficient supplier evaluation system
- Reliable payment terms

The questionnaire for employees targeted the entire Kaasi site since the researcher wants to have a very fair opinion of the entire employee's views with respect to the procurement team.

Suppliers involved in the questionnaire are major players such as Techno serve limited i.e. a sorghum buying company for GGBL in Ghana, Qualipack also a supplier of packaging components such as crown corks and bottles and Mearsk Sealand is GGBL's transporter for finished products, equipment, spares and raw materials.

The financial analysis covers a period of five (5) years from 2003 to 2007 to be able to have a representative trend that can be reliable and predictable.

1.7 LIMITATIONS OF THE STUDY

There is the probability that respondents could consult with others and influence the responses to the questionnaire. However, this was largely managed since the researcher extensively explained the questionnaires before personally administering and retrieving them.

Secondly suppliers involved in the exercise could think that if they give sincere responses, which could be negative, it might lead to their being deleted as suppliers. However the researcher minimized this effect by educating the suppliers to feel free to respond since the questionnaires were to be submitted without their names besides the essence of the exercise is to improve the system and address their problems.

Lastly the financial analysis of GGBL could be limited by the accuracy of the source. However, this may be negligible since GGBL is part of a global organization and also listed on the Ghana stock exchange and therefore there is uniformity in ways of working to meet Ghana and the international standards of working.

1.8 ORGANISATION OF STUDY

The study would be organized into five chapters to keep together relevant information and for easy reading.

The first chapter will introduce the study and present the background of the company, objectives, justification, methodology and limitations of the study.

Chapter two contains literature review that discusses the concept of supply chain, supply chain management and inbound supply chain primarily the procurement section of supply chain.

The third chapter details the research methodology, the methods of data collection, the sample size and data analysis procedure. The background of Guinness Ghana Breweries Limited and its current inbound supply chain processes are presented in this chapter.

Chapter four analysis and discusses the results of the data collected and identified the impact of supply chain management on GGBL employees and its suppliers. The financial trends were also discussed in this chapter.

A discussion of findings, conclusion and recommendations are presented in chapter five. References and appendices are also presented.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

The essence of supply chain management in a company is to identify the main drivers in the chain and manage these entities efficiently. The main drivers are inbound supply chain, management and outbound supply chain (Wales, 2007). Moreover, there is the need to understand supply chain, logistics management, supply chain management and inbound supply chain management or procurement management.

2.2 BASIC TERMINOLOGY

2.2.1 SUPPLY CHAIN

Supply chain is a network of autonomous or semiautonomous business entities involved, through upstream and downstream links, in different business processes and activities that produce physical goods or services to customers. It consists of a series of activities that an organisation uses to deliver value, either in the form of a product, service, or a combination of both, to its customers (Shaw, 1998). Furthermore, the supply chain can be considered as an integration of materials and information flow between customer, manufacturer and supplier. This implies the supply chain is made up of supplier, manufacturer or organisation, wholesaler and retailer and customer.

Hoekstra (1992) indicates that there is a decoupling point at which stock is held as a buffer between supply and demand.

Monczka (2000) also states "Supply chain encompasses all activities associated with the flows and transformation of goods from the raw materials stage

(extraction) through to end user, as well as the associated information flows. Material and information flows both up and down the supply chain”.

Furthermore, Monczka (2000) states that “supply chain is made up of the following entities systems management, operations and assembly, purchasing, production scheduling, order processing, inventory management, transportation, warehousing and customer service”.

Therefore, from the definition above, supply chains are essentially a series of linked suppliers and customers since every customer is in turn a supplier to the next downstream organisation until a finished product reaches the ultimate end user.

Furthermore, the procurement department needs to make the order given a lead time, that the supplier can supply goods and services, which would be received by the manufacturing or production section (end user) as unique product, processed and shipped to the customer directly or through wholesalers and retailers. The link is depicted in the figure below.

Figure2.2.1 SUPPLY CHAIN

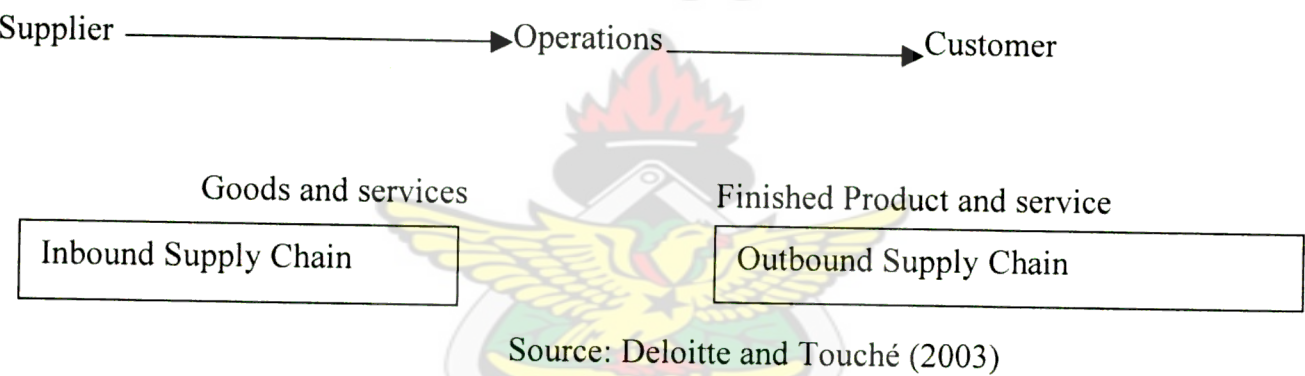


Source: Author's field study

Another school of thought by Strahan (2001), emphasises the fact that supply chain is a link from sourcing of raw materials, spares and equipment as well as services such as repairs through supplier, to manufacturer (where it is processed to finished goods) and then distributed to final customer.

However, to have a quick response as items are consumed or purchased, information needs to be transmitted to the supplier to trigger a response for prompt delivery to the procurement department and forwarded to the manufacturing section for processing. Furthermore, another view by Deloitte and Touché (2003), states that “supply chain is a network of suppliers supplying goods, services and labour needed by operations through the procurement department where it is processed and supplied to the final customer with so much value for his or her money”. The link is showed in the figure below.

Figure 2.2.1 SUPPLY CHAIN NETWORK



2.2.1.1 ELMENTS OF SUPPLY CHAIN

The key elements of supply chain are the internal functions, upstream suppliers and downstream customers (Monczka, 2000).

2.2.1.2 INTERNAL FUNCTION

The internal functions of a firm are the different processes used in transforming the inputs provided by the supplier network. This is usually referred to as operations (Strahan, 2001). An example is in an automotive industry the various spare parts, which need to be assembled into an automobile. In this industry customer

requirements such as actual orders are inputted into the system and certain key details would be required such as quoting prices, delivery dates, delivery arrangements and market service (Monczka, 2000).

Production scheduling is also required which translates orders into actual plans and schedules. This can be easily done using Materials Requirement Planning (MRP) and capacity planning system to schedule work centres, employees and maintenance on machines.

2.2.1.3 UPSTREAM SUPPLIERS

Upstream suppliers are made up of suppliers and the procurement team (Walter, 1993). Purchasing managers are responsible for selection of right suppliers, ensure suppliers meet performance expectation, ensure that appropriate contractual agreement are made and build a good relationship between suppliers and internal supply chain members such as engineers, accountant. The materials manager is responsible for planning, forecasting and scheduling materials flow from suppliers. These managers work closely with production schedulers to ensure adequate supplies are made.

2.2.1.4 DOWNSTREAM CUSTOMERS

Downstream function encompasses distribution channels, processes, and function that the product passes through to the customer (Mentzer, 2001). Distribution managers are involved in packing, storing and handling materials at receiving docks or warehouses. This process involves flow of materials and service down the stream usually from organisation to customer and funds flow up the chain from customers to company. Information and knowledge also flow up and down the chain (Swenson, 2002).

2.2.2 LOGISTICS MANAGEMENT

Logistics management is a process of planning, implementing and controlling the efficient cost effective flow and storage of raw materials, in-process inventory finished goods and related information flow from point of origin to point of consumption for the purpose of conforming to customer requirements. (Council of Logistics Management, 1998).

Furthermore this implies logistics includes inbound, outbound, internal and external movements and return of materials for environmental purposes. In other words it means having the right thing, at the right place and time.

Another school of thought by Walter (1993) explains “Logistics management as the science of planning, organising and implementing the acquisition and use of the resources necessary to sustain the operation of a system”.

Helsinki (1996) argues that, “Logistics is defined as a business-planning framework for the management of material, service, information and capital flows.”

This includes the all information, communication and control systems in business.

Moreover, another school of thought known as the military definition defines “Logistics as the science of planning and carrying out the movement and maintenance of forces which are aspects of military operations that deal with the design and development, acquisition, storage, movement, distribution, maintenance, evacuation and disposition of material; movement, evacuation, and hospitalization of personnel; acquisition of construction, maintenance, operation and disposition of facilities; and acquisition of furnishing of services” (Walter, 1993).

2.2.3 SUPPLY CHAIN MANAGEMENT

Mentzer (2001) defines “Supply chain management (SCM) as a systemic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole”. With this definition, the focus of SCM is still on the different levels and the business operations within the channel from the point of origin to the point of consumption.

SCM is a business philosophy that strives to integrate the dependent activities, actors which are the suppliers, customers, retailers, wholesalers and the manufacturing team as well as the procurement team, and resources between the different levels of the points of origin and consumption in channels. This means that SCM comprises different kinds of dependencies in between and across companies in channels from manufacturers/suppliers to customers/consumers.

Mentzer (2001) argues that the definitions of SCM can be classified into three categories, namely:

- a management philosophy;
- the implementation of a management philosophy; and
- a set of management processes.

Swenson (2002) argues that SCM is a business philosophy that simultaneously should address the overall bi-directional dependencies of activities, actors, and resources on an operational, tactical, and strategic level, from the point of origin to the point of consumption in and between channels.

The literature supports the view that the integration of key business processes within and across companies that add value for customers and other stakeholders can be called SCM (Cooper ,1997).

The business processes are:

- Customer Relationship Management
- Customer Services Management
- Demand Management
- Manufacturing Flow Management
- Procurement
- Order Fulfilment
- Product Development & Commercialization
- Returns

The supply chain process involves a number of sub-processes which include: sales and operation planning; demand management; customer order management; production planning; control and execution; materials, quality and inventory management; material procurement; distribution requirements planning; transportation and shipment management; and integrated supply and demand plan (Archibald, 1999). Successful SCM requires an integration of all the components involved into a combination of business processes within and across organisations. This requires integration of the organisational elements responsible for each activity and the external suppliers and customers who are part of the planning and execution process. The goals are to achieve speed-to-market, agility, and flexibility to respond more quickly to actual customer demand, while keeping cost at a minimum. All components involved in any supply chain need to be managed properly for effective

and efficient operations. Integration of those components within and outside organisations would result in number of complexities.

The management and coordination of the activities within the supply chain is paramount to the success of an organisation, which is referred to as “supply chain management” (Archibald, 1999).

Chandra and Kumar (2000) argue that it is necessary to improve the planning and management of complex interrelated systems such as materials planning, inventory management, capacity planning and production management within the chain.

Monczka (2000), explains supply chain management as the integration and network systems management, operations and assembly, purchasing, production scheduling, order processing, inventory management, transportation, warehousing and customer service and after-market disposition of packaging and materials.

This implies that the supplier provides inputs either direct or indirectly to the focal enterprise, which is the role of the purchaser. For every small or simple industry supply chain management is practised where materials are directly pulled from their origin, processed, packaged and shipped to customers this emphasises the importance of supply chain management.

First and foremost, the cost, availability of information and resources between entities in the supply chain leads to easy linkages and eliminate time delays in the network. (Deloitte and Touché, 2003)

Secondly, due to the level of competition in both domestic and international market demand in the supply chain network most organisations are agile, lean and flexible.

Huddersfield, (1998) shows that supply chain management maximises profit through enhanced competitiveness in the final market by lower lost and faster transactions.

However, currently competition is not between firms but between supply chains therefore companies that put up the best-integrated supply chains will be the winners.

2.3 DEFINITION OF PURCHASING

“Purchasing is the processing of buying materials of the right quality, in the right quantity from the right source delivered to the right place at the right time at the right price”(Lyson, 2006).

In practice, it may be possible to obtain the right quality but not at the right price or the right suppliers who may offer goods at the right quantity but at wrong quality.

However, purchasing is primarily concerned with the mechanics or order placing on a one-off basis rather than the establishment, where appropriate, of long-term, collaborative supplier relationships.

Tactical rather than strategic – that is, purchasing is focus on short-term buying rather than a contributing to the achievement of long-term corporate goals.

Another school of thought by Weele (2001), purchasing obtains external sources of goods and services which are necessary for running, maintaining the company primary and supporting activities with respect to the most favorable condition.

External resources refers to people recruitment and management of individual ordering, maintenance invent, receipt and storage of suppliers and payment.

Supplier management also refers to sourcing and developing supplier potential, negotiation, specification, approving of suppliers and monitoring supplier performance.

LIBRARY
KWAME NKRUMAH UNIVERSITY OF
SCIENCE AND TECHNOLOGY
KUMASI-GHANA

2.4.1 PURCHASING AS PROCUREMENT

Trent (2002) highlights the fact that procurement is a wider term than purchasing, which implies the acquisition of goods or services in return for a monetary or equivalent payment, however, is the process of obtaining goods or services in any way, including borrowing, leasing and even force or pillage.

As procurement is, strictly, a more accurate term, it is not surprising that the word procurement is often supplanting 'purchasing' in job titles, such as 'procurement manager who reports to 'head of procurement' in GGBL.

2.4.2 PROCUREMENT AS ORGANIZATIONAL BUYING

According to Marian (2000) buyers are individuals who purchase goods and service for the specific purpose of industrial or agricultural production or for use in the operation or conduct of a plant, business, institution, profession or service.

Organization buyers are, therefore those buy on behalf of an organization rather than for individual or family use or consumption.

Another school of thought from both the British Chartered Institute of Purchasing and Supply (CIPS) and the journals such as The European Journal of Purchasing Management, states that the process undertaken by the organizational unit that, either as a function or as part of an integrated supply chain, is responsible for procuring or assisting users to procure, in the most efficient manner, required supplies at the right time, quality and price and the management of suppliers, thereby contributing to the competitive advantage of the enterprise and the achievement of its corporate strategy.

According to, the process in the purchasing definition refers to the chain or sequence of activities involved in procuring supplies (Lyson, 2006).

However, the organizational unit or responsibility centre could refer to a department, team, cost or profit centre responsible for all purchasing activities under the control of a designated manager.

2.4.3 PROCUREMENT AS A LINK IN THE SUPPLY OR VALUE CHAIN

Procurement along with such activities as production, warehousing and transportation, is one of the links in the supply chain or sequence of processes by which supplies are converted into finished products and delivered to the purchasers, supply and value chains (Monczka, 2000).

KNUST

2.4.4 PROCUREMENT AS A RELATIONSHIP

Procurement relationships may be both internal and external, short-or long-term. Internal relationships are with other links in the supply chain, such as initiator(s) of a purchasing and the users of the goods procured. Increasingly, internal relationships are cross functional and based on teamwork (Trent, 2002).

External relationships with suppliers may represent supplier alliances. Many organizations now rely on suppliers to design, develop and manufacture items that they would previously have produced themselves.

Ford (1990) explains the main issue facing managers is no longer about 'buying the right products as right time at the right price' but of handling and developing relationships with key supplier, over long periods.

2.5 EVOLUTION OF PROCUREMENT

Evolution of procurement shows the various stages procurement or purchasing started from and eventually advanced to this stage in our modern times. (Lee, 1990)

2.5.1 PRODUCT CENTRED PROCUREMENT (1940- 1946)

Babbage (1832) details that key officers often an operator, supervisor is the material man who selects, purchases, receives and delivers all articles needed for production. Emphasis was on the product purchased when needed.

Hend (1995) indicates that procurement if not done well can handicap the company but can make little positive contribution to the business.

Lyson (2006) shows that procurement at this stage is product focussed which concentrates exclusively on the purchasing of tangible products.

Therefore for this stage procurement was how to get the products needed and no emphasis was on process and who is solely responsible and accountable.

2.5.2 PROCESS CENTERED PROCUREMENT (1947 – 1970s)

Henderson (1990) states that procurement is a neglected function in the organisational management. The study went on to state that never could a company be more visualised than its competitors because of successful superior procurement skills and processes.

Fearson (1968) makes it clear that procurement need not be a department within the firm, recognising the role of procurement agents to determine sources of suppliers.

Procurement is integrated in each department's process of work.

It is during this era procurement process was measured via the outcome delivered.

2.5.3 RELATIONAL PROCUREMENT (1970 –1990)

Fearson (1968) implies that procurement involves multiple sourcing through competitive pricing and never the supplier as a value added partner. Price competition was the major determining factor for supply contracts.

Another school of thought by Lyson (2006) is procurement expands to include purchasers –supplier relationship to enhance the quality and nature of supplies.

It is at this stage procurement managers had been recognised within the corporate hierarchy (John Hill, 1975).

2.5.4 PERFORMANCE CENTRED PROCUREMENT (1990 –2000s)

Procurement focuses on best product management methods, employed an integrated mythology to manage relationships, processes and performances (Lysons, 2006).

Monczka (2000) indicates that procurement moved toward the quality and role of the supplier, which involved supplier development, supplier evaluation, payment process and customer satisfaction. Two main steps of procurement are

1. Procurement role in improving changing technology by way of property and equipments needed to satisfy customers
2. Procurement has to use international data networks and worldwide webs such intranet, SAP etc

Lansing (1995) explains that procurement in modern times aims at achieving maximum performance benefits for the organisation with respect to its goal and objectives. Besides procurement must be integrated with customer requirements, operations, logistics, HR, finance, marketing and IS&T.

2.6 PROCUREMENT PROCESS

Trent (2002) indicates that procurement process involves the major steps needed to acquire goods and services from the right suppliers, at the right time, cost, quality, quantity, and place and target customers. This comprises of the following steps

- ❖ Procurement objectives
- ❖ Procurement span of control
- ❖ Procurement cycle
- ❖ Procurement documents
- ❖ Types of purchases
- ❖ Improving procurement processes

2.6.1 PROCUREMENT OBJECTIVES

According to Monczka (2000) the procurement objectives are the main requirements needed are purchase goods on time and in full under the best condition to the target customer.

There are six main steps, which are as follows:

1. Support operational requirement
2. Manage the purchasing process efficiently and effectively
3. Select, develop and maintain sources of supply
4. Develop strong relationships with other functional groups
5. Support organizational goals and objectives
6. Develop integrated purchasing strategies that support organizational strategies

2.6.1.1 SUPPORT OPERATIONAL REQUIREMENTS

Procurement must perform a number of activities to satisfy the operational requirements of internal customers. Procurement supports the needs of operations through several purchases typical examples are raw material, components, subassemblies, repair and maintenance items and services. In view of this, during new product development procurement also forms part of the team to support engineering and technical groups (Handfield, 2002).

According to Kolchin (1999) vertical integration is a means of managing sources of supply i.e. an organisation controls the inputs that support the internal suppliers in the supply chain.

However, many industries are moving away from vertical integration and relying increasingly on external suppliers and procurement plays a key role to support this movement by providing an uninterrupted flow of high-quality goods and services that internal customers require. Supporting this flow requires purchasing to

1. Buy items at the right price
2. From the right source
3. At the require specification
4. In the right quantity
5. For delivery at the right time
6. To the right internal customer

Therefore, procurement must be responsive to the material and support needs of its internal operational customers. Failing to respond to the needs of internal customers

will diminish the confidence these internal customers have in purchasing resulting in backdoor buying. This term means internal customers negotiating contracts themselves and not through purchasing.

2.6.1.2 MANAGEMENT OF THE PROCUREMENT PROCESS

Trent (2002) indicates that procurement must manage its internal operations efficiently, by determining staff level, developing and adhering to administrative budgets, providing professional training and growth opportunities for employees and introducing purchasing system that leads to improvement in production good decisions.

Procurement management has limited resources available to manage the purchasing process, and must continuously work toward improved utilization of these resources. Limited resources include employee's working within the department, budgeted funds, time, information, and knowledge. This implies that procurement employee is required to have developed the skills necessary to deal with the wide variety of tasks faced by purchasing.

26.1.3 SOURCES OF SUPPLY

According to Burt (1990) one of the most important requirements of the purchasing function is the selection, development, and maintenance of supply and this process is key in the strategic supply management process. Procurement selects and manages a supply base capable, of providing performance advantage in product cost, quality, technology, delivery, or new product development. Trent (2002) states that generally some companies have adopted this principle and have improved on-time delivery and reduced cycle times by working closely with suppliers in sharing production

schedules and forecasts, working with suppliers to reduce non-value-added time in their processes, and helping them to improve the scheduling of deliveries. Supplier had to improve their scheduling processes reduce setup times, reduce order-entry errors change their facility layout, and do whatever necessary to improve delivery performance.

2.6.1.4 RELATIONSHIP WITH OTHER FUNCTIONAL GROUPS

Procurement must communicate closely with other functional groups, which are purchasing internal customers (Kolchin, 1999). For instance if a manufacturing personnel is complaining that parts received from a supplier are defective, than purchasing must work closely with the supplier to improve quality. This requires that purchasing must develop positive relationship and interact closely with other functional groups.

2.6.1.5 SUPPORT ORGANIZATIONAL GOALS AND OBJECTIVES

This requirement implies that purchasing can directly affect (positively or negatively) total performance and that purchasing must concern it with organizational directives (Trent, 2002). For example let's assume an organization has an objective of reducing the amount of inventory across its supply chain. Procurement can work with suppliers to deliver smaller quantities more frequently, leading to inventory reductions. Therefore, policies will show up as improved performance on the firm's balance sheet and income statements. However, the ability to support organizational goals requires a fundamental shift in the way that executive management views purchasing. Procurement can no longer be a support function, but must be recognized as a strategic asset that provides a powerful competitive advantage in the marketplace. In

order for this to happen, purchasing must deliver timely results that contribute to organizational goals and objectives.

2.6.1.6 PROCUREMENT AND ORGANIZATIONAL STRATEGY

The procurement section in a company monitors supply markets and trends (e.g., material price increases, shortages, changes in suppliers) and interpret the impact of these trends on company objectives.

Burt (1990) identifies the critical materials and service required to support company strategies in key performance areas, particularly during new product development. Finally it develops supply options and contingency plans that Support Company plans.

2.7 PURCHASING'S SPAN OF CONTROL

Kleiner (1993) defines “Span of control as a human resource management term that refers to the number of subordinates and supervisors that can be effectively managed and illustrates the hierarchy of control”. Purchasing is a functional group in the organization hence has the authority to take certain key decisions in the business such evaluating and selecting suppliers and review specifications.

2.8 EVALUATE AND SELECT SUPPLIER

One of the most important duties of procurement is the right to evaluate and select suppliers since it has the expertise and specialization to carry out this responsibility. It is important to retain this right to avoid “backdoor” buying and selling – a situation that occurs when suppliers contact and attempt to sell directly to end users or internal customers in an organization (Emily Kay, 2005). Even though procurement has the

right to request assistance when identifying or evaluating potential supplier product and process performance capabilities the sales representative or heads of departments need not enter into contract agreements with suppliers. This is because certain technical details would be lacking and rather the selection decision becomes more of a consensus process than to the benefit of the company.

Allowing non-purchasing departments to select suppliers invites questionable behaviour between buyers and seller and risks the selection of less qualified suppliers. It could also result in poorly worded contracts, increased supply risk, redundant paperwork, and the lack of a unified buying policy. Organizations often issue a policy statement outlining the guidelines to follow in this area.

2.9 REVIEW SPECIFICATIONS

Mullins (2007) shows that the authority to review material specifications is also within purchasing span of control, although engineering sometimes disputes this right. The right to question allows purchasing to review specifications where requires. For example, purchasing may question whether a lower cost material can still meet an engineer's requirements (Monczka, 2000). The right to question material specification also helps avoid developing material specifications that only a user's favourite supplier can satisfy. A review of different requisitions may also reveal that different users actually require the same material. By combining purchase requirements, purchasing can often achieve a lower total cost.

2.10 THE PROCUREMENT CYCLE

According to Monczka (2000) a procurement cycle is a process of identifying the needs of users from potential supply. The procurement processes as a cycle consist of five major stages:

1. Identify or anticipate material or service needs.
2. Evaluate potential supply sources.
3. Select suppliers.
4. Release and receive material requirements.
5. Continuously measure and manage supplier performance.

2.11 IDENTIFICATION OF MATERIAL AND SERVICE NEEDS

The procurement cycle begins with identifying or anticipating a material or service need. Material requirements can be for equipment, components, raw materials, subassemblies, or even completely finished products (Weele, 2001). Examples of services requirements include a need for computer programmers, hazardous waste handlers, transportation carriers, or maintenance service providers. These are the various systems used for identification of material and service needs

- Purchase requisitions
- Forecasts and customer orders
- Reorder point systems
- Stock checks
- Cross-functional new product development teams

2.12 PURCHASE REQUISITIONS

Wikipedia dictionary (2007) states, “A purchase requisition is an authorization for a purchasing department to procure goods or services”. It is originated and approved by the department requiring the goods or services. The most common way to inform purchasing of a requirement is through a purchase requisition document completed by a user that informs purchasing of a specific material need. A standard purchase requisition is used most often for routine, noncomplex items, which are increasingly being transmitted through online requisition systems linking users with procurement (Kolchin, 1999). An online requisition system is an internal system designed primary to save time through efficient communication and tracking of material requests. Users should use these systems only if they require procurement’s involvement.

2.13 FORECASTS AND CUSTOMER ORDER

Kolchin (1999) indicates that a customer order for an item triggers a need for components or signal the need for existing materials. As companies increasingly customize products to meet the need of individual customers, purchasing must be ready to support new material requirements. Maker forecasts can also signal the need for material. An increasing product forecast, for example may signal the need for additional or new material. If a supplier already is selected to provide that material, then an automated ordering system such as material requirements planning (MRP), may forward the material request to suppliers automatically (Kolchin, 1999).

2.14 REORDER POINT SYSTEM

According to Khan (2007) states that the reorder point for replenishment of stock occurs when the level of inventory drops down to zero. In view of instantaneous

replenishment of stock the level of inventory jumps to the original level from zero level. In real life situations one never encounters a zero lead time. Reorder point system as mentioned by Trent (2002) is a widely used way to identify purchase needs. Reorder system uses information regarding order quantity and demand forecasts that are unique to each item or part number maintained in inventory. Each item in a reorder point system, which is usually computerized, has a predetermined order point and order quantity. When inventory is depleted to a given level, the system notifies the material control department (or the buyer in some organizations) to issue a request to a supplier for inventory replenishment. This signal might be a blinking light on a screen, a message sent to the material control department's e-mail address, or a computer report. Most reorder point system is automated using predetermined ordering parameters (such as an economic order quantity, which considers inventory holding and ordering cost). Computer-based system can instantly calculate reorder point parameters. Most system can also calculate the cost tradeoffs between inventory holding costs, ordering cost and forecast demand requirement. Reorder point system is used for production and non-production items.

2.15 STOCK CHECKS

Monczka (2002) indicates that stock checks (or cycle counts) involve the physical checking of inventory to verify that system records (also called the record on hand) match actual on hand inventory levels- also called the physical on hand (POH). If the physical inventory for an item is below the system amount, an adjustment to that part's record can trigger a reorder request for additional inventory.

2.16 CROSS-FUNCTIONAL TEAM

When users contact purchasing with a specific need, we say that purchasing is operating in a reactive manner (Trent, 2002). On the other hand when procurement works directly with internal customers to anticipate future requirements, such as during new development, purchasing is being proactive. What does it mean to anticipate a requirement? If purchasing is part of new product development teams, then the opportunity exists to see product designs early stages of the process. Procurement can begin to identify potential suppliers for expected requirement rather than reacting to an engineering requirement.

2.17 EVALUATE SUPPLIERS

Emily Kay (2005) explains that, “supplier evaluation is the second step in the procurement cycle process”. The potential evaluation of suppliers begins after determining that a purchase need exist (or is likely to exist) and the development of material specifications occurs. For routine or standard product requirement with established or selected suppliers, further supplier’s evaluation and selection is not necessary. However, potential sources for new items, especially those of a complex nature, require thorough investigation to be sure that purchasing evaluation only qualified suppliers.

However, Burt (1990) indicates that the source evaluation process required the development of list potential suppliers. This list may be generated from a variety of sources, including market representatives, experience with suppliers, information databases, and trade journals. For some items, companies may maintain a list of “preferred suppliers” who receive the first opportunity for new business. Preferred

suppliers can reduce the time and resources required for evaluating and selecting suppliers.

Buyers use different performance criteria when evaluating potential suppliers. These criteria are likely to include a supplier's capabilities and past performance in product design, commitment to quality, management capability and commitment, technical ability, cost performance, delivery performance, and the ability to develop process and product technology. These factors are weighted in the supplier evaluation process.

2.18 SELECTION OF SUPPLIERS

Trent (2002) shows that a final supplier selection occurred once procurement completed the activities required during the supplier evaluation process. Selection of suppliers was one of the most important activities performed by companies. Errors made during this part of the purchasing cycle can be damaging and long-lasting.

Competitive bidding and negotiation are two methods commonly used when making a supplier selection decision.

2.19 BIDDING

Wikipedia dictionary (2007) explains, "Bidding as an offer (often competitive) of setting a price one was willing to pay for something". A price offer is called a bid.

Wikipedia dictionary (2007) further details that "Bidding up" means raising a price for an item by a series of rising bids. It may be unlawful, if done by a group of persons with an interest in raising the price.

Competitive bidding in private industry involved a request for bids from suppliers with whom the buyer is willing to do business (Trent, 2002). This process is typically

initiated when the purchasing manager send a request for quotation to the supplier. The objective is to award business to the most qualified bidder. Purchasers often evaluate the bids based on price. If the lowest bidder does not receive the purchase contract, the buyer has an obligation to inform that supplier why it did not receive the contract. Competitive bidding is effective under certain conditions.

- Volume is high enough to justify this method of business.
- The specification or requirements are clear to the seller. The seller must know or have ability to estimate accurately the cost of producing the item.

Buyers use competitive bidding when price is a dominant criteria and the required item (or service) has straightforward material specifications. In addition, competitive bidding is often used in the defence industry and for large project (e.g. construction projects, information system development).

2.20 NEGOTIATION

Wikipedia dictionary (2007) defines “Negotiation as a dialogue intended to resolve disputes, to produce an agreement upon courses of action, to bargain for individual or collective advantage, or to craft outcomes to satisfy various interests”. Negotiation involves three basic elements: process, behavior and substance (Monckza, 2000). The process refered to how the parties resolve disputes whereby one takes into account the context of the issue, the parties to the negotiations, the tactics used by the parties, and the sequence and stages in which all of these play out. Behavior refers to the relationships among these parties, the communication between them and the styles they adopt. The substance refers to what the parties negotiate over: the agenda, the issues , options, and the agreement reached at the end.

Negotiation according to Churchman (1993) states that negotiation was logical when competitive bidding is not an appropriate method for supplier selection. Face-to-face negotiation is the best approach.

- When any of the previously mentioned criteria for competitive bidding are missing. For instance, when the item may be a new and/or technically complex item with only vague specifications.
- When the purchase requires agreement about a wide range of performance factor, such as price, quality, delivery, risk sharing and product support.
- When the buyer requires early supplier involvement.
- When the supplier cannot determine risk and costs.
- When the supplier requires a long period time to develop and produce the items purchased. This often makes estimating purchase costs on the part of the supplier difficult.

As firms continue to develop closer relationships with selected supplier, the negotiation process has become one of most reaching agreement in items of cooperate business. . For standard items, the competitive bid process will remain an efficient method purchase relatively straightforward requirements. The bid process can also reduce the list of potential suppliers before a buyer begins time-consuming and costly negotiation.

2.21 RELEASE AND RECEIVE PURCHASE REQUIREMENTS

Trent (2002) emphasises that the release and receive purchase requirements phase of the purchasing cycle involves the physical transmittal of purchase requirements. This should be a fairly routine, although not necessarily the most efficient, part of the purchasing cycle. Some organization transmits orders electronically, while others send material releases through the mail or by fax. Purchasing or materials planning must minimize the time required to release and receive material.

2.22 PERFORMANCE EVALUATION OF SUPPLIERS

According to Emily Kay (2005) one way to identify the best suppliers was to track performance after awarding a contract. Supplier measurement and management was a key part of the purchasing cycle. Buyers should not assume that the purchasing cycle ends with the receipt of an ordered item or the selection of a supplier. Continuous measurement is necessary to identify improvement opportunities or supplier non-performance.

A major issue when evaluating supplier performance is the frequency of evaluation and feedback, which could be daily, weekly, monthly, or quarterly basis. For many firms, this overall evaluation may occur only one or two times a year. Regardless of the reporting frequency, supplier performance measurement is an important part of the purchasing process cycle.

2.23 PROCUREMENT AS A PROCESS

The Procurement process chain

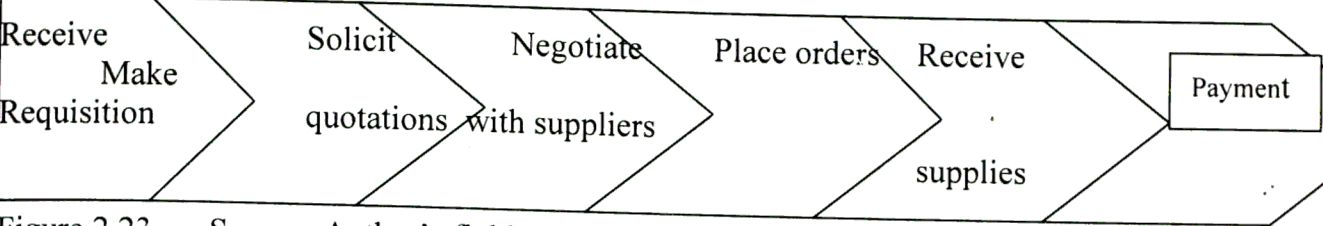


Figure 2.23 Source: Author’s field survey

2.24 REQUEST FOR QUOTATION

“A request for quotation (RFQ) is discribed as a standard process and the purpose is to invite suppliers into a bidding process to bid on specific product and services” (Wikipedia dictionary, 2007).

An RFQ involves more than the price per item. Information like payment terms, quality level per item or contract length could be requested during the bidding process.

Monczka (2000) shows that if the purchase requisition requests an item with no existing supplier, then purchasing may obtain quotes or bids from potential suppliers. Purchasing would forward a request for quotation (RFQ) to suppliers inviting them to submit a bid for a purchase contract (Trent, 2002). The quotation form provides space for the information that suppliers require to develop an accurate quotation, including the description of the item, quantity required, date needed, delivery location, and whether the buyer will consider substitute offers. Procurement can also indicate the date by which it must receive the supplier’s quotation. The supplier completes the form by providing name, contract person, unit cost, net amount, and any appropriate payment terms. The supplier then forwards the request for quotation to the buyer for comparison against other quotations. The normal practice is for a buyer to request at least three quotations. Procurement evaluates the quotations and selects the supplier most qualified to provide the item.

2.25 PURCHASE ORDER

“Purchase Order (PO) is a commercial document issued by a buyer to a seller, indicating types, quantities, and agreed prices for products or services the seller will provide to the buyer” (Wikipedia dictionary, 2007). Sending a PO to a supplier constitutes a legal offer to buy products or services. According to Trent (2002) a purchase order (PO), sometimes called a purchasing agreement, takes place after a supplier has been completely selected. An approved purchase requisition when processed results in purchase order. Procurement must take great care when wording a purchase agreement because it is a legally binding document. Almost all purchase orders include the standard legal conditions that the order (i.e., the contract) is subject to on the reverse side of the agreement. The purchase order details critical information about the purchase: quantity, material specification, quality requirements, price, delivery date, method of delivery, ship-to address, purchase order number, and order due date. This information, plus the name and address of the purchasing company, appear on the front side of the order.

Procurement forwards a copy of the purchase order to accounting (i.e., accounts payable), the requesting department, receiving, and traffic (either electronically or manually).

Procurement usually keeps several copies for its records. There are good reasons for other departments to have visibility to purchase orders and incoming receipts. The accounting department gains visibility to future accounts payable obligations. It also has an order against which to match a receipt for payment when the material arrives.

The purchase order provides the requesting department with an order number to include in its records.

The requestor can refer to the purchase order number if her or she must inquire into the status of records. Receiving has a record of the order to match against the receipt of the material. Receiving has a receiving also can use outstanding purchase orders to help forecast its inbound workload.

Traffic becomes aware of inbound delivery requirements and can make arrangement with carriers or use the company's own vehicles to schedule material delivery.

Purchasing uses its copies of the purchase order for follow-up monitoring open orders. Orders remain active in all departments until the buying company acknowledges receipt for the order and that it meets quantity and quality requirements (Burt, 1990).

Most firms are increasingly using computerized databases such as SAP to perform these processes, and moving toward a "paperless" office. Paper transfer and handling in a manual purchase order system represent minimal, if any value-adding activity.

2.26 PURCHASE RELEASE

"Purchase release can be said as a standard form used by employees to authorize payment of invoices on a blanket purchase order" (Wikipedia dictionary, 2007). All invoices for a blanket purchase order must be matched with a purchase order release before they are entered into the electronic system. If accounts payable receives a blanket order invoice, they will route the invoice back to the department. The department will attach this release form to the invoice and route back to accounts payable for data entry.

Procurement specifies the required part numbers, quantity, unit price, required receipt date, using department, the ship-to address and the method of shipment and forwards this to the supplier. Purchasing forwards copies of this form to the supplier,

accounting, receiving and traffic. Purchasing retains several copies for its records. The copy to the supplier serves as a notification of a required item of item.

2.27 BILL OF LADING

“Bill of lading is described as a document issued by a carrier, e.g. a ship's master or by a company's shipping department, acknowledging that specified goods have been received on board as cargo for conveyance to a named place for delivery to the consignee who is usually identified” (Wikipedia dictionary, 2007). A through bill of lading involves the use of at least two different modes of transport from road, rail, air, and sea.

Transportation carriers use a bill of lading to record the quantity of goods delivered to a facility (Burt, 1990). The bill of lading helps protect the carrier against wrongful allegations that the carrier somehow damaged, lost, or otherwise tampered with a shipment. This document does not necessarily protect the carrier against charges of concealed damage, however. A user may discover concealed damages after opening a shipping container. Responsibility for concealed damage is often difficult to establish.

The receiving company may blame the carrier. The carrier may blame the supplier may maintain total innocence and implicate the carrier. While all this goes on, the buyer must record the material as a rush order. This can affect customer service commitments (Monckza, 2000).

2.28 MAKE PAYMENT

According to Trent (2002) accounting receives a copy of the payment order so it can match the quantity received against the quantity ordered for payment purposes.

Receiving must have visibility on incoming orders so it can compare ordered quantities with received quantities. As with other forms, this part of the process is increasingly becoming electronic.

Different types of material release exist. Organization often uses the material release as a mean to provide visibility to the supplier about forecasted material requirement as well as actual material requirements.

2.29 TYPE OF PURCHASES

There are categories of items that can be purchased such as raw materials, semi finished products, finished products, maintenance repair and operating items and production support items

2.30 IMPROVING THE PURCHASING PROCESS

Most Ghanaian companies spend too much time and too many resources to manage the ordering of good and service, particularly lower-value items (Monczka, 2000).

Online ordering is a logical approach once an organization has established a blanket purchase agreement or longer-term contract with a supplier. The strategic part of the purchasing process involves identifying, evaluating, and selecting suppliers. Online ordering systems, allow purchasing or users to place orders directly into supplier's order-entry system. Advantages of online ordering system include

- Immediate visibility to backordered items
- Faster order input time, which contributes to reduce order cycle tome
- Reduced ordering errors
- Order tracking capabilities

- Order acknowledgment from the supplier often with shipping commitment dates
- Ability to batch multiple items from multiple users on a single online order
- Faster order cycle time from input to delivery.

Suppliers establish online ordering system so purchasers can have dedicated access to the suppliers order-entry system. The system creates a seamless tie-in or linkage between organizations. Third-party software producer such as System Application Program (SAP) has been of great use (Burt, 1990).

- SAP is computer software used in most companies such as brewery industry, aircraft, car manufacturing industries and others that enhances the supply chain network. Procurement uses it to generate purchase requisitions, purchase orders and purchase release notes. The list of all suppliers used by the company is set in the system during installation. For the manufacturing companies all the various stages are also set up before made available to the users. This system since it is electronic makes generating orders faster, easier and reliable. If the company has several sites all could be connected to the system hence workers can observe (not change) other sites performance and request for other raw materials or spares, which are in excess on another site through the system.

CHAPTER THREE

METHODOLOGY

3.0 INTRODUCTION

This chapter discussed the methodology that was used for the study. It comprised, research design, questionnaire design, population of the study, sampling procedures, instruments for data collection, pre-testing of instruments, data analysis procedures and company profile.

3.1 RESEARCH DESIGN

The nature of the study was observational and descriptive. However, the literature review was predominantly desk study and research.

The descriptive survey was the design that was used in this study. It was used because of several reasons advanced by authorities in research methodology.

Descriptive research involves collecting data in order to address research questions concerning the current status of the subject of study. It also determines and reports the way things are (Gay, 1987). The descriptive design was towards determining the nature of a situation, as it existed at the time of the study. Wallen (2002) states that obtaining answers from a large group of people to a set of carefully designed and administered questionnaires is the heart of a survey research.

According to Hungler (1993) a descriptive survey aimed predominantly at describing, observing and documenting aspect of a situation as it naturally occurs rather than explaining them. The design has an advantage of producing a good amount of responses from a wide range of people.

3.2 QUESTIONNAIRE DESIGN

The method employed was both direct and indirect. Direct method involved the use of questions, which elicit specific responses, and in most cases dichotomous questions were used which were close-ended questions. For example “Tick your status in the organisation a) management staff b) unionised staff”.

The indirect question involved the use of less obvious, often open ended in nature requiring a more general response. For example a question that aimed at evaluating the use of SAP in GGBL such as “How has SAP enhanced your ways of working? A question of this nature allowed the respondent to display knowledge and may produce a more truthful response, with respect to this open ending question. (Abramson, 1990)

3.3 POPULATION OF THE STUDY

The population for the study was varied, and diverse, which was Guinness Ghana Breweries Limited (GGBL), employees and suppliers. The target population comprised GGBL unionised staff, managers from finance, marketing, sales, production and human resources departments and key suppliers. All these people had vital information about the operations of GGBL and the brewery industry at large. They are involved in the supply chain management at different stages of the process and were therefore considered to be respondents who could contribute vital information to the entire process.

3.4 SAMPLING PROCEDURE

The sampling frame used was the list of the employees of Guinness Ghana Breweries at Kaasi. The total number of managers was fifty-five (55). At the time of the survey, five were on annual leave. This leaves a total of fifty (50) managers. Fifty questionnaires were administered and forty-five (45) were received. The total response rate in this category was 81.8% and the active response rate was 90.0%.

For junior or unionized staff the total number on the list was seventy (70). At the time of the survey eleven (11) were on leave. Fifty-nine (59) questionnaires were administered and fifty-five responded. The total response rate in this category was 78.57% and the active response rate was 93.22%.

For the suppliers, who participated, were from different companies, which were either providers of goods or services. They were Mearsk Sealand transporter, Techno Serve company limited, Qualipack Limited, Pelliconi Crown Limited, Cargil grains Limited, Chef Delight, Vintaq cleaning company, Keclean Cleaning Company, Kwame Kwarteng Chemical accessories Limited, Sudchemie detergent Limited, L'iane Services Limited, Kronos Ghana Limited and Ahinsan Carpentry Shop. Sixty questionnaires were administered to these companies and fifty responded. The active response rate was 83.33%.

3.5 INSTRUMENTS FOR DATA COLLECTION

Two sources of data were used for this study and these were primary and secondary data sources. The primary data came from information gathered from respondents by

the researcher on the field primarily the questionnaire and few occasions interview guide.

Furthermore for the interviews it involved face-to-face interviews, telephones surveys and hand delivery surveys. The personal interviews were conducted to encourage high response rate, completion of questionnaire and to obtain first hand information and other relevant observation, especially for a few of the unionised staff. The interview was structured making it flexible and pointed to the relevant information but it also allowed the respondents the opportunity to ask for further information if they so wish. (Hanke and Reitsch, 1991)

The secondary source of data was GGBL operational and financial data.

3.6 PRETESTING

The instrument was pilot tested on the GGBL Ahinsan site, which has managers and unionised staff, besides they are also familiar with brewing. This site is soon to be closed down hence not all functions and departments were represented. Employees from production, HR and sales were used. Pilot testing is crucial in any scientific study and scholars in research methodology had shown that.

Hundley (2001) indicated that the term 'pilot studies' refers to mini versions of a full-scale study (also called 'feasibility' studies), as well as the specific pre-testing of a particular research instrument such as a questionnaire or interview schedule. Pilot studies are a crucial element of a good study design. Conducting a pilot study does not guarantee success in the main study, but it does increase the likelihood.

Adding more to the justification for pilot testing in a research study Hungler (2001) noted that the term pilot study is used in two different ways in social science research. However, a pilot study can also be the pre-testing or 'trying out' of a particular

research instrument (Baker 1994). One of the advantages of conducting a pilot study is that it might give advance warning about where the main research project could fail, where research protocols may not be followed, or whether proposed methods or instruments are inappropriate or too complicated. In the words of De Vaus (1993) "Do not take the risk, pilot test first." These are important reasons for undertaking a pilot study, but there are additional reasons, for example convincing funding bodies that your research proposal for the main study is worth funding. Above all it helped to verify whether the instruments were valid and reliable.

With the actual pilot testing, a total of fifteen (15) respondents were used, which was made up of six (6) managers and nine (9) unionised staff. The fifteen respondents were made up of twelve (12) production employees, one (1) HR employee and two (2) sales staff. The researcher conducted the pilot testing personally and it lasted for two weeks.

3.7 DATA ANALYSIS PROCEDURES

Data collected by the researcher were collated and edited for clarity of responses. After this process, the responses were coded for analysis. When the input processes were completed, data was transformed into simple frequency percentages. The results of the computed analysis are presented and discussed in Chapter Four. Graphical methods involving SPSS analytical tool and simple frequency percentage were used to analyze the data and pie charts and bar charts used in presenting the pictorial view of the data. Secondary data from financial report of Guinness Ghana Breweries Limited for 2007 was analysed to assess the company's performance and bar charts used for the pictorial view.

3.8 COMPANY PROFILE

Guinness Ghana Breweries Limited (GGBL) was the sixth largest Guinness market in the world and it is listed on the Ghana stock exchange. Guinness Ghana Breweries Limited was incorporated in Ghana in 1971.

However in 1971 the company could produce a total production capacity of one hundred and fifty thousand (150,000) hectoliters (hl). The production then consisted of a manual Brew house capable of producing two brews per day and a Packaging line capable five hundred (500) hl per day of one brand.

This capacity was able to sustain the business achieving its sales target regularly. However, the fortune of the company changed dramatically in 1978 when there were issues with foreign exchange. This was because the major raw materials were then all imported and this impacted on the financial position of the company. Thus the company had to reduce its production capacity and some staffs were laid off. The capacity of the company was significantly reduced to working for only a few days in a week. Between 1978 and early 1980 there was an overall reduction in the beer market due to the general economic situation. This trend continued till 1986 when the company decided to invest in second packaging line that with a technology that is faster, and delivers high quality as compared to the previous Packaging line. This investment took the capacity from one hundred and fifty thousand (150,000) hl to two hundred and fifty thousand (250,000) hl per annum.

The company continued its expansion program till 1997 when it became part of Diageo the world-leading premium drinks business.

3.8.1 INVESTMENT AND CREATING VALUE (INNOVATION)

Guinness's primary aim was to create value for investors by providing consumers with a range of brands using new technologies. This success created a powerful engine for economic growth. The company's success in transforming ideas to commercial value was essential to its sustainability. At Guinness there was a culture of creativity that led to new brands being introduced to meet consumer demand and expectations and to meet new markets segments or new territories. As a result of this, new brands were launched with new technologies. Malta Guinness was launched in 1989, Gordon Spark launched in 2001, Smirnoff Ice launched in 2006 and Malta Guinness Quench was launched in 2007. These innovations come with good investment in new technologies.

3.8.2 HIGH QUALITY BRANDS

The quality policy reflects the importance of quality of the brands. It had a quality management system that aimed to ensure that responsibilities are clear, personnel are properly trained, quality is monitored and sustainable targets are set for improvement. The Brewery was regularly monitored and is licensed to operate to ensure compliance with legislation and with Guinness quality management standards.

3.8.3 SUPPLIER RELATIONSHIPS

Guinness Ghana Breweries Limited sourced supplies locally and globally. It aimed to develop strong relationship with its suppliers to help ensure that the goods and services received are sustainable and can continue to obtain the best value for in terms of cost, quality, delivery, service and innovation. Strong relationships with suppliers go beyond commercial aspect of the business. It allowed the company to

encourage suppliers to maintain standards, health and safety, environmental Management and integrity.

3.8.4 CUSTOMER RELATIONSHIP

The customers of the company were responsible for the distribution and retailing of its brands. The customers comprised of major retailers who sell direct to consumers through trade bars, restaurants and clubs) or through the off trade (supermarket and stores), and wholesalers. Guinness creates business for its customers by providing them with its brands and by offering commercial skills and resources to encourage demand and maximize customer returns. GGBL has the most extensive distribution network in the brewing industry. It was the only brewing company with 100 % countrywide coverage and its network is made up of thirty one (31) Key Distributors, one hundred (130) direct accounts, three hundred (300) wholesalers and six thousand (6000) retailers. Distribution depots could be found in all regions of the country. This gave it the opportunity to expand activities in undeveloped markets. Its strategy gained market share and its position as number one was well conceived. The company had achieved a much lower cost structure than its competitors due to reduction in staff levels and machine downtime and implementation of strict management controls.

3.8.5 PROCUREMENT PROCESS

Many people within the business had regular if not daily contact with suppliers and other parties. The Procurement team was responsible for ensuring that GGBL operates responsibly and with integrity when working with suppliers. Procurement advised on which suppliers to use and negotiate the terms of the broader GGBL

Supplier agreement. Procurement was initiated by requisitions raised by the stakeholders.

3.8.6 BUYING PROCESS

1. Defined your requirements by completing a requisition either manually completing a requisition book or electronic means known as System Application program (SAP)
2. Ensure that when placing an order it is inline with your budgeted expenditure.
3. Buy only from a preferred supplier (contact the Procurement team).
4. Confirm your requirements with the supplier.
5. Confirm the rate (Ghana Cedi) with the chosen supplier and it should comply with the company's policy
6. Ensure that your line manager has approved your requisition with his/her signature.
7. Deliver the requisition form to the Procurement dept who would obtain two quotes were necessary.
8. Procurement would meet with the authorisation committees at least once a week that will review and approve or reject the requisition. Procurement would notify you of the outcome.
9. Procurement raised the order and issued the order once it is authorised by the procurement director or finance director.
10. If there were issues with the good or service received (quality, time to deliver, etc) raise them with the supplier directly in the first instance to resolve.
11. All invoices were to be sent to the accounts payable department directly by the supplier.

3.8.7 SUPPLIER SELECTION

The requesting department needed to discuss in depth with the procurement department on terms and specifications required so that procurement had a full understanding of what needed to be procured. Once procurement had a full in-depth understanding of the requesting department, procurement would proceed with the sourcing and negotiations with potential vendor/suppliers. Bidding processes would be used when appropriate

The procurement team had a list of selected and preferred suppliers approved by the business to supply each category of goods and services.

However, to change a supplier both the budget holder would discuss the need and reasons for changing supplier.

The two parties seek to agree on action plans to address the issues or agree on an exits strategy for the supplier as they sought for a new supplier

3.8.8 APPROVAL OF SUPPLIER

In GGBL, before engaging a new supplier, would need to be vetted according to the GGBL Supplier vetting criteria and the Vendor registration form must be followed completed and approved by the business. The Vendor vetting criteria and registration process was available from the Procurement department. Suppliers would not be paid until they have been approved and registered with GGBL SAP system as vendors.

3.8.9 PERFORMANCE REVIEWS

The Procurement team periodically conducted an in-depth review of each category of spend within the business. This measure was to ensure that the business is achieving best value for money from its total spend within the category as a whole, as well as

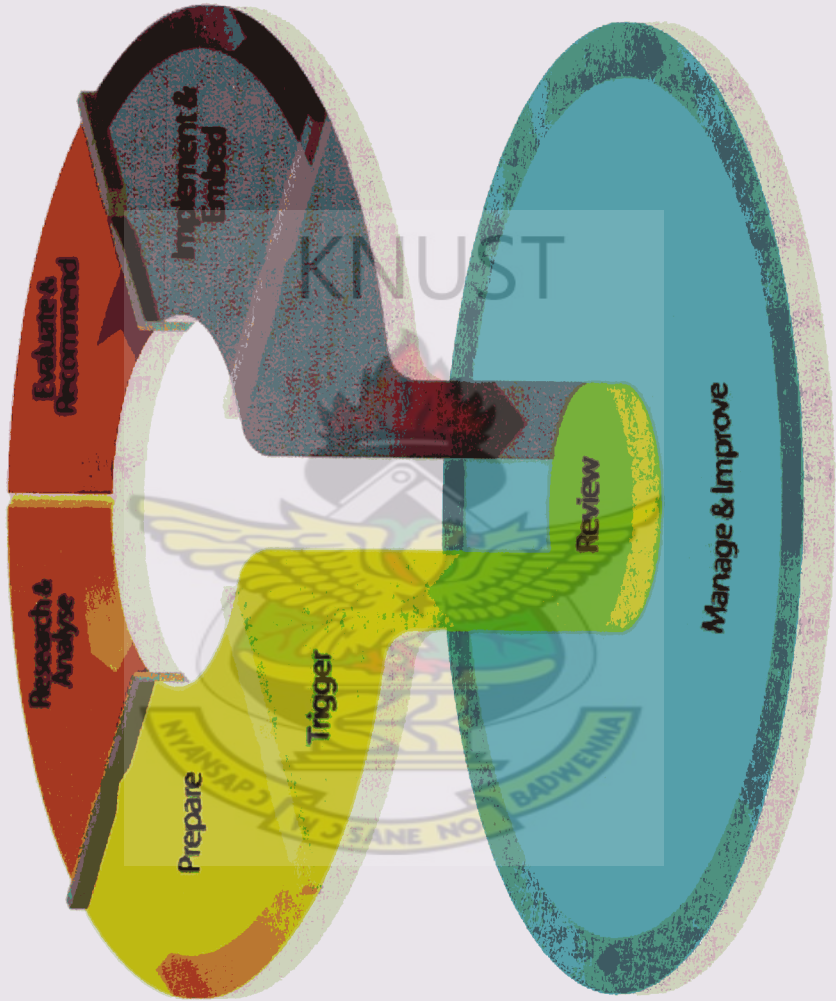
working with the right suppliers and obtaining the right quality of goods and services. The Procurement team followed the process below (as detailed figure 3.8.9) and works as part of a project team with budget-owners and other stakeholders to ensure the right business outcome for each review.

KNUST



These stages are about forming a project team with stakeholders, identifying the objectives and evaluating the supply market opportunities to fulfil our business needs.

At this stage the team will make a recommendation to the business for sign off



The trigger is the catalyst that signals the need for change within a category. For example;

- a supplier contract is due for review; or
- poor performance from a supplier means we need to consider other companies; or
- we decide to invest in some new on-trade capex.

Working consistently with stakeholders and suppliers over time to 'be the best' and unlock growth, value and innovation opportunities.

3.8.10 G GBL SUPPLIER PERFORMANCE MANAGEMENT

Effective supplier management had two elements.

Firstly, the process ensured that the supplier meets the immediate business needs in terms of cost, service and value. To do this procurement will work with the budget-holder to monitor and review the supplier's performance on a regular basis, usually against predetermined Key Performance Indicators (KPI) that have been mutually agreed. If there were issues with performance, effective supplier management was initiated to determine corrective actions and resolve issues.

Secondly, Procurement identified which of our critical few supplier relationships have the potential to impact the achievement of our business plans. The business needed to be in control of these relationships in order to deliver the untapped value existing between GGBL and the supplier. This may be about making GGBL the preferred customer of choice for our suppliers so that they came to the company first with innovative ideas and/or it may be about shifting the focus from cost management to value management.

The element of supplier management that should be utilised was KPIs

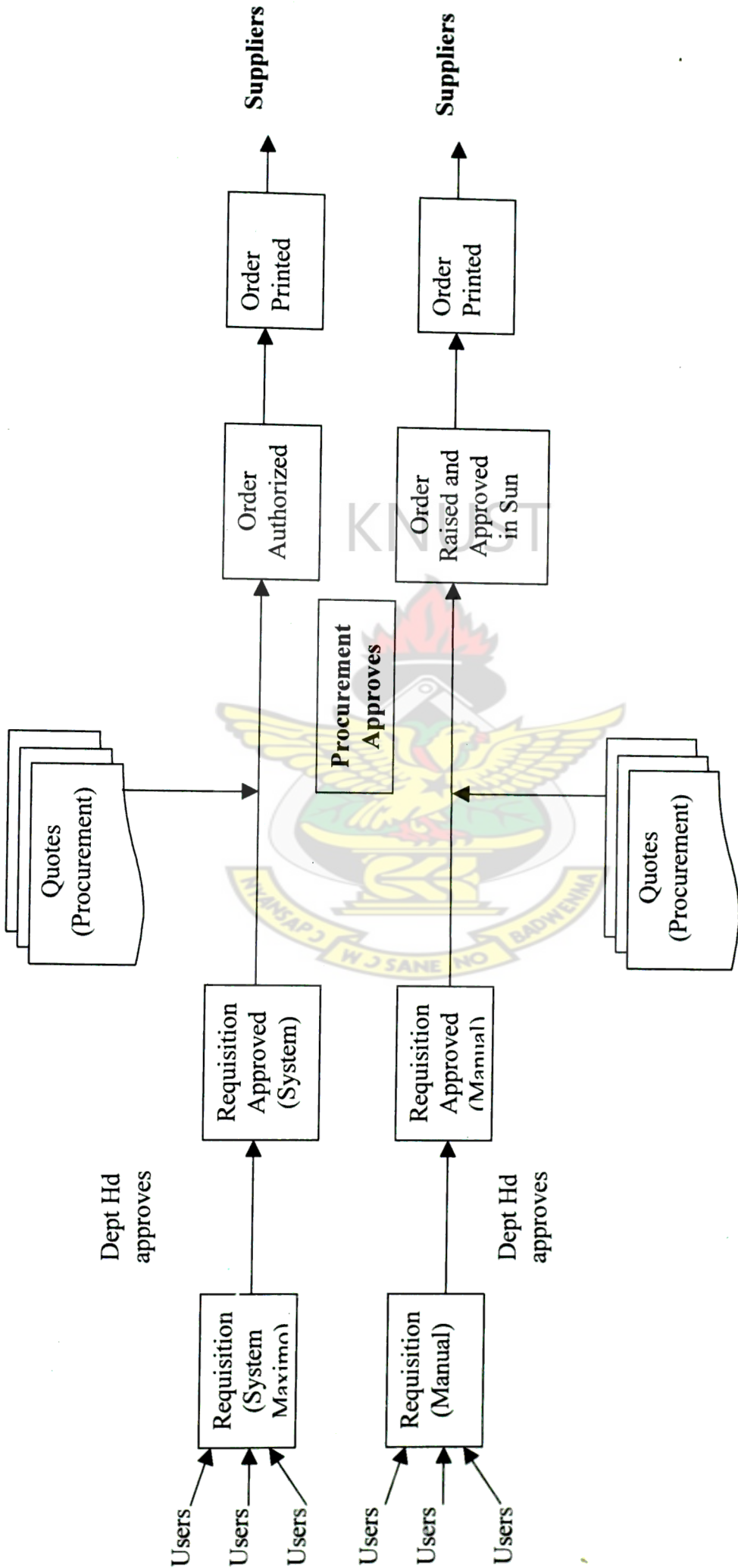
3.8.11 PAYMENT TERMS

Payment terms must be agreed with the Vendor when negotiating the contract.

However, payments made against Non-Influential Spend Vendors will normally have immediate Payment Terms, e.g. Revenue Commissioner, small value Donations.

On the other hand for suppliers other than Non-Influential Spend Vendors, standard Payment Terms are 30 Days from date of invoice.

PROCESS OF PROCUREMENT



ORGANOGRAM OF GUINNESS GHANA BREWERIES LTD

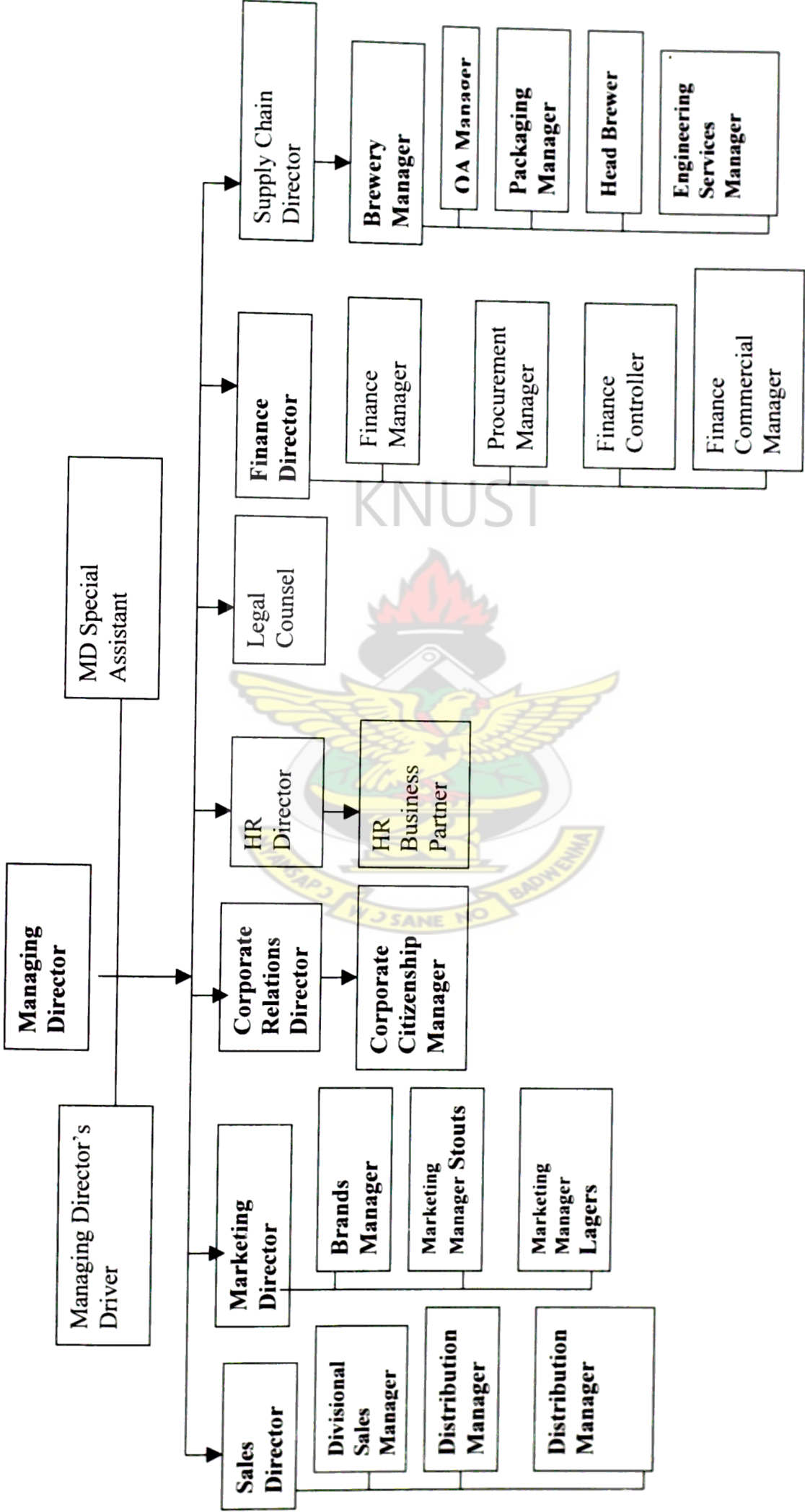


Figure 3.8.13 Source : GGBL

CHAPTER FOUR

ANALYSIS OF RESULTS

4.0 INTRODUCTION

This chapter is reviewed under the following:

- Analysis of GGBL response to questionnaire
- Analysis of suppliers response to questionnaire
- Using published business performance financial data on
 1. Profit after taxation
 2. Dividend per share
 3. Net asset per share
 4. Net assets
 5. Turnover
 6. Retained profit
 7. Earnings per share
 8. Property and Equipment to show growth

4.1 ANALYSIS OF GGBL EMPLOYEES RESPONSE TO QUESTIONNAIRE

Findings are based on Research instrument (questionnaire). The following data was collected and analyzed based on the major themes under the research instrument. A total of hundred (100) employees responded and fifty (50) suppliers responded.

4.1.1 AREA OF WORK

The total number of employees interviewed across the five departments and their percentage frequency is presented below in Table 4.1 and figure 4.1 respectively.

LIBRARY
KWAME NKRUMAH UNIVERSITY OF
SCIENCE AND TECHNOLOGY
KUMASI-GHANA

TABLE 4.1.1 AREA OF WORK

Question 4					
Which area are you currently working				%Freq	
Finance					18.5
Supply					47.8
Marketing					10
Sales					15.7
HR					7.8

Which area are you currently working

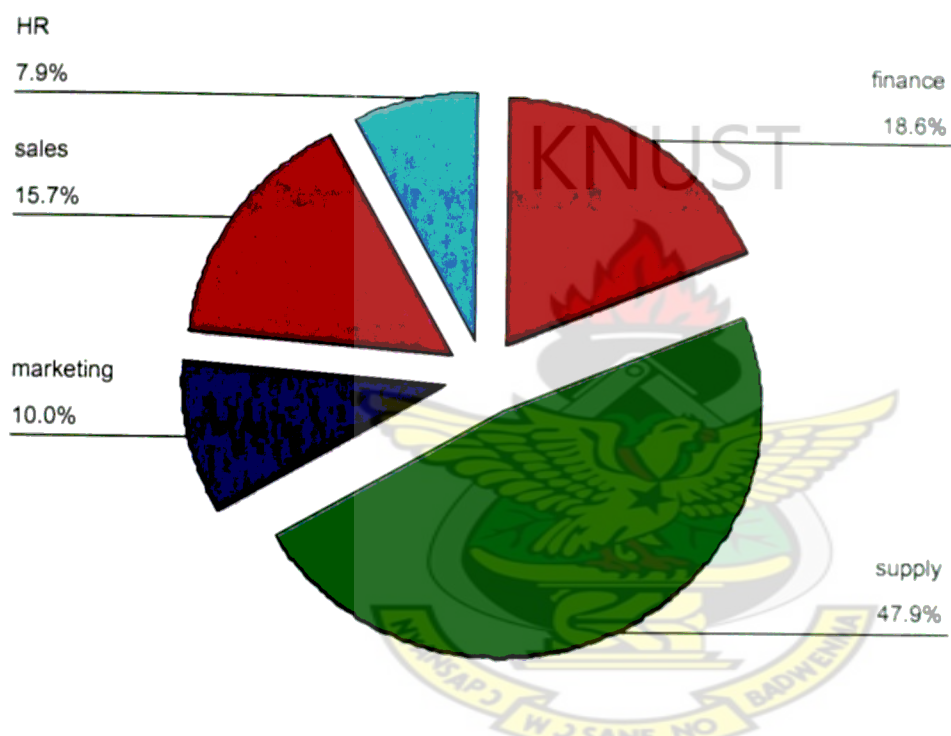


Figure 4.1.1 Source: Author’s field survey

Figure 4.1.1 shows that forty eight percent (48%) of the respondents were from supply function where about sixty percent (60%) of the routine purchases take place since they are in the majority and also need it for production. Finance and sales also make a lot of purchases as well as marketing for promotions. Sales and HR represent 15.7% and 7.9% respectively. The implication of the above distribution is that their views are necessary for discussing the topic in question, since their percentages are significant.

4.1.2 LENGTH OF SERVICE

The study was not limited to a group of employees who have spent some particular number of years but the table below indicates the various groups of employees.

TABLE 4.1.2 LENGTH OF SERVICE

Question 2					
For how long have you worked with GGBL					% Freq
1-2years					25
3-5years					29
6-10years					29
10 and above					16

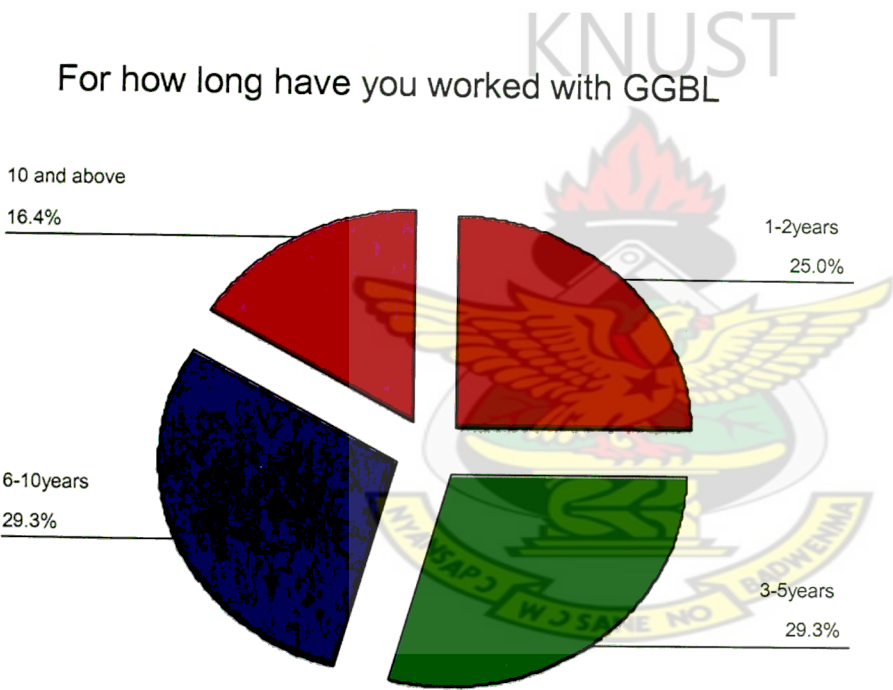


Figure 4.1.2 Source: Author’s field survey

The above figure shows the length of service profile of GGBL employees. The 3-5 years and the 6-10years, which have 29.3% each, indicate that there were a good number of employees who have spent only a few years in the company. This implied the company had a potential to grow this young generation to succeed the older generation. On the other hand, it could be that the turnaround of employees was high

hence the company had to improve ways of motivating workers to retain them to sustain the supply chain policies of the company.

4.1.3 GENDER

The table below shows the gender ratio in GGBL.

TABLE 4.1.3 GENDER

Question 1					
Gender					% Freq
Male					91
Female					9

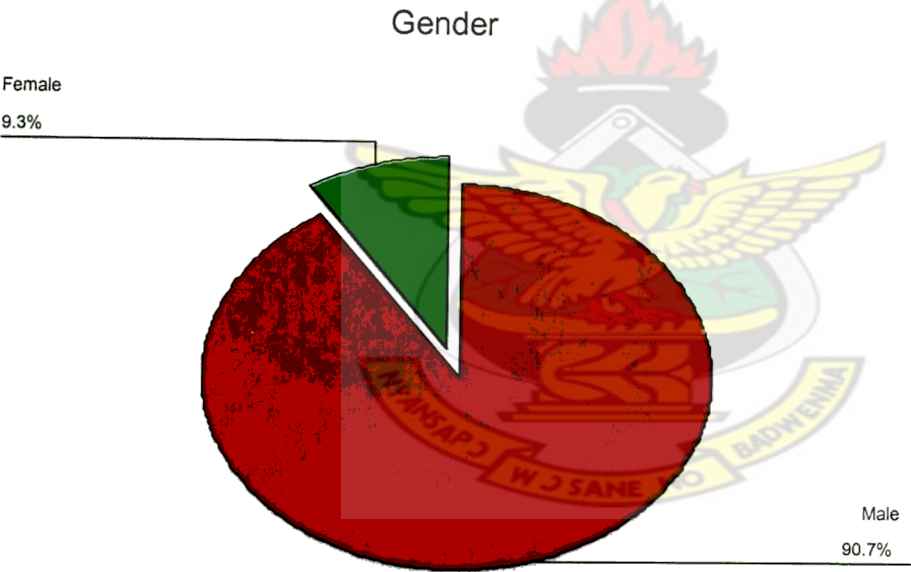


Figure 4.1.3 Source: Author’s field survey

The sex profile for respondents of GGBL employees is 90.7% are males and 9.3% are females, which showed that there is more room for gender balance.

4.1.4 STATUS IN THE COMPANY

Table 4.1.4 shows the distribution of the managers and unionised staff in GGBL.

TABLE 4.1.4 STATUS IN THE COMPANY

Question 3					
Your status in the Organisation					%Freq
Management staff					45
Junior staff					55

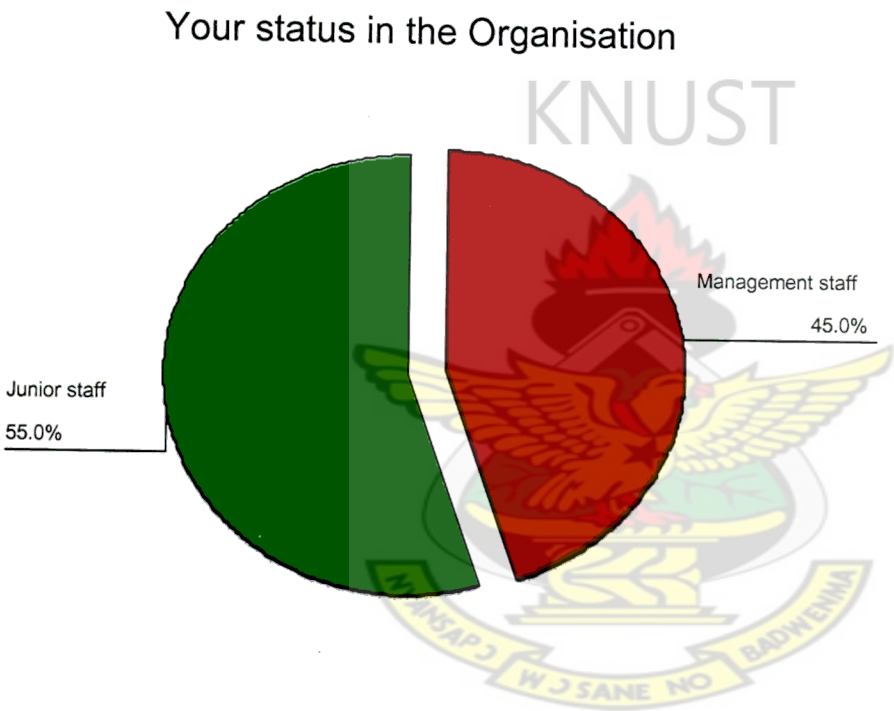


Figure 4.1.4 Source: Author’s field survey

The status of respondents are fifty five percent (55%) for unionised staff and forty five percent (45%) for managers which indicate that more staff can grow into managerial roles when coached and trained appropriately.

4.2 PURCHASE GOODS AT RIGHT TIME, COST & QUANTITY

The table below shows whether goods purchased by GGBL are on time, in full and at right cost.

TABLE 4.2 PURCHASE GOODS AT RIGHT COST, TIME, QUALITY AND QUANTITY

Table4.2	Questions	5,6,7			
	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
Purchase goods on time and full	13	26	20	22	19
Procurement purchases goods at right quantity and quality	14	26	24	17	19
Procurement purchases goods at right cost	13	29	27	19	13

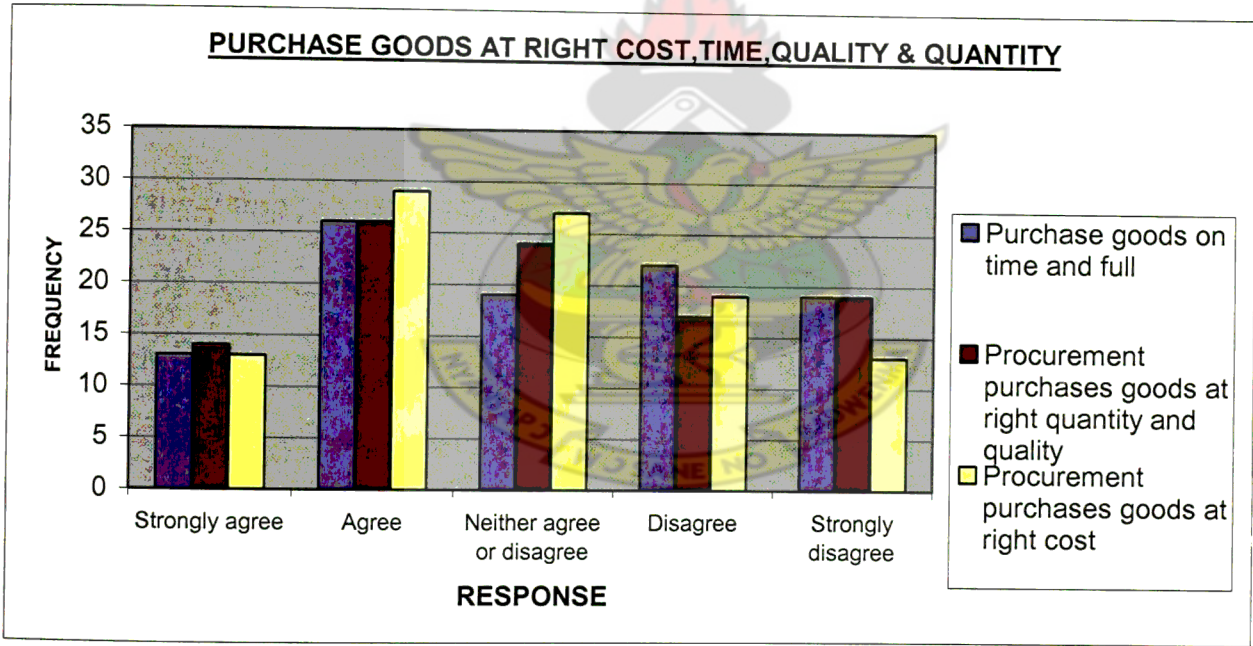


Figure 4.2 Source: Author's field survey

From the figure above forty one percent (41%) of the respondents indicated that they both strongly disagreed and disagreed that the procurement department purchases goods on time and in full. Basically this is as a result of poor planning from the procurement department and the end users who usually make emergency purchases

resulting in delays. The lead-time for purchasing is two weeks to source for quotations and analyse to pick one supplier for the item but most departments wait till their items are out of stock before placing the order, which results in delays in purchases.

Besides the stakeholders need to develop realistic budgets, which should include all items needed for the year, and this budget should be used for planning purchases in the year. One other good thing which is in the new electronic tool SAP is it generates automatic Material Requirement Plan (MRP) such that as the items reach their minimum levels automatic purchase orders are raised but unfortunately most of the items have not been set in the system.

Moreover, the strongly agreed and agreed were thirty nine percent (39%) for procurement purchasing goods on time and in full even though the margin is close there is still more room for improvement.

A total of forty percent (40%) strongly agreed and agreed as against thirty-six percent 36%, which strongly disagree and disagree that procurement purchases goods and services at the right quantity and quality. Generally adequate information is given to procurement to purchase specified number of goods with peculiar specifications however, there have been instances when procurement has ordered items very different from the specification given resulting in a downtime on the production floor.

This happens when the user gives very scanty or wrong information about the items or when procurement keys in wrong details. Besides most of the time suppliers would indicate lead-time to supply these items but sometimes when the date for delivery is due the items would not be on their shelf.

Procurement purchased goods at the right cost forty two percent (42%) of the respondents indicated strongly agree and agree whereas thirty two percent (32%) indicated strongly disagree and disagree.

Generally respondents had confidence that procurement purchases goods at the right cost because quotations were received from at least two suppliers but ideally three to prevent suppliers from conniving to price very high. However, when emergency purchases were made because production would halt then quotations are received from just one supplier that does not result in competitive purchases. Cost of transportation could be higher because an emergency courier service might be employed if it is from one region to the other instead of hand picking and despatching through an available transporters or through normal courier service which sometimes takes two or three days. For foreign items goods might have to be airfreight instead of using the sea, which is relatively cheaper about one third the price of transportation. The company paid a very high price for emergency purchases because apart from the cost of purchase being higher, other items that are also important cannot be bought since the budget would be depleted. Higher courier bills were accrued.

4.3 PURCHASE REQUISITION

The table below shows the purchase requisition process which starts with completing the requisition form whereby all details of the items are specified such as model number, serial number, quantity needed, approver, department where requisition is originating from and the date of the requisition. Once the requisition is completed and saved, the buyer assigns a supplier and the requisition is converted into a purchase order. The purchase order, when saved triggers a workflow or notification to the approver requesting him to either approve or reject with reasons.

When the order was approved the supplier would supply goods or raise queries to the procurement team if the specifications or details are not clear. These queries needed to

be channelled immediately to the end-user since they need to clarify the issues in order that the lead-time of the goods is not affected.

TABLE 4.3 PURCHASE REQUISTION

	Questions	8,9,10			
	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
Explain all details on purchase requisition	14	44	17	14	11
Approver does not delay in approving purchase order	18	32	9	19	11
Informed immediately of issues to rectify on requisition	18	31	7	20	13

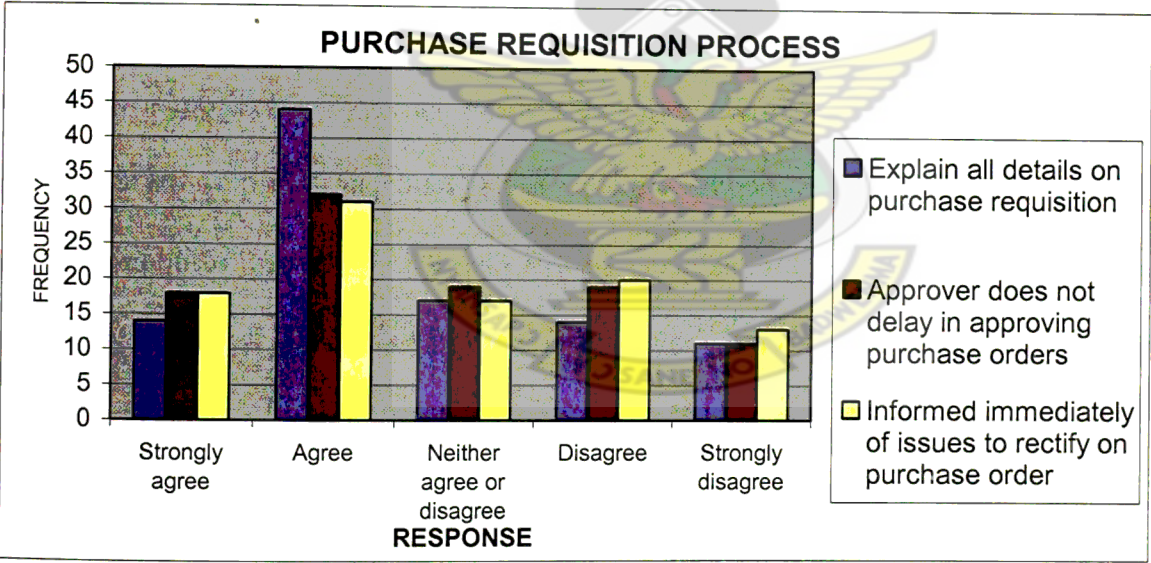


Figure 4.3 Source: Author’s field survey

From figure 4.3, fifty eight percent (58%) of the respondents indicated that they were able to completely update the requisition form with all relevant details however, twenty five percent (25%) indicated that they could not explain all details on the requisition form. This was probably due to the new electronic system where practically all details are made electronically through SAP or through an excel sheet.

Moreover, fifty percent (50%) strongly agreed and agreed that approvers do not delay in endorsing all purchase orders however, thirty percent thirty percent (30%) indicated that their direct approvers delay the process. With the introduction of SAP all approvers are expected to endorse all orders within 48hours otherwise the orderer would have to raise the order and assign an approver again.

Furthermore, forty nine percent (49%) agreed and strongly agreed that procurement informs them immediately when there are issues with the requisition but thirty three percent (33%) indicated that the strongly disagree and disagree. This indicates that there is a communication gap between the departments and procurement, which needs to be addressed.

4.4 PURCHASES FROM THE LIST OF PREFERRED SUPPLIERS

For frequently purchased goods there were known suppliers which were listed as preferred suppliers. Typical examples were Krones international limited manufacturers of packaging lines, Cheff Delight company limited, Mearsk Sealand limited, Benburto laboratory chemical limited, Sudchemie Limited, Kwame Kwarteng laboratory chemical limited and others. These frequently used suppliers are already set up in the SAP system with cost centres hence “orderers”(i.e. employees trained to place purchase orders through SAP) raise purchase requisitions and the buyers got quotations from these suppliers. The buyers analyse these quotations with prices, lead times or Expected Time of Arrival (ETA) and quality of service.

TABLE 4.4 PURCHASES FROM THE LIST OF PREFERRED SUPPLIERS

	Question	11,12,13			
	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
Generating all purchasing details through SAP	22	38	14	16	10
Buy goods from the list of preferred suppliers	18	38	14	14	16
Procurement provides two or more suppliers for requisition	22	29	22	16	11

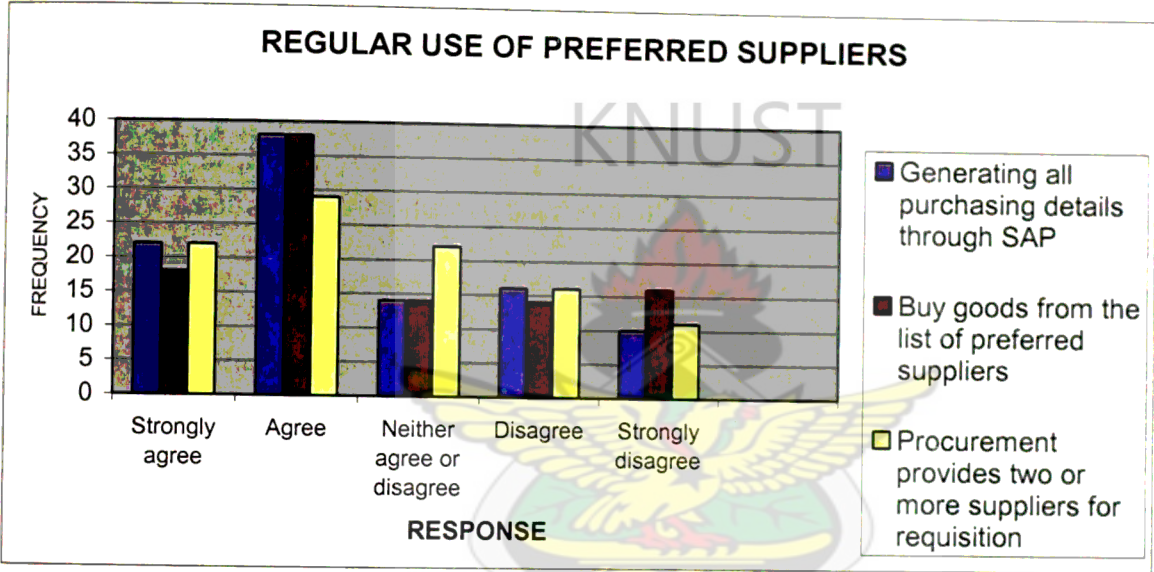


Figure 4.4 Source: Author’s field survey

From Figure 4.4, sixty percent (60%) strongly agreed and agreed that generating all purchase details through SAP is reliable whereas twenty six percent (26%) disagreed and strongly disagreed that SAP enables them generate purchase details.

However, about fourteen percent (14%) neither agreed nor disagreed since they were not very conversant with the new system, which is SAP, hence had little or no confidence in the system.

Furthermore, fifty six percent (56%) strongly agreed and agreed that procurement buy goods from preferred list of suppliers in SAP whereas thirty percent (30%) disagreed and strongly disagreed.

Using SAP, emails or fax were sent to suppliers to facilitate the process since all details of the purchase order are available. For every new tool it took quite sometime before people could trust the system. The good aspect was that once purchases had to be made through SAP then three suppliers were expected to be used for this purpose of supplying quotations and recorded in the system.

4.5 QUALITY ASSURANCE PROCEDURE

The quality assurance procedure comprised of relevant stakeholders checking all goods delivered as to whether it meets specification and if not such goods are rejected either they are returned back or discounted.

TABLE 4.5 QUALITY ASSURANCE PROCEDURE

	Questions	14,15,16			
	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
Relevant stakeholder check and certify goods before delivery	17	26	22	19	16
Stores to ensure all specifications for goods are accurate	9	3	19	15	14
Goods rejected because they do not meet specification	18	31	0	16	15

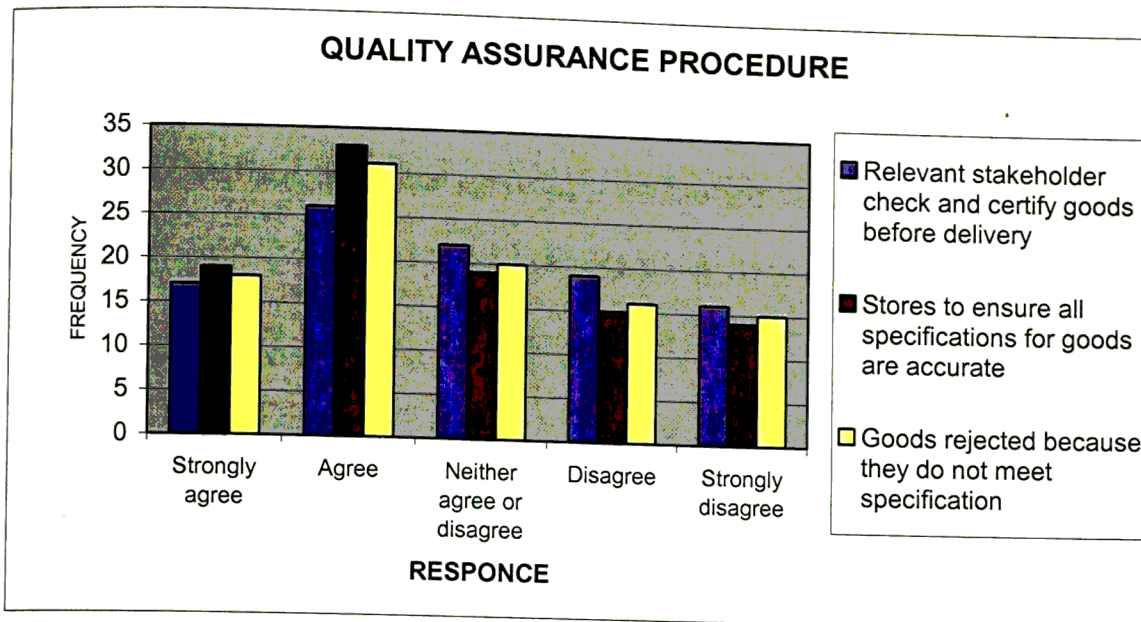


Figure 4.5 Source: Author's field survey

From figure 4.5, forty three percent (43%) strongly agreed and agreed that relevant stakeholders check and certify goods before delivery whereas thirty five percent (35%) disagreed and strongly disagreed. Twenty two percent (22%) neither agreed nor disagreed that relevant stakeholders check goods.

Furthermore, from the percentages it was clear that majority agreed that relevant goods are checked but then there are lapses, which sometimes arise but not often. This occurs when there is a high demand for production the results of the checks when not favourable were ignored.

Fifty two percent (52%) strongly agreed and agreed that good delivered are checked by stores to ensure that all specifications are accurate whereas twenty nine percent (29%) strongly disagreed and disagreed. This was in line with the response from suppliers from Figure 4.2, thirty six percent (36%) strongly agreed or agreed that samples are sent to QA department or relevant stakeholders, two percent (2%) neither agreed nor disagreed and twelve percent (12%) strongly disagreed or disagreed. This indicated that generally QA were involved in the procurement process.

However, forty nine (49%) strongly agreed and agreed that goods are sometimes rejected because they do not meet specification or Key Performance Indicators (KPI) and on the other hand thirty one percent (31%) strongly disagreed and disagreed this and the rest twenty percent (20%) neither agreed nor disagreed. Some are rejected and moved from the site however in some cases these items are used but paid for at a discounted price due to the fact that all parameters were not meeting GGBL specifications

4.6 SELECTION OF SUPPLIERS

The procedure for selection of suppliers was initiated by procurement department, which would organise a meeting with all relevant stakeholders, mostly made up of end user departments, approvers and suppliers. Procurement would explain all the specifications, quality of service and lead times. The quality assurance department based on the laid down procedure checks samples from the suppliers. Finally at least two or three suppliers were selected as preferred suppliers based on the findings from the meeting, usually for a year depending on the contract.

TABLE 4.6 SELECTION OF SUPPLIERS

	Questions 19,20,21		Neither agree or disagree	Disagree	Strongly disagree
	Strongly agree	Agree			
Procurement have discussion with dept before sourcing	14	31	19	20	6
Procurement is transparent with bidding and negotiation	17	24	26	19	14
Sample checked by QA before supplier selection is done	16	30	17	19	18

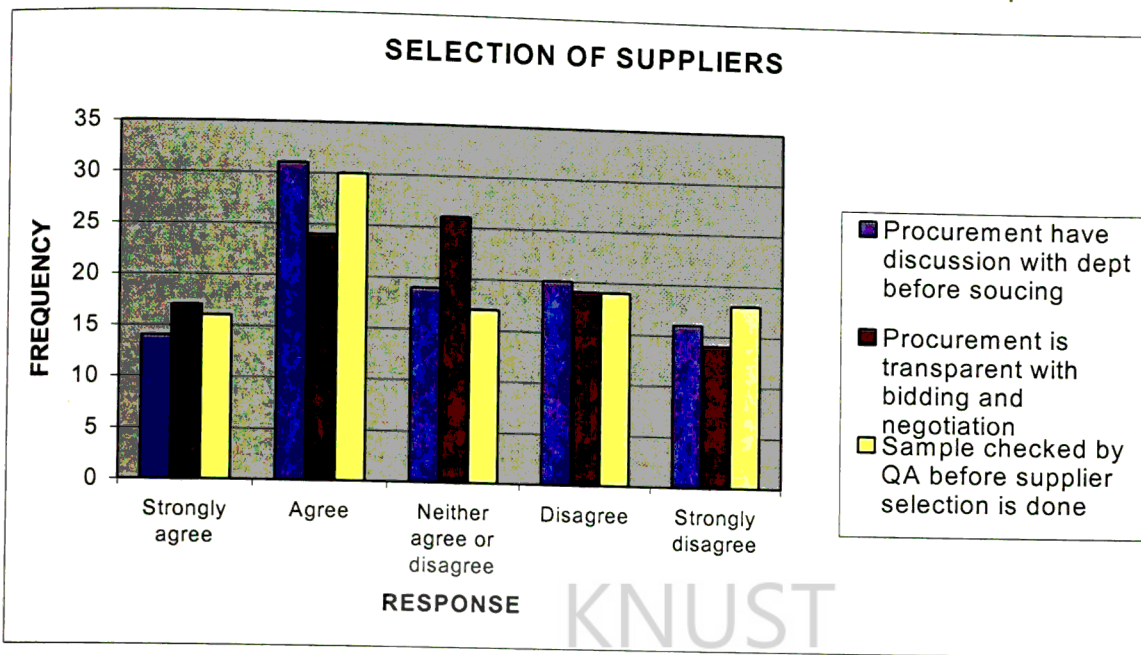


Figure 4.6 Source: Author's field survey

From Figure 4.6, forty five percent (45%) of the respondents strongly agreed and agreed that procurement have discussion with the department before sourcing relevant stakeholders, whereas nineteen percent (19%) neither agreed nor disagree and thirty six percent (36%) strongly disagreed or disagreed.

This could be as a result of the new system in place, which is SAP where all vendors were already chosen and put in the system. Another area of concern was that sometimes during such discussions not all key stakeholders were included in the discussion.

However, forty one percent (41%) strongly agreed and agreed that procurement is transparent with the bidding and negotiation process and thirty three percent (33%) disagreed and strongly disagreed to this fact. Basically procurement seems to be doing well but the employees felt there is more room for improvement

Moreover, forty seven percent (47%) strongly agreed and agreed that samples are checked by QA before supplier selection is done whereas thirty seven percent (37%)

strongly agreed and disagreed. In most cases quality assurance department was invited to analyse and submit reports on samples provided by new suppliers: However, sometimes their reports were ignored when production needed the items urgently.

4.7 REVIEW MEETINGS FOR SUPPLIERS

The review meeting for suppliers was organised by procurement, immediate end users and all other stakeholders and this was to evaluate the supplier’s performance within the time of their contract. The outcome of this meeting determined whether certain suppliers should be retain, changed for performing poorly or supported to improve.

TABLE 4.7 REVIEW MEETINGS FOR SUPPLIERS

	Questions 23,24,25		Neither agree or disagree	Disagree	strongly disagree
	Strongly agree	Agree			
Regular meetings review with suppliers	14	7	29	17	13
Suppliers performing poorly supported to improve	17	23	29	19	3
Some suppliers changed based on review meeting	15	27	27	18	13

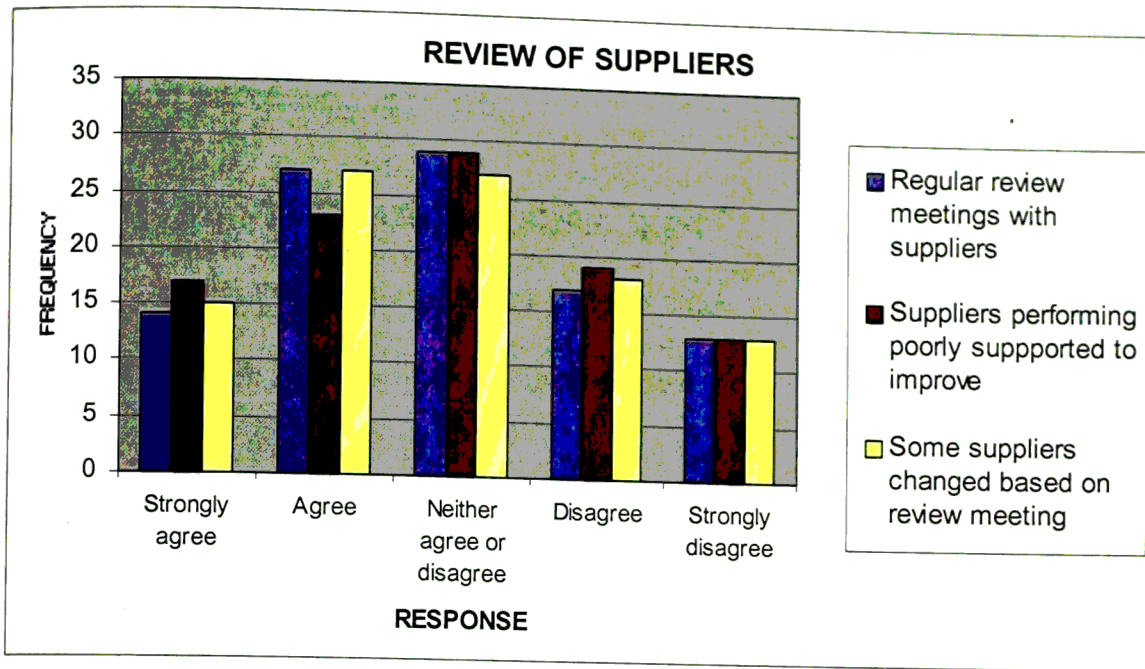


Figure 4.7 Source: Author's field survey

From Figure 4.7, forty one percent (41%) both strongly agreed and agreed that regular review meetings were held with suppliers and thirty percent (30%) of the respondents both strongly disagreed and disagreed whereas twenty nine percent (29%) neither agreed nor disagreed. Review meetings were held but from the procurement schedule it is expected to be every quarter but in view of their skeleton staff it was not strictly adhered to hence minimising its importance.

Furthermore, forty percent (40%) of the respondents both strongly agreed or agreed that suppliers performing poorly were supported to improve and thirty two percent (32%) both disagreed or strongly disagreed.

The review meetings supported the suppliers to improve but if for some reason did not take place then no assistance was rendered.

Finally, forty two percent (42%) both strongly agreed and agreed that some suppliers are changed based on the review meetings findings and thirty one percent (31%) both strongly disagree and disagree.

This was an indication that the review meetings were not regularly held for all suppliers and feedback not circulated.

4.8 PAYMENT SYSTEM FOR SUPPLIERS

In GGBL, generally suppliers should be paid after thirty (30) days from date of invoice or as stated in the contract. This agreement when respected by two parties i.e. suppliers providing goods and services in the right quantity, quality, cost and time and GGBL promptly paying within the days stated in the contract enhanced the relationship.

TABLE 4.8 PAYMENT OF SUPPLIERS

Table 4.8	Questions 27,28				
	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
Company pays suppliers when due	12	19	22	25	22
GGBL payment system is enhancing good supplier relationship	14	17	22	24	23

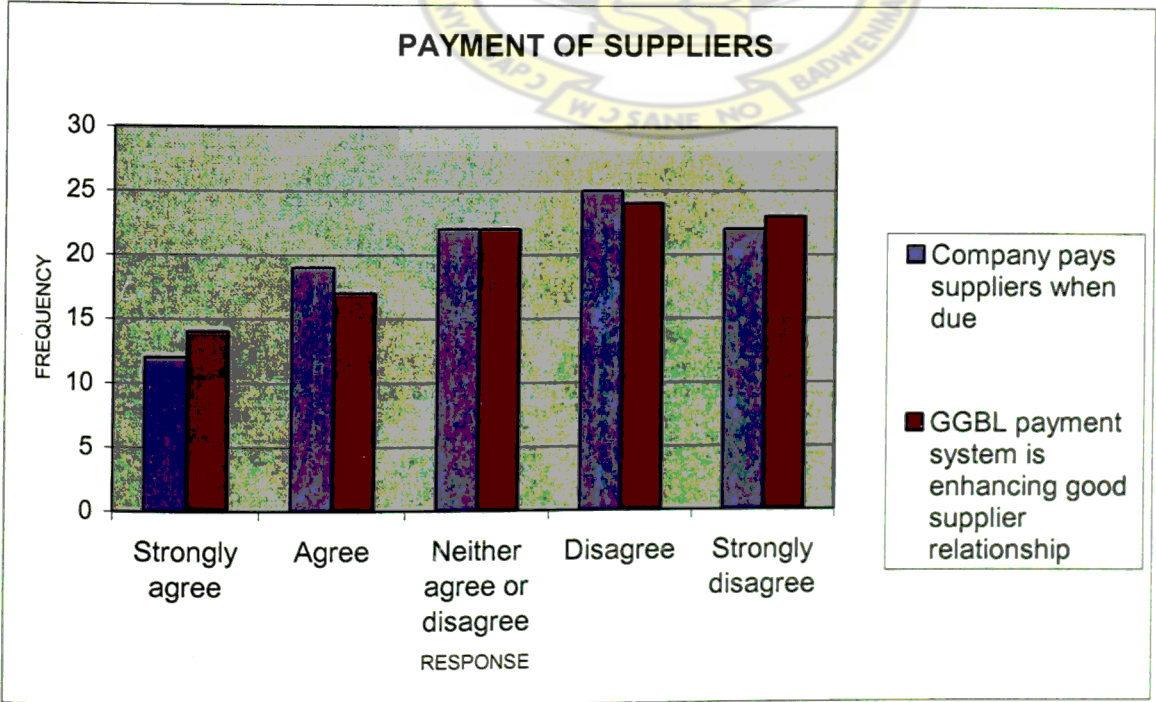


Figure 4.8 Source: Author’s field survey

Furthermore, from Figure 4.8, thirty one percent (31%) strongly agreed and agreed that company paid suppliers when due, twenty two percent (22%) neither agreed nor disagreed and forty seven percent (47%) strongly disagreed and disagreed. This clearly implied that GGBL payment system was not reliable hence not able to pay suppliers on time according to the agreement probably due to lack of funds or improper documentation or due to unplanned purchases.

However, thirty one percent (31%) both strongly agreed and agreed that GGBL payment system was enhancing good supplier relationship, twenty two percent (22%) neither agreed nor disagreed and forty seven percent (47%) both strongly disagreed and disagreed.

4.9 OVERALL PERFORMANCE OF PROCUREMENT TEAM

Question 18					
Satisfied with service from the support procurement team					
					Percent
	Strongly agree				16.4
	Agree				27.9
	Neither Agree not disagree				19.3
	Disagree				19.3
	Strongly disagree				17.1
	Total				100

atisfied with service from the support procurement team

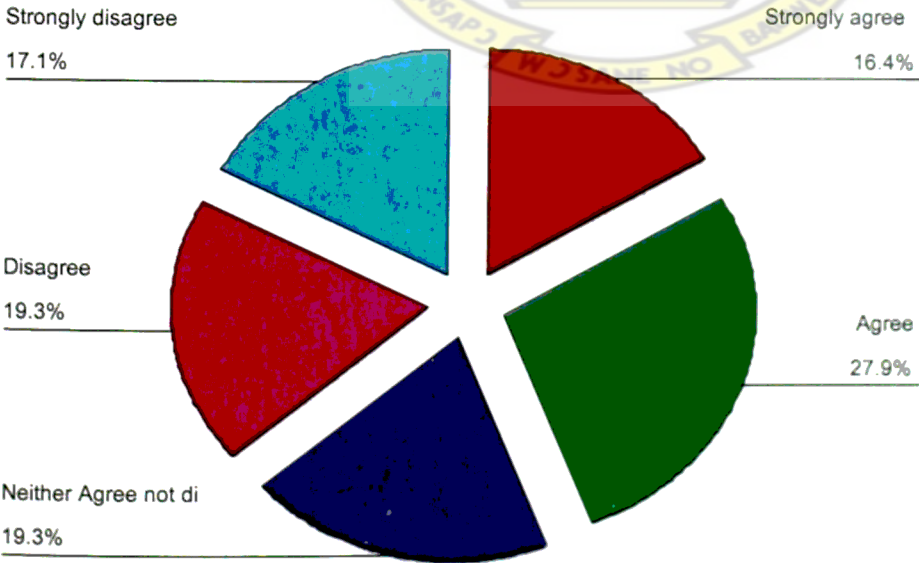


Figure 4.9

Source: Author's field survey

From Figure 4.9, 44.3% both strongly agreed and agreed that GGBL employees are satisfied with services from the support procurement team, 19.3% neither agreed nor disagreed and 36.4% strongly disagreed and disagreed. Basically most were dissatisfied because of the poor payment system and the supplier performance review sections, which were not regularly pursued.

4.10 EFFECT OF SAP IN GUINNESS GHANA BREWERIES LIMITED

Three main questions were asked in the questionnaire about SAP and the first question was “How has SAP enhanced your ways of working?” The response was that generally about eighty percent (80%) indicated that SAP has enhanced their ways of working since currently they work faster, easier, and with less paper work. Furthermore there is an added advantage of global network to other Diageo sites apart from Ghana. Therefore if there was the need for certain spare parts or raw materials that were not available on ones site, it could be sourced from another site since a user can view other sites.

However a relatively few indicated that they have not benefited since they were not using the system yet.

The second question was what are the major drawbacks of SAP? The respondents indicated that SAP had not really solved the problem of delays in payment to suppliers after completion of contracts. SAP had not changed management’s commitment to prompt payment of suppliers is slow.

Moreover, some indicated that the system was too complex for them apparently because they had not fully grasped the SAP principles.

The last question was “Which areas need improvement”? The responses showed that the areas of concern and needed improvement, were a more transparent system for

selection of suppliers, frequent evaluation of supplier performance and prompt payment of suppliers.

4.11 ANALYSIS OF SUPPLIER QUESTIONNAIRE

4.12 EFFICIENCY OF SUPPLY PROCESS

The table below shows the supply process efficiency with respect to delivery of goods at the right time, cost, quantity and quality. This was a key indicator for suppliers since it was a measure for their performance.

TABLE 4.12 EFFICIENCY OF SUPPLY PROCESS

	Questions 6,7,8				
	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
Supply goods on time, right cost and in full	30	15	0	3	2

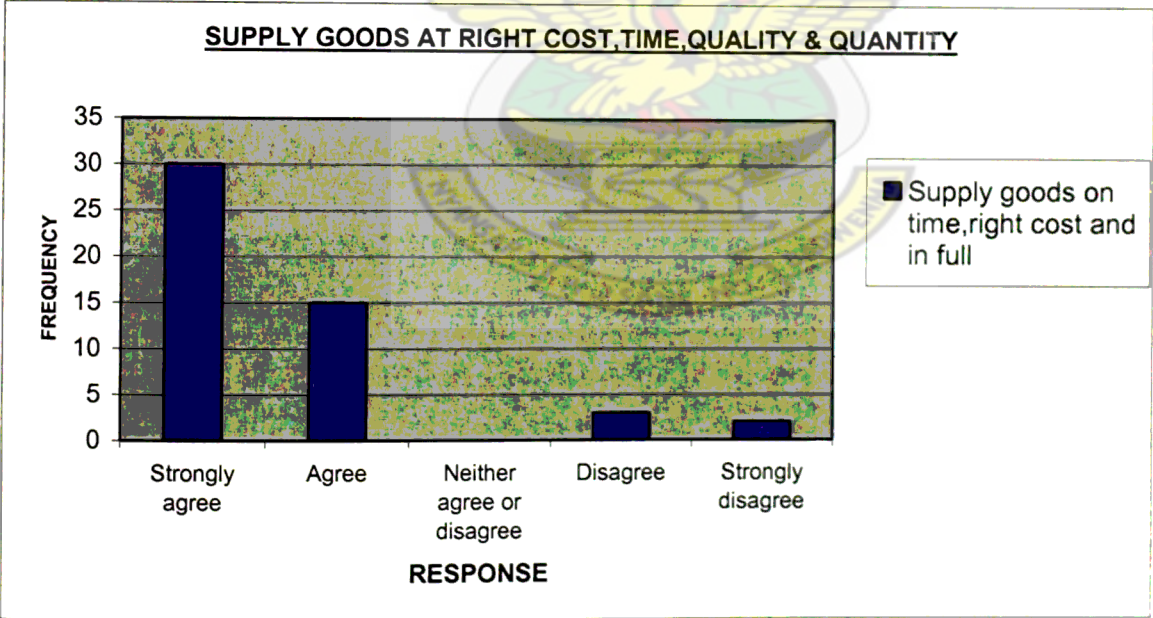


Figure 4.12 Source: Author’s field survey

From Figure 4.3.1, ninety percent (90%) of the respondents both strongly agreed and agreed, none of the respondents neither agreed nor disagreed and ten percent (10%)

both strongly disagreed and disagreed. This is an indication that suppliers were committed to remain in the contract by supplying goods on time and in full.

4.13 PURCHASE ORDER PROCESS

The table below showed the purchase order process which included suppliers accessing their orders online by email or fax system or by phone. The supplier would need to understand all details on the purchase order in order to supply the exact item. Moreover, the supplier needed to deal directly with the purchasing team for clarity on details on the order or if necessary with the end user through the purchasing team.

TABLE 4.13 PURCHASE ORDER PROCESS

	Questions 9,10,11				
	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
Access your orders on email/fax easily	23	0	1	4	2
Understand all details on order	18	22	5	3	2
Always deal with purchasing directly on orders	21	28	0	0	1

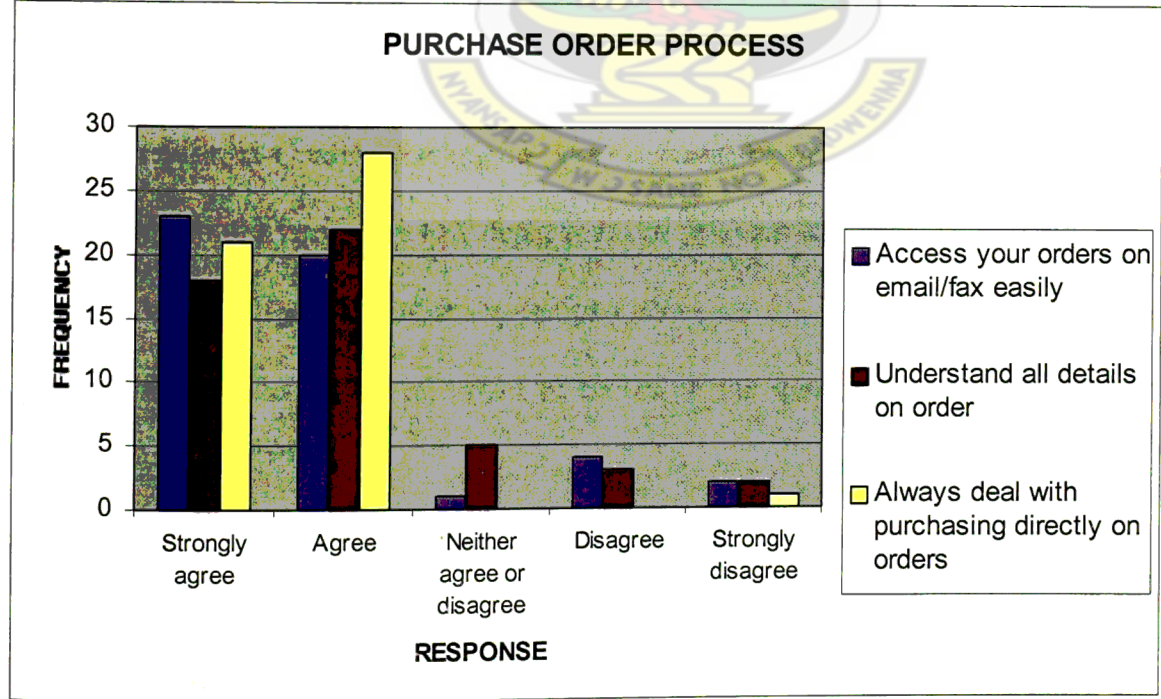


Figure 4.13

Source: Author’s field survey

From the figure 4.13 above, eighty six percent (86%) both strongly agreed and agreed that suppliers can access their orders by emails or fax system easily, two percent (2%) neither agreed nor disagreed and twelve percent (12%) strongly disagreed and disagreed.

Furthermore, eighty percent (80%) both strongly agreed and agreed as suppliers they understand all details on order, ten percent (10%) neither agreed nor disagreed and ten percent (10%) both strongly disagreed and disagreed.

However, ninety eight percent (98%) both strongly agreed and agreed that suppliers always deal with purchasing directly on orders, none of the respondents indicated that they neither agree nor disagree and two percent (2%) strongly disagreed.

This clearly shows that English and computer literacy levels among the suppliers are high and GGBL has adequately introduced suppliers to the new electronic system SAP.

4.14 PURCHASE ORDER PROCEDURE

The purchase order procedure involved procurement team requesting suppliers to supply samples to Quality Assurance (QA) department or relevant stakeholders for analysis before delivery. The QA department or relevant stakeholder would check if the goods were in line with GGBL specifications.

The suppliers needed to be informed of issues on the quotations by the purchasing team or end users.

The suppliers are informed that their specimens had, either passed their analysis or otherwise, before goods are delivered.

TABLE 4.14 PURCHASE ORDER PROCEDURE

	Questions	13,12,14			
	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
You send a sample to QA before delivery	19	17	2	7	5
You are informed of issues with your order early	22	16	2	5	5
The relevant stakeholder passes specimen before delivery	18	16	5	10	3

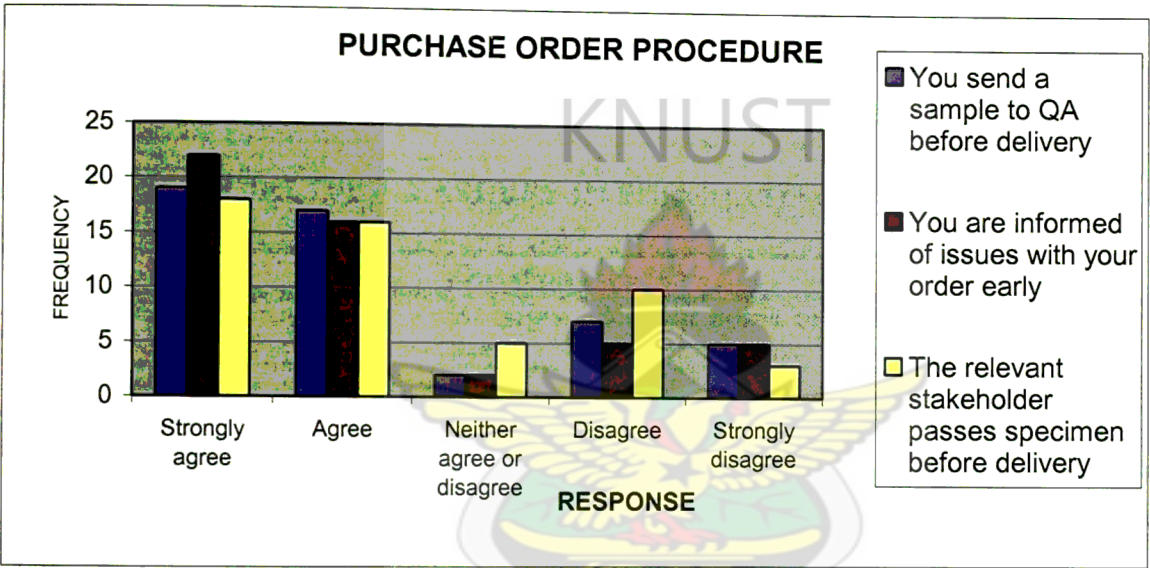


Figure 4.14 Source: Author’s field survey

From Figure 4.14, seventy two percent (72%) both strongly agreed or agreed that samples are sent to QA department or relevant stakeholders, 4% neither agreed nor disagree and twelve percent (12%) strongly disagreed and disagreed.

Furthermore, seventy six percent (76%) strongly agreed and agreed that suppliers are informed of issues with their quotations early, four percent (4%) neither agree nor disagree and ten percent (10%) both strongly disagreed and disagreed.

Moreover, sixty eight percent (68%) both strongly agreed and agreed that relevant stakeholder passes specimen before delivery, ten percent (10%) neither agreed nor disagreed and twenty six percent (26%) both strongly disagreed and disagreed.

From the analysis it showed that the QA department and other stakeholder were involved in the purchasing process, which helped to make the process transparent.

4.15 QUALITY MEASURES IN PURCHASING

The table below showed that the Quality Assurance (QA) department or stakeholders after analysis either receive goods or reject based on the GGBL specifications. Generally it was rare that goods were sometimes rejected if they do not meet specification.

However, to enhance supplier relationship with GGBL it was key that all employees especially the security team express friendliness and politeness.

TABLE 4.15 QUALITY MEASURES IN PURCHASING

	Questions 15,16			
	Strongly agree	Neither agree or disagree	Disagree	Strongly disagree
Your goods are sometimes rejected because they do not meet specification	2	2	17	26
You are sometimes frustrated by stakeholders and security	0	0	30	8

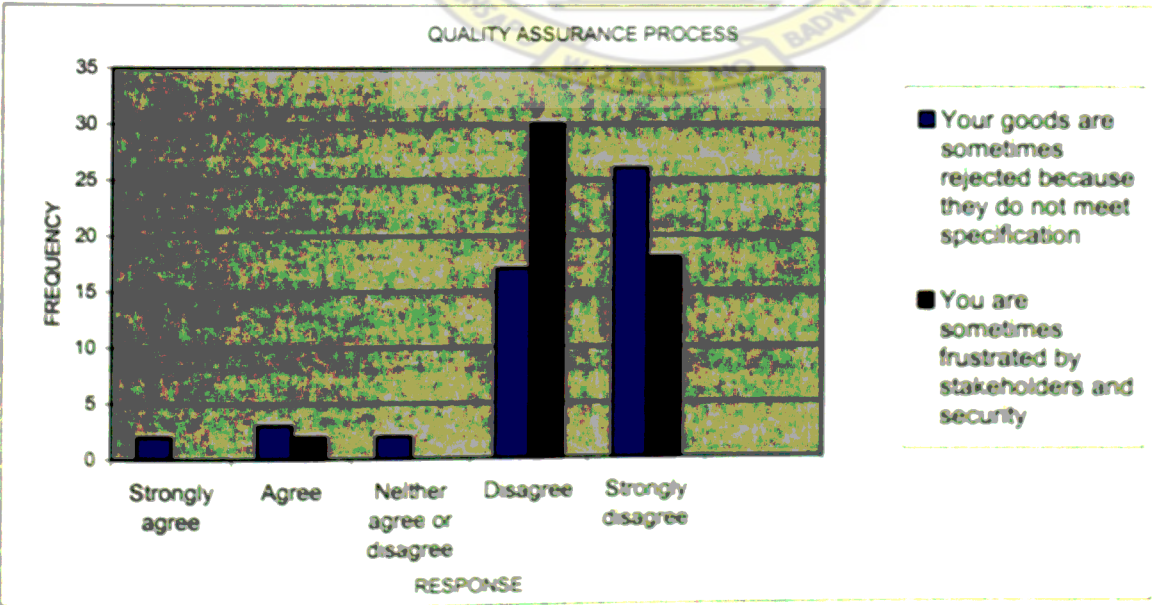


Figure 4.15 Source: Author’s field survey

From Figure 4.15 ,ten percent (10%) of the respondents both strongly agreed and agreed that their goods are sometimes rejected because they do not meet GGBL specification, four percent (4%) neither agreed nor disagreed and eighty six percent (86%) both strongly disagreed and disagreed.

Generally from the percentage distribution it is an indication that samples supplied to GGBL are of high quality that meet GGBL specification.

However, four percent (4%) of the respondents both strongly agreed and agreed that sometimes they are frustrated by stakeholders or employees of GGBL especially the security, none neither agree or disagree and ninety six percent (96%) both strongly disagreed and disagreed.

This implies that GGBL staffs are receptive to suppliers and they are valued.

4.16 GGBL SUPPLIER RELATIONSHIP

The table below indicated the kind of relationship between GGBL and its suppliers. The more cordial the relationship the more efficient production process since all raw materials and services would be supplied on time on the other hand the hostile the relationship the higher the downtimes on the production floor.

TABLE 4.16 GGBL SUPPLIER RELATIONSHIP

	Question	17			
	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
There is a cordial relationship between your company and GGBL	14	13	2	12	9

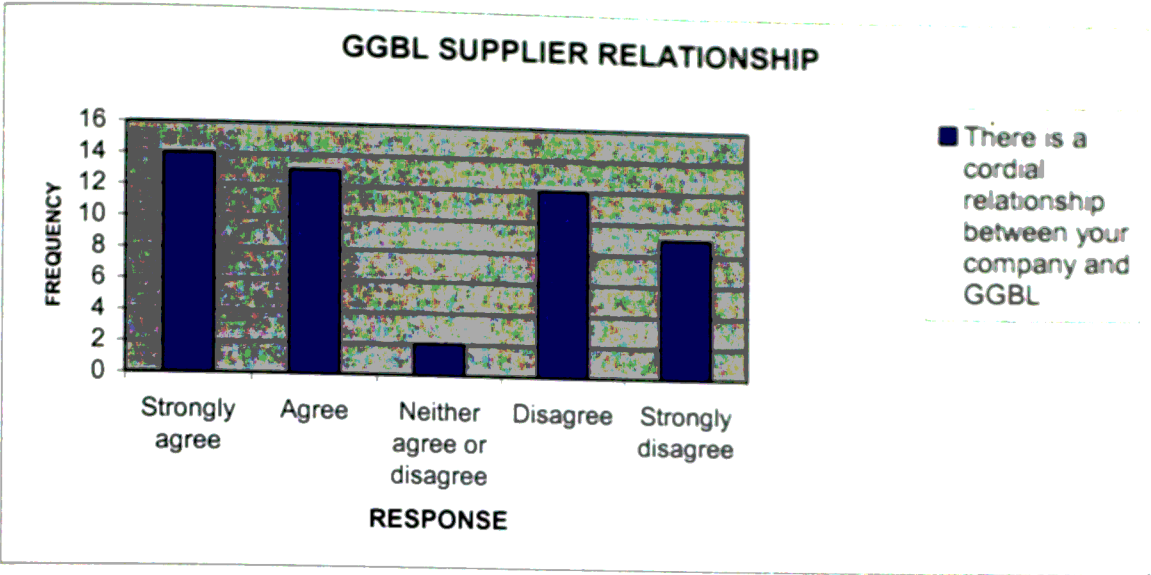


Figure 4.16 Source: Author’s field survey

From Figure 4.16, fifty four percent (54%) both strongly agreed and agreed that GGBL has a cordial relationship with suppliers, four percent (4%) neither disagreed nor disagreed and forty two percent (42%) both strongly disagreed and disagreed.

4.17 SELECTION OF SUPPLIERS

The table below showed the selection of suppliers and how transparent it was with respect to bidding and negotiation process.

TABLE 4.17 SELECTION OF SUPPLIERS

	Question 18				
	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Bidding and negotiation process is transparent	13	15	5	9	8

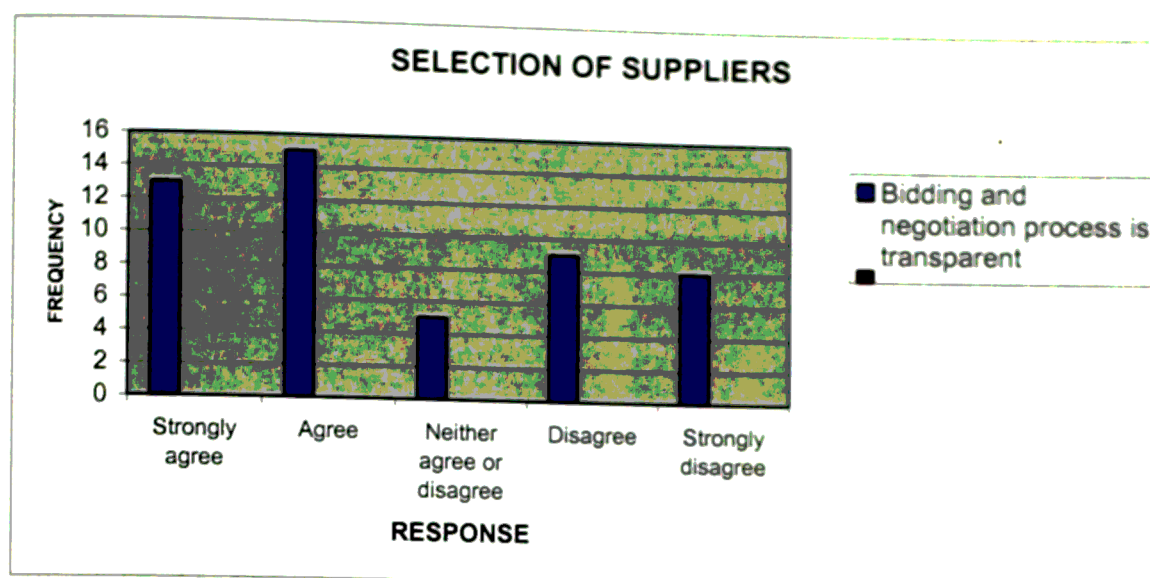


Figure 4.17 Source: Author's field survey

From figure 4.17, fifty six percent (56%) of the suppliers both strongly agreed and agreed the GGBL bidding and negotiation process is transparent, ten percent (10%) neither agreed nor disagreed and thirty four percent (34%) both strongly disagreed and disagreed.

4.18 SUPPLIERS REVIEW

The review section for GGBL included regular evaluation meetings every quarter, suppliers performing poorly were supported to improve or deleted if there was no improvement over a considerable period of time.

TABLE 4.18 SUPPLIERS REVIEW

	Questions 20,21,23				
	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Regular review meetings are held with your company and GGBL	8	8	5	16	13
Suppliers performing poorly are supported to improve	11	9	2	15	13
The review system is yielding good supplier performance	8	9	2	17	14

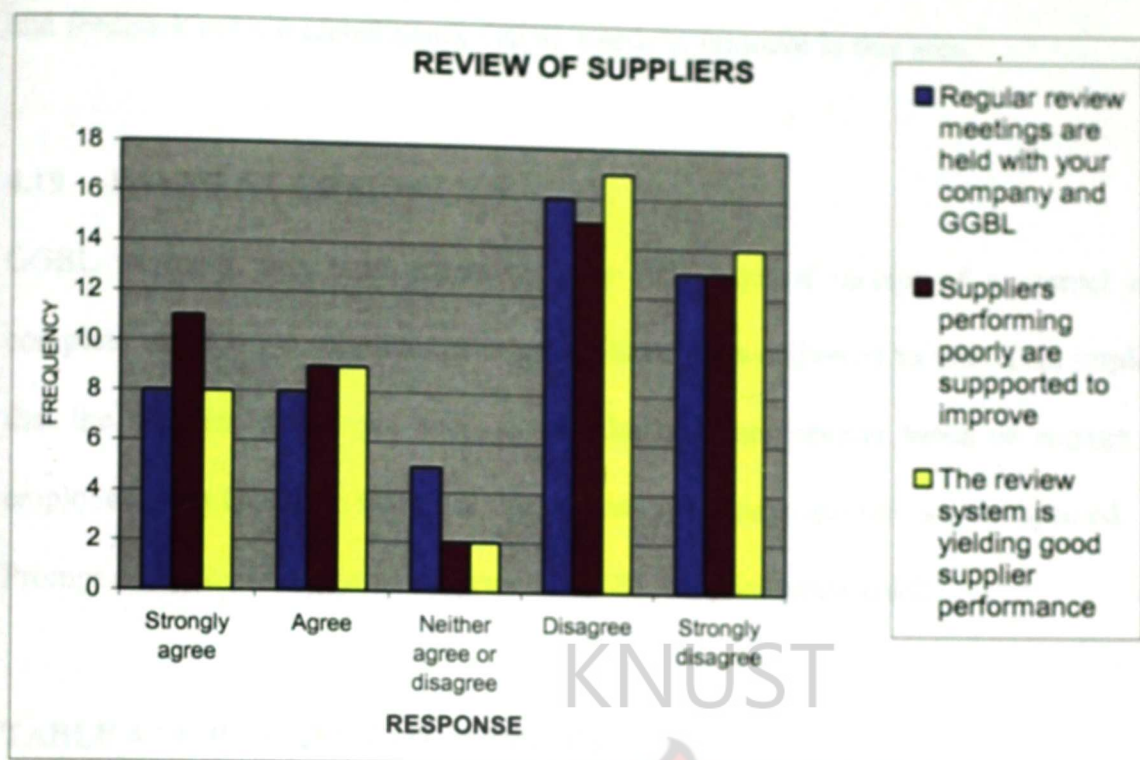


Figure 4.18

Source: Author's field survey

From Figure 4.18, the thirty two percent (32%) of the respondents both strongly agreed and agreed that regular review meetings are held with their company and GGBL, ten percent (10%) neither agreed nor disagreed and fifty eight percent (58%) both strongly disagreed and disagreed. However, forty percent (40%) both strongly agreed and agreed that suppliers performing poorly are supported to improve, none of the respondents neither agreed nor disagreed and fifty six percent (56%) both strongly disagreed and disagreed.

Furthermore, thirty four percent (34%) of the respondents both strongly agreed and agreed that the review system is yielding good supplier performance, four percent (4%) neither agreed nor disagreed and sixty two percent (62%) both strongly disagreed and disagreed.

This is an indication that the review meetings were not regularly held for all suppliers and feedback not circulated hence GGBL needs to improve in this area. .

4.19 PAYMENT OF SUPPLIES

GGBL payment term was generally thirty (30) days of receipt of a correct and complete invoice for suppliers after goods have been delivered to site. This implied that the supplier would not need to call the premises several times or engage an employee from GGBL to fast track the process, if the payment terms are respected.

Prompt and complete payment enhances GGBL supplier relationship.

TABLE 4.19 PAYMENT OF SUPPLIES

	Questions 23,24,25		Neither agree or disagree	Disagree	Strongly disagree
	Strongly agree	Agree			
GGBL pays suppliers when due	0	1	2	9	38
My company needs to call GGBL several times before payment is done	15	25	2	6	2
GGBL payment system is enhancing good supplier relationship	0	1	1	25	23

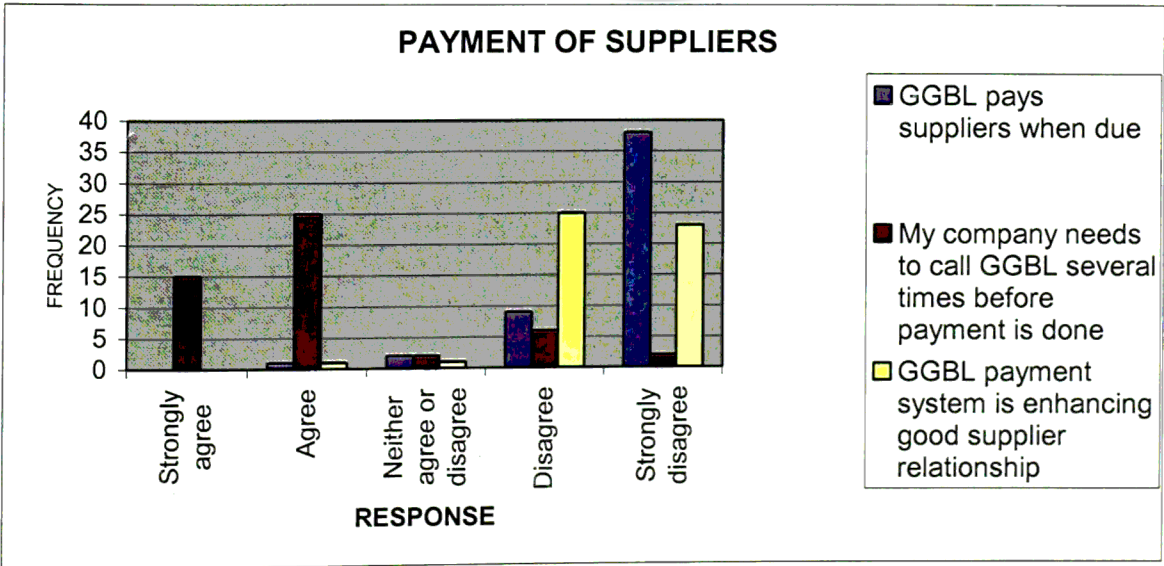


Figure 4.19

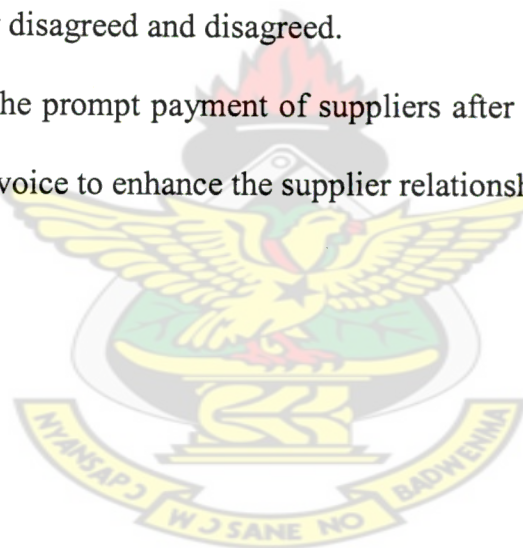
Source: Author’s field survey

From Figure 4.19, two percent (2%) agreed that GGBL pays suppliers when due, four percent (4%) neither agreed nor disagreed and forty percent (94%) both strongly disagreed and disagreed.

Moreover, eighty percent (80%) of the respondents both strongly agreed and agreed that their company needs to call GGBL several times before payment is done, four percent (4%) neither agreed nor disagreed and sixteen percent (16%) both strongly disagreed and disagreed.

Furthermore, two percent (2%) agreed that GGBL payment system is enhancing good supplier relationship, two percent (2%) neither agreed nor disagreed and ninety six percent (96%) both strongly disagreed and disagreed.

GGBL needed to improve the prompt payment of suppliers after delivering of goods and correct and complete invoice to enhance the supplier relationship and production.



4.20 DISCUSSION OF RESULTS FROM QUESTIONNAIRE

- Generally about forty two percent (42%) of GGBL employees and about ninety percent (90%) of suppliers agreed that goods were purchased at the right quantity, quality, time and cost and about thirty four percent (34%) of employees disagreed. This indicated that procurement and suppliers were managing this process well but they needed to work closely with the suppliers to supply goods within the lead-time. During evaluation suppliers would need to be appraised based on this parameter as well.
- From figures 4.6 and 4.17, forty four percent (44%) of GGBL employees and fifty six percent (56%) of suppliers respectively agreed that supplier's selection is transparent. Therefore, GGBL procurement team and its suppliers were managing the supplier selection well but to sustain all stakeholders should be part of the selection process and due quality checks adhered to.
- From figures 4.7 and 4.18, 28% of GGBL employees and fifty nine percent (59%) of suppliers respectively did not agree that procurement team reviewed the performance of the suppliers regularly. Definitely from the results above the GGBL procurement team needed to hold regular evaluation meetings to either support or delete inefficient suppliers.
- From figures 4.8 and 4.19, forty seven percent (47%) of GGBL employees and ninety four percent (94%) of suppliers respectively disagreed that suppliers are paid when due. Basically GGBL needed to value their suppliers and make sure they are paid promptly and stakeholders should buy only justified goods from their budget.

4.21 PUBLISHED FINANCIAL PERFORMANCE INDICATORS TO SHOW GROWTH

These are indices used to determine the financial performance of a corporate company especially registered on the stock exchange.

4.22 PROFIT AFTER TAXATION

Profit before interest and tax was the profit left after all the operating costs had been deducted. The financial cost of meeting interest payments was subtracted to give profit before tax and the annual tax liability was subtracted to give profit after taxation. GGBL had increasing profit after taxation from 2003 to 2006. However there was a downward trend in 2006 during the merger and the purchase of the new packaging line. The trend is shown in figure 4.22

Table 4.22 PROFIT AFTER TAXATION

Years	2003	2004	2005	2006	2007
Profit after taxation (million Ghana cedis)	5.06	6.35	8.501	14.031	13.084

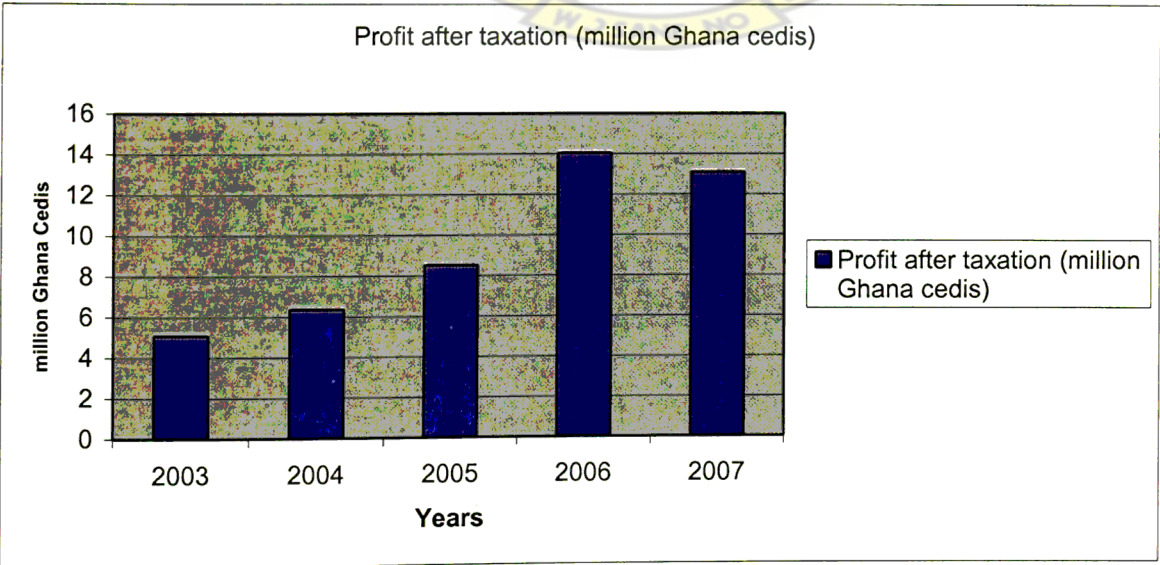


Figure 4.22 Source: GGBL Annual Report 2008

4.23 DIVIDEND PER SHARE

This was an investor ratio, which was used, in corporate finance for different purposes especially assessing the effect of proposed financing. It is defined as

$$\frac{\text{Total dividend paid to ordinary shareholders}}{\text{Number of issued ordinary shares}} = \text{Dividend per share}$$

However, the total dividend paid could change form year to year, individual share holders will expect that their dividend per share will not decrease.

Table 4.23 DIVIDEND PER SHARE

Years	2003	2004	2005	2006	2007
Dividend per share (Ghana cedis)	0.025	0.03	0.036	0.042	0.043

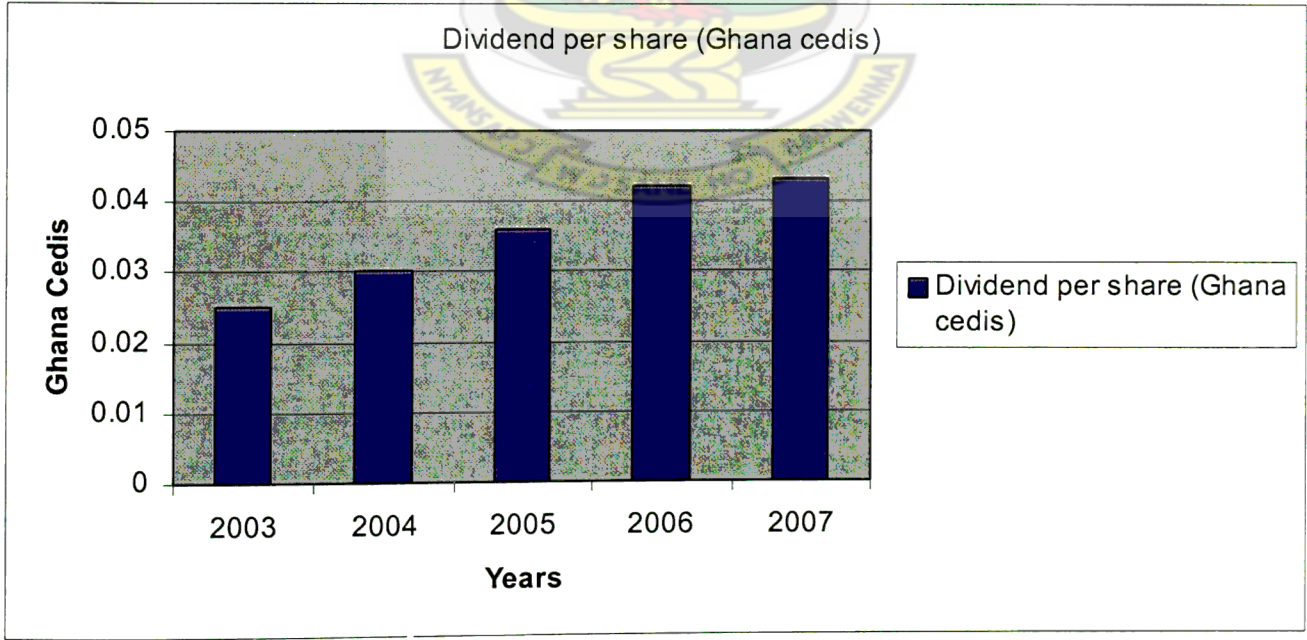


Figure 4.23

Source: GGBL Annual Report 2008

LIBRARY
KWAME NKRUMAH UNIVERSITY OF
SCIENCE AND TECHNOLOGY
KUMASI-GHANA

From figure 4.23, the dividend per share trend from 2003 to 2007 shows a good performance, as there is return on shareholders fund year on year. Therefore this is a strong shareholder value creation resulting in growth. There was an improvement by seventy two percent (72%) from 2003 to 2007.

4.24 NET ASSET PER SHARE

Net asset per share is the net asset value that represents a fund or a company’s value per share. It is defined as:

$$\frac{\text{Total net Asset value of a company or fund}}{\text{Number of shares outstanding}} = \text{Net Asset per Share}$$

Figure 4.24 showed an increasing trend from 2003 to 2007.

Table 4.24 NET ASSET PER SHARE

Years	2003	2004	2005	2006	2007
Net Asset per Share (Ghana cedis	0.091	0.1147	0.2516	0.2949	0.3234

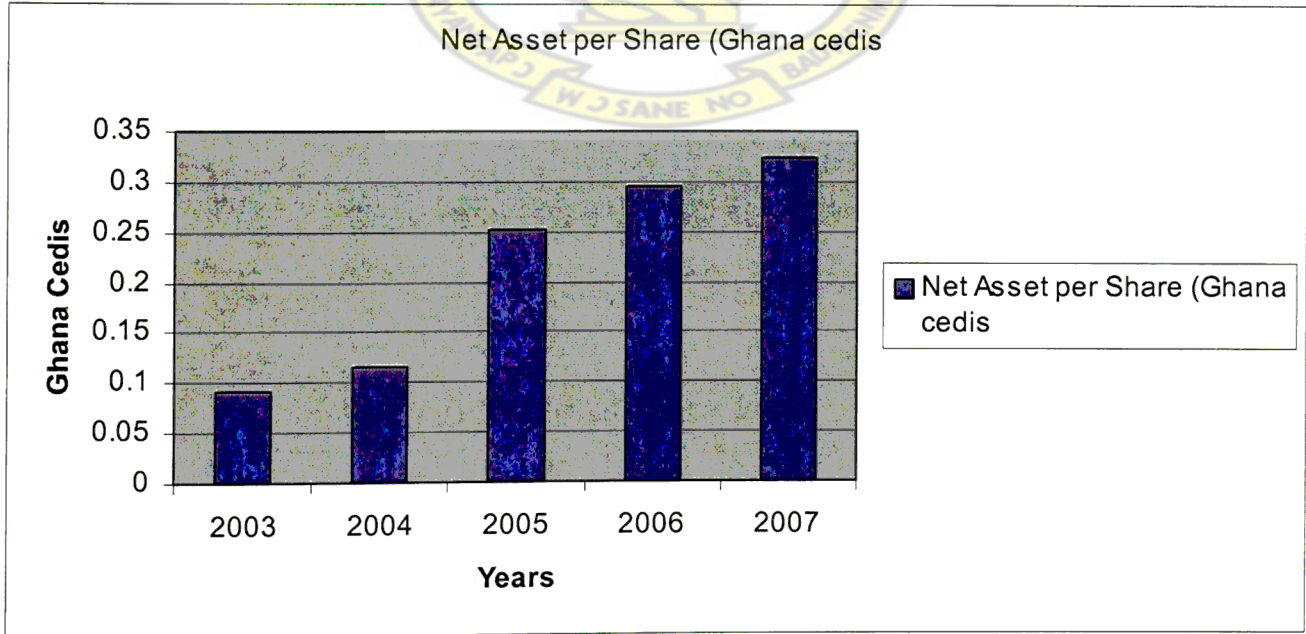


Figure 4.24 Source: GGBL Annual Report 2008

4.25 NET ASSETS

In the balance sheet net asset was shown as total assets less total liability.

(Total assets –total liability = Net Assets)

For GGBL there has been an increase from 10.649 million Ghana cedis in 2003 to 53.336million Ghana cedis in 2007 as shown in figure 4.25.

Table 4.25 NET ASSETS

Years	2003	2004	2005	2006	2007
Net Assets (million Ghana cedis)	10.649	13.474	41.514	48.662	53.336

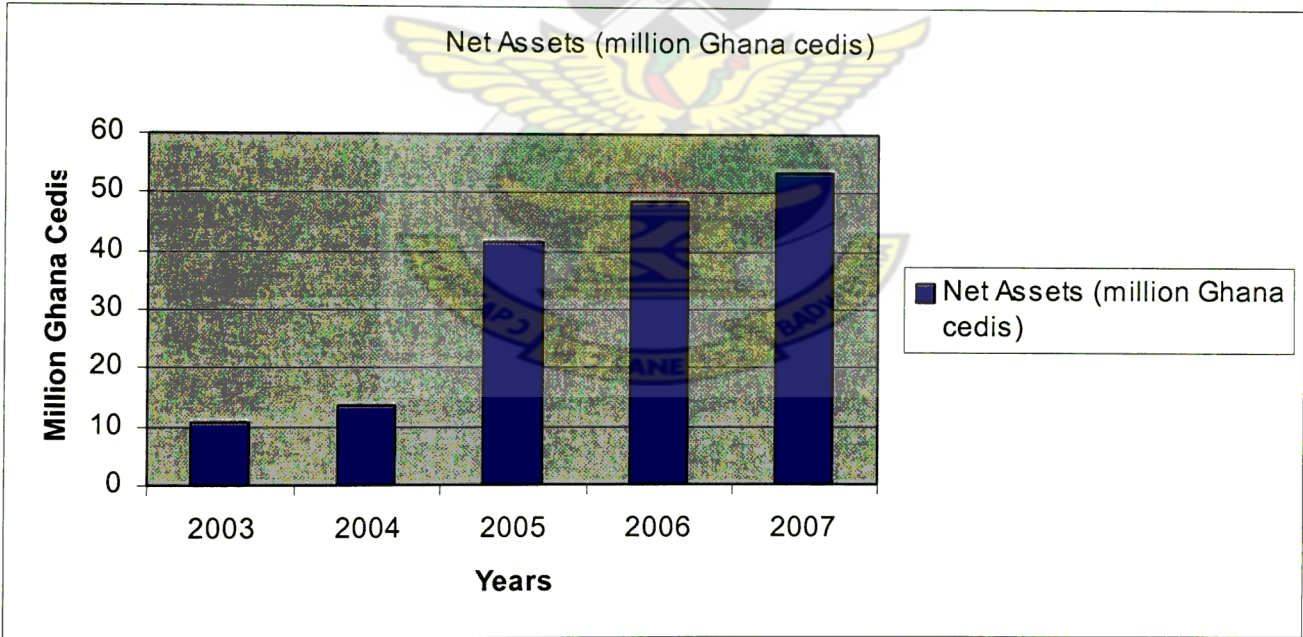


Figure 4.25 Source: GGBL Annual Report 2008

4.26 **TURNOVER**

This was the total sales revenue for a company. GGBL performance growth showed a growth in turn over from 2003 to 2007. This trend was consistent with the others except profit after taxation where there was a decline in 2006. The turnover trend is illustrated in Figure 4.26

Table 4.26 TURNOVER

Years	2003	2004	2005	2006	2007
Turnover (Ghana cedis)	36.208	52.721	63.085	75.545	91.994

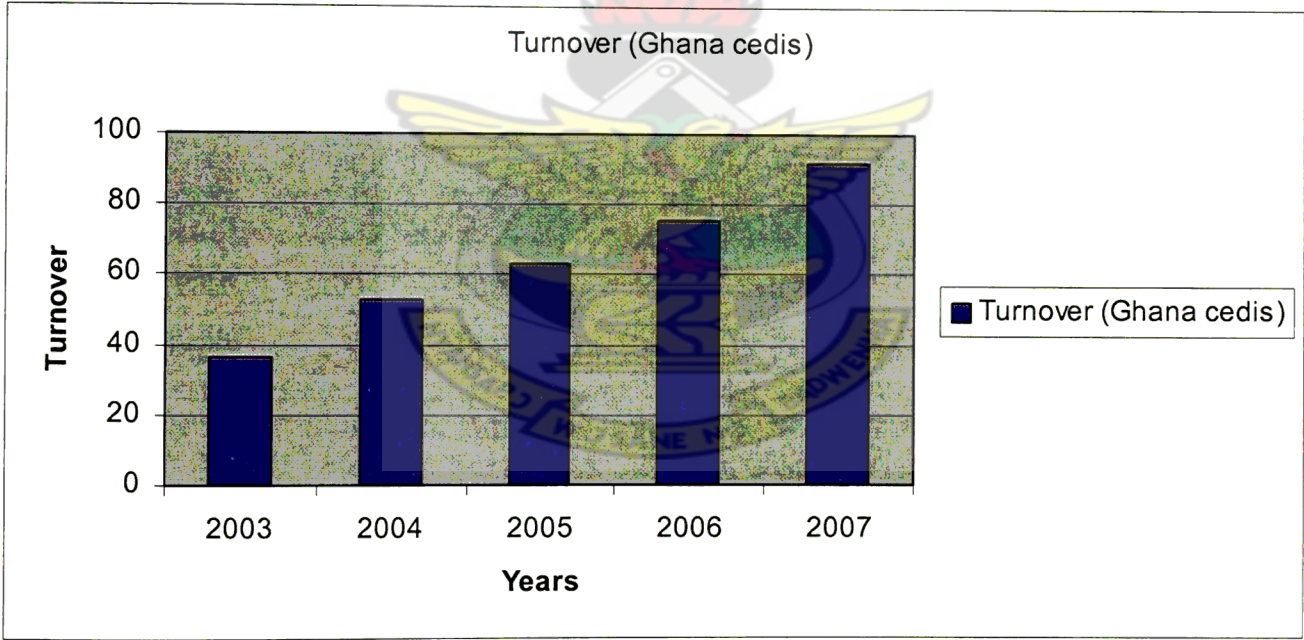


Figure 4.26 Source: GGBL Annual Report 2008

4.27 **RETAINED PROFIT**

This was the percentage earnings not yet paid out as dividend but retained by the company to be reinvested into its core business or to pay debt. Many companies

retained their profits to invest in areas that can create growth opportunities such as buying new machinery or spending the resources on research and development.

Table 4.27 RETAINED PROFIT

Years	2003	2004	2005	2006	2007
Retained profit (Ghana cedis)	2.126	2.825	2.557	7.147	6.019

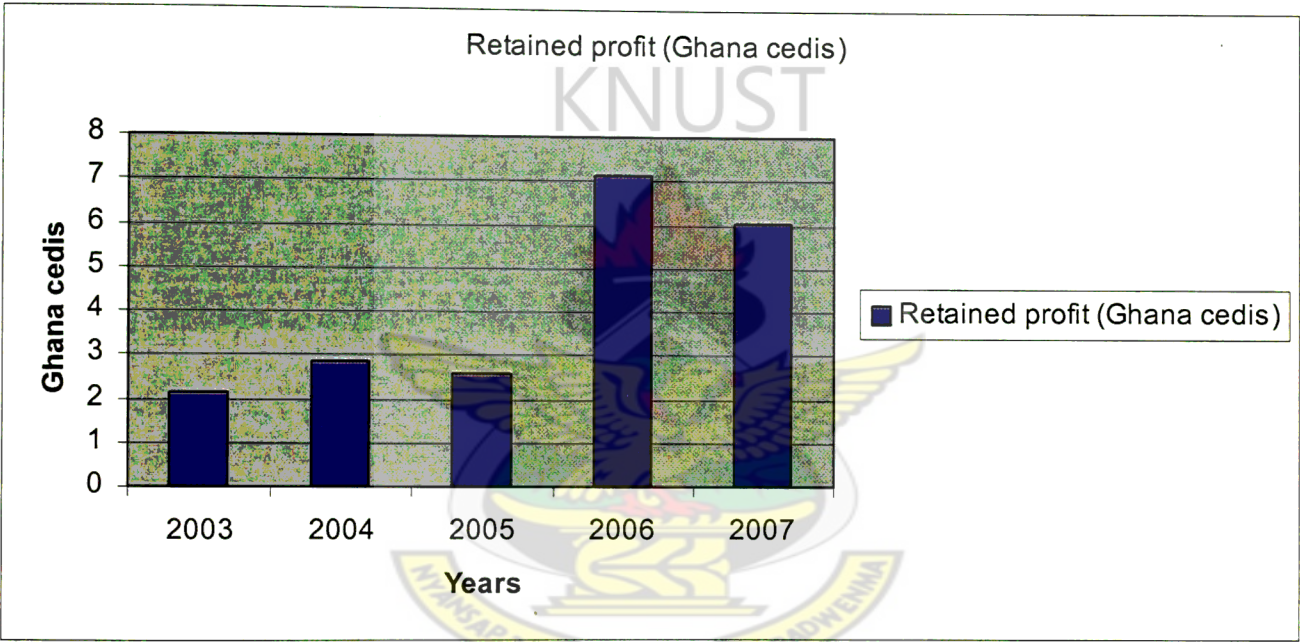


Figure 4.27 Source: GGBL Annual Report 2008

Figure 4.10 shows retained profit by Guinness Ghana Breweries limited improving from 2.126 million Ghana cedis in 2003 to 7.147 million Ghana cedis in 2006. There was a decline in 2007 to 6.019 million Ghana cedis.

4.27 EARNINGS PER SHARE

An earnings per share was a key ratio by stock market investors. It is defined as

$$\frac{\text{Earnings after tax and preference dividends}}{\text{Number of issued ordinary shares}} = \text{Earnings per share}$$

However for this calculation earnings attributed to ordinary shareholders was used.

Table 4.27 EARNINGS AFTER SHARE

Years	2003	2004	2005	2006	2007
Earnings per share (Ghana cedis)	430.97	540.45	515.23	850.33	792.96

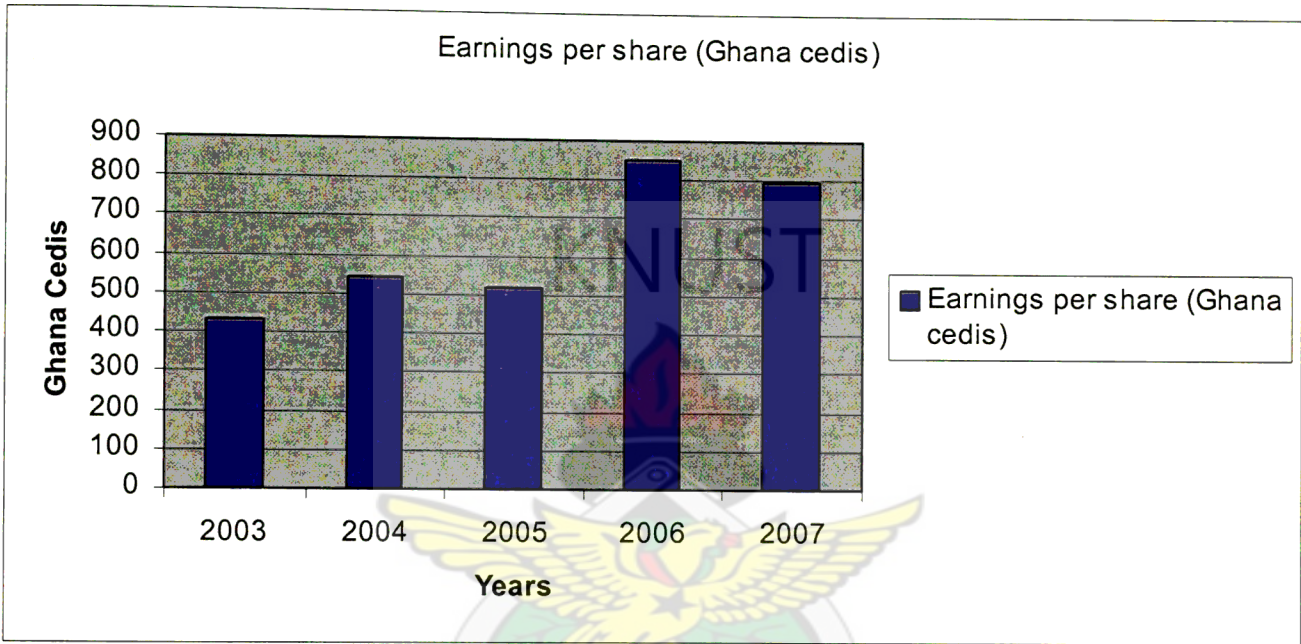


Figure 4.27 Source: GGBL Annual Report 2008

The performance above using the financial key performance indicators were of the fact that GGBL earnings per share declined marginally in 2007.

4.29 PROPERTY AND EQUIPMENT

Property and equipments are the acquired assets by way of land; packaging lines brewing vessels etc that have been purchased by GGBL.

Table 4.29 PROPERTY AND EQUIPMENT

Years	2003	2004	2005	2006	2007
Property and Equipment (Ghana cedis)	15.02	29.156	34.345	43.386	45.767

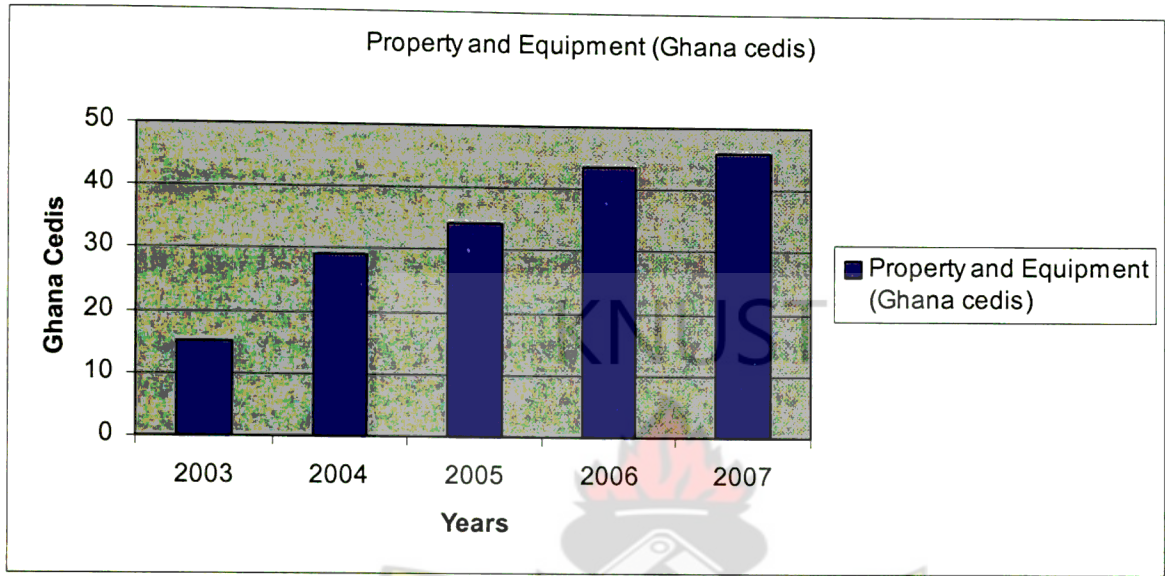


Figure 4.29 Source: GGBL Annual Report 2008

From Figure 4.29 from 2003 which were 15.02 Ghana cedis to 45.767 Ghana cedis in 2007, which showed an investment pattern resulting in improved performance. GGBL has continually improved in its purchases of property and equipments to meet competition and sustain the business.

4.29 DISCUSSION OF FINANCIAL PERFORMANCE INDICATORS

From Figures 4.23 to 4.29 dividend per share, net assets, turnover and property and equipment showed consistent growth over the years from 2003 to 2007.

Dividend per share showed a strong shareholder value creation resulting in growth. A significant growth for dividend per share was realised which was seventy two percent (72%) from 2003 to 2007.

However for net assets there was a significant improvement from GH¢ 10.649 million in 2003 to GH¢ 53.336 million in 2007 indicating 80% increase from 2003 to 2007. This is a reflection that new assets have been purchased by the procurement department with the assistance of the key stakeholders.

Moreover, another significant performance indicator is turnover, which showed a considerable growth. There was an increase from GH¢ 36.208 million in 2003 to GH¢ 92.0million, representing an increase of sixty percent (60%) total sales since the company was growing.

Furthermore, three key performance indicators showed growth from 2003 to 2006 and declined marginally in 2007. These are profit after taxation (figure 4.20), retained profit (figure 4.10) and earnings per share (figure 4.11). Profit after taxation declined from GH¢14.031 million in 2006 to GH¢13.084 in 2007 representing 6.7%. Retained profit declined from GH¢ 7.147 million in 2006 to GH¢ 6.019 million in 2007 representing 15.8%. Finally earnings per share decreased from GH¢ 850.33 million in 2006 to GH¢ 792.96 million in 2007, representing 6.75%.

The general decline in the three performances and growth indicators from 2006 to 2007 financial years coincided with the merger process initiated by Diageo and Heineken the parent companies of Guinness Ghana Limited and Ghana Breweries Limited. Besides the purchase of a new packaging line and the cost of settling litigation issues in court also resulted in the decline.

Therefore the company turnover was high hence made GGBL beat its competitors however, the cost of settling litigation issues with suppliers concerning delays in payment affected its image.

KNUST



CHAPTER 5

CONCLUSION AND RECOMMENDATION

5.0 SUMMARY OF FINDINGS

- Purchase of goods on time, right quantity, quality and cost: From the analysis the company and suppliers are doing well but end users were not procuring goods strictly from their budget on time. The impact was overpricing of goods due to higher courier bills to deliver emergency goods on time resulting to increased cost.
- Selection of suppliers: GGBL was managing the selection process adequately but not all stakeholders were included in the selection committee. The impact was some stakeholders concluded that the process was not very transparent and fair.
- Evaluation of suppliers: Both GGBL employees and suppliers were of the view that the company performed poorly in this area. Irregular review meetings with suppliers on their performance and relationship with GGBL was an issue. A few inefficient suppliers were still on the GGBL supplier list resulting in some downtimes on the production floor because sometimes products of good quality were not delivered on time.
- Payment of suppliers: Suppliers were not paid on time within the contract. The impact was poor supplier relationship, some litigations raised concerning payment tarnished the organization's reputation.

5.1 CONCLUSION

GGBL inbound supply chain process comprise mainly the organisation primarily the procurement department and its suppliers. The inbound process has to do with how best procurement can source for items from several reputable suppliers, analyse their quotations and purchase these goods and services such that they are delivered in full and on time. The process further entailed the selection of suppliers, evaluation of supplier's performance and payment terms

The success of inbound supply chain process depends on the performance of the company. Effective procurement policy has sustained the performance by way of improved technology through the purchase of a new packaging line. The expansion by way of the merger has increased its market share and turnover. From the three main objectives the conclusions have been identified.

➤ Perception and impact of SCM on employees and suppliers

The general perception of both suppliers and employees indicated that supply chain process is well managed especially from the supplier selection, goods acquired at the right time, cost and quality. However, supplier evaluation and prompt payment of suppliers needed improvement.

Poor evaluation of suppliers led to complacency in the performance of some suppliers. The results were goods were supplied at wrong time or of poor quality, which incurred cost to the business.

➤ Financial performance

Generally the company's turnover and net assets increased which indicated that the GGBL was improving. However there was a decline in profit after taxation from 2006 to 2007 due to the merger exercise between Kumasi Breweries and GGBL, purchase of new line and also the company had to settle some litigation

issues in court as a result of delayed payments to suppliers tarnishing the company's image. Delays in the supply chain waste time and resources and reduce profit.

➤ Major challenges

The major challenge facing the inbound supply chain for GGBL has to do with sustained performance review of suppliers and prompt payment of suppliers, which affected the corporate image and the organisation's performance by way of profit in 2007.

5.1 RECOMMENDATIONS

1. All departments should be made to submit realistic budgets, which should be a live document (i.e. document that is frequently used) that informs the purchase policy planning of the purchasing departments.
2. Stakeholders should be made to order items at least three months before the spares or consumables are exhausted and all items, which have not been included in automatic MRP in SAP, should be completed. Automatic MRP would be trigger when items reach their minimum stock levels
3. No emergency purchases should be encouraged but if need be at least two quotations needed to sourced for such justified purchases.
4. To prevent purchase of items, with wrong specifications or quantities and duplication of purchases, a committee needs to be set up which would review all orders with all stakeholders and procurement. This meeting would ensure items bought were budgeted for and if not they would have to be justified by the stakeholder.

5. Quality assurance checks done on samples before delivery should be part of the procurement policy and under no circumstance should this critical step be flouted. Any employee be it manager or staff who by passes this step should be made accountable for any consequences
6. All key stakeholders should be included in the selection of suppliers meeting to ensure that the process is transparent and fair. Preferred list of suppliers should be made available to all in the department in SAP.
7. Review of suppliers should be held religiously every quarter by all relevant stakeholders including the suppliers and chaired by the procurement team. The review template should be modified and made user friendly and easy to understand.
8. The payment of suppliers after receipt of correct and complete invoice should be reviewed from 30 to 60days and management should be committed to pay when due
9. SAP a business tool used throughout the business for all transactions, would have to be reintroduced through training to all employees and suppliers who are still not conversant with the system
12. From the findings and discussion it is recommended that future mergers and acquisition be carefully managed to prevent it from coinciding with some major purchases such as the new packaging line. This is to avoid some of the impacts on company performance indicators. If this were done the growth trend could have continued in respect of profit after taxation, retained profit and earnings per share.

Area for future study

- It was not possible to review the impact of procurement processes on other stakeholders like the distributors, retailers and service providers like the banks. This area of activity is recommended for future study

KNUST



REFERENCES

- Abeele S.P., (1989). “Physical Distribution And Logistics Management”, 8th edition, USA.
- Archibald E., (1999). “Designing And Managing The Supply Chain”, Irwin/McGraw-Hill, USA.
- Babbage, D., (1832). “Logistics Management”, Macmillan India, Vol. 15, pp. 10-24[online] (cited 30th January, 2008) Available from URL: <http://www.macmillanindia.com>.
- Burt,D (1990). “Purchasing And Materials Management”, Homewood, IL, Irwin, Uk.
- Chandra K.(2000). “Customer Service Management” , [online] (cited 30th January 2008) , Volume 8, Available from URL: <http://www.linkedin.com>
- Churchman R.S., (1993). “Negotiation Tactics”, Maryland, University Press, USA
- Cooper and Lambert., (2000). “Industrial Marketing Management” 29th edition., [online] (cited 1st January 2000) Available from URL: <http://www.flipkart.com>.
- Council of Logistics Management (2004). “Procurement and Supply management”, NJ: Prentice Hall. [online] (cited 30th January 2008) , Volume 8, Available from URL: <http://www.cscmp.org>
- Deloitte and Touche (2003). “Logistics Versus The Supply Chain”, USA.
- Fearson D., Flynn G., (1968), “Logistics Management Operations” 4th edition., Upper Saddled River, NJ: Prentice Hall.
- “Guinness Ghana Breweries Limited’s Annual Reports And Financial Statement Of”,(2008), Ghana
- Hansfield, (2000). “Management Information Systems”, 3rd edition, Upper saddle river, NJ:Prentice Hall.
- Helsinki J.T., Stevens, G., (1989). “Integrating The Supply Chain,” vol. 19, International Journal of Physical Distribution and Logistics Management Supply Chain, [online](cited April 2007) Available from URL: <http://www.amazon.com>.

- Huddersfield R., (1998). “Defining Supply Chain Management: A Historical Perspective And Practical Guidelines, Industrial Management And Data Systems”, vol. 99, Upper Saddled River, Prentice Hall.
- Kahn K., (2007). “Best Practices In E-Sourcing”, 5th edition, Practise and Principles, [online](cited June 2008) Available from URL: <http://www.emeraldinsight.com>.
- Kay E., (2005). “Purchasing Magazine”, Chelmsford Mass
- Kleiner P., (1993). “Supply Chain Strategies”, 6th edition, Council of Logistics Management Publications, Mayfield. [online](cited May 2007) Available from URL: <http://www.amrresearch.com>.
- Kolchin, (1999). “Reducing The Transaction Costs Of Purchasing Low Value Goods And Services”, 2nd edition, Centre for advanced purchasing studies, UK
- Lansing T., (1995). “Assessment of Procurement Operations”, 3rd edition, Michigan State University, USA
- Lee H., (1995). “The Evolution Of Supply-Chain-Management Models And Practice”, vol. 25, Sage Publications Inc
- Lyson D.R., (2006). “Tactical Procurement” 3rd edition, McGraw Hill Ryerson, London [online](cited April 2008) Available from URL: <http://www.cilt.org.hk/webadmin>.
- Marian T., (2000). “Procurement Decision Making”, 2nd edition., Press and Information Bureau, Poland.
- Mentzer J.T., Moon M. A., (2005). “Sales Forecasting Management: A Demand Management Approach”, 2nd edition., Thousand Oaks, California: Sage Publications Inc.
- Monczka (2000), “Purchasing And Supply Chain Management”, Thomson Press, USA.
- Mullins J., (2007). “Supply Chain Management Systems” 7th edition, Prentice Hill. [online](cited April 2008) Available from URL: <http://www.ciao.co.uk/>
- Murray M., (2008). “Logistic And Supply Chain”, 7th ed., McGraw-Hill.
- Strahan M., (2001). “Supply Chain Management: Logistics Catches Up With Strategy”, 5th edition, Booz, Allen & Hamilton: Outlook.

- Swenson W.,(2002). “ Maximise Demand Fulfillment and Logistics Constraints”, 5th edition, Thomson Press, [online](cited April 2008) Available from URL: [http:// www.linkedin.com](http://www.linkedin.com)
- Trent R., (2002). “Procurement And Demand Management”, 4th ed., Thompson Press, USA
- Weele, L.F., (2001). “New Developments In Supply Chain Management For The Millennium”, vol. 29, Industrial Marketing Management.
- **Wilkepedia dictionary, 2007. “Supply Chain Systems”** [online](cited August 2008) Available from URL: [http:// wikipedia.org/wiki](http://wikipedia.org/wiki)

KNUST



LIBRARY
KWAME NKUMAH UNIVERSITY OF
SCIENCE AND TECHNOLOGY
KUMASI-GHANA

APPENDIX 1

QUESTIONNAIRE FOR EMPLOYEES OF GUINNESS GHANA BREWERIES LTD

PART I

1. Tick your gender. Male () Female ().
2. How long have you been working with this organization?
a) 1-2yrs b) 3-5yrs c) 6-10yrs d) 10yrs and above
3. Tick your status in the organization. Management staff () Unionized Junior Staff ().
4. Which area are you currently working?
5. a) Finance b) Supply c) Marketing d) Sales e) HR ().

INBOUND SUPPLY CHAIN PROCESS

6. Procurement dept purchases our goods and services on time and in full
a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree
7. Procurement purchases our goods and services at the right quantity and quality.
a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree
8. Procurement purchase our goods and services at the right cost.
a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree
9. You are able to explain all details of your request on the purchase requisition form.
a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree
10. Your approver of your requisition does not delay in approving your requisition.
a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree
11. You are immediately informed of issues with your order to rectify them.

- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree
12. You buy goods from the list of preferred suppliers created by purchasing.
a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree
13. You are generating all purchasing details through SAP.
a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree
14. Procurement always provides 2 or more suppliers to choose from when making a requisition.
a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree
14. Prior to delivery of goods, a sample brought in to be checked, by the QA dept or relevant stakeholder.
a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree
15. The relevant stakeholder check and certify the specimen before actual consignment is delivered.
a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree
16. The stores to ensure all specifications (i.e. quality, quantity and cost) on the request are accurate on delivery.
a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree
17. Goods are sometimes rejected because they do not meet specification or (KPI).
a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree
18. You are satisfied with the service from the support procurement section.
a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree

SELECTION OF SUPPLIERS IN INBOUND SCM

19. Procurement always have a discussion with the department before sourcing the suppliers
a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree

- e. Strongly disagree
20. Procurement is transparent with the bidding and negotiation process.
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree
21. Samples/specimens are brought in to be checked by QA dept or other stakeholders before supplier selection is done.
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree
22. Vendors with favourable payment terms are considered.
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree

REVIEW OF SUPPLIERS

23. There are regular review meetings held with suppliers.
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree
24. Suppliers who are performing poorly are supported as to how to improve.
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree
25. Some suppliers are changed based on the decision from all stakeholders.
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree
26. The review system yields good supplier performance with respect to KPIs.
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree

PAYMENT OF SUPPLIERS

27. The company is able to pay all suppliers within or at the 30days period i.e. from date of invoice issued
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree
28. GGBL payment system is enhancing good supplier relationship.
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree
e. Strongly disagree

How has SAP enhanced your ways of working?

What areas in SAP with respect to purchasing is a draw back to the company?

Which other areas in purchasing process would you recommend an improvement?

APPENDIX 2

QUESTIONNAIRE FOR SUPPLIERS OF GGBL

PART I

1. Tick your gender. Male () Female ().
2. How long have you been working with this organization?
a) 1-2yrs b) 3-5yrs c) 6-10yrs d) 10yrs and above
3. Tick your status in the organization. Management staff () Junior Staff ().
4. Which area are you currently working?
a) Finance b) Supply c) Marketing d) Sales e) HR ().

PART II

UPSTREAM SUPPLY CHAIN MANAGEMENT

SUPPORT OPERATIONAL REQUIREMENTS

5. You supply goods/services to the business often?
a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree e. Strongly disagree
6. Your company supplies goods or services at the right quantity and quality?
a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree e. Strongly disagree
7. Your company is able to supply goods or services at the right cost?
a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree e. Strongly disagree
8. You are able to deliver goods or services at the right time and in full?
a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree e. Strongly disagree
9. Your company can access your orders immediately through the email, or fax system?
a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree e. Strongly disagree
10. Are you able to understand all details of the order made?
a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree e. Strongly disagree
11. Do you deal with purchasing directly when there is an order?

- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree e. Strongly disagree
12. Are you immediately informed of issues with your order to rectify them?
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree e. Strongly disagree
13. Prior to delivery of goods, do you send a sample to be checked, by the QA dept or relevant stakeholder?
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree e. Strongly disagree
14. Does the relevant stakeholder pass the specimen before you deliver actual consignment?
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree e. Strongly disagree
15. Are your goods sometimes rejected because they do not meet specification or key performance indicators (KPI)?
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree e. Strongly disagree
16. Are you sometimes frustrated by stakeholders such as security etc?
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree e. Strongly disagree
17. Is there a cordial relationship between your company and GGBL?
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree e. Strongly disagree

SELECTION OF SUPPLIERS IN INBOUND SCM

18. Is the company's bidding and negotiation process fair and transparent?
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree e. Strongly disagree
19. Are vendors with favorable payment terms considered?
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree e. Strongly disagree

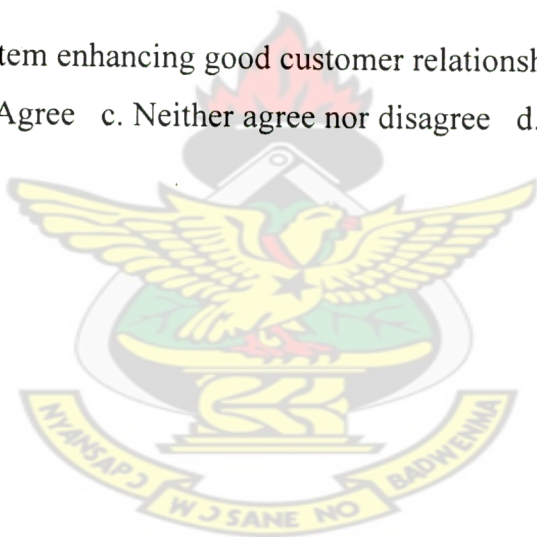
REVIEW OF SUPPLIERS

20. Is regular review meetings held with GGBL stakeholders on KPI performance?
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree e. Strongly disagree

21. Are issues raised thoroughly discussed and reviewed periodically for continuous improvement?
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree e. Strongly disagree
22. Is the review system yielding good supplier performance with respect to KPIs?
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree e. Strongly disagree

PAYMENT OF SUPPLIERS

23. Does GGBL pay all you in full and on time when due?
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree e. Strongly disagree
24. Do you need to call on the premises several times before payment is done?
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree e. Strongly disagree
25. Is GGBL payment system enhancing good customer relationship ?
- a. Strongly agree b. Agree c. Neither agree nor disagree d. Disagree e. Strongly disagree



HYPOTHESIS TESTING

Is this just a chance variation?

Therefore the need for testing at 95% significance level.

The question is : Are you satisfied with the service from the support procurement team?

H_0 : Null hypothesis

H_1 : Alternate hypothesis

H_0 : High level of satisfaction for the service

H_1 : Low level of satisfaction for the service

50% for null hypothesis was used since experts accept

50% as an acceptable level of satisfaction in the industry

$H_0 \geq 50\%$

$H_1 < 50\%$

Using the normal distribution to calculate Z because sample of 100 employees is greater than 30.

$$Z = \frac{\mu - \bar{x}}{\frac{\sigma}{\sqrt{N}}}$$

N = Population size

σ = Standard deviation

μ = Population sampled

$$Z = \frac{0.5 - 0.443}{\frac{(7-8)^2}{100}} = \frac{0.5 - 0.443}{0.642} = 0.088$$

Since $Z = 0.088$ which is greater than -1.645 we accept H_0 and reject H_1 . Therefore there is high service level at 95% significance level. Implying that it was not a chance variation.

