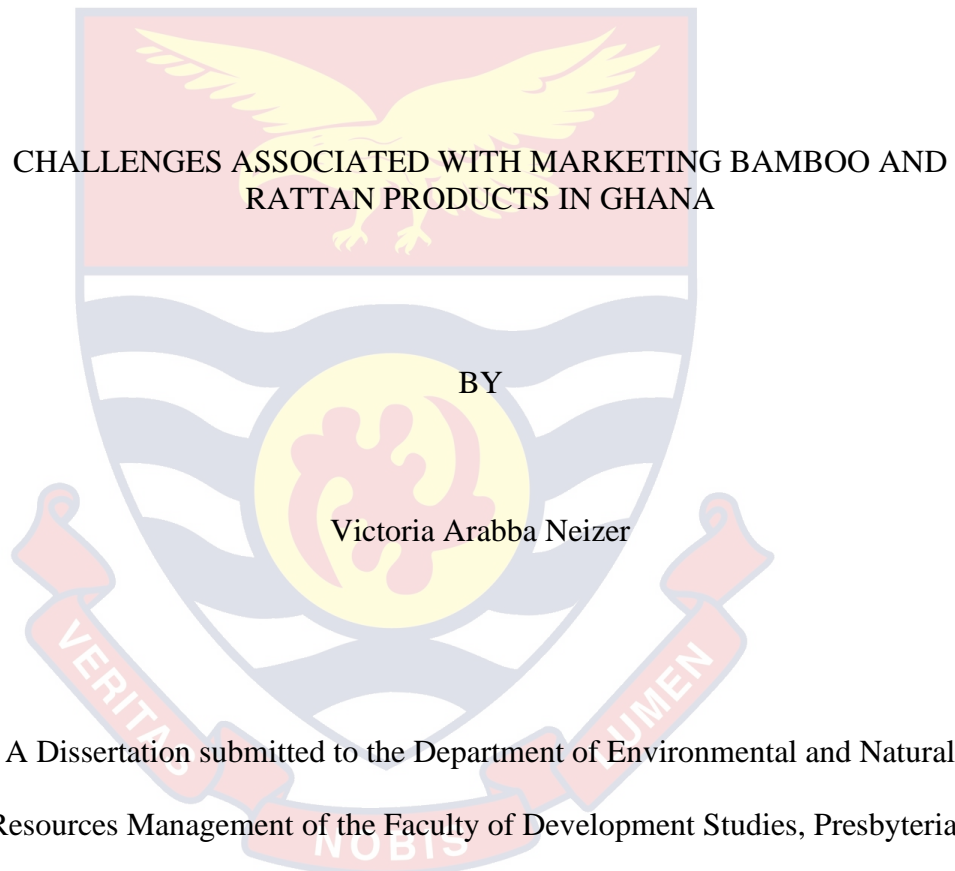


PRESBYTERIAN UNIVERSITY COLLEGE, GHANA

FACULTY OF DEVELOPMENT STUDIES

DEPARTMENT OF ENVIRONMENTAL AND NATURAL RESOURCES  
MANAGEMENT



CHALLENGES ASSOCIATED WITH MARKETING BAMBOO AND  
RATTAN PRODUCTS IN GHANA

BY

Victoria Arabba Neizer

A Dissertation submitted to the Department of Environmental and Natural  
Resources Management of the Faculty of Development Studies, Presbyterian  
University College, Ghana in partial fulfilment of the requirements for the  
award of Master of Science in Natural Resources Management

SEPTEMBER 2020

## DECLARATION

### Candidate's Declaration

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

Candidate's Signature ..... Date .....

Name: .....

### Supervisor's Declaration

I hereby declare that the preparation and presentation of the dissertation were supervised in accordance with the guidelines on supervision of dissertation laid down by the Presbyterian University College, Ghana

Supervisor's Signature ..... Date.....

Name: .....

## ABSTRACT

In Ghana, bamboo and rattan are the two largest non-timber forest products. The study sought to assess the marketing challenges associated with marketing bamboo and rattan products in Ghana. The study area is focused on all the regions in Ghana. Descriptive research design is used to gather data from two hundred customers of bamboo and rattan products out of 1,000 target population throughout the country. The study revealed various items made from bamboo and rattan on the market. It also revealed that manufacturers of bamboo and rattan products do not design products to meet needs of customers and do not offer after sale services and selling at very high prices, among others. The study further revealed that the first and second major marketing challenges confronting manufacturers of bamboo and rattan products in Ghana are the lack of promotion and quality of their products respectively. Other challenges included the presence of competitors and poor product awareness. The study therefore recommended that the local media should also be sensitized by the national bodies such as the Ministries of Information and Communication, and Media Commission to spearhead the regular promotion and marketing of bamboo and rattan products. Also, the District Assembly should create the enabling environment to improve upon activities of the bamboo and rattan industry.

## ACKNOWLEDGEMENTS

To God almighty be the glory, honor and praise for granting me strength and protection and thereby making it possible for me to come out with this dissertation successfully.

Secondly, I owe an inestimable debt of gratitude to my supervisor Prof. Edward Wiafe of the Presbyterian University College, Ghana for his constructive criticisms and useful suggestions for making this dissertation a reality.

My profound gratitude also goes to my husband Nana Yaw Osei Darkwa for his financial support and contributions and my children Ohemaa, Nana yaw and Eno.

I humbly acknowledge my father Mr. Kow Essuon Neizer and my brothers, brother in laws and sister in laws for their prayers and support in diverse ways.

To my late mum, Joyce Kwarley Neizer I say thank you for making me who I am today even though I miss you so much. May your soul continue to rest in peace Amen.

Finally, I would like to acknowledge the following people Dr. Kwakye Ameyaw at the Forestry Commission Ghana who advised me to go back to school and all staff of the Bamboo and Rattan Unit of the Forestry Commission for their patience and support.

May God Almighty richly bless you all!!!

## DEDICATION

To my husband Nana Yaw Osei-Darkwa and to my children



## TABLE OF CONTENTS

DECLARATION .....	ii
ABSTRACT.....	iii
ACKNOWLEDGEMENTS .....	iv
DEDICATION .....	v
LIST OF TABLES .....	ix
LIST OF FIGURES .....	x
CHAPTER ONE .....	1
INTRODUCTION .....	1
1.1 Background of Study.....	1
1.2 Statement of the Problem .....	2
1.3 Objective of the Study.....	3
1.4 Research Questions .....	3
1.5 Significance of the Study .....	4
1.6 Scope of the Study.....	4
1.7 Limitations of the Study.....	5
1.8 Organization of the Study .....	5
CHAPTER TWO .....	6
REVIEW OF RELATED LITERATURE .....	6
2.1 Introduction .....	6
2.2 Bamboo and Rattan .....	6
2.3 Processing of bamboo and rattan .....	8
2.4 Uses of Bamboo and Rattan .....	11
2.6 Definition of Market.....	19

2.7 Concept of Market.....	19
2.7.1 The Production Concept .....	19
2.7.2 The Product Concept .....	20
2.7.3 The Selling Concept .....	20
2.7.4 The Marketing Concept.....	20
2. 8 Definition of marketing .....	20
2.9 Marketing challenges faced by bamboo and rattan industry in developing countries ...	21
2.9.1 Lack of promotion .....	21
2.9.2 Business premises.....	22
2.9.3 Finding new markets .....	22
2.9.5 Transportation.....	23
2.9.6 Competition .....	23
2.9.7 Product awareness .....	23
2.9.8 Capital.....	24
2.9.9 Sourcing.....	24
2.9.10 Quality .....	24
2.10 Conclusion and Lessons Learnt.....	25
CHAPTER THREE .....	26
RESEARCH METHODOLOGY.....	26
3.1 Study Area.....	26
3.2 The Research design.....	28
3.3 Population of the study.....	28
3.4 Sample Size .....	28
3.5 Sampling Procedure .....	29
3.6 Source of data.....	29

3.7 Data Collection Instrument .....	30
3.8 Method of data collection.....	30
3.9 Data Analysis .....	31
CHAPTER FOUR.....	32
RESULTS AND DISCUSSION .....	32
4.1 Socio-Demographic Background of Manufacturers of bamboo and rattan products.....	32
4.2 Services and types of bamboo and rattan Products in the market.....	35
4.3 Determinant of choice of Bamboo and Rattan Products .....	38
4.4 Customer Satisfaction of bamboo and rattan products.....	42
4.5 Marketing challenges of bamboo and rattan products .....	43
CHAPTER FIVE .....	44
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS .....	44
5.1 Summary of Findings .....	44
5.1.1 Assessing the various types of bamboo and rattan products in the market. .	44
5.1.2 Identifying the determinant of choice of bamboo and rattan products.....	44
5.1.3 Examining the marketing challenges of bamboo and rattan products.....	45
5.2 Conclusion.....	45
5.3 Recommendations .....	46
REFERENCES .....	50
APPENDICES .....	i
APPENDIX I.....	i
APPENDIX II .....	v



## LIST OF TABLES

Table 1: Sex Distribution of Customers .....	323
Table 2 Age of Customers.....	334
Table 3 Nationality of Customers .....	34
Table 4: Educational Status of Manufacturers .....	3435
Table 5 Marital Status of Manufactures .....	35
Table 6 Bamboo and Rattan products in Ghana.....	36
Table 7 Quality level of bamboo and rattan products .....	37
Table 8: Branding products .....	38
Table 9 Prices of the products .....	39
Table 10 Payment terms of the bamboo and rattan products .....	40
Table 11: Bamboo and rattan products delivery .....	40
Table 12: Customer satisfaction on usage of bamboo and rattan products .....	42
Table 13: Marketing challenges affecting manufactures of bamboo and rattan products.....	43

## LIST OF FIGURES

Figure 1: Map of Ghana .....	278
Figure 2: Do bamboo and rattan products meet your special design?.....	37
Figure 3: After sales services of bamboo and rattan products .....	39
Figure 4: Foreign bamboo and rattan products .....	41



## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of Study

The importance of non-timber forest products (NTFPs) at the national economy lies in the large number of people involved in gathering, processing, trading and other aspects of their production and uses (Arnold, 1994). Bamboo and rattan are two of the largest non-timber forest products, making up about 5% of the forest vegetation cover. Many industries have been developed with the processing of these resources for diverse products.

However, unsustainable management and harvesting techniques of natural stands, poor quality products, and limited markets for products and poor support constrain the potential of bamboo and rattan for poverty alleviation and economic development in Ghana. Traditional and low volume handicrafts dominate the market though products like furniture, musical instruments, and baskets are manufactured. Little information exists on the current trade and innovation in the bamboo and rattan industry in Ghana (Tekpetey *et al.*, 2015).

The production and trade of different products include furniture, basket, bamboo briquette, lamp holders, chopping boards etc. as a major source of livelihood for many Ghanaians where bamboo and rattan are available.

In recent times though there is increase in demands for these products worldwide limited information exists on the extent of trade and innovation in the bamboo

and rattan products industry. The bamboo and rattan products industry is a key component of the non-traditional exports sector of the country economy. Its contribution to the country's GDP and cannot be underestimated, as it creates jobs and generate foreign exchange for the economy. (Daily Graphic, 2011).

However, the last two decades has been dwindling in the fortune of the sector, as foreign exchange from the handicraft sector fell from US\$15 million to US\$ 2.5 million at the end of 2014. (Daily Graphic, 2011)

The decline, according to the Ghana export promotion authority (GEPA), was as a result of lack of investment in products and design development by handicraft producers (Daily Graphic, 2011).

### **1.2 Statement of the Problem**

In Ghana, even though manufacturing of bamboo and rattan products goes on but the demand for the products by the populace is nothing to write home about thus affecting the manufacturers of the products. This has led to series of calls from previous and current governments to the general public to patronize in products to promote and sustain the growth of the local industries.

Manufacturers of these products complain of low demand for their products upon all the efforts being made by them to satisfy the needs and wants of the Ghanaian market. Surprisingly, consumers still perceive that products are of poor quality and for that matter prefer foreign ones to locally manufactured ones

thus causing a relatively reduction in the total revenue of the made in Ghana bamboo and rattan products hence low profit being made by the manufacturers.

The place, promotion, price and the products to produce in order to meet the needs and wants of the customers become a challenge for most businesses in Ghana, including the bamboo and rattan industry. Therefore, the problem the researcher intends to investigate into is the marketing challenges affecting the bamboo and rattan products industry in Ghana.

### **1.3 Objective of the Study**

The objective of this study is to assess the problems associated with marketing Bamboo and rattan products in Ghana. This is achieved through the following specific objectives:

- i. To assess the types of bamboo and rattan products in the market.
- ii. To identify the determinant of choice of bamboo and rattan products.
- iii. To examine the marketing challenges of bamboo and rattan products.

### **1.4 Research Questions**

In order to achieve the objectives stated above, the study raises the following questions:

- a. What are the types of bamboo and rattan products produced in the Ghana?

- b. What are the factors that influence the choice of bamboo and rattan products?
- c. What are the marketing challenges associated with the bamboo and rattan products industry?

### **1.5 Significance of the Study**

First of all, since there is limited research on bamboo and rattan products industry in Ghana, this dissertation being an embodiment of knowledge, will serve as a very important reference material for students, producers of bamboo and rattan products, marketers, researchers, government and people who are interested in the products industry in general. It is therefore hoped that this study will provide basis for further research.

Also, the study identifies the main marketing challenges producers of bamboo and rattan products are facing and necessary strategies to promoting locally manufactured bamboo and rattan products in the Ghanaian market. In addition, the study seeks to highlight or suggest the marketing implications to the products manufacturers and how to improve upon their marketing efforts.

Last but not the least, the study seeks to make available marketing strategies that can improve and promote the use and consumption of locally-made bamboo and rattan products.

### **1.6 Scope of the Study**

Conceptually, the study was confined to customers of made-in Ghana bamboo and rattan products within the country, and was conducted to investigate into the marketing challenges that affect the manufacturers of these products.

Moreover, it is worthy to mention that the research is a case study approach within all the regions across the country. Hence, the result was placed in the relevant context of the entire area studied.

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

This study is not without limitations. First, studying the marketing challenges associated with the manufacturers of bamboo and rattan products as a whole would demand taking a larger sample size from all the regions of Ghana.

Due to poor documentation on indigenous activities of bamboo and rattan products in Ghana, scantiness of literature on the locally made products made the review of related literature difficult and frustrating.

### **1.8 Organization of the Study**

The study is organized in five chapters. The first chapter is the introductory chapter and discusses the background of the study, problem statement, objectives, research questions, significance of the study, brief methodology, scope of the study, and limitations of the study. Chapter Two considers a literature review of the theme of the study, while Chapter Three deals with methodology for the study. Additionally, Chapter Four presents the results of the various specific objectives used for the study and the accompanied discussions. Finally, Chapter Five presents summary, conclusions, policy recommendation as well as suggestions for future studies.

## CHAPTER TWO

### REVIEW OF RELATED LITERATURE

#### 2.1 Introduction

This chapter reviews literature on both bamboo and rattan. The overview throws light on basically bamboo and rattan and its uses worldwide. It also reviews the definition of market, concept of market, and marketing challenges faced by bamboo and rattan industry in developing countries. To add, this chapter presents theories pertaining to the subject matter of discussion (specific objectives and research questions) as presented in chapter one.

#### 2.2 Bamboo and Rattan

Bamboo, (subfamily Bambusoideae), subfamily of tall treelike grasses of the family Poaceae, comprising more than 115 genera and 1,400 species. Bamboos are distributed in tropical and subtropical to mild temperate regions, with the heaviest concentration and largest number of species in East and Southeast Asia and on islands of the Indian and Pacific oceans. A few species of the genus *Arundinaria* are native to the southern United States, where they form dense canebrakes along riverbanks and in marshy areas (Encyclopaedia-Britannica, 2004).

Bamboo forests grow faster than most forest of other species; they have a high reach maximum height and diameter for a site in 3 to 7 years. They also have a high Leaf Area Index (LAI, example of 10 of Masha bamboo forest in South-



West of Ethiopia) that could absorb 95% of the incident solar radiation (Shackleton *et al*, 2002). Further, canopy gaps are not critical for new shoot emergence in bamboo forest until maximum stand density is reached for the site.

Hence, the growth of new shoots depends entirely on photosynthetic products transported from parent trees through the rhizome system (Khare *et al*, 2000).

Thus, bamboos are efficient converters of solar energy into biomass. The living biomass then provides vital environmental services by providing shelter for the soil and the organisms harbouring in it against the adverse effect of rain, sun and wind.

Rattan is a creeping climbing thorny vine with long slender stems belonging to the species of palm of the Genus *Calamus*. It is tough and creeps towards the light of the sun. Its stems vary in diameter ranging from 3mm to 6mm and can attain a length from 30m to 240m. Four genera of rattan palms, representing 20 species, occur in West and Central Africa (Briassoulis, 2006) the rattans of Africa form an integral part of subsistence strategies for many rural populations and provide the basis of a thriving cottage industry.

Rattan is found from sea level up to 3,000 m. Around 600 species and 13 genera of rattan are known. Although most rattan species are native to the tropical regions of Africa, Asia, and Australia, there is a large variety in their distribution. (Gardner, 2010). Commercially-used rattan usually grows in hilly tropical areas, with a mean annual temperature of 25° C and an annual rainfall

of -2,000 mm. As a result, the main area for rattan production is in the tropical regions of South and Southeast Asia. (Garden, 2010)

There are different types of rattan palms, such as high or low climbers, single stemmed or clustered rattan species. Some have very short and underground stems. Several rattan species are known to reach lengths of 100m. (Garden, 2010)

Rattan sheaths have spines for protection, along with ‘whips’ that are also covered with spines. These play a major role in supporting the rattan as it grows over trees and other plants in the rainforest. (Garden, 2010)

### **2.3 Processing of bamboo and rattan**

Bamboo is susceptible to attacks by decay fungi -such as the soft rot, brown rot and white rot (Liese,1970) and powder post beetles, particularly *Dinoderus minutus* Fabr. (Casin and Mosreiro,1970). Dipping the handicraft products made from bamboo for 3-5 minutes in 0.10% of 2-thiocyanomethyl-benzothiozole + methylene bithiocyanate arrests fungal growth (Giron, 1992). For treating whole culms, a multi-cap, high-pressure sap displacement (HPSD) apparatus was developed. It follows the principle of the boucherie process, wherein the sap from the freshly felled culm is forced out by pressure and replaced by a water-borne preservative, i.e., the preservative is introduced into the culm by pressure through a cylinder cap fitted over one end of the pole.

Processing of bamboo for any use needs drying. The moisture content should be consistent with the average atmospheric conditions prevailing in the intended place of use. Most of our furniture industries, especially the small and medium-scale and cottage type, lack facilities to dry their raw materials which reduces their competitiveness in the export market. The Forest Products Research and Development Institute (FPRDI) has developed a furnace type kiln which is cheap yet efficient. It can be constructed out of locally available materials such as concrete blocks, wood and asbestos cement sheets. In conjunction with the dryer, suitable drying schedules for some Philippine bamboos were also developed (Laxamana, 1984). Another technology developed in FPRDI is for steaming and bending of round bamboo. A simple hydraulic bending equipment was fabricated with a 60 cm radius of curvature. This technology is yet to be improved. Finishing is another important technology developed in FPRDI to help the furniture industry. Although the entire finishing operation basically involves the same set of activities as for wood (surface preparation, staining, sealing, sanding and top coat application), poor application can be a source of numerous finishing troubles. Bamboo surfaces are prepared through scraping, filing and sanding. Shaving or scraping of bamboo culm is done manually using a bolo, a scythe or fabricated scraper. Sanding is done, using abrasive grits or sandpaper, along the direction of the grain. Once the surface is prepared, staining, if desired or required, is carried out. After staining, the application of a sealer follows. Sealers are meant to protect the stain. If no stain is applied, sealers are used to facilitate sanding.

Once the sealer dries up, the bamboo surface is again sanded to prepare it for the actual coat application. Traditional processing of raw cane requires the removal of the epidermis (skin) from the stem and the drying of the raw cane prior to its use. This is undertaken manually, with the stems being scraped with kitchen knives to remove the skin. Drying is usually undertaken in the open air. This simple means of processing is not only labour intensive, but also results in inferior quality cane and hence limits the value of the finished products. It has led to speculation that the cane in Africa is inherently poor in quality. This has not been supported by thorough studies and it is possible that if processed and transformed more efficiently cane from Africa could, in terms of quality, rival that of Asia. The quality of cane depends on how well it has been treated. Initial treatment of raw cane entails boiling the stems in diesel or palm oil (palm oil turns the cane orange, which is considered unattractive) at an average temperature of 150°C for 20 minutes for large-diameter cane, and 10 minutes for small-diameter cane. This boiling process is beneficial for the following reasons: The boiling process kills any pests and diseases that might be present in the raw cane. The latent moisture content of the cane is reduced dramatically, facilitating the subsequent drying process and reducing the risk of deterioration during storage. Boiled rattan is more durable during storage and is less prone to borer damage and fungal attack. Rattan boiled in diesel oil gains a rich tan colour and a glossy surface, which can reduce the need to varnish after transformation. After boiling, the cane is 'cooked' on racks in a steamer for 10 minutes. The stems are then stacked in the open and allowed to dry. When the stems are reduced to 15 per cent moisture content, they are ready for decorticating

(stripping the skin from the cane) and sanding. In the case of small-diameter canes that are used for weaving, they are also ready for splitting. Straightening of large-diameter canes is also sometimes necessary, particularly at the nodes. These procedures are undertaken using machines specially designed for rattan processing.

## 2.4 Uses of Bamboo and Rattan

Bamboo is an ancient woody grass that numbers up to 90 genera and 1500 species of which only about 50 species are domesticated so far (FAO, 2005). It is found in tropical, subtropical and often temperate zones. Besides traditional use of construction, furniture, handicrafts and food, bamboo is increasingly being recognized as an environmentally friendly and cost-effective wood substitute for producing pulp, paper, boards, panels, flooring, roofing, composites and charcoal. Bamboo shoots are rich in fibre and are competing vigorously in the international vegetable market. In addition, bamboo has significant potential to help cope with wood shortages, reduce deforestation and reverse environmental degradation. According to FAO (2007), only 10 to 20% of bamboo consumed reaches international markets, the value of annual trade is about US\$5 to \$7 billion. The International Network for Bamboo and Rattan (INBAR), headquartered in Beijing, China, through participating organizations and individuals from all countries, develops and assists in the transfer of technologies and solutions to benefit people and their environment. In collaboration with the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC), INBAR has developed an

innovative approach to quantify and map the likely range and distribution of bamboo species (Bystriakova *et al.*, 2003b). Bamboo is one of the most important NTFPs in the world trade and totalling about US\$37.56 million annually (Iqbal, 1995). More than 1 billion people live in bamboo houses globally. About 2.5 billion people in the world depend economically on bamboo (INBAR, 1999) and international trade in bamboo amounts to about US\$2.5 million (INBAR, 2005). It is the most universally useful plant known to mankind and approximately 2.5 billion people, mostly the poor in developing countries, depend on it for a wide range of uses and livelihoods (Anon, 1997). Bamboo and rattan represent an annual commercial value of over US\$ 14 billion globally (Anon, 1997). The socio-economic benefits attributed to this plant includes enhancement of women's and marginalized groups' economic position and mainstreaming of the rural poor in market economies. Market-driven changes in the bamboo sector have encouraged communities previously not involved with the resource to enter a bamboo-based economy. Traditionally, bamboo was used for domestic purposes and supplies were extracted based on need. Now, additional applications of bamboo have propelled it into new domestic and international markets, increasing profits and income for most participants in this sector.

Bamboo is becoming increasingly important for several developing countries in South and Southeast Asia because of the employment it offers to otherwise marginalized groups. However, expansion of the bamboo sector has not received the support required to ensure ecological and socio-economic sustainability. Instead, the focus has been on profits and industrializing bamboo production.

To generate widespread benefits, external support should foster bamboo development close to the resource base to enable growth in communities most dependent on it. The Asia and Pacific region are the biggest net importer of forest products in the world but the largest exporter of Non-Wood Forest Products (NWFPs) especially the bamboo and rattan, amounting to some US\$2-3 billion annually (FAO, 2007). Bamboo culms (stems) have been traditional substitutes for timber in construction and scaffolding, and these uses remain vitally important in Asia today. Bamboo furniture and flooring are gaining market share, with new and innovative designs contributing to this growth. China and India have the world's largest bamboo resources and China is the world's largest producer of commercial bamboo production (UN, 2004). India reports 9 million hectares of bamboo forest and clumps, China counts 7 million hectares of bamboo, including 4 million hectares of plantations, and Ethiopia has 2 million hectares. Latin America is presumed to have 11 million hectares of bamboo, excluding the Andes (Jiang, 2002). The bamboo sector provides part-or full-time employment for more than 5 million people in China (Ruiz-Pérez *et al.*, 2001). More than 50% of the 125 recorded bamboo species are present in North-east India with a high degree of endemism and population density per given land area (Tewari, 1992; Kochar *et al.*, 1992). India's annual harvest totals approximately 4 million tonnes, with slightly more than half used in rural construction and scaffolding (Ganapathy, 2000). Most of the remainder is for making pulp and paper. Bamboo is also used extensively to make paper in Bangladesh, China, the Philippines, Thailand and VietNam. The results from two joint studies by UNEP-WCMC and INBAR showed that over 400 bamboo

species are potentially threatened by the destruction of naturally regenerated forest cover, thus conservation and sustainable management of wild bamboo populations should have high priority (Bystriakova *et al.*, 2003b).

About 80% of bamboo area is distributed with the southern tropical region of Asia and Africa and South Africa are poorly populated with bamboo (Kigomo, 1988). In the Global Forest Resources Assessment 2000-FRA 2000 (FAO, 2001a), although bamboo data were not requested or specified, eleven countries-eight from Asia, one from Africa and two from Central and south America-provided data on the context of the bamboo forests. Interestingly, India, which has the largest area of bamboo resources in the world, did not present data on their extent. Pabuayon and Espanto (1997) reviewed that China, India, Indonesia and the Philippines focused primarily on markets and trades rather than resources. Nepal has only 25 naturally occurring species and no native and introduced species (Ohrnberger, 1999; Londono, 2001) whereas China has 500 native species, 10 introduced species and 626 naturally occurring species and India has 119 native species, 25 introduced species and 102 naturally occurring species. Generally, there are few commercial uses of natural bamboo in most

African countries. This may be because of the lack of awareness of the commercial uses for bamboo and lack of scientific research into the physical properties. Currently, across Africa, bamboo is used mainly for Scaffolding, fencing, farm hut, some handicraft, basic living room furniture, some musical instrument and fishing system as fish traps like “acadja” in Benin. In some



Urban zones, bamboo is partially used in some cases of dancing bars, construction for decorative purposes. Whilst bamboo is used for musical instrument, some ethnic groups execute a kind of dance using cut bamboo pole. This dance is known as bamboo dance in southern region of BENIN. The pole cut from a clump and fixed in the soil becomes sacred one and symbolizes a mysterious life power of the dancer who climbs.

In Tanzania, the production of bamboo wine, known as Ulanzi (Kigomo, 1998) has been tested and young shoots of *Oxytenanthera abyssinica* are being consumed as food. Madagascar have nearly half of all household use bamboo domestically while the culms of *Valiha diffusa* are used for the construction of wall and roof. However, despite the several uses of bamboo in Africa, there have not been any large-scale bamboo industry establishments in any country in Africa. Thus, the economic value of trade in bamboo product in Africa is very negligible, because bamboo product, trade locally and statistics do not enter the national accounting system (Chihongo *et al.*, 2000) Rattans are climbing palms native to tropical forest regions of South-east Asia, the Malay Archipelago and Africa.

Bamboo is extensively used for fishing and aquaculture applications on the Dayu Bay in Cangnan County, Zhejiang. Bamboo has traditionally been used to make a wide range of everyday utensils and cutting boards, particularly in Japan, where archaeological excavations have uncovered bamboo baskets dating to the Late Jōmon period (2000–1000 BC). (McCallum, 1988).

Bamboo has a long history of use in Asian furniture. Chinese bamboo furniture is a distinct style based on a millennia-long tradition, and bamboo is also used for floors due to its high hardness (Yihai, 2003). Several manufacturers offer bamboo bicycles, surfboards, snowboards, and skateboards. (Lukenbill, 2012) (Kermeliotis, 2012).

Due to its flexibility, bamboo is also used to make fishing rods. The split cane rod is especially prized for fly fishing. Bamboo has been traditionally used in Malaysia as a firecracker called a *meriam buluh* or bamboo cannon. Four-foot-long sections of bamboo are cut, and a mixture of water and calcium carbide are introduced. The resulting acetylene gas is ignited with a stick, producing a loud bang. Bamboo can be used in water desalination. A bamboo filter is used to remove the salt from seawater (UNIDO, 2009)

Many ethnic groups in remote areas that have water access in Asia use bamboo that is 3–5 years old to make rafts. They use 8 to 12 poles, 6–7 m (20–23 ft) long, laid together side by side to a width of about 1 m (3.3 ft). Once the poles are lined up together, they cut a hole crosswise through the poles at each end and use a small bamboo pole pushed through that hole like a screw to hold all the long bamboo poles together. Floating houses use whole bamboo stalks tied together in a big bunch to support the house floating in the water. Bamboo is also used to make eating utensils such as chopsticks, trays, and tea scoops.

The Song Dynasty (960–1279 AD) Chinese scientist and polymath Shen Kuo (1031–1095) used the evidence of underground petrified bamboo found in the

dry northern climate of Yan'an, Shanbei region, Shaanxi province to support his geological theory of gradual climate change (Chan, Alan, Clancey & Loy, 2002) (Needham,1986).

There are over 650 rattan species worldwide (Abdulaziz, 2006). Rattans have a wide variety of both household and commercial uses. Recently, their importance in environmental management and conservation has also been recognized. Rattans provide raw materials for the cane furniture industry. About 0.7 billion of the world's population are involved in the trade of raw rattan materials and their finished products (Kigomo, 1992)., Rattan provides a means of livelihood for collectors, processors and traders in the rattan producing countries of Africa.

In Ghana, rattan contributes 20% of the total revenue from NTFPs. Through the National Forest Policy, the government of Ghana is promoting the development of NTFPs including rattan to curb rural poverty and ensure sustainable forest resources. Despite its environmental and socio-economic importance to the nation, the rattan sector lacks adequate authoritative basic data required to enhance its development. INBAR (2007).

## **2.5 Bamboo and poverty alleviation**

Bamboo is a woody grass which occurs naturally on major continents except Europe (Oberoi, 2004). Bamboo is a grass, biologically, but a grass of great diversity and utility more closely related to trees in its use and appearance than other grass. There are about 1600 species of bamboo in the world, distributed

across 111 genera (Oberoi, 2004). Bamboo is strong, versatile, highly renewable material-one that people and communities have known and utilized for thousands of years. INBAR (2007) reported on studies it has done in Asia, central and South America that have indicated bamboo's advantages from a livelihood perspective. The advantages include first, it can be harvested annually and non-destructively. However, clear cutting is detrimental to the stands but selective harvesting increases productivity. Secondly, bamboo establishes quickly with the first harvest generally available in 3-4 years or in some cases even in two years. Stand maturity is generally reached in 5-6 years at the most.

Thirdly, the investment required for establishing a bamboo plantation is quite low compared to most commercial tree species. Lastly, the plant regenerates itself and continues to yield for long periods, dozens of years in most cases and often up to 50 or 70 years. In his study, Abdulaziz (2006) reported on the impact of bamboo economy on poverty alleviation in Ileje District, Tanzania. The results show that bamboo trade was a strategy to alleviate poverty which had manifested in the region. The immediate out-come of this strategy has been poverty alleviation among households engaged in bamboo trade. The bamboo goods were exchanged with commodities like rice, beans and millet that were easily stored. Also, most households indicated that they acquired the skills of making bamboo goods by inheriting from parents and grandparents (54.2%) and others acquired through training after realizing that bamboo goods trade is

profitable (45%). The most popular period for making and marketing bamboo goods is in the dry season when the agricultural activities have been reduced to a minimum. Abdulaziz (2006) revealed that bamboo trade is employing a reasonable proportion of the population in Ileje District and it is a good source of income that helps to alleviate poverty in the district.

## **2.6 Definition of Market**

According to Kotler and Armstrong (2012), concepts of exchange and relationships lead to the concept of a market. A market is regarded as a set of actual and potential buyers of a product or service. These buyers share a particular need or want that can be satisfied through exchange relationships.

## **2.7 Concept of Market**

The concept of selling a product to a customer has over the years changed the greater impact in the market place. Below are discussions on some major concept of market:

### **2.7.1 The Production Concept**

Production concept is regarded as one of the aged concepts in the field of business. The production concept indicates that a customer would prefer a product which is inexpensive but widely available (McCarthy, 1964; Kotler and Armstrong, 2012). The 8 marketers hence assume that consumers are mainly concerned in the availability of the product and its relatively lower price.

### **2.7.2 The Product Concept**

Business across the globe is guided by the product concept, which assumes that a consumer will purchase a product which offers high quality, performance and/or has innovative features (Boyd and Larreche, 1999; Kotler and Armstrong, 2012). The marketer hence perceives that the buyer will admire the product and thus have the ability to evaluate its quality and performance.

### **2.7.3 The Selling Concept**

Another widely known concept in the business field is the selling concept. Kotler and Armstrong (2012) revealed that the selling concept assumes that a customer and business, if not intervened would not buy much of an organization's products. They again further state that the organization should pursue widespread and belligerent promotional effort.

### **2.7.4 The Marketing Concept**

According to Kotler and Armstrong (2012), the marketing concept became known in the last century and challenged the earlier concepts. Instead of a product centred "make and sell" philosophy, it shifted to customer centred "sense and re respond" philosophy (Boyd and Larreche, 1999; Kotler and Armstrong, 2012).

## **2. 8 Definition of marketing**

Many people have a lot of misconception about marketing and thus think of marketing as only selling and advertising (Kotler and Armstrong, 2012). Every day, consumers are being bombarded with television commercials, sale calls and

many others. But, selling and advertising are only the tip of the marketing iceberg (Kotler and Armstrong, 2012). Marketing must be understood in the new sense of satisfying customer needs. If the marketer understands consumer needs; develops products that provide superior customer value; and prices, distributes, and promotes them effectively, these products will sell easily.

Marketing, according to Kotler and Armstrong (2012), is a social and managerial process by which individuals and organizations obtain what they need and want through creating and exchanging value with others.

## **2.9 Marketing challenges faced by bamboo and rattan industry in developing countries**

In spite of its benefits, employment and income generation in Ghana, bamboo and rattan industry is faced with challenges such as lack of promotion, business premises, finding new markets, product range, transportation, competition, product awareness, capital, sourcing and quality.

### **2.9.1 Lack of promotion**

In affirmation, Clough (2011) writes that manufacturers of bamboo and rattan products in developing countries, do not carry out active promotion of their products. They rely on passing trade and customers finding their businesses by chance which results in minimal and local sales (Clough, 2011).

### **2.9.2 Business premises**

Clough (2011) stated that If the business is located far from the market the manufacturer may rely on customers coming to them or will have increased transportation costs to get their products to market.

The manufacturers may also have limited space available to them for both the production and storage of their products, which will limit the amount they can produce. Moreover, for the manufacturers to expand their business and reach out to the market, they may want to set up an outlet in another trading centre. Clough (2011) believes that probably this can pose many challenges such as capital to set up a stall, transportation of goods and man power to operate a further outlet.

### **2.9.3 Finding new markets**

Clough (2011) is of the view that manufacturers of bamboo and rattan products may rely heavily on local customers and have a need to form links with markets in other towns to expand their customer base. They may also want to be linked up to distributors and stockist but lack the knowledge and contacts to make these links (Clough, 2011).

### **2.9.4 Product range**

The manufacturers may depend on selling one specialized product which limits the number of sales they will make each month. They may benefit from expanding their product range particularly into nice and quality products.



### **2.9.5 Transportation**

Manufacturers of bamboo and rattan products whose business is located far from the market centre may have this kind of challenge. The cost and logistics of transportation may be an issue particularly in areas with poor quality roads. Clough (2011) has stressed that transportation costs can increase the price of the products and cut into the manufacturers' profit margin.

### **2.9.6 Competition**

The manufacturers may face a lot of competition from similar businesses' products in the area. This is a particular issue in the bamboo and rattan industry business where competition exists from nicer and quality products (Clough,2011). There may also be strong competition for raw material such as, glue, beads, wire and many others, when a limited supply is available in the local area. This may lead to an increase in the price of raw materials.

### **2.9.7 Product awareness**

Potential customers may lack awareness and even the existence of the product (Clough,2011). This is a particular problem with bamboo and rattan products that are new to the market such as newly designed products by the manufacturers

### **2.9.8 Capital**

A manufacturer of bamboo and rattan products may lack capital to buy stock or raw materials in bulk which allows them to benefit from economies of scale (Clough, 2011). They may also lack capital to engage in marketing activities, research and development or to purchase equipment which would help their business to expand. For example, a manufacturer of bamboo and rattan products may lack the capital to buy additional raw materials that would increase the number of items they could produce at one batch of production.

### **2.9.9 Sourcing**

A manufacturer may struggle to source low cost, quality products and raw material in the local area. This is a particular problem for bamboo and rattan industry where the cost of raw materials can vary between different regions. The sourcing of quality products is also a challenge in the bamboo and rattan business with many substandard products on the market (Clough, 2011).

### **2.9.10 Quality**

Manufacturers of bamboo and rattan products struggle to continue to produce quality products which would help them maintain customers and fetch higher prices.

## 2.10 Conclusion and Lessons Learnt

Review of the literature on the marketing challenges faced by the bamboo and rattan industry in developing countries has revealed that market plays significant role in the livelihood improvement of actors. The review has also revealed that if the marketer understands consumer needs; develops products that provide superior customer value; and prices, distributes, and promotes them effectively, these products will sell easily. Marketing has also been understood to be a social and managerial process by which individuals and organizations obtain what they need and want through creating and exchanging value with others. Some marketing challenges from the review have been revealed to include difficulty in finding new markets, lack of promotion, transportation challenges, and difficulty in accessing capital, among others. The purpose of reviewing literature is to broaden one's scope. It is evident that in every scientific study, there is always the need to validate one's findings with empirical evidence.

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 Study Area

The study area is focused on all the regions in Ghana. Ghana is a country of western Africa, situated on the coast of the Gulf of Guinea and bordered to the northwest and north by Burkina Faso, to the east by Togo, to the south by the Atlantic Ocean, and to the west by Côte d'Ivoire (Fage, 2000).

Although Ghana is relatively small in area and population, it is one of the leading countries of Africa, partly because of its considerable natural wealth and partly because it was the first black African country south of the Sahara to achieve independence from colonial rule on 6 March 1957 (Fage, 2000). Surrounding the basin on all of its sides, except in the east, is the dissected Precambrian peneplain, which rises to elevations of 500 to 1,000 feet above sea level and contains several distinct ranges as high as 2,000 feet.

Ghana's administrative capital is the coastal city of Accra. Originally founded on the site of several Ga settlements, Accra developed into a prosperous trading hub; today it serves as the commercial and educational centre of the county. Kumasi, another prominent commercial centre, is located in the south-central part of the country. Known as the "Garden City of West Africa," (Fage, 2000).

Ghana's population of approximately 30 million spans a variety of ethnic, linguistic and religious groups. According to the 2010 census, 71.2% of the

population was Christian, 17.6% was Muslim, and 5.2% practised traditional faiths. Its diverse geography and ecology ranges from coastal savannahs to tropical rain forests (Fage, 2000).



Figure 1: Map of Ghana

Source: Map of Ghana

### **3.2 The Research design**

Descriptive research design is used for the study. This is because, descriptive research design method includes data collection, analysis and presentation. This allow the researcher clearly present the problem statement in order to allow others understand the need for the research. The study is therefore directed to customers of bamboo and rattan products throughout the country to enable us get a good results of the study findings.

### **3.3 Population of the study**

The population of this study Greater Accra Region, Central Region, Western Region, Ashanti Region, Eastern Region, Volta region, Bono Region, Ahafo Region and Oti Region respectively all the regions and various communities within these regions. A target population of 1,000 customers throughout the stated regions and its subsequent communities in the country is taken.

### **3.4 Sample Size**

The sample size for this study is two hundred (200) people selected from the target population. These respondents are interviewed irrespective of gender. Half of the respondents are from the Greater Accra and the Ashanti Region whilst the other half is widely spread throughout the remaining regions and its respective communities.

### **3.5 Sampling Procedure**

Simple random sampling method which is a perfect method to promote fairness in a study is adopted. This makes every member having an equal chance of being picked thereby reducing bias in the choosing respondents.

### **3.6 Source of data**

Primary data and secondary data are used in the study for data collection. Primary data in this study consist of questionnaires and face-to-face interview. Primary source of data consists of direct information acquired from the respondents of the target population of the study.

#### **3.6.1 Questionnaires**

The questionnaire to the customers of Bamboo and Rattan products was self-administered by the researcher since some respondents needed further clarifications of some questions. The sample questionnaires can be found in the Appendix 1.

#### **3.6.2 Face-to-face Interview**

A face-to-face interview is conducted with the customers of Bamboo and Rattan products in Ghana to deeper understanding of the customers of Bamboo and Rattan products. This is carried out by means of a semi-structured questionnaire (found in the Appendix 1).

### **3.7 Data Collection Instrument**

In the collection of data, quantitative data collection is adopted for the study. A well structures questionnaires and face-to-face interviews is employed to gather data. The well-structured questionnaires have 2 main portions whereby the first portion gathers information relating to the socio-economic characteristics of respondents and the second portion gathers information in relation to the objectives of the study.

### **3.8 Method of data collection**

Questionnaire being the main source of data collection instrument is directed to the customers of Bamboo and Rattan products by the researcher since some respondents need further clarifications of some questions. These respondents reside in the Greater Accra Region, Central Region, Western Region, Ashanti Region, Eastern Region, Volta region, Bono Region, Ahafo Region and Oti Region respectively all the regions and various communities within these regions. A face-to-face interview is also conducted with the customers of Bamboo and Rattan products in Ghana. The sample questionnaires can be found in the Appendix 1.

Photographs of various bamboo and rattan products is taken for more understanding of the uses of bamboo and rattan and at the same time identify the various types of products in the market.



### 3.9 Data Analysis

The analysis is done based on the questionnaire developed to interview the customers of bamboo and rattan products in Ghana with respect to the customer groups. The results are analyzed using the Special Package for Social Sciences (SPSS) and Microsoft Excel. Data is presented in simple frequency distributions, appropriate charts, tables and figures.



## CHAPTER FOUR

### RESULTS AND DISCUSSION

#### 4.1 Socio-Demographic Background of Manufacturers of bamboo and rattan products

This sub-section highlights the socio-demographic characteristics: age-sex structure, educational attainment, and marital status of the customers of bamboo and rattan products in Ghana.

##### 4.1.1 Age and Sex Profile of Respondents

The study revealed that 66% and 34% of the interviewed customers were males and females respectively as indicated in Table 1. This confirms a similar finding of Marana (2010) and Matthew (2013) who indicate that bamboo and rattan products manufacturing is predominantly a job for males. However, the male dominance is unique to the survey as the sex ratio is not in tandem with the national average of 100 females to 93 males (Ghana Statistical Service, 2013).

**Table 1: Sex Distribution of Customers**

SEX	Frequency	Percent (%)
MALE	132	66.0
FEMALE	68	34.0
<b>Total</b>	<b>200</b>	<b>100.0</b>

Source: Field Survey, 2020

Further computation of the ages gives an indication that, 35.5% of the customers are found within the economically active age group of 18 to 40 years while 60% were between 40 to 60 years and the remaining 4.5% were 60 and above (See Table 2). In addition, it was revealed that approximately, 91% of the customers were Ghanaians while 7.5% were not Ghanaians while 1.5% had dual citizenship (See Table 3). This shows the dominance of the nationals in the locally-made bamboo and rattan industry. The industry can therefore provide livelihood to many youthful Ghanaians should they want to be engaged in the sector. Having access to employment as revealed by several studies has the capacity to reduce vices associated with unemployment, such as alcoholism, armed robbery, vandalism, among others.

**Table 2 Age of Customers**

Age	Frequency	Percent (%)
18 – 40	71	35.5
40-60	120	60
60 and above	9	4.5
<b>Total</b>	<b>200</b>	<b>100</b>

Source: Field Survey, 2020

**Table 3 Nationality of Customers**

Nationality	Frequency	Percent (%)
Ghanaian	182	91
Non-Ghanaian	15	7.5
Dual Citizenship	3	1.5
<b>Total</b>	<b>200</b>	<b>100</b>

Source: Field Survey, 2020

#### 4.1.2 Educational Status of Respondents

Findings from the study revealed that about 90.5% of the respondents were educated or had ever been to school. This therefore implies that approximately 9.5% of them had never attained formal education (See Table 4). Findings from the study further revealed that about 46% of the bamboo and rattan products customers were married, while 47% of them were single, 4% were divorced, 2.5% were widowed and 1% were separated (See Table 5).

**Table 4: Educational Status of Manufacturers**

EDUCATIONAL LEVEL	Frequency	Percent (%)
NO EDUCATION	19	9.5
PRIMARY	15	7.5
SECONDARY	26	13.0
TERTIARY	140	70.0
Total	200	100.0

Source: Field Survey, 2020

**Table 5 Marital Status of Manufactures**

<b>MARITAL STATUS</b>	<b>Frequency</b>	<b>Percent (%)</b>
SINGLE	94	47
MARRIED	92	46
DIVORCED	8	4
WIDOWED	5	2.5
SEPERATED	2	1
<b>Total</b>	<b>200</b>	<b>100</b>

Source: Field Survey, 2020

#### 4.2 Services and types of bamboo and rattan Products in the market

It was also imperative to study into the kinds of products and services rendered by the identified businesses and the products they produce. The study revealed various items made from bamboo and rattan which included: furniture, baskets, and bicycles, among others to various customers. The study indicated that 5.5% of customers were familiar with bamboo and rattan souvenir, 31% with furniture, 7.5% with bicycles, 14% with kitchen wares, food was 4.5% while charcoal and basket was 5% and 32% respectively (See Table 6).

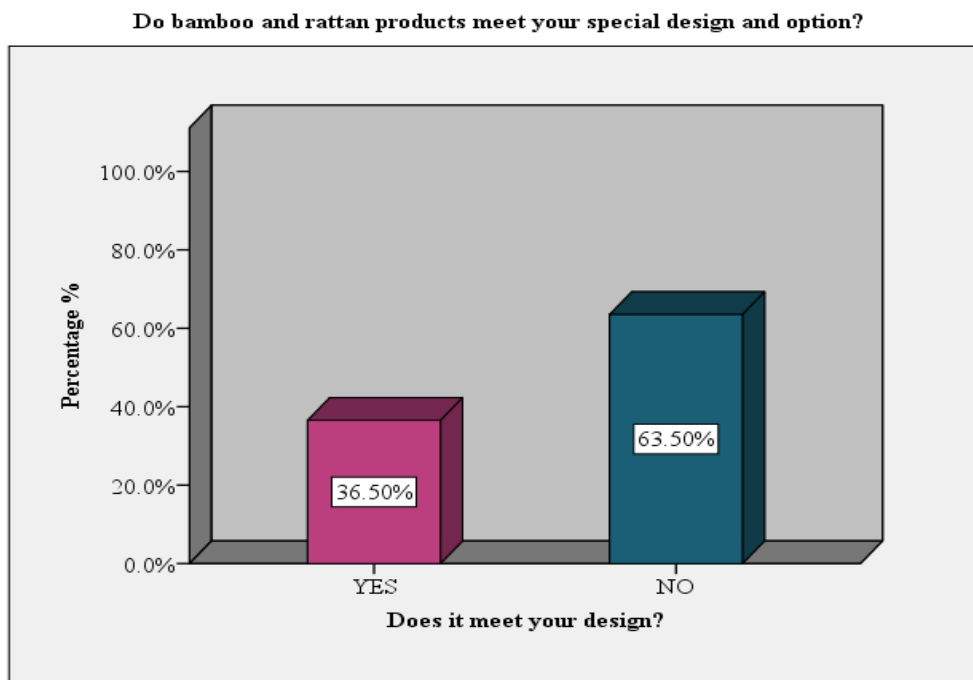
**Table 6 Bamboo and Rattan products in Ghana**

Bamboo and Rattan Product	Frequency	Percent (%)
Souvenir	11	5.5
Furniture	62	31
Bicycle	15	7.5
Kitchenware	28	14
Food	9	4.5
Charcoal/Briquette	11	5.5
Baskets	64	32
<b>Total</b>	<b>200</b>	<b>100</b>

**Source: Field Survey, 2020**

Figure 2 shows that 63.5% of the customers indicated that the bamboo and rattan products do not meet their design and option while 36.5% indicated that they were fine with the design and option.

**Figure 2: Do bamboo and rattan products meet your special design?**



**Source: Field Survey, 2020**

On a scale of 1 to 5 the customers further indicated that 5% of bamboo and rattan products quality was very poor, 30% was poor, 35% indicated medium, and 26.5% was good while 3.5% was very good (See table 7).

**Table 7 Quality level of bamboo and rattan products**

Quality Level	Frequency	Percentage %
Very Poor	10	5
Poor	60	30
Medium	70	35
Good	53	26.5
Very Good	7	3.5
Total	200	100

**Source: Field Survey, 2020**

### 4.3 Determinant of choice of Bamboo and Rattan Products

This section of the study presents and analyses data on the customers' response to the packaging and branding of bamboo and rattan products. The study observed that a greater percentage of the manufacturers products (91.5%) did not have brand names and 8.5% had brand names as indicated in Table 3. Products that are well branded and packaged are mostly those with brand names. Thus, products that did not have brand names and packaging were indirectly not well marketed and promoted (See Table 8).

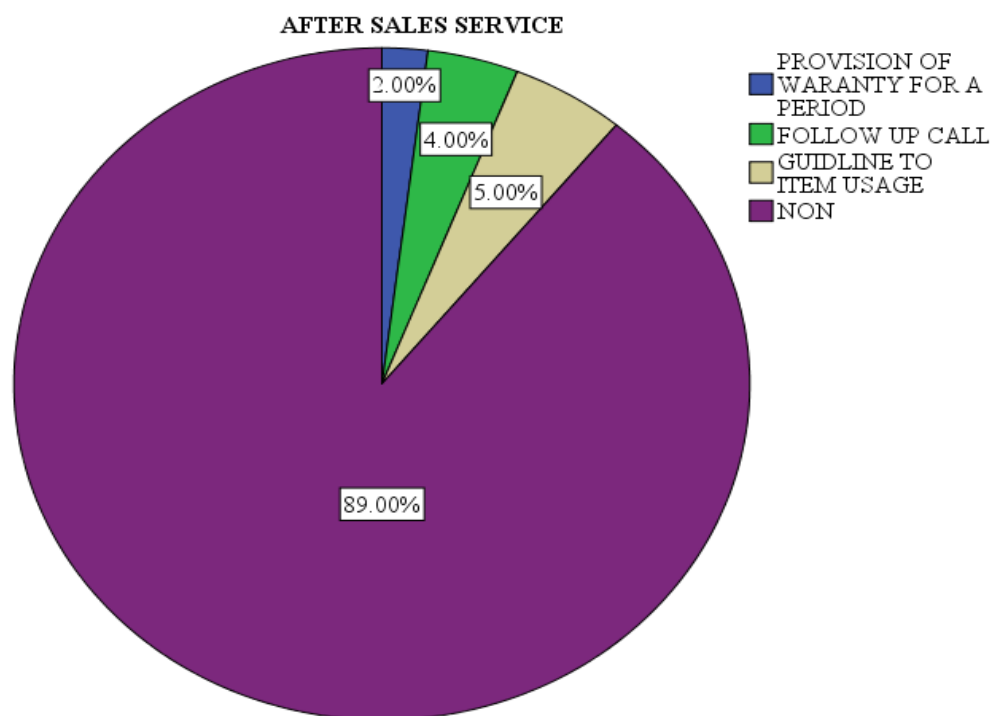
**Table 8: Branding products**

BRAND NAME	Frequency	Percent (%)
SPECIFIED	17	8.5
NOT SPECIFIED	183	91.5
Total	200	100.0

**Source: Field Survey, 2020**

Findings of the study further revealed that 89% of manufacturers do not provide any after sales services, 5% provide guidelines to item usage, 4% make a follow up call and 2% provide warranty for certain period as shown in Figure 3.





**Figure 3: After sales services of bamboo and rattan products**  
 Source: Field Survey, 2020

Furthermore, approximately 62.5% of the customers indicated that the bamboo and rattan product was expensive, 30.5% indicated that the products were moderate while 7% was cheap (See Table 9).

**Table 9 Prices of the products**

Product Prices	Frequency	Percentage
Cheap	14	7
Moderate	61	30.5
Expensive	125	62.5
<b>Total</b>	<b>200</b>	<b>100</b>

Source: Field Survey, 2020

Thus 87% of respondent indicated that bamboo and rattan products are purchased with cash and 13% of customers were able to buy on credit.

The study showed that 83.5% of customers pick up their orders by themselves, 15% at a cost while 3% was free of charge as indicated in Table 11.

**Table 10 Payment terms of the bamboo and rattan products**

Payment Terms	Frequency	Percent (%)
Cash	174	87
Credit	26	13
<b>Total</b>	<b>200</b>	<b>100</b>

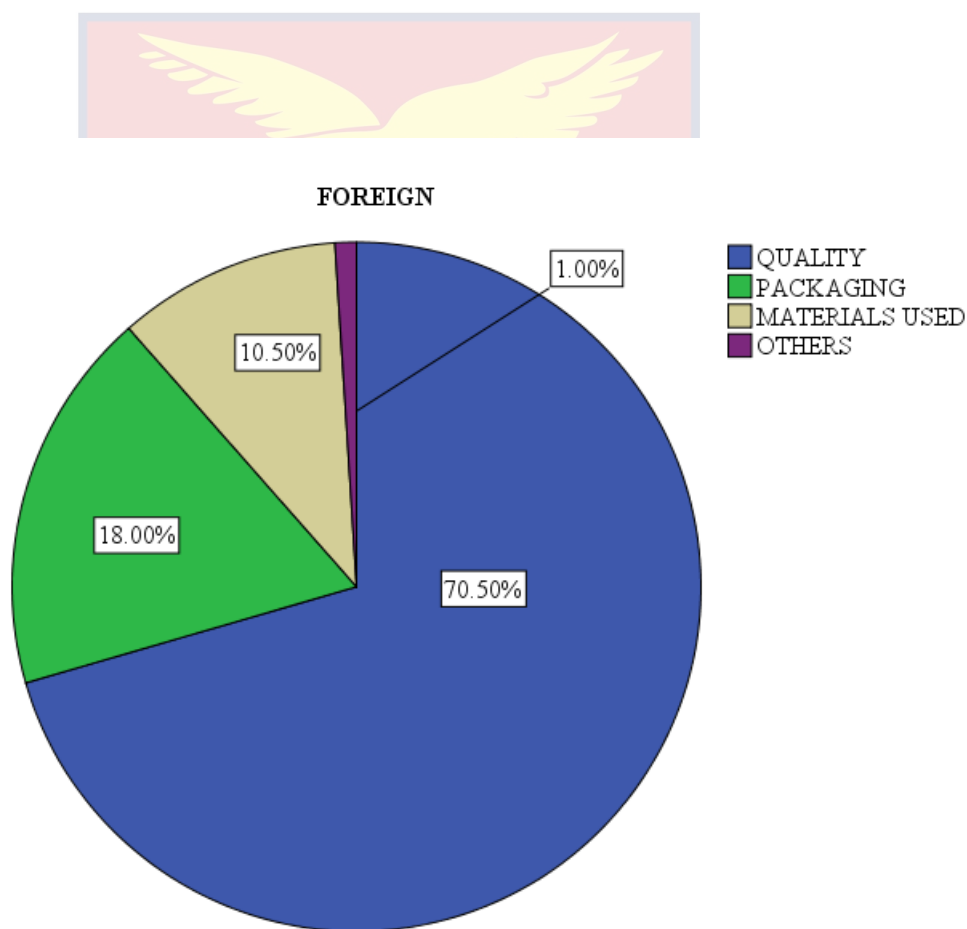
Source: Field Survey, 2020

**Table 11: Bamboo and rattan products delivery**

PRODUCTS DELIVERY	Frequency	Percent(%)
FREE OF CHARGE	3	1.5
AT A COST	30	15.0
PICKED UP BY CUSTOMER	167	83.5
Total	200	100.0

Source: Field Survey, 2020

Comparing the foreign bamboo and rattan products to the locally made ones, the study revealed that 70.5% indicated that the quality of foreign bamboo and rattan was higher than the local ones, 18% showed that the packaging made the foreign ones superior and 10% revealed that the material used as shown in figure 4.



**Figure 4: Foreign bamboo and rattan products**

**Source: Field Survey, 2020**

#### 4.4 Customer Satisfaction of bamboo and rattan products

The customer satisfaction was tested based on the value, purchase experience, pricing and usage experience. 54% were unsatisfied with the value of bamboo and rattan products, 35% were satisfied while 11% were very satisfied.

The purchase experience of these products showed that 9% were unsatisfied 78.5% were satisfied while the remaining 12.5% were very satisfied.

Furthermore, the pricing of the bamboo and rattan products revealed that 10% were unsatisfied, 75% were satisfied while the 15% were very satisfied. Finally, the usage of bamboo and rattan products showed that 69% were unsatisfied, 23.5% were satisfied and 7.5% were very satisfied (See Table 12).

**Table 12: Customer satisfaction on usage of bamboo and rattan products**

Overall Quality	Unsatisfied	Satisfied	Very Satisfied
Value	54%	35%	11%
Purchase experience	9%	78.5%	12.5%
Pricing	10%	75%	15%
Usage experience	69%	23.5%	7.5%

Source: Field Survey, 2020

#### 4.5 Marketing challenges of bamboo and rattan products

The last objective of the study was to identify the main marketing challenges manufacturers of bamboo and rattan products are facing. Respondents were made to rank the most pressing challenge which needs immediate redress. The study revealed that, manufacturers’ major challenge had to do with the “lack of promotion of their products”. According to them, they were unable to do this much because of the associated cost. Secondly, “the quality of the products” was another major challenge they encountered. Comparatively, customers preferred foreign bamboo and rattan products to the locally-made ones due to quality issues. Though, manufacturers asserted that their products were of high quality, customers regarded it otherwise. This thus served as major challenge in marketing their products. The presence of competitors was ranked the third challenge affecting the marketing of their products. Poor product awareness among consumers was ranked the 4<sup>th</sup> marketing challenges of bamboo and rattan products (See Table 13).

**Table 13: Marketing challenges affecting manufactures of bamboo and rattan products**

Marketing challenge	Very High (%)	High (%)	Moderate (%)	Low (%)
Lack of promotion	77.5%	11%	7%	4.5%
Presence of competitors	5%	7.5%	14.5%	73%
Poor product awareness among consumers	74%	9.5%	11.5%	5.0%
Quality of product	60%	17%	12.5%	10.5%

Source: Field Survey, 2020

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Summary of Findings

The general objective of the study was to assess the problems associated in the marketing of the Bamboo and rattan products in Ghana. The findings have been outlined based on the study's specific objectives.

##### 5.1.1 Assessing the various types of bamboo and rattan products in the market.

The study revealed various types of bamboo and rattan products in the market. It also identified that customers of bamboo and rattan products are more familiar with bamboo and rattan furniture followed by the bamboo and rattan baskets. The food and charcoal rated 4.5% and 5% respectively which indicated that not too many people are aware of it. 14% of customers knew about the kitchen ware, 5.5 % were familiar with the souvenir while 7.5% knew about the bamboo bicycle. It was further revealed the customers were of the view that the prices of the bamboo and rattan products were lower, compared to other foreign brands. Manufacturers set the prices of their products based on preference of customers.

##### 5.1.2 Identifying the determinant of choice of bamboo and rattan products

The research findings indicated that a lot of products purchased by customers do not have any brand name. The products were expensive comparing it to the

value, purchase experience and usage experience. Most customers were unsatisfied with the value of the products while a lot more customers were also unsatisfied with the usage. The customers indicated that the products do not last for long meanwhile the prices of these products are very expensive.

### **5.1.3 Examining the marketing challenges of bamboo and rattan products**

The study revealed that, manufacturers' major challenge had to do with the "lack of promotion of their products". Manufacturers were unable to do this (promotion of products) much because of the associated cost. Secondly, "the quality of the products" was another major challenge they encountered. Comparatively, customers preferred foreign bamboo and rattan products to the locally-made ones due to quality issues. The presence of competitors was ranked the third challenge affecting the marketing of their products. Poor product awareness among consumers was ranked the 4<sup>th</sup> as marketing challenges of made- in-Ghana bamboo and rattan products.

### **5.2 Conclusion**

In Ghana, bamboo and rattan are the two largest non-timber forest products. A very great opportunity seems to exist in the bamboo and rattan industry. The little and inadequate information and understanding about the needs and wants of the customers have contributed to poor "image" of the kind of bamboo and rattan products that the manufacturers produce to the market. There exist several marketing challenges that confront manufacturers of these products.

### 5.3 Recommendations

To this end, a combination of awareness, government initiatives and private sector cooperation can bring about improvement in activities of the manufacturers of bamboo and rattan products in Ghana. In view of the conclusions, it is recommended among other things that:

#### 5.3.1 Education, Exhibitions and Training Programmes for Manufacturers of bamboo and rattan products

In order to ensure the growth and sustainability of the bamboo and rattan products manufacturing industry in Ghana, there is the need to undertake extensive education of actors in the industry. It was observed that most of manufacturers have not registered their business and this is mostly due to ignorance of such provisions. It is therefore important that manufacturers of bamboo and rattan products in Ghana in be educated on the need to register their businesses.

The Business Advisory Center of the National Board for Small Scale Industries and the Metropolitan Assembly should collaborate to organize training and education workshops for the manufacturers. Among the items on such training should be how to register businesses, importance of registering businesses, marketing of products and many other issues relevant to the small scale businesses of such nature. When this is done, manufacturers will be better informed on the available provisions for registration and even how to effectively sustain their businesses.



### **5.3.2 Simplifying and improving the administrative and regulatory framework for business so that bamboo and rattan industries can flourish**

An improvement in the levels of entrepreneurial activities requires that individuals make decisions: to either start enterprises along with all the decisions that this entails, or to consider ways to improve their enterprise. To make these decisions of the individual (entrepreneur) requires sound/enabling environment, where his investments would be fruitful. This therefore calls for the need to have implementable and sound policy framework in order to promote entrepreneurship and create employment through the bamboo and rattan industry.

The framework should define clearly the requirements of investors who would want to enter the industry. Furthermore, the enabling environment should take into focus the measures such as tax rebates/incentives and infrastructural development for manufacturers to expand their businesses and enjoy economies of scale.

Also, the desires and interest of the manufacturers should also be well protected by the framework.

### **5.3.3 Improvement in IGF base by encouraging registry of enterprises and sound financial management practices**

The District Assembly through the Business Advisory Center (BAC) should thus ensure that all the manufacturers are well informed and made to register so

as to have a database of the businesses, create the avenue to effectively mobilize revenue to undertake its planned activities; specifically provide relevant infrastructural facilities for manufacturers; train them; help them in promoting and marketing their products.

Furthermore, there should also be conscious steps to sensitize manufacturers on efficiently managing their financial statuses (revenues and expenses). Manufacturers should be educated on how to practice sound savings so as to have „easy“ access to credit support from financial institutions to sustain their businesses, pay their taxes (as source of IGF) to the District Assembly for it (the District Assembly) to undertake its planned programmes and projects.

Also, the local media should also be motivated and sensitized to spearhead the regular promotion and marketing of bamboo and rattan products. This will improve the interest of customers in the products.

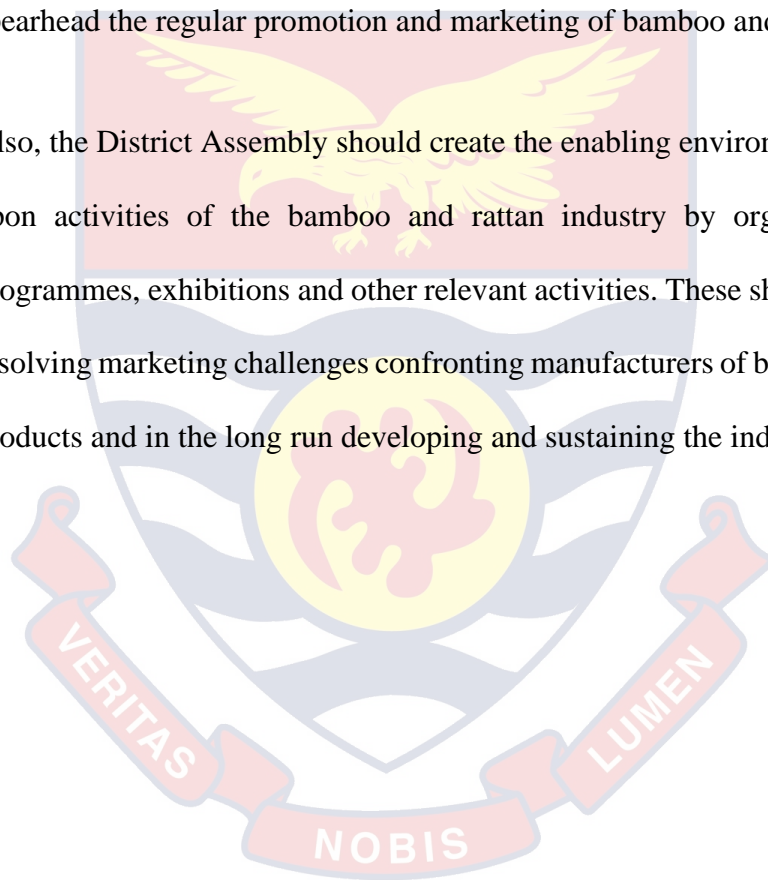
The study therefore sought to access the problems associated in the marketing of the Bamboo and rattan products in Ghana.

The study revealed that products of manufacturer of bamboo and rattan products are of low quality and therefore these manufactures need to improve on quality level for acceptance of products by customers.

Furthermore, the study showed that awareness on these products are very low hence affecting the patronage. Manufactures sell most products by cash and just few people consider the credit bases.

The study however revealed that the major marketing challenge confronting manufacturers of these products is the lack of promotion of their products. Other challenges include the quality of the products, the presence of competitors, and poor product awareness among consumers. The study based on these and recommends that the local media should also be motivated and sensitized to spearhead the regular promotion and marketing of bamboo and rattan products.

Also, the District Assembly should create the enabling environment to improve upon activities of the bamboo and rattan industry by organizing training programmes, exhibitions and other relevant activities. These should be aimed at resolving marketing challenges confronting manufacturers of bamboo and rattan products and in the long run developing and sustaining the industry.



## REFERENCES

- Abdul-aziz, B., (2006) Ileje: living on bamboo. [13/11/2008]. Africa. KEFRI, Nairobi. and Development (IIED), London. 147 pp.
- Adams., C. (August 2009). "Bamboo Architecture and Construction with Oscar Hidalgo". *Natural Building Colloquium*.
- Atuahene. A (23 July 2013). "A Descriptive Assessment of Higher Education Access, Participation, Equity, and Disparity in Ghana". p. 2.
- "A Brief History of the Ghanaian Educational System".(August 2011) TobeWorldwide.org.
- "2010 Population & Housing Census: National Analytical Report" (May 2013). Ghana Statistical Service.
- Bamboo as a Building Material. (April 2010). *Washington D.C: Us department of agriculture*, 7-11.
- Bardelline, J. (9 July 2009). Growing the Future of Bamboo Products. GreenBiz.com. Archived from the original on 15 July 2009. Retrieved 11 August 2009
- "Basic Education Curriculum".(2014) Ghana Education Service.
- "Basic Curriculum Education: The junior High Education". (June 2014) Ghana Education service.

- Baumgartner, J. (1991). Non-marketing Professionals Need More Than 4Ps, *Marketing News*.
- Bennett, A. R. (1997). The Five Ps - A Buyer's Perspective of the Marketing Mix. *Marketing Intelligence & Planning*, 15(3), 151-156.
- Bhattacharya, S. (2010). Molecular Profiling and genetic diversity study. Lambert Academic Publishing.
- Booms, B. H., and Bitner, B. J. (1981). Marketing strategies and organisation structures for service firms. In Donnelly, J. & George W. R. (Eds.), *Marketing of services*. American Marketing Association, 47-51.
- Borden, N. H. (1965). The concept of the marketing mix. In Schwartz, G. (Ed), *Science in marketing*. New York: John Wiley & Sons, 386-397.
- Boyd, W., and Larreche, M. (1999). *Marketing Management: A Strategic Decision Making employees* New York: McGraw Hill.
- Brias, V., (2006) Bamboo plantations for the Eastern Africa Bamboo project, Kenya with a feasibility study for a 100 ha Plantation. UNIDO technical report
- Britannica, T. Editors of Encyclopaedia (March 2004). Bamboo. Encyclopedia Britannica.
- Bystriakova, N.; Kapos, V.; Stapleton, C. and Lysenko, I. 2003b. Bamboo Biodiversity: Information for Planning Conservation and Management in the Asia-Pacific Region. *UNEP-World Conservation Monitoring Centre*

*and International Network for Bamboo and Rattan, Cambridge, UK, and Beijing, China.*

Carson, D. (1990). Some Exploratory Models of Assessing Small Firm's Marketing Performance, *European Journal of Marketing*, 24(11).

Casin, R.F.; Mostiero, A.P. 1970. Utilization and preservation of bamboos. Wood preservation report, 5,86-92.

Chan, A. K.-I.-C. (2002). *Historical Perspectives on East Asian Science, Technology and Medicine*. Singapore: Singapore University Press.

Clark, L., Zhang, W., & Wendel, J. (1995). "A Phylogeny of the Grass Family (Poaceae) Based on ndhF Sequence Data". *Systematic Botany*.

Clough, L. (2011). *Marketing Challenges and Strategies for Micro and Small Energy Enterprises in East Africa*. GVEP International.UK.

*Competition bureau Takes Action to Ensure Accuracy for Textile Articles Labelled and advertised as Bamboo*. (27 January 2010). Competition Bureau Canada.

Constantinides, E. (2002). The 4S Web-Marketing Mix Model. *Electronic Commerce Research and Applications*, 1(1), 5776.

Culliton, J.W. (1948). *The Management of Marketing Costs*. Division of Research, Graduate School of Business Administration, Boston, MA: Harvard University.

Dockel, J.A., and Ligthelm, A. A. (2002). Factors that contribute to small business survival. Article submitted for publication. Pretoria: Unisa.

Dransfield, J. (2002). General Introduction to Rattan. *The Biological Background to Exploitation and the History of Rattan research*, 889-66944.

FAO. 2001a. Global Forest Resources Assessment-FRA 2000, Rome, Italy

FAO. 2005. State of the World's Forest, Food and Agriculture organization of the United States, Rome, Italy. FAO. 2005. World Bamboo Resources: A Thematic Study Prepared in the Framework of the Global Forest Resources Assessment, Non-wood Forest Products 18, Rome

FAO. 2007. State of the World's Forest, Food and Agriculture organization of the United States Rome, Italy.

Farrelly, D. (1984). *The Book of Bamboo*. Sierra Club Book.

"Fastest growing plant". *Guinness World Records*. (3 September 2014. Retrieved 22 August 2014.).

"Four Companies Charged with Labeling Rayon Clothing As Bamboo". *GreenBiz.com*. Archived from the original. (11 August 2009 ).

- Ganapathy, P.M. 2000. Sources of non-wood fibre for paper, board and panels production status, trends and prospects for India. Asia-Pacific Forestry Sector Outlook Study Working Paper No. APFSOS/WP/10. Rome, FAO.
- Giron, M.Y. 1992. Preservation and control of molds, staining and decay and handicrafts made from bamboos, twigs and vines. (Unpublished). fungi in baskets
- G. P. (2012). New Grass Phylogeny resolves deep evolutionary relationships
- Goi, C. L. (2005). Marketing Mix: A Review of „P“. *Journal of Internet Banking and Commerce*, 10.
- Goldsmith, R. E. (1999). The Personalised Marketplace: Beyond the 4Ps. *Marketing Intelligence and Planning*, 17(4), 178-185.
- Graphic online.* ((11th May 2011)).
- Grönroos, C. (1994). From Marketing Mix to Relationship Marketing: Towards A Paradigm Shift in Marketing *Management Decision*, 32(2), 4-20.
- Gruyter, B. K. (2004). In *A hand book on varieties of English. Volume 2.* Oxford University Press.
- Iang, Z. 2002. Bamboo and rattan in the world. Shenyang, China, Liaoning Science and Technology Publishing House.
- INBAR (2007) Annual report. Available at <http://www.inbar.int/Board>. [19/5/2009].



Iqbal, M. 1995. A study of trade restrictions affecting international trade in non-wood forest products. FAO, Rome. Issues and Research Implications. CIFOR Occasional Paper No.40.

John D. Fage (2000), Emeritus Professor of African History, University of Birmingham, England; Pro-Vice-Chancellor, 1979–84; Vice-Principal, 1981–84. Author of *A History of Africa* and others.

Johnson, D. V. (2004). *Rattan Glossary: And Compendium Glossary with Emphasis on Africa*. Rome: Food and Agriculture Organization of the United Nations.

Judicial caning in Singapore, Malaysia and Brunei". (n.d.). World Corporal Punishment Research.

Kelchner S. (2013) "Higher level phylogenetic relationships within the bamboos (Poaceae: Bambusoideae) based on five plastid markers". *Molecular Phylogenetics and Evolution*. In B. P. Group. Archived from the original on 5 June 2015

Khare, A.; Sarin, M.; Saxena, N.C.; Palit, S.; Bathla, S.; Vania, F. and Satyanarayana, M. 2000. *Joint Forest Management: Policy, Practice and Prospects: India Country*

Kigomo, B. N. 1988. Bamboo resource in the East African region. pp. 22-28, in: *Bamboos Current Research*, Proceedings of the International Bamboo Workshop, Nov.14-18.

Kigomo, B.N., (1988) Distribution, cultivation and research status of bamboo in Eastern.

Kochar, S.R.G. and Chaudhary R.N.P. 1992. Bamboo Germplasm Resource of N.E. India, ICAR, Basar, India.

Kotler, P. and Armstrong, G. (2012). Principles of Marketing (14<sup>th</sup> Edition). Prentice

Kotler, P. and Keller, K. L. (2009). Marketing Management, 13th Edition, New Jersey:

Landler, M. (27 March 2002). Hong Kong Journal; For raising Skyscrapers, Bamboo does nicely. New York Times. Archived from the original on 24 April 2009.

Laxamana, M.G. 1984. The preservation of bamboo. Wood Preservation Report, 1,2-10.

Lee, A. W., & Liu, Y. (June 2003). Selected physical properties of commercial bamboo flooring. In F. P. Journal. Madison. 23-26

Liese, W. 1970. Natural decay resistance of some Philippine bamboos. (Unpublished).

Loewe, Michael. (1997). "Wood and bamboo administrative documents of the Han

Low, S. P. and Tan, M. C. S. (1995). A Convergence of Western Marketing Mix Concepts and Oriental Strategic Thinking. *Marketing Intelligence & Planning*, 13(2), 36-46.

Lukenbill, J. (25 October 2012. ). About My Planet: Bamboo Bikes.

MaGrath, A. J. (1986). When Marketing Services, 4Ps Are Not Enough. *Business Horizons*, 29(3), 45-50.

Marshals' Handbook (March 2007 revision ed.). Society for Creative Anachronism.

Möller, K. (2006). The Marketing Mix Revisited: Towards the 21st Century Marketing

Farrelly, D. (1984). *The Book of Bamboo*. Sierra Club Book.

Ghana Statistical Service (2013). 2010 Population & Housing Census Report – Women and Men in Ghana. UN, Ghana.

G. P. (2012). New Grass Phylogeny resolves deep evolutionary relationships and discovers C4 Origins. 193(2): 304-312.

Goi, C. L. (2005). Marketing Mix: A Review of „P“. *Journal of Internet Banking and Commence*, 10.

Goldsmith, R. E. (1999). The Personalised Marketplace: Beyond the 4Ps. *Marketing Intelligence and Planning*, 17(4), 178-185.

*Graphic online.* (11th May 2011).

Grönroos, C. (1994). From Marketing Mix to Relationship Marketing: Towards  
A Paradigm Shift in Marketing *Management Decision*, 32(2), 4-20.

Gruyter, B. K. (2004). In *A hand book on varieties of English. Volume 2.* Oxford  
University Press.

Huber M. (1999). Ghanaian Pidgin English in its West African Context. 139

"Introduction to the Verbal and Multi-Verbalsystem of Akan". Archived from  
the original. (n.d.). 7 April 2014. Retrieved 16 November 2013.

Johnson, D. V. (2004). *Rattan Glossary: And Compendium Glossary with  
Emphasis on Africa.* Rome: Food and Agriculture Organization of the  
United Nations.

Judicial caning in Singapore, Malaysia and Brunei". (n.d.). World Corporal  
Punishment Research.

Kelchner S. (2013) "Higher level phylogenetic relationships within the bamboos  
(Poaceae: Bambusoideae) based on five plastid markers". *Molecular  
Phylogenetics and Evolution*. In B. P. Group. Archived from the original  
on 5 June 2015

Kotler, P. (1986). *Principles of Marketing* (3rd Ed.). New Jersey: Prentice Hall.

Kotler, P. and Armstrong, G. (2012). *Principles of Marketing* (14<sup>th</sup> Edition).  
Prentice Hall, One Lake Street, New Jersey.

Kotler, P. and Keller, K. L. (2009). *Marketing Management*, 13th Edition, New Jersey: Pearson Education Inc.

Landler, M. (27 March 2002). *Hong Kong Journal*; For raising Skyscrapers, Bamboo does nicely. *New York Times*. Archived from the original on 24 April 2009.

Lee, A. W., & Liu, Y. (June 2003). Selected physical properties of commercial bamboo flooring. In *F. P. Journal*. Madison. 23-26

Loewe, Michael. (1997). "Wood and bamboo administrative documents of the Han period".

In Edward L. Shaughnessy (ed.). *New Sources of Early Chinese History*. Society for the Study of Early China. 161–192.

Low, S. P. and Tan, M. C. S. (1995). A Convergence of Western Marketing Mix Concepts and Oriental Strategic Thinking. *Marketing Intelligence & Planning*, 13(2), 36-46.

Lukenbill, J. (25 October 2012.). *About My Planet: Bamboo Bikes*.

McCallum, T. M. (1988). *Containing Beauty: Japanese Bamboo Flower Baskets*. Museum of Cultural History, UCLA: Los Angeles

McCarthy, E. J. (1964). *Basic Marketing*, IL: Richard D. Irwin.

MaGrath, A. J. (1986). When Marketing Services, 4Ps Are Not Enough. *Business Horizons*, 29(3), 45-50.

Marshals' Handbook (March 2007 revision ed.). Society for Creative Anachronism. March 2007. Retrieved 16 March 2010.

Marana, M. (2010). Culture and Development: Evolution and Prospects. UNESCO Etxea, Working Paper No. 1, Bilbao.

Matthew, G.C. (2013). Rural Energy Agency Initiatives in Mainstreaming Gender in the Delivery of Modern Energy Services to Rural Areas. Rural Energy Agency (REA), Tanzania.

Michelle Nijhuis (June 2009). "Bamboo Boom: Is This Material for You?". Scientific American Earth 3.0 Special. 19 60–65.

Möller, K. (2006). The Marketing Mix Revisited: Towards the 21st Century Marketing by E. Constantinides. *Journal of Marketing Management*, 22(3), 439-450.

Moore. N. B; Wein B. (1987). Bamboo In Japan. Kodansha International. 101.

Nanko, H; B. A; D. Hillman (2005). The World of Market Pulp. Appleton, WI, USA: WOMP, LLC.265.

Needham J. (1986). Science and Civilization in China: Volume 3, Mathematics and the Sciences of the Heavens and the Earth. *Taipei: Caves Books, Ltd.* 614

Oberoi, V. S., (2004) *The Bamboo Book*. National Mission on Bamboo Applications.

Ohrnberger, D. 1999. *The bamboos of the world: annotated nomenclature and literature of the species and the higher and lower taxa*. Elsevier, 585 pp.

Owusu. S. F.W& Appiah-Kubi. Emmanuel. P. (2015) "Trade and Innovation in Bamboo and Rattan Furniture Industry in Ghana",

Pabuayon, I.M. and Espanto, 1997. FAO Publication, Rome, Italy.(<ftp://ftp.fao.org/docrep/fao/010/a1243e/a1243e02.pdf>) Policy that Works for Forest and People. International Institute for Environment

Patel, L. (June 1981). "Mechanical properties of bamboo, a natural composite". *Fibre Science and Technology*.

Perdue, Robert E.; Kraebel, Charles J.; Tao Kiang (April 1961). "Bamboo Mechanical Pulp for Manufacture of Chinese Ceremonial Paper". *Economic Botany*.161–164

Piper, Jaqueline M. (1995). *Bamboo and rattan, traditional uses and beliefs*. *Oxford University Press*.

Roach M. (1 June 1996). "The Bamboo Solution: Tough as steel, sturdier than concrete, full size in a year". *Discover Magazine*

Rottke, Evelin (27 October 2002). "Mechanical Properties of Bamboo". Aachen, North Rhine- Westphalia, Germany: RWTH Aachen University. Section 3, p 11 and Section 4, p 11.

Ruiz-Pérez, M.; Fu, M.; Yang, X. and Belcher, B. 2001. Bamboo forestry in China: Toward Environmentally Friendly Expansion. *Journal of Forestry*, 99(7): 14–20.

Shackleton, C.M., Shackleton, S.E., Ntshudu, M. and Ntzebeza, J. 2002. The role and value of savanna non-timber forest products to rural households in the Kat River

Soni, Dr. K M (2011). "India Pavilion at World Expo 2010". NBM Media.

Stokes, D.R. (2000). Entrepreneurial Marketing: A Conceptualisation from Qualitative Research, *Qualitative Market Research: international Journal*, 39(1).

"Study of Ghanaian Languages". (2013) [africa.upenn.edu](http://africa.upenn.edu).

Teo Kermeliotis (31 May 2012). "Made in Africa: Bamboo bikes put Zambian business on right track". CNN.

"The Bureau of Ghana Languages (2013) -BGL". Ghana Embassy Washington DC, USA.

"Top 10 Best Universities in Ghana". Pulse Gh. (27 September 2019).



Tewari, D.N. 1992. A monograph on bamboo. International Book Distributors, Dehra UN. 2004. UN commodity trade statistics database (UN Comtrade) (available at [unstats.un.org/unsd/comtrade](http://unstats.un.org/unsd/comtrade)).

Valley, South Africa. *Journal of Tropical Forest Products*, 845-65. Vol. 32, No. 60-62. Valley, South Africa. *Journal of Tropical Forest Products*, 8: 45-65. [www.worldagroforestry.org/ar2004/tc\\_story01.asp](http://www.worldagroforestry.org/ar2004/tc_story01.asp) [20/9/2008].

UNIDO. (November 2009). Bamboo: an untapped and amazing resource.

UNIDO, (2002) "Role of Governments and Private Agencies for Exploring Opportunities for Growth and Preservation of Traditional Arts and Crafts with Special Focus on UNIDO Artisan Craft Development", Prepared by N. Suzuki for the International Congress on Islamic Arts and Crafts, Isfahan, Iran, October 2002.

Vignali, C. & Davies, B. J. (1994). The Marketing Mix Redefined and Mapped Introducing the MIXMAP Model. *Management Decision*, 32(8), 11-16.

"Vocational Education in Ghana". UNESCO-UNEVOC. (July 2012).

West African Examinations Council (May 2014). Corporate site: Ghana. "BECE".

Wilson. C.L. & Loomis, W.E. *Botany* (3rd ed.). Holt, Rinehart and Winston.

## APPENDICES

### APPENDIX I

#### SAMPLE QUESTIONNAIRE TO CUSTOMERS OF BAMBOO AND RATTAN PRODUCTS

I am a Master of Science Student of the Presbyterian University College and carrying out a research dubbed “Challenges associated in marketing Bamboo and Rattan Products in Ghana”. Your responses will be treated confidentially and used for academic purpose only. Your participation in the study will be greatly appreciated. Thank you very much for your time and assistance.

#### SECTION A: Socio-economic characteristics of respondents

Please tick the appropriate response where applicable

1. Age: 18 – 40 [  ]  
40 – 60 [  ]  
60 and above [  ]
2. Gender: Male [  ] Female [  ]
3. Marital Status: Single [  ] Married [  ] Divorced [  ] Widowed [  ]  
Separated [  ]
4. Educational Status: No Education [  ] Primary [  ] Secondary [  ] Tertiary [  ]
5. Nationality: Ghanaian [  ] Non Ghanaian [  ] Dual Citizenship [  ]

**SECTION B: Assessing the various types of bamboo and rattan products in the market**

6. What are the types of bamboo and rattan products you are familiar with in Ghana?

Souvenir[  ] Furniture[  ] Bicycle [  ] Kitchenware[  ] Food[  ]  
Charcoal/Briquette [  ] Baskets[  ]

7. Which of these products mentioned in question 6 have you purchase or used before?

Souvenir[  ] Furniture[  ] Bicycle [  ] Kitchenware[  ] Food[  ]  
Charcoal/Briquette [  ] Baskets[  ]

8. Do bamboo and rattan products meet your special design and option? Yes [  ] No [  ]

9. On a scale of 1 to 5, what is the quality level of Bamboo and Rattan products?  
Very poor [  ] Poor [  ]  
Medium [  ] Good [  ] Very good [  ]

**SECTION C: Identifying the determinant of choice of bamboo and rattan products.**

10. What was the brand name of the product you purchased?

Specified [  ] unspecified [  ]

11. What was the after sales services provided? Provision of warranty for a certain period [  ] Follow up call [  ] Guidelines to item usage [  ] Non [  ]

12. How did you find the prices of the products? Cheap [ ] Moderate [ ]  
Expensive [ ]

13. How will you rate the price of the products?  
Higher price [ ] Same price [ ] Lower price [ ]

14. Do the manufacturers have any payment period terms for their customers?  
Cash [ ] Credit [ ]

15. How was the product delivered?  
Free of charge [ ] At a cost [ ] Picked up by Customer [ ]

16. Choose one of the areas below that makes foreign bamboo and rattan products superior to made in Ghana bamboo and rattan products.  
Quality [ ] Packaging [ ] Materials used [ ] Others [ ]

17. How satisfied are you with the bamboo and rattan products based on the following criteria?

Overall Quality	Unsatisfied	Satisfied	Very Satisfied
Value			
Purchase experience			
Pricing			
Usage experience			

**SECTION D: Examining the main marketing challenges affecting manufacturers of bamboo and rattan products**

18. Kindly rank, in your own opinion these marketing challenges affecting manufacturers of bamboo and rattan products.

Marketing challenge	Very High	High	Moderate	Low
Lack of promotion				
Presence of competitors				
Poor product awareness among consumers				
Quality of product				



## APPENDIX II

### PICTURES



Picture 1: Bamboo and rattan furniture at Cantoment Accra, Ghana

Source: Field Survey, 2020



**Picture 2: Bamboo briquette and bamboo bicycle at the Bamboo and Rattan Unit of the Forestry Commission.**

**Source: Field Survey, 2020**



Picture 3: Bamboo and rattan baskets and bags at the Spintex Road, Ghana

Source: Field Survey, 2020





**Picture 4: Bamboo and rattan chairs at Forestry Commission Training Center, Kumasi**

**Source: Field Survey, 2020**



**Picture 5: Treated bamboo being dried for furniture production at Forestry Commission Training Center, Kumasi**

**Source: Field Survey, 2020**



PRESBYTERIAN UNIVERSITY COLLEGE, GHANA

FACULTY OF DEVELOPMENT STUDIES

Name of Department: Environmental and Natural Resources Department

Programme of Study: M.Sc. Natural Resources Management

Topic: Challenges associated with marketing bamboo and rattan products in Ghana

Name of Student: Victoria Arabba Neizer

Student's ID: 18040013

RESPONSE MEMO

NO	COMMENTS	STUDENT'S RESPONSE TO COMMENTS
<b>EXAMINER</b>		
<b>Suggested corrections in thesis in red pen</b>		
<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> </ol>	<p>The abstract did NOT follow sequentially as indicated in the guidelines. Objective; study area; methodology; key findings; conclusion.</p> <p>Attend to other comments made in red ink.</p>	<ul style="list-style-type: none"> <li>• The abstract has been rearranged correctly starting with the objective; study area; methodology; key findings and conclusion.</li> <li>• The comment in red ink stated that                             <ul style="list-style-type: none"> <li>✓ Pages not up to 60 pages. In view of this pages have been updated to 60.</li> <li>✓ Declaration page not recommended by the guideline. Declaration page has been corrected</li> <li>✓ Dedication should come after Abstract and Acknowledgements which has been corrected.</li> <li>✓ Table of content should not be splitted and correction has been done.</li> </ul> </li> </ul>
<b>CHAPTER ONE</b>		
<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> </ol>	<p>Citations NOT according to APA style.</p> <p>All Latinized words should be italicised. E.g. <i>et al.</i> is Latin and therefore, should be italicised. The</p>	<ul style="list-style-type: none"> <li>• All references have been corrected and cited appropriately beginning with the surname and followed by the year.</li> <li>• All Latinized words has been italicised.</li> </ul>

<p>3.</p> <p>4.</p> <p>5.</p>	<p>appropriate notation for <i>et al.</i> should be followed. E.g. Omari <i>et al.</i> (2020) or (Omari <i>et al.</i>, 2020). The font size should be 12” (throughout except for the Chapter title and subheadings), and style should be Times New Romans throughout the work.</p> <p>Make use of the guidelines.</p> <p>Attend to other comments made in red ink.</p>	<ul style="list-style-type: none"> <li>• Font size has been corrected to 12 throughout the work except for the Chapter title and subheadings and the style is Time New Romans throughout the work.</li> <li>• Guideline followed</li> <li>• The comment in red ink stated that             <ul style="list-style-type: none"> <li>✓ Problem statement should be changed to Statement of Problem which has been corrected.</li> </ul> </li> </ul>
<p>1.</p> <p>2.</p> <p>3.</p> <p>4.</p> <p>5.</p>	<p><b>CHAPTER TWO</b></p> <p>Stick to the guidelines for the title of each chapter. LITERATURE REVIEW should be REVIEW OF RELATED LITERATURE</p> <p>Citations NOT according to APA style.</p> <p>All Latinized words should be italicised. E.g. <i>et al.</i> is Latin and therefore, should be italicised. The appropriate notation for <i>et al.</i> Should be followed. E.g. Omari <i>et al.</i> (2020) or (Omari <i>et al.</i>, 2020).</p> <p>The literature heavily relied on Wikipedia.com</p> <p>Attend to other comments made in red ink.</p>	<ul style="list-style-type: none"> <li>• LITERATURE REVIEW has been corrected to REVIEW OF RELATED LITERATURE</li> <li>• All references have been corrected and cited appropriately beginning with the surname and followed by the year.</li> <li>• All Latinized words has been italicised.</li> <li>• The Literature has been deleted and written again. All Wikipedia information has been deleted and replaced with relevant inform based on research.</li> <li>• The comment in red ink stated that             <ul style="list-style-type: none"> <li>✓ Font size should be 12 throughout. Font size has been corrected to 12.</li> <li>✓ Copy and paste from Wikipedia. All Wikipedia information has been deleted and replaced with relevant information.</li> </ul> </li> </ul>
<p>1</p>	<p><b>CHAPTER THREE</b></p> <p>The literature heavily relied on Wikipedia.com</p>	<ul style="list-style-type: none"> <li>• The Literature has been deleted and written again. All Wikipedia information has been deleted and replaced.</li> </ul>

<p>2.</p> <p>3.</p> <p>4.</p> <p>5.</p> <p>6.</p>	<p>All Latinized words should be italicised. E.g. <i>et al.</i> is Latin and therefore, should be italicised. The appropriate notation for <i>et al.</i> Should be followed. E.g. Omari <i>et al.</i> (2020) or (Omari <i>et al.</i>, 2020).</p> <p>The information of the study area is missing.</p> <p>Map of the study area not clear and not precise.</p> <p>The methodology is NOT clearly written.</p> <p>Attend to other comments made in red ink.</p>	<ul style="list-style-type: none"> <li>• All Latinized words has been italicised.</li> <li>• An addition has been made to the study area indicating that the study area is focused on all the regions in Ghana.</li> <li>• Map of Ghana has been enlarged for all the regions to be clearly defined.</li> <li>• Methodology has been written again and more more information has been added.</li> <li>• The comment in red ink stated that             <ul style="list-style-type: none"> <li>✓ Data collection instrument not clear. In view of this an addition was made to the data collection instrument indicating that in the collection of data, quantitative data collection is adopted for the study</li> </ul> </li> </ul>
<p>1.</p> <p>2.</p> <p>3.</p> <p>4.</p> <p>5.</p>	<p><b>CHAPTER FOUR</b></p> <p>Link demographic characteristics to the objectives of the study. What is the use of the demographic characteristics of the respondents in the study?</p> <p>The font of the charts and tables should be Times New Romans.</p> <p>Send all pictures to Appendix.</p> <p>You need to present your results according to your study objectives.</p> <p>You need to discuss your results.</p>	<ul style="list-style-type: none"> <li>• Demographic characteristics has been linked to the study.</li> <li>• Font of chats and tables have been corrected to Time New Romans</li> <li>• All pictures have been sent to Appendix.</li> <li>• Results have been discussed based on the objectives starting with the types of bamboo and rattan products on the market followed by the determinant of choice of bamboo and rattan products and finally the marketing challenges of bamboo and rattan products.</li> <li>• Results have been further discussed.</li> </ul>

6.	Attend to other comments made in red ink.	<ul style="list-style-type: none"> <li>• The comment in red ink stated that             <ul style="list-style-type: none"> <li>✓ DATA RESENTATION, ANALYSIS AND DISCUSSION should be changed to RESULTS AND DISCUSSION. In view of this changes have been done.</li> <li>✓ What is the importance of sex and age on the objective of the study? In view of this The age, sex and educational background has been linked in the RESULTS AND DISCUSSION.</li> <li>✓ Pictures not clear, use colour and where was the picture taken. In view of this all pictures has been sent to appendix and location of picture has been indicated.</li> </ul> </li> </ul>
1	<p><b>CHAPTER FIVE</b></p> <p>Attend to other comments made in red ink.</p>	<ul style="list-style-type: none"> <li>• It should be SUMMARY CONCLUSION AND RECOMMENDATION instead of SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION. In view of this correction has been made.</li> </ul>
	<p><b>REFERENCES</b></p> <p>1. A number of references and citations did not follow the APA referencing style.</p> <p>2. Names of Journals should be written in full.</p>	<ul style="list-style-type: none"> <li>• References corrected and updated to APA referencing style.</li> <li>• All names of journals have been written in full.</li> </ul>

**Declaration by Candidate:**

I declare that I have attended to and incorporated the comments made by the examiner in the dissertation.

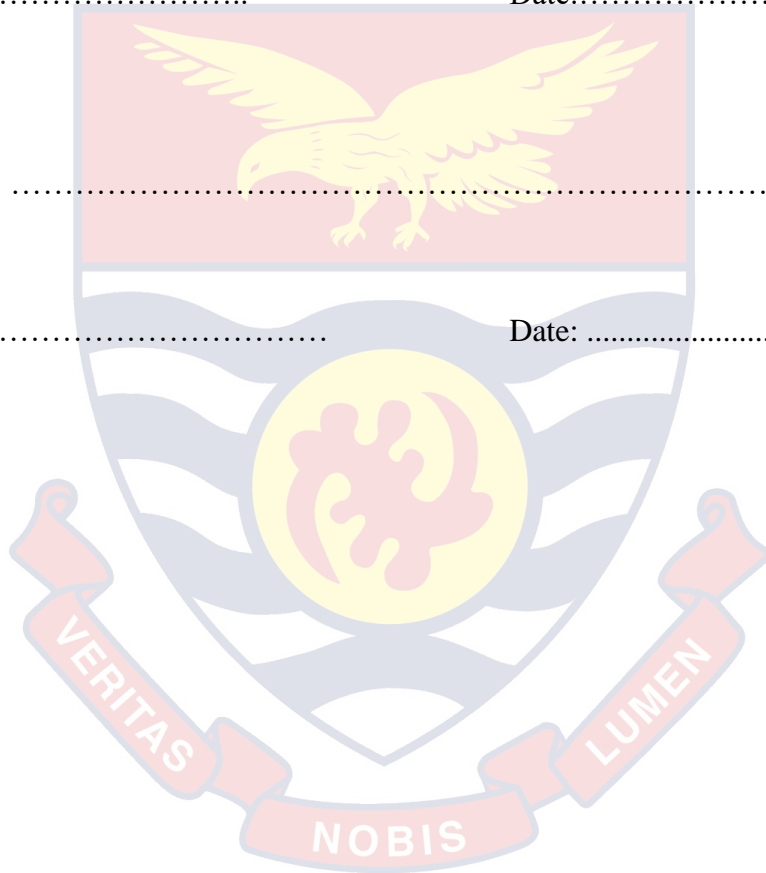
Name of Student: .....

Signature: ..... Date:.....

**Approved by:**

Name of supervisor: .....

Signature: ..... Date: .....



PRESBYTERIAN UNIVERSITY COLLEGE, GHANA

FACULTY OF DEVELOPMENT STUDIES

Name of Department: Environmental and Natural Resources Department

Programme of Study: M.Sc. Natural Resources Management

Topic: Challenges associated with marketing bamboo and rattan products in Ghana

Name of Student: Victoria Arabba Neizer

Student's ID: 18040013

RESPONSE MEMO

NO	COMMENTS	STUDENT'S RESPONSE TO COMMENTS
<b>EXAMINER</b>		
<b>Suggested corrections in thesis in red pen</b>		
	<b>TOPIC</b>	
1.	Topic should be changed to CHALLENGES ASSOCIATED WITH MARKETING BAMBOO AND RATTAN PRODUCTS IN GHANA	<ul style="list-style-type: none"> <li>The topic has been changed from to CHALLENGES ASSOCIATED IN MARKETING BAMBOO AND RATTAN PRODUCTS IN GHANA to CHALLENGES ASSOCIATED WITH MARKETING BAMBOO AND RATTAN PRODUCTS IN GHANA.</li> </ul>
	<b>CHAPTER ONE</b>	
1.	Specific objective 2 does not match with research question 2.	<ul style="list-style-type: none"> <li>The research question 2 has been changed from Who are the manufactures of Bamboo and Rattan products selling their products to? to What are the factors that influence the choice of bamboo and rattan products?</li> </ul>
	<b>CHAPTER TWO</b>	
	<b>CHAPTER THREE</b>	
1.	The right respondents are not revealed. It appears candidate used Customers instead of sellers or producers of the product.	<ul style="list-style-type: none"> <li>The right respondents are the customers of the product, those who use the bamboo and rattan products. The questionnaire</li> </ul>



		was directed to the consumers of the products not the manufactures
1.	<b>CHAPTER FOUR</b> Results need to be discussed based on the relevant literature.	<ul style="list-style-type: none"> <li>Results have been corrected and discussed based on related literature</li> </ul>
	<b>CHAPTER FIVE</b>	
	<b>REFERENCES</b>	

**Declaration by Candidate:**

I declare that I have attended to and incorporated the comments made by the examiner in the dissertation.

Name of Student: .....

Signature: ..... Date: .....

**Approved by:**

Name of supervisor: .....

Signature: ..... Date: .....

