UNIVERSITY OF EDUCATION, WINNEBA

PACKAGING TRENDS IN GHANA

MICHAEL ODJEYEM

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(8151750009)

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JUNE, 2018

DECLARATION

STUDENT'S DECLARATION

I, **MICHAL ODJEYEM** declare that this thesis with the expectation of quotations and references contained in published work which have all been identified and duly acknowledged, is entirely my own original works and that it has not been submitted, either in part or whole for another degree elsewhere.

Signature ……..……. Date ……..….

SUPERVISOR'S DECLARATION

I hereby certify that the preparation of this work was supervised in accordance with the guidelines for supervision of dissertation as laid by the University of Education, Winneba.

Frimpong Kwaku Duku (PhD)

Signature ……..……. Date ……..….

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DEDICATION

This thesis is dedicated to my parents, Mr. Joseph Kwasi Odjeyem and Mrs. Stella Odjeyem; my wife, Mrs. Juliana Hughes-Odjeyem whose assistance and prayer, if had been deprived of, my dream for the achievement of this programme, would have been completely shattered.

I say, may the good Lord, sustain you all day long.

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ABSTRACT

Sale ratio is vividly dictated by equal open product exposure to consumer attention. In these situations, the determining factor of sale is the quality of packaging. Since made-in-Ghana products remain integral part of our daily life in Ghana, it is therefore high time that practitioners of the industry presented it safe to the consumer by packaging them very well. On the market where local products stand in contrast with foreign ones, packaging deficiencies of local products stand out. The ultimate goal of increasing sale is however achieved through attractive packaging structure and quality content. This thesis seeks to achieve the quality role packaging play in the marketability of products on Ghanaian markets. The descriptive method of qualitative approach is purposely employed to describe the procedures and processes in designing and constructing packages. The general design of the pack should be underpinned with functions of a package (protect, preserve, promote, contain and handle), with good surface graphics, attractive but reduced colours, illustrations presenting a true and honest picture of the content, the shape should provide convenience in handling, easy for refilling and the ability to stand or with low support. For the purpose of this research, paper card is used as a suitable package material for the selected products (alchoholic beverage; *pito, palm wine, akpeteshie,* fruit juice; *mango and pineapple juice,* traditional herbal medicine; *typhoid medicine*). This research is carried out in the Eastern and Greater Accra regions of Ghana. The main sample and sampling technique adopted for the study was purposive sampling. Interview guide, observation checklist were the main instruments used to collect data. A structured interview guide was used to collect data from 30 respondents. However, findings reveal that plastic reduces the potency of herbal medicine after a while in the sun. This act affects most of our locally produced products as they are displayed in the open under the sun for sale. Also, the study reveals that producers of locally manufactured products such as *akpeteshie, pito,* palm wine and traditional herbal medicine package their products using second hand bottles scavenged from the environment. Finally, some locally produced alcoholic beverage such as palm wine, *akpeteshie* and *pito* are consumed the same old traditional way despite the health implications. The study concludes that various packaging materials such as glass bottles, plastic containers, polythene bags used to package locally manufactured goods are industrial products and Ghanaian local producers consider these packaging materials to be more expensive and would increase cost of production.The study recommends that durable paper card material for packaging is encouraged because it is cheaper, easy to come by, easy to manipulate without heavy machinery, will allow for easy storage, clear labeling, no leakages, wouldn't add additional cost to production and will make products consumer friendly. This will make the entrepreneur reach the aim of consumer satisfaction and hence maximize sales.

CHAPTER ONE

INTRODUCTION

1.0 Background to the Study

The prehistoric man did not bother about packaging. This was due to the fact that produce were consumed in their raw states either on the spot or sometimes carried to their homes or caves in their bare hands. It is also probably because society had not developed to the extent that there was no competition in the manufacturing and sale of products. With development, however, packaging in one way or the other developed gradually.

The most significant era of packaging is when man started keeping some of his wares in leaves, gourds and shells as containers, endowed by nature. The oldest information on manufactured package available to the research dated as far back as 1844 when paper production was introduced in Europe. What necessitated the use of manufactured package could be linked primarily to transportation and agglomeration Scrib.Org. 2006. Packaging started in a different form from what we know today.

The first packages used the natural materials available at the time; baskets of reeds, wineskins (bota bags), wooden boxes, pottery vases, ceramic amphorae, wooden barrels, woven bags, etc. Liquids were stored in containers made from animal skins, hollowed out logs, gourds, coconuts and shells. Processed materials were used to form packages as they were developed: for example, early glass and bronze vessels (Wikipedia, 2016).

In ancient times, food was produced and consumed locally so there was no need for packaging. But as civilizations grew, the need to contain, protect, and transport food supplies became critical. Primitive men used vessels and containers made of natural

materials in the form of tree leaves, bamboo, lotus leaves, palm leaves, gourds, coconut shells, animal shells and animal skin. Later on, as minerals, ores and chemicals were discovered, metals and pottery were developed leading to the use of new materials including fabrics, ceramics, metals, lacquerware, wood ware, jade ware, and certain types of paper (Mudit, 2013).

In Ghana, most food made of corn, such as the “Ga kenkey” (komi) and "nkyekyera‟ of the Asantes for example, are still wrapped in corn husk to this day. Foodstuffs were and are still carried from the farm to market places or homes in woven palm fronds called "Bɛdɛ" in the Twi language. From this, it may be established that packaging is not new to Ghanaians. Branded packaging is however, fairly new in Ghana (Essuman, 2008, p. 16)

The earliest recorded use of paper for packaging dates back to 1035, when a Persian traveler visiting markets in Cairo noted that vegetables, spices and hardware were wrapped in paper for the customers after they were sold (Wikipedia, 2016). Containers of that period consisted of leaves, shells and gourds which later gave way to materials that were of natural origin, such as animal organs, containers made of woven grasses and logs that were hollowed (Berger, 2002 p. 114).

In the Ancient Egypt and Roman Empires, materials such as clay were used as containers. Glass, metal and paper were later introduced upon their invention and therefore used for packaging. Butter and cheese were kept in baskets, vinegar in barrels, and tea in chests whilst grains were put in sacks during the Victorian times (Hook, Joe & Heimlich, 2007).

The first ever branded package was introduced in England in 1746 by one Dr. Robert James who packaged his "Fever-Powder" in a box for retailing (Ariev, 2007 p. 86).

Other people followed suit by introducing other forms of packaging by using 12 different materials such as metal and glass. A. F. Pears, an Englishman established the first soap packaging company (Ariev, 2007 p. 89). Yardley of London also packaged his famous lavender water in glass bottles, while Crosse and Blackwell also branded olive oil and mustard in jars (Ariev, 2007 p. 95).

Industrial revolution created a sudden demand for better products as trade flourished and more goods became available to consumers. Since materials were expensive, packaging was limited to luxury goods only. The period during and after World War I saw a remarkable number of packaging innovations such as molded glass, cardboard boxes, metal cans, and cellophane that made packaging commonplace. This pushed manufacturers to establish an identity to sell to consumers (Mudit, 2013 p. 16).

Packaging as a method for food preservation began in the latter part of the 16th century (Hook et al., 2007). In 1795, when the French War was raging, there was an urgent need for food preservation for soldiers in the war. As a result, food had to be canned. The famous French warrior Napoleon Bonaparte realizing the need to preserve and transport food to his army, offered a prize to reward anyone who could find answers to his demands (Hook et ai., 2007). In 1809, one Nicholas Appert, a confectioner, invented the process of canning by introducing an airtight glass jar to win the prize. By this, he introduced canning which was further developed to the light weight cans of today (Hook et ai., 2007). Canned product was first used by the army before it came to the consumer's domain. The British Army first used the canned food during the Crimean wars (1853 – 1865); In the American Civil war (1861 – 1865) the militant groups used these bulky cans for food preservation and transportation. It is interesting to note that light cans that we have today and are easy to open used to be bulky and required the use of hammer and chisel for opening when it was first introduced (Hook

et al., 2007). Product packaging became very important during the World Wars. The researcher is of the view that although war is bad and destructive, this development of food product packaging is one good thing that was initiated by the demands of war at that period in history. The 19th century was the period when advancements in canning and paper containers fabrications we use today got started. The packaging industry at that time availed itself with the development of mechanical printing processes, photoengraving and process colour printing. Many packages were decorated using the printing processes to make them more attractive to the buyers, to bear the names of the products and their manufacturers' information. This marked the beginning of packaging, branding and labelling.

The packaging of most products, especially foods, in Ghana primarily serve as containers for the products. They are normally not intended as a means of extending shelf-life, promote it sale as well as protecting it against damage and prevent it from deterioration while storing and transporting. Suitable packaging can preserve most products. Good packaging could extend shelf-life and permit more of a product to be processed.

The development of suitable packaging for most traditional staples is hampered by the lack of standards. Variations exist in the composition, shape, weight, and methods of preparation of products from different sources, and it is not easy to design simple, inexpensive, ready-made containers for such a wide range of items. Unfortunately, the packaging industry in Ghana is not well developed to meet most of these demands. Even at the industrial level packaging contributes significantly to the cost of production. As a result, many local industries use cheap, poorly designed packages. Local manufacturers can hardly afford to add any extra cost to their overhead.

Virtually all food products packaged by local food vendors are unlabelled. No indication is given of the name of the product, its source, or its composition, nor any information on appropriate storage conditions or instructions for use. Street foods are displayed open and unwrapped. Sellers and consumers alike take this for granted.

The local food sector will dominate the food industry in Ghana for a long time and remains a major source of meals for many people. But this significant role is adversely affected by poor hygiene and the lack of suitable packaging materials. The use of unsuitable packaging materials, inadequate and ineffective packaging during transportation, cost of packaging, absence of appropriate packaging machinery, poor labelling, lack of standards and specifications and environmental issues are some of the challenges facing the packaging of both fresh and processed foods in the informal and formal sectors of the food industry in Ghana. These challenges impact greatly on the country's drive towards food security as well as promoting the export of Ghanaian food products Institute of Packaging Ghana (IOPG), (2014).

From factory to market, market to home, and home to landfill, modern packages have been carefully designed for every step. Packages not only store and protect goods, they help sell them. Each box, bottle, can, tube, bag, and jar serves as a silent salesman on the store shelf. At the same time, packaging is designed for efficient transportation and disposal (Hagley, 2016).

In Ghana consumers and packaging watchers, are complaining that, the problems associated with packaging worldwide were directly imported to our systems since almost 95 per cent of consumable goods and services are imported (Institute of Packaging Ghana (IOPG), (2014). For local manufacturers who engage in competition based on the goods and services they produce for local and foreign consumption, the

ability to package their goods and services to match that of the imported goods and services literary becomes a steep mountain to climb technologically and logistically. Many local food packages lack the qualities and values of a good package; this is because most African designers especially, Ghanaian packaging designers, are not well vested in the knowledge of materials they use to enhance the aesthetic value of their packaging. A good package is a package that can perform these functions: containment, protection, preservation, identification, convenience and add values and quality to product they preserve.

The need for good packaging in Ghana is also fuelled by the rapid growth of urban population and the increasing number of working people who have caused changes in the eating habits due to the diminishing in time available for freshly home-cooked meals. Parents are often employed outside the home and children attend schools far away. Consequently, fewer people, especially in the urban areas, are eating full home-cooked meals; much food is purchased from vendors. As a result, the fast-food industry has been growing rapidly. In Accra, Kumasi, Sekondi-Takoradi for example, the number of restaurants and food hawkers have increased rapidly in recent times, so is the attempt to preserve cooked food. The use of polythene bags as "take-away wrappings" for food, is a sharp move from wrapping food with leaves. Today, Neat Fufu, Neat banku etc, are all packaging our old-age Fufu and Banku, which hitherto appeared impossible. As packaging improves, so is hygiene. Several attempts have been made to improve the hygienic practices of food vendors. Packaging is one area that has attracted attention because the use of suitable materials for cooked foods to improve the life span of both goods and services as well as those who consume them.

As the competition in structural packaging in the world over gains momentum, so will research into this arena become increasingly important, given the potential for structural packaging to successfully achieve marketing goals. One needs to fully understand the role that packaging structures play in a marketing environment, and how best to control this tool to influence Ghanaian consumers. If packaging structures are so important, what will be the best way to measure its value? There is the need, therefore, to critically explore the concept of standout in packaging with greater emphasis on its structure, to increase patronage of Ghanaian products.

1.1 Statement of the Problem

Patronage of Ghanaian manufactured goods has been disadvantaged by the perception that most made-in-Ghana goods are of inferior quality due to poor packaging. Packaging and labelling of Ghanaian products lack the quality that can make them competitive on any market. Although some of the locally made products are considered to be of high quality and unique to the country, they are not accepted as good packaged products to enable them to be sold successfully, especially outside the local market Institute of Packaging Ghana (IOPG), (2014).

According to the Institute of Packaging Ghana (IOPG), (2014), one key challenge being faced by the packaging industry in Ghana is weak quality and structural design due to low skills in packaging, technology and expertise in packaging design. This does not help local manufacturers and the country loses foreign revenue as a result. It is for these reasons stated above that the researcher seeks to explore "Packaging trends in Ghana'' with greater emphasis on their structures or fabricated forms to increase patronage of Ghanaian products. As earlier stated in the background to this study, packaging has developed well beyond its original function as merely a means of product protection, but now plays a key marketing role. That is increasing shelf appeal on products,

providing product information and establishing brand image and awareness. Packaging in recent times plays a major role in the marketability of the product notwithstanding the quality of the contents of the product. There is no doubt that Ghanaian consumers generally prefer imported foreign products from countries which are more advanced with regard to packaging such as China, America, India, Malaysia, Indonesia, Thailand, South Africa, The Far East, and Europe to similar locally-made brands. Ghanaians patronize the former mainly because of the high quality and attractive-looking nature of their packaging which are also relatively affordable. Interestingly, majority of Ghanaians are known to do impulse buying (purchasing wants and not needs) therefore, manufacturers of Made-in-Ghana products can increase their sales trends by making conscious efforts to ensure that, the packaging of their products are very colourful and attractive to entice consumers and increase their desire to purchase the products even though they might not need them. Even though some consumers purchase Made-in-Ghana products, none of them did so because it is attractive, have aesthetics and portrayed Ghanaian cultural values. This is a clear indication that had Made-in-Ghana products been aesthetically attractive and portray some elements of Ghanaian culture, the patronage will increase. The other side of the issue is that the major reason for purchasing foreign products is that they are well packaged, beautiful in terms of colour and shape (aesthetically pleasing) and provides all the needed information. These inherent qualities of the products give them the edge over the local ones. They are thus, purchased when the consumer has to make a choice. The impressions of consumers about the packaging of Made-in-Ghana products are that it is not well packaged, not attractive and mostly the designs are shabbily done and do not reflect any Ghanaian culture. These are some reasons why an increasing number of Ghanaians purchase Chinese products to the detriment of the local ones. It is therefore not surprising that

the incident of product rejection by consumers is high for Made-in Ghana products than the foreign ones.

Quality judgments are largely influenced by product characteristics reflected by packaging, and these play a role in the formation of brand preferences. If the package communicates high quality, consumers frequently assume that the product is of high quality. If the package symbolizes low quality, consumers transfer this "low quality" perception to the product itself (Underwood, 2001). The package becomes the symbol that communicates favourable or unfavourable implied meaning about the product.

Underwood, (2001) suggests that consumers are more likely to spontaneously imagine aspects of how a product looks, tastes, feels, smells, or sounds while viewing product pictures on the package. The production process is not complete until the product gets to the final consumer. This presupposes that, products would have to be aesthetically appealing and needed by the consumer for it to be purchased. It is clear that the need for a product is the first consideration but when a consumer is faced with the choice of two products which are substitutes then other consideration come to play. The first factor considered here is the aesthetics value of the packaging (how attractive it is). This attraction would lead to the choice of one product over the other even though they might solve the same problem. It is only after a choice has been made that, the consumer would then check the label to find the information such as manufacturing and expiry dates, weight, storage and usage etc. Therefore, there are different levels of factor consideration and it is important for Ghanaian manufacturers and packaging designers to admit and appreciate this so that they can take full advantage of it. The above analogy shows that it is essential for a product to be attractive as if it is to have a high probability of being purchased. Therefore, in as much as packaging is important, its aesthetic value comes first before the vital information that needs to be provided are

considered. Consumers associate the beauty of a package to the quality of the product. This is very interesting, as it defies logic and rationality. One cannot determine the quality of a product by the level of attractiveness of its packaging.

In European markets Ghanaian products, though not deficient in quality, have packaging designs that are ineffective in communicating product value and clear consumer benefits. Ghanaian exporters appear to be ignorant about the sophistication and unpredictability of the consumer and fail to meet their expectations. It is every exporter's desire to see his/her product arrive at its final destination in an acceptable condition, suitable for sale and consumption. Trade liberalization, the free-zone market system and globalization has intensified competition between products on the international market. Exporters therefore have to comply with increasingly complex international standards and provisions, as well as target market specifications and requirements on safety, health, environmental protection and packaging requirements. International trade rules and regulations, in addition to packaging expectations of importers and buyers are changing drastically and rapidly.

International markets have existing standards and regulations for its imports. Every exporter has to comply with or face sanctions and blacklisting. Consumer expectation and attitudes towards products place high demands on exporters. They have divergent needs that must be met. Since purchases are often made in disorderly, relatively noisy retail environments, it is important to ensure that products on shelves get noticed when situated alongside competing brands. Obviously, the solution rests on great packaging design. Packaging will help increase earnings from products exported to the international markets. This research therefore seeks to prove that effective packaging design can increase the attractiveness and recognition of Ghanaian products in the international market.

Products to be looked at include locally brewed alcoholic beverages, traditional herbal medicine and locally processed fruit juice.

1.2 General Objective

To access the quality role packaging plays in the marketability of products on Ghanaian markets

1.3 Specific Objectives

(i) To identify specific Ghanaian products and determine the trend the products have gone through in the packaging process.

(ii) To examine simple technological methods and measures adopted to facilitate quality and attractive ways of packaging products.

(iii) To design a sample packaging structure for a locally manufactured product.

1.4 Research questions

(i) What are the trends some Ghanaian products have gone through in the packaging process?

(ii) What are the simple technological methods and measures to adopt to facilitate quality and attractive delivery of products through packaging?

(iii) What innovative shapes could the structure of packages be made in to improve packaging in Ghana?

1.5 Importance of the Study

Different people respond to different packages in different ways, depending on their involvement (Vakratsas and Ambler, 1999, p. 26). This research is geared towards finding some solutions to major problems affecting the quality of product packaging in the Small and Medium Scale Enterprises in terms of their packaging structures. It seeks

to bring to bear the need for manufacturers to go beyond merely labelling the product but going a step further to improve upon the structural designs of the packages. This study would enable manufacturers to package their products professionally and attractively to meet the taste of their target market.

1.6 Delimitation

This study is limited to consumer products packaged locally by Ghanaian Small and Medium Scale manufacturers. Thus, products whose packages require structural design, decoration and labelling as expected by customers and consumers to increase patronage. These include consumable products such as alcoholic beverages (*akpeteshie*, *pito, palm wine*), traditional herbal medicine and locally produced fruit juice (mango juice and pineapple juice). The study would make use of available existing data on the packaging material properties where possible to this research. Although this work would have an overview of the popular packaging materials used in Ghana, it would, however, focus on structures using plastic bottles, paper, so as to enable the researcher create alternative packages with ease. This is because the researcher would not have to use heavy equipment, as in the case with other materials like glass and metals.

1.7 Definition of Terms

- Consumers - Those individuals who use goods or services to satisfy their individual needs and desires, rather than to resell or use them as raw materials.
- ISO - International Standards Organisation
- Labelling - The use of textual information on a product's package to instruct and to inform those who interact with the product.

- Packaging - The materials in which objects are wrapped or contained before being conveyed or sold. In economic sense, packaging is industrial and marketing technique for containing, protecting, identifying, and facilitating the sale and distribution of products.
- Structural Packaging - The look or appearance of a container for containing products 'Akpeteshie', 'pito' – Traditional brewed alcoholic beverage.

1.8 Abbreviations

- ISO - International Standards Organisation.
- IOPG - Institute of Packaging, Ghana
- FAGE - Federation of Ghanaian Exporters
- GSA- Ghana Standards Authority
- FDA- Food and Drugs Authority
- CAD - Computer Aided Design
- GEPC - Ghana Export Promotions Council
- AGI - Association of Ghana Industries

1.9 Organisation of the Rest of the Study

Sequentially, this thesis has been arranged in five chapters to give logical meaning to the study conducted.

Chapter two contains the review of related literature. It presents studied evidence on packaging of some Ghanaian local products (*akpeteshie, pito*, palm wine, mango and pineapple juice and typhoid medicine) and relates it to this research. The chapter three presents the methodology used by the researcher. Chapter four comprises data presentation, analysis and interpretation of findings. Chapters five finally sees to the

summary of the entire research, conclusions and recommendations possible for improvement are presented.

CHAPTER TWO
REVIEW OF RELATED LITERATURE

2.0 Overview

This chapter discusses and reviews related literature on the topic, "Packaging trends in Ghana". The sub-topics discussed included the following:

a. Concept of packaging

b. Definition of Packaging

c. Packaging Design

d. Structural Design

e. Types of packaging

f. Graphic Design

g. Functions of Packaging

h. Appearance of Packaging

i. Materials used in making Packaging Structures

2.1 Concept of Packaging

"Packaging has become a critical factor in the consumer decision-making process because it communicates to consumers at the time they are actually deciding in the store. Packaging is part and parcel of our daily life. Food products brands use a range of packaging attributes, combining colors, designs, shapes, symbols, and messages" (Nancarrow, Wright and Brace 1998 p. 110). These attract and sustain attention, helping consumers identify with the images presented. The importance of packaging design and the use of packaging as a vehicle for communication and branding is growing (Rettie and Brewer 2000), as packaging takes on a role similar to other marketing communications elements. One reason for this is simply the fact that

consumers may not think very deeply about brands at all before they go into the store to buy.

One recent study estimated that 73 percent of purchase decisions are made at the point of sale (Connolly and Davidson, 1996). Consumer intention to purchase depends on the degree to which consumers expect that the product can satisfy their expectations about its use (Kupiec and Revell, 2001 p. 7). But when they have not even thought about the product much before entering the store, this intention to purchase is determined by what is communicated at the point of purchase.

Consumers are increasingly demanding higher quality packaging for products which has in turn increased the role of packaging in the sale of goods and services (Institute of Packaging Ghana IOPG, 2014). To achieve the communication goals effectively and to optimize the potential of packaging, fast moving consumer goods (FMCG) manufacturers must understand consumer response to their packages, and integrate the perceptual processes of the consumer into design (Nancarrow, 1998). Most products are in the form of packaged foods, canned drinks, bottled water, packaged toiletries, cosmetics etc. Labels put on packages help customers to know the content, nature of product, manufacturing and expiry dates, ownership, direction of use, place of origin etc and this information makes it easier for customers to use these products.

"Visual imagery on the package is another essential attribute. To be noticed at the point of sale, pictures on the package can be a strategic method of differentiation, which will enhance access to consumer consciousness. This is because pictures are extremely vivid stimuli compared to words and also are quicker and easier for consumers to process in a low involvement situation" (Underwood, 2001 p. 403). Well packaged products gives customers some sort of delight and self-satisfaction with the pleasure of

acquiring the item. In the design process, marketers and package designers must take account of consumers' past experiences, needs and wants; understand how packaging design elements get consumers to notice the package and notice messages on the package; and, broadly, evaluate packaging design and labeling for their effectiveness in the communications effort. In doing this, it is particularly important to remember that not all consumers evaluate packaging the same way. Just as in consumer response to other elements of marketing, segmentation is an important factor (Orth, McDaniel, Shellhammer and Lopetcharat, 2004 p. 97).

2.2 Definition of Packaging

Packaging does more than protect and identify a company's products. It plays a vital role in developing a company's image and brand within a target market. Failing to pay attention to the design of the packaging can decrease the visibility and attractiveness of a product, which can be devastating for sales, and that is the backbone of this study.

"Packaging" is the science, art and technology of enclosing or protecting products for distribution, storage, sale, and use. "Packaging also refers to the process of design, evaluation, and production of packages. It is fully integrated into government, business, institutions, industries, and personal use" (Underwood, 2001 p. 22).

Packaging has always had a fundamental role to play in business and marketing communication. The package is a vital element on the marketing communications mix. The increasingly important communications role of packaging has given rise to expressions such as "Packaging is the least expensive form of advertising": "Every package is a five-second commercial", "Packaging is the silent salesman", and The package is the product" (Shimp, 1997 p. 23). However, packaging design in the modern age has become one of the most sophisticated, holistic and powerful examples

of the designer's craft. The full life-cycle of packaging now touches on all of the key issues facing business today and it is important to understand its impact from cradle to grave (Sands, 2007).

In Hines's (2008 p. 125) perspective, the package has become the "first moment of truth" at retail since that is going to decide whether the customer will buy the product or not. It is important therefore that attention is given to not only what goes inside but, more importantly what is on the outside of the box. Just because the product is great does not mean it is going to sell even if it is placed in the right retail environment.

The box today is the "retail" salesperson. The box or package is expected to provide the necessary information to make an informed shoppers' decision. There may not be a salesperson available to answer a question either. So the package must be the silent salesperson to tell all that is needed to know, more importantly, convey the information about what is inside and how it is going to help the consumer (Hines, 2008).

Without the proper packaging mix, the needed or expected increase in sales would not be realized. For instance, if the charges are deemed fair and preferences rightly anticipated and incorporated into the design for the packaging, but the scientific or technical aspects are neglected, the product would not even get to the consumer to satisfy the anticipated changes in taste. Again, regardless of the attractive nature of the packaging, it has to communicate the right message so as to sustain its market share and possibly increase it.

William & Weilbercher (1979 p. 86) defined packaging as, 'A broadcast commercial opportunity offered for sale at a particular time for a particular price'. This definition is skewed by just looking at packaging as 'Advertising'. The emphasis is on the final product since it would be sold for a price without taking into consideration its safe

delivery. However, how it would attract and sustain consumption and even whether consumers are prepared to buy at that price were not considered. Hanlon (1971) supports this critic by saying this about packaging: 'In its more familiar forms, it is the box on the grocers' shelf and the wrapper on a candy bar. It can also be the crate around a machine or a bulk container for chemicals. 'It is an art and science', - p. 205.

Milton (1991) looks at packaging as not just a support for advertising but advertising itself, stating that '... While advertising may alert a large number of potential consumers to a product's existence, it is only at the point of purchase that the promotion story and the products image come together' p. 61. Milton's assessment to some extent has been generalized and saw packaging to be advertising but then the product should be packed before advertising sets in. In other words he tries to place value on the package as a sales tool, which is the reason for this study.

Conventional marketing thinking suggests that the primary goals of packaging include identifying the brand, communicating information, facilitating distribution and logistics, preserving the product and assisting product consumption, (Bhattacharya, Sen, Korschun, Kotler, Keller, 2012). In a bid to attain the outlined objectives, marketers should choose the aesthetic and functional variables of packaging meticulously so that they realise the intended impact. Other authors explains packaging taking into consideration the distributive process. For instance, Paine (1961 p. 212) defined packaging as a means of ensuring the safe delivery of a product to the ultimate consumer in sound condition at the minimum overall cost. This definition by Paine considers only the protective functions and the cost of packaging. This opinion is supported by Davis (1967 p. 28) when he defined packaging as, "a collective term for all kinds of containers in which goods are packed for sale to the consumer". Thus, highlighting much on the container in which the product is packed and not dwelling on

the other important functions that a package performs. The above explanation is criticised on the fact that; even though getting the product safely transported to the shelves is important; the product communicates with the consumer while on the shelves to enable its purchase.

Hanlon (1971) also considered packaging in the sense of the container. Hanlon thinks that packaging is any structure that contains or limits its content which include crates, boxes, nets, bottles, as well as displays, utensils and conveyance. Hanlon looks at packaging only as a structural thing with or without any visual demand and also takes into consideration the type of materials used in the manufacture. The way and manner the product would be advertised or promoted in terms of cost, the rules and regulations prevailing at the packaging industries and the manner in which the product would reach the final consumer are all not considered.

Byett (2002 p. 54) defined packaging as "an item's physical container, label and insert". Packaging is indeed the physical container that is able to conveniently protect the product contents through the transportation and distribution stages, and has a well-designed label which gives all vital information about the product and most importantly looks attractive. The importance of the package leading to the sale of the product is the objective of this research.

Marketing Essentials (2003 p. 11) state clearly on the sales function of packaging. It states that a package does much more than hold a product – "it is a selling tool". It further states that companies take great care in designing or redesigning packages for their products to increase sales. Marketing Essential also says that, packaging actually serves many purposes, ranging from product protection to attracting customers' attention. It is also a selling tool that should promote and sell the product by catching

customers 'attention, defining a product's identity, and providing information, ensuring safe use, and protecting the product.

People are supposed to differentiate a product from other competing products on the shelf and know exactly how to use the product so that it does not cause any unintended harm. Hence, the definition by Judd, Aalders & Melis (1989 p.26) which see packaging as a sales agent or "a silent salesman" or "a dispenser", after it has completed its function of delivering the product, is well placed. Manufactures see this definition more suitable as their main aim is to minimize cost.

Prendergast & Pitt (1996 p. 60), see packaging as "…that which has both "marketing and logistics" functions. For marketing, the package sells the product by attracting attention and communicating. For logistics, the package allows the product to be contained, apportioned, unitized and communicated". Against this background, the authors concluded that it is difficult to separate the marketing functions of packaging from the logistical functions since both are related. In his capacity as a management consultant, Walton (2002 p. 94) observed, "...from single serve to family-size, packaging is a bridge between how we live and what we buy". He cited an example where a new carton for Coca-Cola becomes a refrigerator dispenser and school lunches for children becomes their favourite items in ready-to-go cartons, bags and cups. He concluded that, packaging is about function. It is about engaging the minds and hearts of consumers.

So what happens when a typical package has nothing to do with how we live? Any package that cannot connect with consumers' lifestyle cannot effectively sell a product. This shows that today's society cannot survive without effective packaging. The recent development of a global market coupled with the growth of supermarkets and other

self-service retail outlets has necessitated that the package assumes functions beyond the traditional role of merely containing and protecting the product.

The package serves to:

1. Draw attention to a brand,
2. Break through competitive clutter at the point of purchase,
3. Justify price/value to the consumer,
4. Signify brand features and benefits, and
5. Ultimately motivate consumers brand choices.

Decardi, (2015 p. 107) defined packaging as “the interface between the product and the consumer”. It is the expression of the brand identity of the product, its intrinsic qualities, and its "philosophy". Packaging is the voice of the product, its dress-sense and its "look". It is the product’s first sales pitch, which is of key importance to its market positioning. Packaging’s physical proximity brings it closer to consumers who look at it, lift it up for a closer look, read it, handle it, take it home and use it. The form, colours and texture of packaging provoke sensations in the consumer. In a word, it is the spokesperson of the product.

Packaging has four distinct marketing functions, according to Lamb, (2011). Packaging contains and protects products. It promotes products. It helps consumers use product - for example, by allowing them to reseal it between uses. Finally, packaging facilitates recycling and reduces environmental damage.

Packaging consist of the physical appearance of products as they are presented in all types of containers and wrappers used to protect, transport, and distribute goods including labelling. Literally, packaging is the container that holds the product and makes it possible for easy handing and selling. In packaging, consideration include

size, weight, shape and ability to stack. Relevant information is included on packages which include company's name, the product's name, content and features are displayed on the package for marketing purposes. Also instructions for the use of the product is included in the package.

If a cell phone company wants to design a package for its product, it will thus try to develop a package that will protect the cell phones from accidents such as dropping, moisture and tampering. The company will also try to make the packages easy to handle, ship and easy to display on the retail shelves. Marketing opportunities are also a part of packaging which most companies dwell on. Companies use packaging to attract potential costumer's to their products and to demonstrate its attributes. Product attributes include things such as colour, size, graphic designs, price and quality.

Designing packaging from a marketing perspective also involves brand recognition. Brand recognition occurs when a consumer can identify a brand by its attributes. If there is strong brand recognition, the general public will be able to identify the product brand without seeing the name. The package will also lure customers to impulse buying, which is simply an unplanned decision to make a purchase of a product or service right before the purchase is made. Impulse buying is made at the spur of the moment with little, if any, reflection or analysis. Grocery and retail stores capitalize upon impulse purchase all the time in checkout lanes, where they attempt to lure customers to purchase that delicious-looking candy bar or thirst quenching cola.

2.3 Packaging Design

In today's competitive market place, it's harder than ever to attract a consumer's attention. "It's estimated that the average consumer spends less than a second scanning shelves, and in that time, will make a decision on whether or not to purchase any given

product" (Rabinowitz, 2002 p. 2). If you are that product's manufacturer, you will want to make sure that in that critical time frame, the consumer will be drawn to your merchandise, have a desire to pick it up, inspect it, and make a decision to buy it. Whether this is a new product, or a reformulation of an existing one, you'll be smart to turn to a package designer to ensure that in that important fraction of a second, your target audience will know your product is there. The discipline of package design focuses on producing a container that will get noticed. By skillfully teaming colorful graphics, a unique shape, or any other eye-arresting method, the package designer is a key player in any company's marketing effort. No matter how beneficial the product inside the container may be, unless a consumer decides to pick it up, that product will never get tested p. 2.

Pilditch, (1961 p. 26) quoted Ernest Dichter, explain that "package must literally shout attention to the product". It further explained that "package must be its own salesman; it must arrest the gaze of the passing shopper and entice the customer to pick up the product". Henrion, (1962) also supported that, the package must attract attention before it can inform or persuade buyers.

The assertion of packaging design by Romanuck as cited by Rabinowitz, (2002 p. 5) says that, "Retailers are not allowing things to remain on the shelves very long unless they sell, there's a big competition just being allowed to be on the shelves. Because of the competition, you've got to do a lot more to attract someone."

In essence, packaging design is a vital element for sustainable market competitiveness. From the above objectives, it presupposes that a package must be quality and look attractive, that is aesthetically-pleasing. Thus, designs of the graphics should be able

to attract and sustain the consumer's interest so as to first get the market, and then maintain and improve upon them.

Packaging to a larger extent determines the quality of the product hence customers are forced to buy them. This should be a clue to local manufacturers and designers that consumer attention can be captured through colourful and attractive packaging. Most Ghanaians purchase locally manufactured products out of convenience or at times due to their monopolistic nature, thus, they have no substitutes. Ghanaians do not purchase Made-in-Ghana products because they were more attractive. The fact remains that packaging of most made-in-Ghana products is a deviation from the constituents of a good packaging and hence, consumers would reject such products for the more attractive foreign ones. Interestingly, all incidents of product rejection are due to the poor packaging and these products are all locally manufactured and packaged. Concerning consumers' perceptions of the packaging of foreign products as compared to our local ones, the responses for the packaging of foreign products are positive while those for the local ones were mostly pessimistic. Consumers are of the opinion that, foreign products are well packaged, thus, the packaging protects the product content very well as well as providing needed and adequate information of the product which makes these products seem very presentable.

The production process is not complete until the product gets to the final consumer. This presupposes that, a product would have to be aesthetically appealing and needed by the consumer for it to be purchased. It is clear that the need for a product is the first consideration but when a consumer is faced with the choice of two products which are substitutes then other consideration come to play. The first factor considered here is the aesthetics value of the packaging (how attractive it is). This attraction would lead to the choice of one product over the other even though they might solve the same

problem. It is only after a choice has been made that, the consumer would then check the label to find the information such as manufacturing and expiry dates, weight, storage and usage etc.

According to Hanlon, Kelsey, Forcinio, (1971), the product and the package are becoming so independent that we cannot consider one without the other. It will be so naïve that at this point of technological advancement, to talk on increase in productivity; packaging will not be giving much consideration.

This research therefore seeks to investigate into how good packaging practices can impact positively on consumers and to design convenient packages for selected Ghanaian products using locally available materials.

2.3.1 Structural design

Structural design is the engineering of package structures to meet functional and performance objectives such as to protect the product's contents from contamination, bad weather, and to preserve the product. Structural design is largely undertaken by package manufacturing and converting companies who employ specialists such as mechanical, chemical, industrial and production engineers with the knowledge and skills to conceive and adapt packaging structures that can be manufactured economically and at the same time meet all the performance standards emanating from distribution around the globe. Structural designers often operate in a specific material sector such as glass containers, paper containers (cartons), metal cans, bottles, cotton/jute bags or wooden pallets TIEPIK. (2005).

Leonard (1980 p.192) indicated that "A package consists of both structure and appearance". Thus, a package can be looked at in two different ways: The structural

design, that is, the construction of package from the technical point of view, which is what this project is about, and the visual design, that is the appearance of the package and its promotional value. Ockumpah-Bortei (1991) explained that these two aspects may be distinct but inseparable.

Structural design basically can be explained as something built from different materials put together to form a container or an object. It comes in three dimensional form or object used in keeping products. For instance, a wine bottle designed in the shape of the name; probably in the shape of the human skull or a female figure. A box designed for candies could assume the shape of a castle or a space shuttle. It will make the product look far more interesting and attractive and help consumers imagine how tasty the product will be.

The main function of structural packaging is to facilitate the protection, transportation and storage of the products. In particular, when deciding the appropriate visual impact for a package, it should be in mind that both structural and graphic design can contribute to the achievement of the desired promotional effects.

Structural packaging raises products' appeal through promotion and advertising with desired sales increment and a resultant increase in profit margins, which is the ultimate aim of every producer (Ditcher, 1981; Meyers and Gerestman, 2005). For structural packaging to play this important role, it must be attractive, informative, and clearly identify with the product. Thus, emphasizing Dichter's (1981) view that consumers tend to view a product and its packaging as one. The use of packaging as a marketing and sales promotional tool has been well-developed in the advanced countries, with developing countries such as Ghana lagging behind. The saying in the explanation if packaging by Silayoi and Speece, (2004 p. 607) as "salesman on the shelf" cannot be

over emphasized. In Ghana, many products tend to be poorly labelled in terms of concept and appeal including colour, typography, photography, illustration and layout.

2.3.2 Types of packaging

Danger, (1987) grouped packaging into three broad categories: Primary, Secondary and Tertiary packages.

1. Primary packaging - the material that first envelops the product and holds it. This usually is the smallest unit of distribution or use and is the package which is in direct contact with the contents.
2. Secondary packaging - is outside the primary packaging – perhaps used to group primary packages together.
3. Tertiary packaging- is used for bulk handling, warehouse storage and transport shipping. The most common form is a palletized unit load that packs tightly into containers.

To Sand (2008 p. 72), the structural package design must serve in four different ways:

1. Protect the contents of a package.
2. Contribute to the cost of the end product.
3. Promote the product's attributes and benefits.
4. Form a part of the product experience.

The move to larger supermarkets and increased segmentation of markets has led to the proliferation of products, so that packaging has to work in a more crowded competitive context both in the retail environment and in the kitchen (Thompson, 1996).

Impulse-buying is also increasing, with an estimated half of all grocery purchases being unplanned. A quantitative survey by the Henley Centre concluded that 73 percent of purchase decisions are made at point of sale (Frontiers, 1996 p. 177). The tendency to shop weekly, and the large number of items purchased at one shop, leads to less time to make the purchase decision, and the consequent need for the package design to work harder.

It is suggested that packaging may be the biggest medium of communication. Three reasons are given for this:

1. Its extensive reach to nearly all purchasers of the categories.
2. Its presence at the crucial moment when the purchase decision is made,
3. The high level of involvement for users who will actively scan packaging for information.

Researchers have shown that truly, the point of purchase is the perfect period to communicate with consumers. Hence, anything that a consumer is exposed to at the point of purchase can perform an important communication function. All the elements on the package must assist in communicating value and trust on the product to the potential customer. The structural package must also function in several ways. But ultimately the structural package must sell the product.

Ann, (2005 p. 23) is of the view that, "…As we move into the 21st Century the pressure on the packaging supply chain are increasing all the time. Retailers are fighting to increase their share of a UK market that is essentially static, due to lack of population growth and an actual decline in the number of calories consumed per person..." He advised that while the pressure on the consumer packaged goods supply chain continues

to increase, there is the need to work together with supply chain partners. "…In the future it will not be organizations which compete; it will be supply chains..." says Christopher, (2006 p. 41).

2.4 Graphic design

If structural design has the ability of creating images that appeal to the consumers' emotions, graphic design – the visuals that decorate the surface of the package – has an even greater opportunity to encourage the purchase of the product. To do so, the packaging graphics must be based on a distinct positioning strategy for the product and project this strategy in the most forceful and comprehensible manner.

Packaging design is a major component in the marketing campaign. It is often considered as the most important and critical sales promotional tool (Essuman, 2008). Graphics includes layout, colour combinations, typography and product photography, all of which create an image. For low participation, there is a strong impact from marketing communications, including image building, on consumer decision-making (Meyers, 1998 p. 125). It is for this reason that, so much attention and resources are now devoted to the perfecting of package appearance. Evaluation of attributes is of less importance in low participation decisions, so graphics and colour become critical (Grossman and Wisenblit 1999).

The opportunities to communicate product attributes through packaging graphics are almost limitless. Graphics are capable of communicating informative and emotional messages (Meyers, 1998 p. 126). This messages include: Brand identity, Product name, Product description, Flavour or variety identification, Attribute description, Benefit statements, sell copy, Promotional messages, Usage directions, Cross-references (for

food), Warning or caution statements (for drugs and chemicals) and Size and contents (Meyers, 1998 p. 126).

Beyond providing pure information, the emotional aspects of graphics are more hidden. They evolve from the styling of various graphics elements, including logo styling, copy styling, symbol, icons, colour, textures, photography and illustration (ibid)

While graphics communicate the main verbal and pictorial messages, the shape and structure can create impressions of strength or fragility, elegance or practicality, and can be key elements of a brand image. The package should give a valid impression of the product – that is, it should not deceive by looking significantly more or less expensive than its contents. The colours, brand name or the decorative motifs should not offend the target group's tastes, religion or customs in a target market (TIEPIK, 2005). Consumers associate the beauty (aesthetics) of a package to the quality of the product. This is very interesting, as it defies logic and rationality but then, good packaging is able to achieve that. Interestingly, majority of Ghanaians are known to do impulse buying (purchasing wants and not needs) therefore, manufacturers of Made-in-Ghana products can increase their sales trends by making conscious effort to ensure that, the packaging of their products are very colourful and attractive to entice consumers and increase their desire to purchase the products even though they might not need them. Even though some consumers purchased Made-in-Ghana products, none of them did so because it was attractive, had aesthetics and portrayed Ghanaian cultural values. This is a clear indication that had Made-in-Ghana products been aesthetically attractive and portrayed some elements of Ghanaian culture, the patronage would have increased.

2.5 Functions of Packaging

Purposes of packaging are important issues to this study. A number of authors who wrote on packaging in relation to a product commented generously on the numerous functions of the package. Actually, the package of a product must Protect, Preserve, facilitate distribution and handling, and promote Customer Choices, Inform and Instruct Sales, Position the Product and Promote. Pilditch, (1961 p. 30) assert that package conveys the product from factory to the final consumer, irrespective on the destination of the consumer.

As indicated by Coles (2003) the primary parts of food packaging are to care for food items from outside impacts and harm, to contain the food, and to give customers ingredient and dietary data. A package is supposed to protect, preserve, promote, inform and instruct p. 244.

A good package will have the following ingredients: adequate capacity (volume) to hold the content; compatible with the content (inert) and should not cause any deterioration in the integrity of product/or be affected by content; Have adequate strength to withstand the weight of the content as well as other stresses that may be encountered during transportation and handling; Attractive to enhance marketability of product; Informative; Providing information on product identity and its use; Disposal precaution in the event of accident or misuse as appropriate; Safe to handle and use convenience; Containing products, defining the amount the consumer will purchase; Protecting products from contamination, environmental damage and from theft and quality; Facilitate transportation and storing of products; and Carry information and colourful designs that make attractive displays *(http://www.fao.org)*.

A trip down any aisle in the grocery store will show just how far the packaging industry has come. Today's consumers are greeted with innovative options that run the gamut from eco-friendly packaging to designs that actually assist in the food preparation process. So much consideration and science goes into selecting the correct container that, for manufacturers, packaging is a strategic decision. The following variables should be considered when choosing a package for a product.

2.5.1 Containing the Product

The package should effectively contain a defined quantity of product, using the available pack volume as efficiently as possible. Depending on the nature of the product, the package may need to be airtight, liquid tight or powder tight, to prevent escape of the product or ingress of contaminating materials. The quantity of product may be measured by volume, by weight or by count. Tight dimensioning, i.e., keeping the pack size to a minimum, is usually important both for economy and to optimize package strength. A tight package, with minimal empty space, normally withstands pressure and handling stresses better than a loosely filled one; the product itself can often contribute to pack strength. A loosely filled package has to bear the stresses alone TIEPIK (2005).

Pilditch, (1961) sums up the argument on the containment function of packaging in his statement –"the package carries the product from factory to end-user, across seas, over hills, through swamps. It guards goods in frozen freight cars or on scorching docks and it delivers them, after weeks of jerks and bumps and abuse, as fresh and crisp as when they left the safe order". Thus, bringing to question the protective role of packaging p. 33. Packaging must meet all of these challenges as well as contain the product itself. This implies a resistance to both internal and external corrosion, with effective

properties that guarantee resistance to gas, oxygen, water and smells. In this explanation, packaging is seen as performing different functions all at the same time. It is a good package which is able to do all these, and it takes a good graphic designer to design such a package.

2.5.2 Protects the Product

"The essential employment of a pack is to likewise ensure its substance against stun, vibration, scent, microscopic organisms, dampness, pilferage, compound response and physical dangers", Pilditch, (1961 p. 37), Smith, (2003 p. 73). Bundling must have the capacity to survive vivacious physical taking care of amid conveyance so that the items are gotten by end client in the same capacity they exited the maker. The produce must be shielded against assaults from all edges, be it humidity, warmth, air, crushes endured over the span of transportation (TIEPIK, 2005). As stated by Robertson (2006) Packaging procedures and material might not transmit contaminants or offensive substance to the item, should comply with any appropriate nourishment added substance regulation and ought to give satisfactory assurance from tainting p. 118. Nevertheless, it is the responsibility of the producer to protect his consumers from the content. Vulnerable kids ort to be protected from weed killers, medicine, chemicals, etc., while protecting the contents from tampering.

Manufacturers aim is to transport products to their customers notwithstanding the vigorous physical handling of products in the cause of distribution so that products are received by customers just as they were produced. In some exceptional cases, some goods require special attention to prevent damage during shipment. Such efforts must be carefully balanced against increased costs that arise (e.g., stronger packaging in order to provide greater protection to products). The product must be protected against

attacks from all quarters: heat, dampness, air, bumps suffered during transportation TIEPIK (2005). The package must be designed so that the product is kept in perfect condition until it reaches the end user. That is the main aim of a package.

Some goods need inner packaging for basic protection apart from their usual transport package. This protection function of the inner package is determined by the quality and the type of product contained. Products can be put in to various groups based on the inner-package protection needed:

- Foodstuffs need consumer packaging due to their nature. Package requirements are high for both hygienic and appearance reasons.
- Certain goods such as garments, shoes, textiles, handbags etc are sold to customers without packaging. These can be found in grocery shops displayed on retail shelves. In order to keep the products from dirt, grease and getting lost, simple package could be provided for shopkeepers to handle.
- Some products need to be displayed on the self for customers view and may not contain package but then need to be protected from damage and theft. These include sets of glasses and other tableware, decorative items with fragile parts, glass vases and other breakable products. The need to let these products satisfy consumers, demand a high rate of precaution.
- Luxurious products such as jewellery and gift items are to be packaged with good quality materials and the package must be able to sustain the content in regards to its appearance. For this group of products, the package is an important part of the marketing effort. If a product is very expensive, there is the likelihood that the package would be sophisticated or expensive. In all

cases, products sold to the consumer need to be packaged and noticed so that the consumer wouldn't have to be sure of the content by opening the package to check. In addition considering protection needs, there is the need also to take into account the marketing aspects. Many different types of packages and materials- either singly or in various combinations - can be used to give both the required protection and the sales appeal in a cost-effective way.

2.5.3 Preserves the Product

Stewart (1995) ascertains that packaging plays certain role right from the production unit until the product reaches its final consumer. The package must preserve products reliability by protecting the product against possible damage from climatic, microbiological and transportation dangers.

Hanlon (1971) is also of the view that packaging must preserve the product from deterioration and contamination so that the health of the final consumer is not compromised. Hanlon stressed on the bases that product packaging must be in the position to preserve its contents, so that if a customer is unable to use or consume a product immediately, the product must be protected and preserved for an extended period of time.

2.5.4 Distribution and Handling of Products

It is every producers aim to get products reach their customers in the safest and convenient way without any hitch. Packaging is supposed to accommodate and with ease transport the product from the point of manufacturing to its final user. The cost of transportation is usually factored into the cost of the product in order not to inconvenient

the costumer of paying extra for delivery. The packaging structure should have the tendency to reduce the handling cost of the package from the packaging unit to the consumer. A product must be packaged to meet the needs of all customers and users. In other words, a package's size and shape must be suitable for displaying and stacking the product in the store. In a grocery shop, an odd-shaped package might attract shoppers' attention, but if it doesn't stack well, the retailer may not display the product. Packaging is scientific and technological due to the fact that it has to do with all the components of easy handling during the distribution chain of the market, whether mechanized or not TIEPIK (2005).

2.5.5 Packaging facilitates customers choice

Packaging a product the right way entails much more than just creating a box to put your product in. According to Herdeg (1961), packaging design goes beyond its aesthetic satisfaction or meeting all the structural designs expected of a package but should be in the position to promote customer choice amidst other competitive products on the shelf. Packaging therefore enables and promotes brand identification and competition.

Underwood, Klein, Burke, (2001) explained a theoretical framework for understanding the communicative effects of product imagery (picture) on attention to the brand or package. The results showed that packaging pictures increased shoppers' attention to the brand. The result showed that packaging pictures were useful for private label brands and /or less tire national brands whose strategic objectives were to improve consumers' perceptions of the brand. Picture significantly improved attention to the low familiarity brands, especially those providing high level of experimental benefits.

Before a consumer buys a product, certain factors might have been considered. This is proportionate to the choice and selection of a product. Whereas others consider the need and desire for consumption, the satisfaction of beauty in which the product is made of and not necessarily the need is the focus of other consumers. For the purpose of this study, the need to understand and appreciate the factors that consumer's lookout for when making a decision to purchase a product cannot be overemphasized. This is because packaging designers need such knowledge to understand what consumers expect to see on the packaging. Manufacturers also, need to appreciate these factors so that they can demand from the designers the right packaging to make the right sales and profits. Consumers who are the final users of all products would also be well equipped so that they make the right choices. The packaging of a product sells it by attracting attention as well as communicating emotions, as it is believed that 75% of the purchasing decision of consumers is made at the point of purchase TIEPIK (2005). Kotler and Keller, (2012 p. 156) define packaging as "…all the activities of designing and producing the container for a product". It is considered as the buyer's first encounter with the brand. It draws the consumers' attention and encourages product choice. In effect, the product package design acts as a brief commercial for the brand prior to purchase and in the latter stages, the package design affects consumer's post purchase experiences.

2.5.6 Packaging Informs and Instructs

Packaging's vital and important function is to inform and instruct its customers. Every package is not supposed to fall deficient of this function. Pilditch (1961 p. 45) citing Bernard Bolter, writes: - 'The designer's challenge is to communicate the right message as fast and convincingly as much as possible.' The principal purpose of packaging is

to ensure that customers receive their packed product just as it left the packaging unit. Examining the mark on the packaging ought to enlighten customers about the substance of the item, how to assemble it, its recommended procedure for conservation and use. But rather, customers receive the package, remove the product and throw the package away.

The primary function of packaging is to provide all necessary information to customers. The label on a package is to provide customers with such information as the contents of the product, its ingredients, its recommended preservation and use. Gould, (1966 p. 106) stated that "the package needs to enlighten the customer regarding its substance". Laws on packaging require that an increasing number of realities be specified. If any additive or preservative is added to the product has to be clearly stated, and the manufactures must protect their brand name to ensure that any information provided about the origin and composition of the product is the accurate.

One of the most important tools for communicating the brand message of products directly to customers is packaging (Nancarrow, Wright, Brace, 1998). If a product needs to be noticed within a competitive environment among a group of products and at the same time need to attract the attention of passing customers, then packaging has to do better than ever to remain outstanding Milton (1991). Alongside this challenge, retailers are faced with the realisation that consumers not only differ in how they perceive brands but also in how they relate to these brands.

2.6 Appearance of Packaging

The definition of packaging is subjective and is based on its perceived numerous functions. Soroka (1996 p. 13) describe it as "a coordinated system of preparing goods for transport, distribution, storage, sale, and use". To him, it is a complex, dynamic,

scientific, artistic, and controversial business function, which in its most fundamental form contains, protects/ preserves, provides convenience, and informs/sells, within acceptable environmental constraints. This definition is broad and the focus is on what really goes into packaging the product. Here, packaging is seen as a service function that cannot exist by itself; it does need a product. Thus, once there is no product, then, there is no need for a pack. Packaging is complex in nature given that, there is always the need for harmony amongst numerous aspects. For instance, manufacturers should not concern themselves with only the container that is supposed to protect the product since the concern is on getting the product to the final consumer as a whole. They need to consider the labelling, shape and structural aspects of packaging, etc. Packaging is seen to be dynamic because it deals with human beings whose tastes keep changing and scientific because there is chemical interaction between the container and the contents. It is also artistic because the right colours must be used to attract the consumer and also the label must communicate to the ultimate consumer. This is the holistic approach to packaging. However, care should be taken not to put too much focus on one aspect to the neglect of the others, because a perfect blend is needed if the product is to perform all the right functions. Also, without the proper packaging mix, the needed or expected increase in the sales trend would not be realized. Again, regardless of the attractive nature of the packaging, it has to communicate the right message so as to sustain its market share and possibly increase it. William and Weilbercher (1979 p. 86) asserts packaging as, 'A broadcast commercial opportunity offered for sale at a particular time for a particular price'. This assertion is skewed by just looking at packaging as 'Advertising'. The emphasis is on the final product since it would be sold for a price without taking into consideration its safe delivery. However, how it would attract and sustain consumption and even whether consumers are prepared to buy at that price were

not considered. Hanlon, Kelsey and Forcinio (1971) support the critic by saying this about packaging: "In its more familiar forms, it is the box on the grocers' shelf and the wrapper on a candy bar. It can also be the crate around a machine or a bulk container for chemicals. It is an art and sciences…".

Milton (1991 p. 65) looks at packaging as not just a support for advertising but advertising itself and that '...while advertising may alert a large number of potential consumers to a product's existence, it is only at the point of purchase that the promotion story and the products image come together'.

Milton's view to some extent has been generalized and equated packaging to advertising but then the product should be packed before advertising sets in.

2.7 Materials used in making Packaging Structures

According to Kenneth and Betty (2007) the right determination of packaging materials and technologies keeps up product quality and freshness amid circulation and storage. Accordingly packaging materials directly affects the quality and the accomplishment of a package. The choice of material relies on what sort of item you are going to send to your client or to the grocery store.

Ghana's packaging sector is dominated by small-scale enterprises in the bid to attain the appropriate materials that may be used as packaging structures. Consumers of locally manufactured products believe that the composition of package like plastic bottles and paper bags are inferior, hence not appealing to the eyes and also sometimes results in leakage of liquid products. Consumers are enticed to buy certain products which hitherto are not planned for as a result of the attractive nature of the package. Most consumers are of the notion that, the nature of the package to a larger extent

determines the quality of the product hence they are forced to buy them. This should be a clue to local manufacturers and designers that consumer attention can be captured through colourful and attractive packaging.

The common materials used for packaging, however, include paper, plastic, wood, metal, shrink wrap, fabric and glass, among others. (Hollins & Pugh, 1990) are of the view that materials used in packaging must be durable enough to prevent spoilage, withstand stress and allow products to last longer. Kweifio (1981) commented that for effective packaging, knowledge about the packaging material is necessary. In using these materials, environmental concerns must be considered, to the effect that as much as possible, biodegradable materials should be used. The cost and quality of the materials used must be considered in selecting the materials.

2.7.1 Glass

(Sacharow & Griffin 1980) cites that since 3000 BC, the first glass objects used for packaging items emanated which makes it one of the packaging materials existed for long. The production of glass is quit cumbersome. In manufacturing glass, moulds are made and mixture of silica (the glass former), sodium carbonate (the melting agent), and limestone/calcium carbonate and alumina (stabilizer) are heated to high temperatures until the materials melt into a thick liquid mass that is then poured into the moulds. Other raw materials such as broken glass is also used in glass manufacturing. Some manufacturers use glass to coat the surface of some containers to serve as a lubricant to prevent surface scratching and also re-enforce containers durability to increase their life span and reduce bottle breakage. Better-quality break resistors help manufacturers to use thinner glass which reduces weights and is better for disposal and transportation (McKown 2000 p. 63). Due to less chemical residue

and its odorless nature, glass has many advantages for food packaging comparatively to other packaging materials. Glass can be classified under the following desirable characteristics: transparent in appearance, good in preservation, protects food from moisture, past micro-organism, inert, sterilisable, pressure resistant to a degree since some drinks have gases added up so it helps to resist internal pressure, can be moulded into a variety of shapes, glass is also highly recyclable, reuse and nonporous, can be manufactured in varieties of colours as well as labelled.

Like any material, glass has some disadvantages. Notwithstanding efforts to use thinner glass, its heavy weight adds to transportation costs. Another concern is the way it is fragile and vulnerable to breakage from internal pressure, impact or thermal shock. All glass packages used in Ghana are exported for use.

2.7.2 Metal

Metal is a packaging material with a multipurpose function among packaging forms. It has to do with a lot of brilliant functions such as physical protection of products and can be moulded into variety of shapes. It can be recycled and customers find it comfortable to use. The common metals mostly used in packaging are aluminum and steel.

2.7.3 Plastic

Presently, Ghana has a widespread of use for plastic materials in various diverse ways. People have a strong attachment to plastic materials for product packaging, substituting other materials such as glass, metals, and others with plastic materials. Most of the products on the Ghanaian markets are packaged in to polyethylene films, example is

the package of sachet water (IRIN, 2006 p. 8). Plastic package is difficult to do away with by the public since it is widely recognized packaging material. Characteristics commonly known to plastics are: they are easy to transport goods and materials to a customers' destination, ensures good protection, it is strong, manufacturing of plastic materials are cheaper and more resourceful, others also see plastic packages as hygienic and relatively low energy consumption. It is for these reasons that they are used so much, as an alternative but its nature of heat retention makes plastic disadvantaged.

In Ghana, it is estimated that there are over forty (40) plastic manufacturing companies, producing over 31,000 metric tons of assorted plastic products per annum. In addition, about 12,000 metric tons of finished plastic products are imported annually into the country. 90% of the plastic manufacturing companies are located in the Accra-Tema metropolis (Fobil, 2000 p. 5).

2.7.4 Paper and paper Board

Paper and paper board has been in existence for food packaging since the 17th century and saw a rapid rise during the 19th century (Kirwan 2003). A system of interlaced cellulose fiber gotten from wood through the use of sulfate and sulfite are materials processed into paper and paperboard. Enforcing agents and chemicals like slimicides are then used to bleach the fiber for producing paper products. Paper and paperboards are normally used in corrugated boxes, milk cartons, folding cartons, bags, sacks, and wrapping paper. Other products gotten from paper and paperboard are cups, paper plates and Tissue paper.

Robinson and Ryan (2004) specified that different types of papers/cards are used in the production of packaging, examples corrugated cartridge paper, tracing paper foil lined

solid white board, duplex board, etc having their own role that they play. Paper and boards are normally measured by weight. Mostly if the material weighs below 250 grms for every square meter (gsm), it's referred to as paperboard. Paper is quite often treated, covered, overlaid, or impregnated with materials, for example, waxes, pitches, or polishes to enhance practical and protective properties. Soroka, (1996) explains that a wide range of paper types used in food packaging are Kraft paper, Sulfite paper, Greaseproof paper, Glassine, Parchment paper, Paperboard which have replica as White board, Solid board, Chipboard, Fiberboard and are used to make containers for transportation, for example, boxes, auto tons, and plate.

2.7.5 Labelling

Products are labelled to provide necessary information to consumers. "A label is a piece of paper, polymer, cloth, metal, or other material affixed to a container or product, on which is written or printed information about the product" Nancarrow, Wright, Brace, (1998 p. 110). The label, as the current local and international regulations demand, should indicate the content, nature, manufacturing and expiry dates, ownership, direction of use, and place of origin on the object or container it has been affixed to or inserted in (Ghana Standards Board General Labelling Rules, 1992). It is mandatory as a producer to provide a label on a product as demanded by the local and international law. As an obligation, labelling must be well designed to attract customer's attention as products are meant for use. A products' label delivers your sales message. Preferably for a consumer, the true label is simple and familiar, possibly uses adjectives or images, does not use technical terms, or specific vocabulary. The quality and quantity of information on products' packaging may not suit every consumer's palate, but the general direction is that information displayed should be easily understood for an average consumer and it should help the choice of food (Byrd-

Bredbenner, Wong, Cottee, 2000 p. 615). Labels need to remain secured throughout the life of the product. For example, a vin plate on an automobile must be resistant to heat, oils and tampering; similarly, a food label must endure until the food has been used. A label with powerful features in its design would distinguish the product better and attract shoppers' attention much better than a dull one. Nancarrow, Wright, Brace, (1998 p. 111) opines that "Effective labelling on the packaging would underpin the main forms of marketing communications of advertising, personal selling, publicity, public relations, direct marketing and sponsorships", to emphasize the various areas under labelling marketing functions. According to an organisation specialising in environmental labels, the basic principles of a good label are: easy to understand, low information cost, voluntary certifications, authenticity, scientific background, abolishing unnecessary commercial barriers, an entire life cycle attitude, support for innovation, keeping administration to the minimum and open discussions looking to agree, Global Ecological Network (2004).

CHAPTER THREE

METHODOLOGY

3.0 Overview

This chapter of the research details how the study was carried out. It encompasses the various approaches or techniques employed to gather the required data on the packaging trends in Ghana. It discusses the research design, the population of the study, instruments for data collection and the procedures for data collection among others.

3.1 Study Area

Eastern region and Greater Accra region were selected for the study because of the number of large and small scale industries that are found within the catchment area. The study area involved all participants in the packaging industry, mainly Institute of Packaging, Ghana (IOPG), Accra, Ghana Standards Authority (GSA), Accra, Center for Scientific Research Institute on Traditional Herbal Medicine, Mampong-Akwapim. Some large and small organisations and business enterprises within the packaging industry were visited. Some local packaging industries visited included Nana Tekyi Company Ltd, Adukrom-Akwapim, Blue Sky Ghana, Nsawam, Dormerhsco farms, Somanya. Grocery Shop Operators and attendants such as Shoprite, Madina Mall Accra all at Accra and Unique Tolo, Galaxy shop, K.K. Yeboah shop, Zinaida Pharmacy, Nagisa Pharmacy all at Somanya, were also visited.

3.2 Research Design

The researcher employed the qualitative approach in analyzing and interpreting the data gathered from the field.

The approach helped the researcher to describe the current state of affairs in the packaging industry and what needs to be done to improve the industry in packaging aspects to promote advertisement and sale. Rudestam and Newton (1992) stated that, ''qualitative approach implies that the data is in the form of words as opposed to numbers'' (p. 231).

3.3 Descriptive Method

A descriptive study was adopted by the researcher to describe and analyze the composition and layout of the designs on the products. Descriptive research method is a form of research that specifies, describes or reports the nature of a particular situation or phenomenon (Turkson, 2011 p. 63). This was used to describe poorly rendered packages for locally manufactured products and adopt measures to re-design attractive ways of packaging products.

3.4 Population for the Study

The population for this study comprised all stakeholders in the packaging industry, with special emphasis on Institute of Packaging, Ghana (IOPG), Accra, Ghana Standards Authority (GSA), Accra, Center for Scientific Research Institute on Traditional Herbal Medicine, Mampong-Akwapim. The rest included Nana Tekyi Company Ltd, Adukrom-Akwapim, Blue Sky Ghana, Nsawam, Dormerhsco farms, Somanya. Grocery Shop Operators and attendants such as Shoprite, Madina Mall, all in Accra and Unique Tolo, Galaxy shop, K.K. Yeboah shop, Zinaida Pharmacy, Nagisa Pharmacy, all in Somanya.

3.5 Sample Size and Sampling Technique

A sample is "a small collection of units from a population used to determine truths about that population" (Field, 2005 p. 211). The study would focus on a sample size of thirty (30) respondents made up of ten (10) manufacturers, three (3) institutions, five (5) shop operators, two (2) shop attendants and ten (10) consumers.

The researcher chose purposive sampling technique to get the various respondents for the study. The researcher handpicked the respondents to be included in the sample on the basis of their judgements on the layout and composition of packages.

3.6 Sources of Data Collection

Two groups of data have been gathered for the study. Primary data was gathered through the use of tools such as observation, interview and discussion. Secondary data on the other hand was obtained from documented sources such as books and library reviews, publications, magazines, internet sources, journals etc.

3.7 Data Collection Instruments

The data gathered for the research were made possible by conducting interviews, observations, transcription of audio files into textual facts. Data collection in this research required responses from the respondents posed by the researcher to answer the research questions. According to Patton (2002), using more than one data collection instrument strengthens and gives credibility to the study.

3.7.1 Interview

In this research, both structured and non-structured interview schedules were used by the researcher to probe deeper into issues that needed clarifications. This agrees with the views of Schaefer and Lamm, (1983) who are of the view that, an interview has a

high response rate because people find it more difficult to turn down a personal request for interviews than to throw away a written questionnaire. In addition, a skillful interviewer can go beyond written questions and "probe" for a subject‘s underlying feelings and reasons (Schaefer and Lamm, 1983. p. 54). This has been also used to gather information on the cost of production and other related issues.

The researcher adopted the unstructured conversational type of interview with officials of Centre for Scientific Research Institute, Mampong-Akwapim and Institute of Packaging, Ghana to find out their views about Ghanaian exports and how they can meet European Union standards and specifications. These interviews were not planned in advance. The researcher only asked questions as the opportunity came up and listened carefully and used the respondents’ responses to decide on the next question.

3.7.2 Observation

Leedy & Ormrod (2005) stated that in qualitative study, observations are intentionally unstructured and free-flowing: the researcher shifts focus from one thing to another as new and potentially significant objects and events presents themselves (p 271). This involves looking at processes and procedures. The researcher directly play a part in the situation being observed as a participant in other to validate facts and information that was gathered (participant observation) in a number of relevant production sites. These included locally brewed alcoholic beverages sites (*pito, palm wine, akpeteshie*) and how they are packaged, Nana Tachie Herbal Bitters all in the catchment area and its environs. Also, Dormehsco Farms, Centre for Scientific Research Institute, Mampong –Akwapim were all visited. These enabled the researcher to study some of the indigenous concepts of packaging products in their natural settings and contexts and the developmental trend these products have gone through till date.

The researcher therefore used participant observation technique in this research work. Direct and close observations were made at selected shopping malls and supermarkets in Accra and Somanya. These are Shoprite, Madina Mall all in Accra and then Unique Tolo, Galaxy shop, K.K. Yeboah shop, Zinaida Pharmacy, Nagisa Pharmacy all at Somanya. For a period of three months, the researcher conducted an observation tour in these shopping malls and supermarkets of customers who were shopping.

The researcher paid a visit to these shops, lasting for 20 minutes to one hour. The criteria used for the observation includes;

a. Shelf display of locally packaged product and structural appearance.
b. Customers perception and reaction to made in Ghana products.
c. Comparing made in Ghana products shelf display and appearance to imported products.

The researcher used observational checklist to gather the data from the field of study.

3.8 Data Collecting Procedure

The researcher embarked on a number of visits to industries, supermarkets, shopping malls, spoke to customers in the streets to gather information on how the local market and producers package goods for the market. It was observed that most of the packages found during the researchers visit were not attractive enough as compared to the foreign packages. The mode of assessment used by the researcher is described below;

1. The researcher checked the packages to see if they met ISO Ghana standard of labelling and specification.
2. The researcher made a quick glance through the whole package; checking for defects such as barcoding, poor typography or abuse of typeface, choice and application of colour, image quality among others.

3.9 Data Analysis Plan

The data gathered from the sample were organized using thematic analysis of qualitative approach. Data obtained were edited, and presented for easy understanding. Editing was done with the aim of detecting and eliminating errors to ensure clean and reliable data. Interview guides were structured to provide information from institutions which were directly engaged with consumers and manufacturers of made-in-Ghana products. Data were then presented in the forms of tables and charts to facilitate the analysis. Deductions were made based on suggestions drawn from the field data gathered.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSIONS

4.0 Overview

The focus of this chapter is on the analysis of data gathered from the field. This was possible with the aid of interview and personal observations involving thirty respondents. It focuses on the actual research findings and discusses data on the concept of standout in packaging through structural designs**.** It discusses and analyses the opportunities and prospects of packaging structures in Ghana from the viewpoint of institutions, consumers, producer's and shopping mall operators as its been obtained from the field survey. As stated in chapter one of this thesis, these analyses were guided by the statement of the problem, the research questions and study objectives.

Classification of Respondent's and Sample size

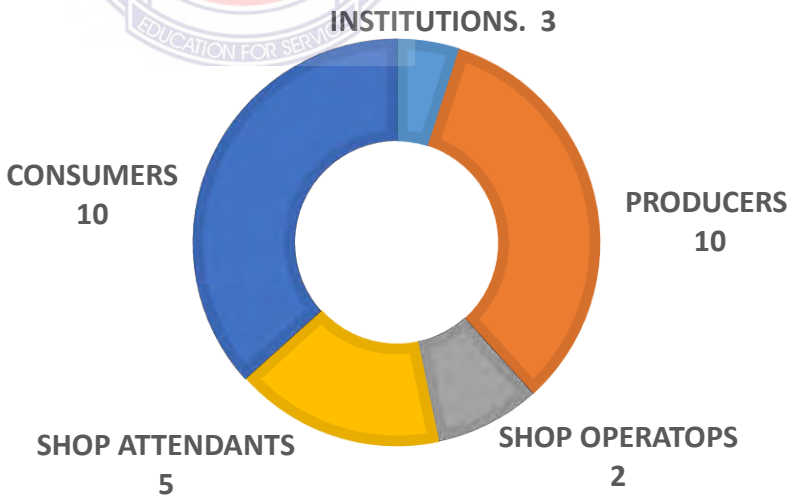


Fig. 1. Classification of Respondent's and Sample size

All the framework and purposes of the main institutions visited for the research are discussed. Information gathered by the researcher concerning the shop owners and the

consumers includes challenges associated with the current state of packaging of locally manufactured products, factors that account for low patronage of locally made products and the various behaviours of consumers regarding packaging structures of locally manufactured products. Moreover, the challenges facing the local packaging industry concerning their structures are also discussed.

Simple technological methods and measures that could facilitate quality and attractive packaging is discussed. Packaging materials that can be used to creatively package local products and some innovative shapes into which the structure of local packages could be made at a less expensive cost is also discussed.

4.1 Discussion of Results for Research Question One

What are the structural trends some Ghanaian products have gone through in the packaging process?

Responses from respondents

Materials used in packaging made in Ghana products.

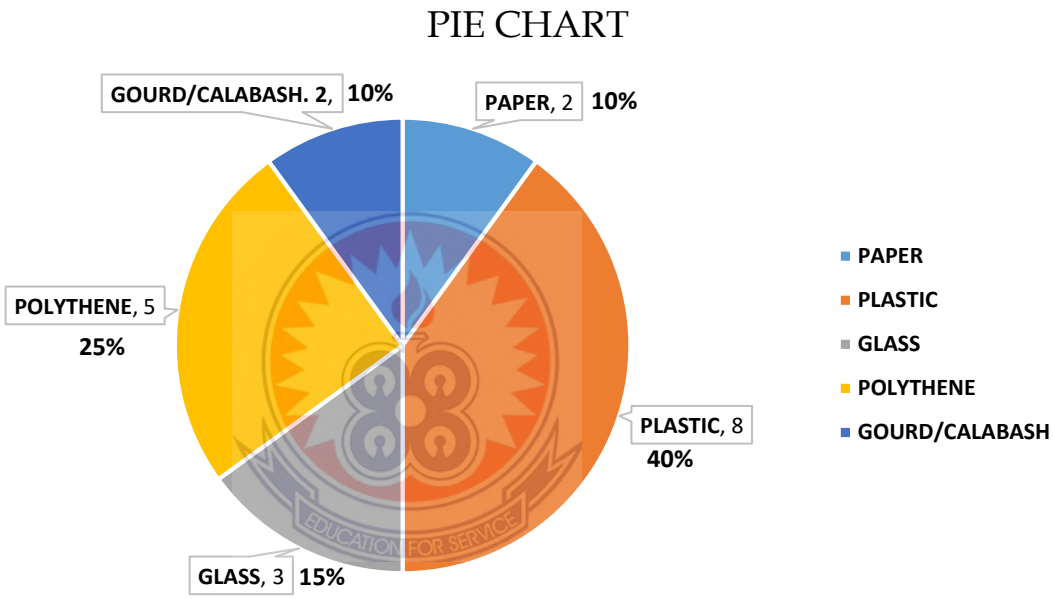


Fig. 2. Various materials used for packaging made-in-Ghana products.
Source: Field Data, 2017

The objective of the study was to identify the various existing packaging materials and the packaging trends of some Ghanaian products such as alcoholic beverage *(akpeteshie, pito* and palm wine*),* fruit juice (mango juice and pineapple juice) and traditional herbal medicine on the Ghanaian market. Through interview and observation, the researcher identified these materials used in securing the raw alcoholic beverage, fruit juice and herbal materials.

From fig. 2, eight sellers use plastic for packaging palm wine, *pito, akpeteshie* and the fruit juice (mango and pineapple juice) representing fourty percent. Palm wine, akpeteshie and pito are indigenous drinks consumed by Ghanaians since the olden days. Plastic drums use to be the storage container *akpeteshie* and *pito* were stored after brewed. Smaller plastic gallons were used to retail the alcoholic beverage to customers. Currently, materials identified on the market for packaging are plastic bottles which are locally produced and are either transparent or translucent in nature for retailing. They are seen in different shapes, types and sizes. Plastic disposable cups are used to serve *akpeteshie* since it turned out that the usual glass cup previously used to serve isn't hygienic since more than one costumer use the cup and it is not properly washed .

Paper also recorded ten percent constituting two sellers. Brown paper is often used for packaging dry herbal medicine. Over the years, traditional herbal medicine have been with us even before the colonial masters. People packaged boiled herbs in earthen pots for sale and packaged dry herbs in broad leaves. The trend changed after the colonial masters introduced paper. Brown paper had been the material for packaging dry herbs as the herbs were wrapped in the brown paper and the ends twisted tight for the paper to form a cone. Others also used cement paper since it is easier to come by. Currently, brown paper is still in use by some herbalists and venders of herbal medicine to package the product.

Glass bottles were also seen with sellers who sell liquid products such as palm wine and *akpeteshie*. Three sellers representing fifteen percent of sellers use glass bottles to package their products. From the interview, the researcher gathered that glass bottles were introduced by the colonial masters which contained their liquid products. Ghanaians started recycling these bottles by keeping products such as *akpeteshie* and other products in them. Different bottle sizes have been the means of measurement

during retailing. Glass cups were also used to serve customers in need of the product. Currently, this trend is been practiced by venders of *akpeteshie*. Venders have smaller drinking glass used for selling in terms of measurement popularly known as "tot" glass.

Polythene is commonly used as wrapper by the sellers when packaging their product. Five sellers representing twenty-five percent use polythene as sachet either to carry alcoholic beverage *(akpeteshie)*, the fruit juice or the herbal medicine. Polythene was introduced as means of innovation. Improving upon the traditional way of packaging products and for easy transportation of goods and materials.

Two sellers representing ten percent make use of gourd and calabash for selling *(pito* and palm wine*)*. Palm wine, a*kpeteshie* and *pito* are indigenous alcoholic drinks from the Gold Coast days. These drinks were packaged in large gourds and stored. Smaller gourds were used during retailing and served with calabash. Currently, palm wine and *pito* are stored in gourds and best served with calabash since that's the indigenous way of enjoying the products. During the observation, some customers requested for plastic disposable cups to drink the *pito* and palm wine and other's requested for calabash. The researcher found out why and gathered that due to hygienic reasons, some customers prefer the plastic disposable cups to the calabash.

4.2 Major Findings

- From the findings, the study placed plastics high among all the other materials used in packaging but unknowing to the sellers, plastics become harmful and dangerous to our health after keeping the product in it under the sun for a longer period.

- Plastic reduces the potency of herbal medicine after a while in the sun. This act affect most of our locally produced products as they are displayed in the open under the sun for sale.
- The radiation of the sun is absorbed through the plastic bottle into the product emitting certain chemicals into the product causing so much harm to our system without our knowledge.
- Producers of locally manufactured products such as *akpeteshie, pito,* palm wine and traditional herbal medicine package their products using second hand bottles scavenged from the environment.
- The researcher found out that some locally produced alcoholic beverage such as palm wine and *pito* are consumed the same old traditional way despite the health implications.
- The researcher saw the need to design and eliminate or replace plastic using any locally available material that will help maintain both the efficiency and the potency of the product.

4.3 Discussion of Results for Research Question Two

What are the simple technological methods and measures adopted to facilitate quality and attractive delivery of products through packaging?

Responses from respondents

Effect of packaging on sales of Ghanaian products.

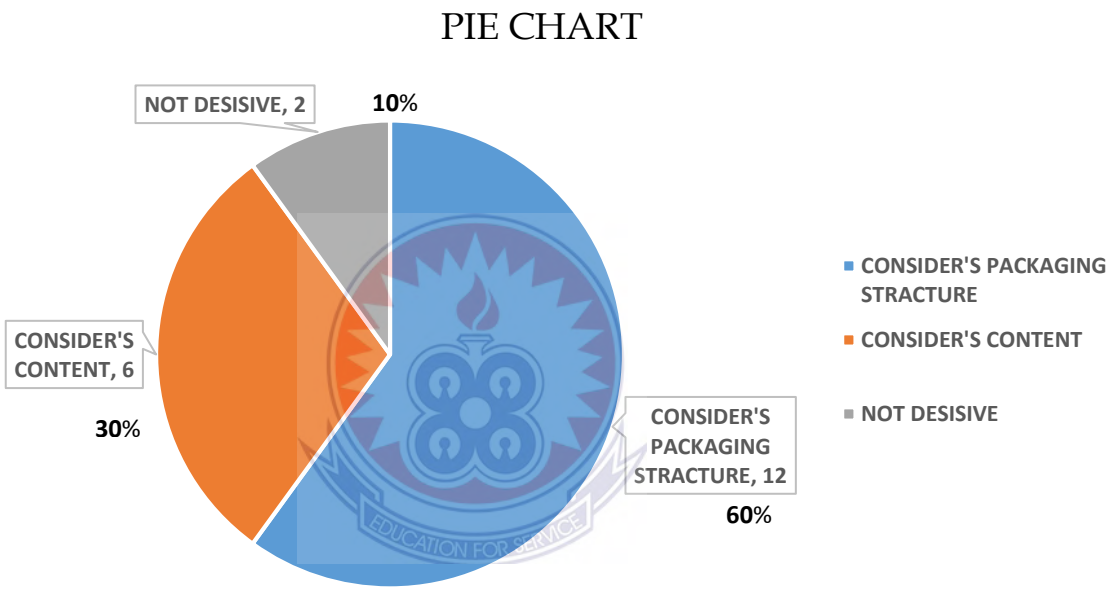


Fig. 3. Effect of packaging on the sales of Ghanaian products

Source: Field Data, 2017

Results from respondents

The information gathered from the interview designed shows that producers or the retailers of alcoholic beverage *(akpeteshie, pito* and palm wine*),* fruit juice (mango juice and pineapple juice) and traditional herbal medicine do not consider the packaging structure of the product but rather the content. However, since the package is what attracts costumers to examine the product before taking a decision, it is the duty

of the producers to introduce simple technological measures that will capture the attention of the consumer.

The researcher observed that the packages used by the producers are old plastic bottles for the alcoholic beverages and the fruit juice are not convenient enough to carry around. The only convenient way is to get a polythene bag and carefully place the product into it to avoid spillage during transportation.

The researcher thought it wise designing a package for producers and retailer's to facilitate sales, making customers comfortable to transport their products by creating a handle on the package which customers can easily hold. This is devoid of spilling the content and customers will have the courage of patronizing the product without any hindrance.

It's hard to underestimate the importance of a well-chosen closure. As a customizable extension of a package design identity, closures are also functionally important components that both preserve product and facilitate a product's use by consumers. Driven primarily by growth in the food, beverage and healthcare categories, caps and closures are helping meet an intensified consumer demand for enhanced product safety. Products sold on the local market (alcoholic beverage; *akpeteshie, pito* and palm wine, fruit juice; mango and pineapple juice, and traditional herbal medicine doesn't make it convenient for customers to use the product and preserve the rest in the package. Most of the bottles used by the retailers to sell the product do not have proper or no cap for the bottles. These few challenges with the packages used by producers and retailers inspired the researcher to introduce a closure on the package. Plastics continue to be the raw materials of choice for closures, followed by metal. Plastic closures, especially those made of polypropylene (PP), are inherently light weight and relatively

inexpensive. They're also stress tolerant and resistance to aspects of formulas that might react with other materials.

Alcoholic beverages (*akpeteshie, pito,* palm wine) are mostly patronized during ceremonies and occasions. The fact that the bottles have no proper closures to prevent the attraction of flies and other insects, makes patronage very low.

The researcher thought it wise to design and produce a package with a proper opening which customer can pour the content and cover the rest for later consumption. This simple technology will facilitate the quality of product and increase patronage.

Most of the shop operator's interviewed attested to the fact that they are having problems with their packaging but have no technical knowhow and resources needed to resolve these problems. Their mind set is, so long as their customers know their product and the product is covered, it is enough. Printing of labels is a waste of resources since the package will eventually end up in the trash can. The researcher made it clear to the shop operator's that this era is a technological era and their products are competing with other foreign products. For that matter, their local products need to meet certain standard to attract customer's demands.

The researcher realized if sixty percent of customers attest to the fact that they consider the packaging of the products, then it is necessary to assist the local producers and shop operators to repackage their products very well, introduce new ideas into the packages as that is the key to their success in the marketability of their products.

4.4 Some Organizations Visited

4.4.1 Institute of Packaging, Ghana (IOPG)

Institute of Packaging, Ghana (IOPG) was instituted in the country in the year 2004. It is a non-profit making organization which has the mandate to develop and promote packaging in the country. The Institute of Packaging is interested in assisting its members to promote their status in packaging. As an institution who represent its member's interest in the packaging industry, various seminars, workshops and conferences are organized to educate members in all matters of packaging. Institute of Packaging, Ghana (IOPG) is a member of the World Packaging Organization and has a strong inter-relation between local and international packaging organizations.

Activities

Institute of Packaging, Ghana (IOPG) has embarked on numerous projects aimed at building the local manufacturers to have a firm backbone in their operations. The institute is also aimed at strengthening stakeholders in the packaging industry to improve their status to international standard. Many local manufacturers have been trained and exposed to both simple and advance modern technology in packaging. These manufacturers have been sent to visit some countries like Thailand, India and the European Union to experience these modern trends of packaging.

Objectives of Institute of Packaging Ghana are:

- To inform the public of the benefits to be derived from effective packaging
- To educate people in all matters relating to packaging
- To promote the status of packaging and the interests of members in the field by every appropriate means

- To establish such educational standards, examinations, bursaries and qualifications as may seem appropriate for the promotion of packaging.
- To publish and disseminate educational and training information about all matters which relate to packaging.
- To hold conferences, exhibitions, seminars and other functions calculated to promote the interest of packaging.
- To affiliate or to associate with any person or body having common interests and objectives with those of the Institute.
- To encourage research and development in packaging.
- To serve as a forum for discussion and exchange of knowledge between persons interested in packaging.

Source: Institute of Packaging, Ghana (IOPG).

4.4.2 Ghana Standards Authority (GSA)

Formerly known as Ghana Standards Board, Ghana Standards Authority (GSA) which is a statutory body with predominant responsibility for establishing quality standards and specifications for raw and packing materials as well as finished products, was established by the Standards Decree, 1967 (NLCD 199) which has been superseded by the Standards Decree, 1973 (NRCD 173). The Authority is also the custodian of the Weights and Measures Decree (NRCD 326, 1975). These legislations together mandate the Authority to undertake the following:

1. National Standards development and dissemination;
2. Testing Services;
3. Inspection Activities

4. Product certification scheme
5. Calibration, Verification and Inspection of Weights, Measures and Weighing and Measuring Instruments
6. Pattern approval of new weighing and measuring instruments
7. Destination Inspection of imported High Risk goods
8. Promoting Quality Management Systems in Industry
9. Advise the Ministry of Trade and Industry, on standards and related issues

Ghana Standard Authority is responsible for consumer complaints on product defects, expiry dates and standardization of packaging for dangerous goods for export and the local market. In line with the commitment of the Ghana Standards Authority to assist Ghanaian manufacturers, industrialists and service providers to be competitive and acquainted with international standards on the global market, they organize technical training programmes for the manufacturing industry. Ghana Standards Authority issues licenses to manufacturers for all new products.

If the license is approved, the manufacturer is issued with a certificate and permitted to print the Ghana Standard Authority (GSA) logo on the package of the licensed product as a seal of quality. The use of Ghana Standard Authority logo on a product is renewable every year.

The mission of Ghana Standard Authority (GSA) is to promote standardization for the improvement of the quality of goods, services and sound management practices in industries and public institutions in Ghana.

Their vision is to become a model of excellence in Standardization in Africa.

Source: Ghana Standards Authority (GSA).

4.4.3 Food and Drugs Authority (FDA)

Food and Drugs Authority (FDA) was established by the Food and Drugs Law 1992, PNDCL 305B. This law has since been amended by the Food and Drugs (Amendment) Act 523, 1996 to provide for the fortification of salt to alleviate nutritional deficiencies and to bring the provisions of the law in conformity with the 1992 constitution, and provide for related issues.

Before 1990, the control of drugs and the practice of pharmacy profession was under the Pharmacy and Drugs Act 64, 1961. In 1990, the Provisional National Defence Council (PNDC) passed the Narcotics Drug Control, Enforcement and Sanctions Law, PNDCL 236. This law established the Narcotics Control Board to deal with the rising incidence of drug abuse in the country and the threatening dimensions that illicit drug dealing had taken internationally. In 1992, the PNDC separated the control of drugs other than narcotics from the practice of Pharmacy.

Food and Drugs Law 1992, PNDCL 305B was then enacted to control the manufacture, importation, exportation, distribution, use and advertisement of food, drugs, cosmetics, chemical substances and medical devices. Consequently in 1992, the PNDC separated the control of drugs from the practice of pharmacy. The Pharmacy Act 489, 1994 was subsequently passed in 1994 to establish the Pharmacy Council to regulate the practice of the Pharmacy profession and the registration of Pharmacists in Ghana. Although the Food and Drugs Law was passed in 1992, it was not until August 26, 1997 that the Board was inaugurated. Food and Drugs Authority is under the control and supervision of the Minister responsible for Health.

Source: Food and Drugs Authority (FDA).

4.5 Discussion of Results for Research Question Three

What innovative shapes could the structure of packaging be made in to improve packaging in Ghana?

The discipline of package design focuses on producing a container that will get noticed. By skillfully teaming colourful graphics, a unique shape, or any other eye-arresting method, the package designer is a key player in any company's marketing effort. No matter how beneficial the product inside the container may be, unless a consumer decides to pick it up, that product will never get tested.

4.6 Identified Variables for improving packaging in Ghana

Functionality: The structure of the package was designed such that the product can be conveniently used by customers. For instance, the general appearance of the designed package will ensure protection, preservation, promotion, easy handling, attraction and contain the contents alcoholic beverage *(akpeteshie, pito,* palm wine*),* Fruit Juice (mango juice, pineapple juice) and Dry Herbal Medicine (typhoid medicine).

Accessibility: The package has a convenient opening to pour the content since the fruit juice and alcoholic beverages are in the liquid form. The package for the typhoid medicine has a bigger opening since it is dried roots cut into smaller pieces and need easy access.

Easy identification: Paper card was used to manufacture the package based on its uniqueness and its ability to maintain the natural state of the product without any form of contamination. The package was lined with foil for resistance to liquids and was able to prevent seepage, evaporation and dampness to the package. Paper is easy to work with and could be given any unique shape peculiar to the product.

Colour: Package colours have the ability to evoke feelings, emotions and behaviours in different consumers. The package colours reflected the natural state of the product. Yellow colour was used to exhibit the natural mango and pineapple appearance. The pito package has a brown colour depicting its nature. Green colour was used for the palm wine, herbal medicine and mango package to show the natural state of the product. Also patches of green were used in the other packages to show that all the products are natural. The element of white colour appeared on all the packages to indicate purity of the products.

Typography: To reduce time spent looking for this brand of product on the shelf, certain qualities were not left out. The typography was made legible and readable. Brand name and logo were a vital attribute which was not missing on this package. Also, the choice of font colour was not a conflict with the background colour of the package. Colours used for the typography were not different from the colours used in designing the package. The reason is to have a perfect blend of colours.

Materials: As stated in chapter two of this thesis, various materials can be used for packaging products which are; plastics containers, paper boxes, glass bottles, polythene bags, metal containers, wooden vessels, gourd/calabash and others. However, the main material used for this package was paper card. The package designed for the typhoid medicine had polythene used to wrap the medicine which served as primary package. The designed structure is the secondary package. All the other containers were well treated and tightly sealed to serve as primary package.

Illustration: Images of the products were designed and printed onto the package since the structure of the package is paper card. The various products were easily identified by customers as the illustrations are colourful and bright. The surety of the product

was not compromised since customers who cannot read have the opportunity to make a decision when they come across the brand of product.

Aesthetics: The package colours, material, instructions and typography that was employed by the researcher ensured aesthetic qualities in the product. It is to build confidence in the products as it is going to compete with other similar products. The glossy surface of the paper card that was used for the package gave the work a good finish. The aesthetic design elements used are meant to appeal and excite the target market and stimulate consumer purchasing behaviour.

Cost benefits: Paper is a cheap commodity based on what a producer will opt for**.** In other to reduce cost, the researcher went in for material that will not put any burden on the local producers. Paper is effective and durable for this purpose. Since one of the objectives for this research is to adopt simple technological methods and measures to facilitate quality and attractive packaging, paper will help producers achieve their aim of marketability at an affordable package.

Development cycle: Through observation and interview administered by the researcher, the analysis on the findings were used as the bases for which the package design is made. This is to satisfy the customers and make them feel they were taken into consideration during the production process since they are the final consumers. Producers are expected to use packages that will not expose the content, which will not allow rodent/insect infestation and many others. The containers, therefore, had the ability to contain, promote, protect, preserve, withstand and inform. All these assertions informed the researcher to use paper card for the package since paper is a bio-degradable material and it is environmentally friendly.

4.7 Poor Structural Packaging

Customer's main problem with Ghanaian locally produced products is the type of material used for the package; the way the package has been designed and the way the package has been sealed. In designing and selection of materials for their products, they do not pay any special attention to health, safety and environmental impact of their packaging materials on products. Most of the local producers interviewed such as *Akpese* palm wine, *Salosie pito*, *Akorley akpeteshie* and *Amelia* herbal care all at Somanya attest to the fact that they are not familiar with the standard requirements and regulations regarding packaging in the country. They go by the traditional way of producing and selling to consumers.

Research has shown that some producers have also managed to break the culture of the indigenous way of packaging by contracting professional graphic designers to design and produce their structure with appropriate packaging materials. Such producers include Blue Sky Ghana at Nsawam, Nana Takyi distilleries at Adukrom-Akwapim, Kane-Em industry at Accra. Some of them mostly face the challenge of sealing. This is an area where the manufacturers lack the expertise and technical abilities, thus leading to poorly-finished packages.

Responses gathered from Blue Sky Ghana, Mr. E. Ablorh revealed that local producers find it difficult to get the right people to help them solve their packaging problems. As a result, they do what they feel is appropriate. If they get the opportunity to be educated in regards to packaging, it would have gone a long way to improve their product package to bust marketability. Mr. Ablorh further said it is therefore important for producers to take extra care of their packages in regards to proper packaging and sealing to maintain their integrity on their products to increase patronage of products on the local markets.

4.8 Challenges facing the Local Packaging Industry

From the study by the researcher, about seventy-five percent of local producers do not really see the need for any special attention to the structure of the packages. This is because producers of some local products such as Akpese palm wine, Salosie pito, Akorley akpeteshie and Amelia herbal care see it as a waste of resources and wouldn't want to incur any additional cost on their products since they raise concern of low profit. This is as a result of similar cheaper products on the market from foreign countries like china, Malaysia, Europe, Thailand, South Africa and The Far East.

Ghana's packaging sector is made up of small-scale industries who are in to the production of plastics and some companies import paper, paper board and glass. It has become a big challenge for this small scale industries such as Kene-Em and Poly Group to produce packages of modern standards and this has compelled these industries to use modern, automated equipment for large-scale production which the industry sees to be capitally intensive. The Aboso Glass Factory which is now non-operational has become a big challenge for the glass packaging industry since all glass packages have to be imported into the country from either South Africa or Nigeria.

The local packaging industry is further challenged by the increased demand in packaging as the trend towards smaller households, the increasing requirements for convenience among consumers is rising. The rising health awareness among consumers; the trend toward 'on-the-go' lifestyles among the time conscious consumers is rising. Also the growing requirements for brand enhancement and differentiation in an increasingly competitive environment; new packaging material development is rising. The move towards smaller pack sizes as the frequency of families eating together at the dinner table is becoming less common but increasing

demands for fast food is on the ascendancy. These factors, coupled with the exposure of the Ghanaian middle-class to high quality packaging that has shifted the demand towards well-packaged, clearly labeled and environmentally friendly products is compelling the packaging industries to meet the demands of the general public.

The researcher also noted that the liberalization of trade in Ghana has paved way for variety of packages on to the Ghanaian market. These foreign companies produce more attractive products at affordable prices leading to high patronage in these products and locally produced products rather see low patronage.

Many consumers expressed displeasure about the polythene bag commonly used at the local market as a package. The polythene bag is virtually used to package everything bought at the local market, especially food. Consumers raise the issue of being embarrassed in public as the bags are not strong enough and when used to package items, it tears, pouring the content on the floor.

4.9 Materials that can improve patronage of locally manufactured products

In Ghana, many materials are available and some that are commonly used in designing and packaging items are glass, paper, plastic, wood, metal among others. Among the lot, local producers use plastic, polythene bags and paper card more. As producers use these materials often, the produces try to design the materials into attractive structure to entice customers. For the purpose of this study, the researcher used paper card for the suggested packages. The reason being that paper is biodegradable and can be easily recycled, compared to plastic or the other materials.

As stated in the second research question, *'what are the simple technological methods and measures to adopt to facilitate quality and attractive delivery of products through packaging'*, the researcher saw paper to be a material that doesn't need complex

technology, making it easy to manipulate without heavy equipment's. Also this will reduce the impression that packaging will increase producer's cost of production. One other reason why paper is chosen is that paper wouldn't put any form of financial burden on producer's making their products less capitally intensive.

4.10 Designing Packaging Structures

The third research questions stated by the researcher is "*What innovative shapes could the structure of packages be made into to improve packaging in Ghana?*

In the quest to answer this question, the researcher studied a number of local packaging structures that are already on the market, how the elements have been used to design the package, the colour scheme and the shape the structure has been adopted. With this, the researcher designed a more attractive package to market some locally manufactured products in Ghana.

One of the intentions of the study is to ascertain the various existing packaging materials used in packaging products such as traditionally produced alcoholic beverages *(akpeteshi, pito,* palm wine*)*, fruit juice (mango juice, pineapple juice) and traditional herbal medicine (typhoid medicine) on the Ghanaian market. The researcher identified these materials used during the interviews and observations. The identified materials were paper containers, glass, plastics containers and calabash/gourds containers.

4.10.1 Paper (Brown paper)

Paper is both indigenous and contemporary material based on the transitions it has gone through. According to Davis, (1967) paper for wrapper in this country was mostly old newspaper and brown paper. The commonly used paper for packaging items on the local market is the "cement paper". The nature of the brown paper allows it to be used in packaging large quantity of product unlike ordinary paper which has to be packed

bit-by-bit. Both the news print, newspaper and the brown paper are used in wrapping product sold and conveniently has to be carried by hand. Through observation, the different types of papers after loading with products were folded into a conical shape and sometimes put in a black small polythene bag. The brown paper identified through observation was really doing well on the Ghanaian market in terms of containment in carrying as compared to protection and preservation.

4.10.2 Plastics

A number of shapes, types and sizes of plastic containers were identified. Each of the types, shapes identified has a specific purpose and function. Due to the technological advancement, most of the types identified were locally fabricated and they are transparent in nature. They perform efficiently as a container, very good in measuring the products. The plastic also has the ability to protect and preserve the content but has not exhibited maximum performance in protecting and preserving the content from heat. Plastics are termed as good conductors of heat, it easily absorbs heat from the sun potentially releasing some chemicals from the plastics into the product which affect the potency of the product. It is an industrial product manufactured in Ghana by companies such as Marssily Ghana Limited in Tema, Kane-Em industries limited in Accra, Poly Group at Accra among others. Plastic containers are either obtained newly from shops or as second hand from scavengers who wash the containers with detergents and/or sand before selling them for use.

4.10.3 Glass bottles

Through observations made, glass bottles are also one of the common packaging materials used by practitioners to secure alcoholic beverages *(akpeteshi, pito,* palm wine*)*, fruit juice (mango juice, pineapple juice) and some traditional herbal medicine

products. The types observed are locally manufactured and re-usable bottles. Few of the bottles were new bottles. The bottles are prevailing in the packaging of liquid products. The glass bottles observed at the *pito, akpeteshie* and palm wine sellers shops were obtained from second-hand dealers for re-use. Through its handling, most of the bottles have their corks broken or cracked. Some too, the closure device mostly do not firmly fit the glass therefore allowing external air to get into the bottle. The researcher asked how clean the bottles are and the sellers responded the second hand dealers sometimes use bleach to clean the bottles to make them more transparent.

4.10.4 Polythene Sachets

The use of polythene bag is one of the materials commonly found on the market. It has the highest ability to carry and contain its product but has the lesser advantage of preserving, protecting as well as motivating a class or a group of people to patronise the product. The polythene bags commonly come in sizes. Few ones are designed in colours. They are mostly obtained from shops for use and market women prefer the black polythene bags because they are cheaper. Due to its nature, when warm or hot food is packaged in it, it becomes poisonous and harmful to humans.

4.10.5 Calabash/Gourd

It is a creeping plant with hard-shelled gourds as fruits. They come in different sizes, shapes and forms. Practitioners obtained the fruits from a gourd plant which is basically gotten from the indigenous people. It has a thick shell which is used as a container and also prevents permeation of liquids. The food in the fruit is scooped off leaving the empty shell to dry to obtain a natural brown colour. When the gourd is split in parts, each half is called a calabash. The gourd is for storage of traditional liquid products

such as palm wine, *pito, asaana, brukutu, toosɜe* whereas the calabash is used to serve the product. This is the calabash plant.

As stated earlier, there are many materials that can be used in making packaging structures, but for convenience sake, the researcher chose to use paper in designing the suggested packaging structures. This is mainly because the researcher wants to use the simplest technological methods and measures to facilitate quality and attractive ways of packaging products so that the traditional producers c afford packaging as stated in the objective earlier.

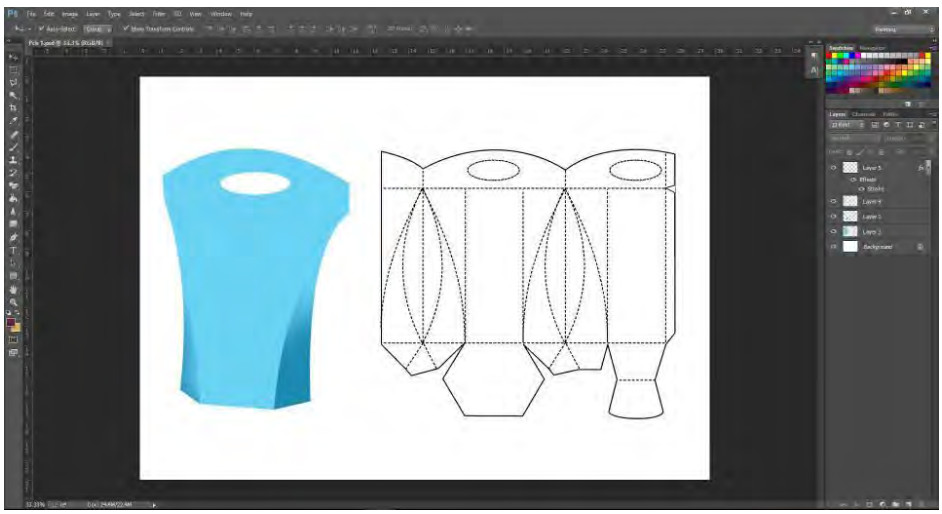
4.11 Working Procedure

The researcher used the software Coral Draw X7 and Adobe Photoshop to design the packaging structure since the software makes structural designing of packaging easier. With dedicated tools specifically designed for packaging structural design, product development, virtual prototyping and manufacturing, Coral Draw and Adobe Photoshop help to increase productivity throughout the supply chain. It is one of the ideal product for packaging designers.

Figure 4: Coral Draw X7 and Adobe Photoshop software.

Source: graphicdesign.about.com.

Coral Draw X7 and Adobe Photoshop software are used to design the packaging structure on the computer. Construction lines are used for the designing using thick black lines and thin broken lines. After printing, the solid black outline is cut out with a paper cutting knife along the thick lines whilst the thin, broken line is scored using the back of the paper cutting knife.



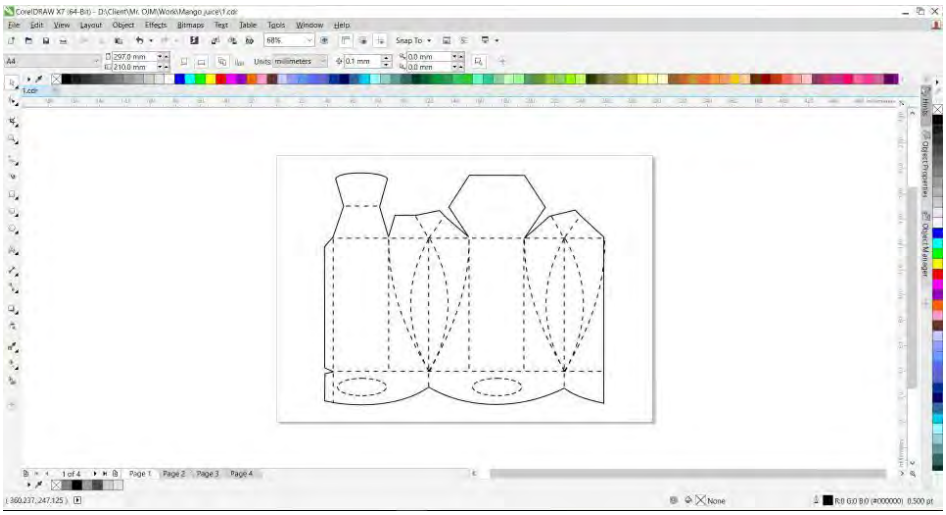


Figure 5: Coral Draw X7 and Photoshop software were used to design the pattern. Source: Working procedure by researcher.

4.11.1 Paper production process

Coral Draw X7 and Photoshop software are used to design the package. The necessary dimensions to the structure is taken into consideration. There are other considerations such as leaving additional space for inner protective lining, waste of material during the production stage and fitting of the package into pallets.

The researcher constructed a package for the alcoholic product '*pito'*.

Figure 6: Coral Draw X7 and Photoshop software are used to design the package.

Source: Working procedure by researcher.

4.11.2 Tools and Materials

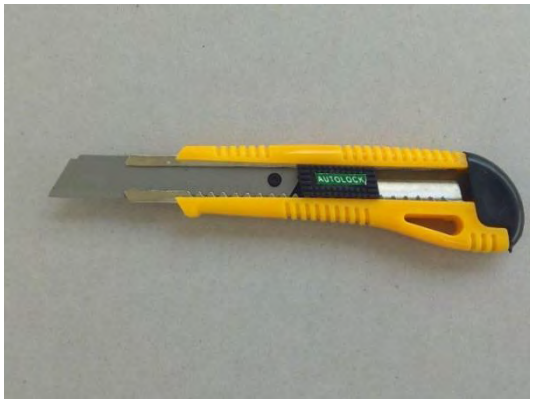


Figure 7: Paper cutter

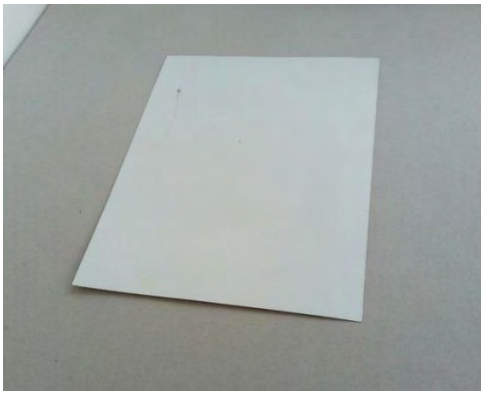


Figure 8: Paper card

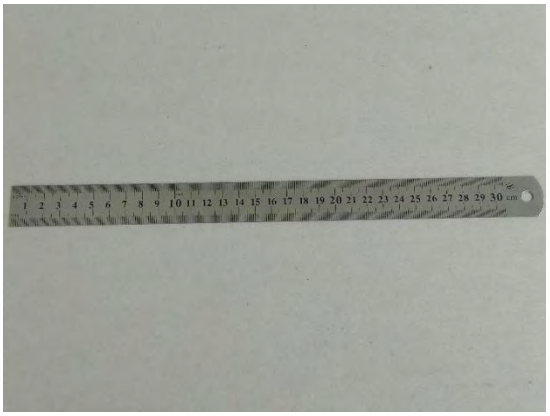


Figure 9: Metal ruler

Figure 10: Pencil's and eraser

Figure 11: White glue

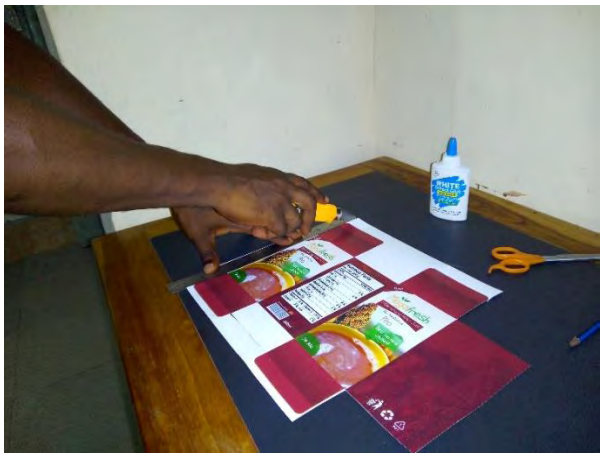
Figure 12: Computer

Figure 13: Sealing machine

Figure 14: Polythene

4.11.3 Cutting

After using the software Coral Draw X7 and Adobe Photoshop to design the packaging structure, cutting is done along the construction lines with the utility knife. Cutting is carefully done in other to prevent injury and also the construction lines are cut out accurately with the paper cutting knife. Guided by a steel ruler, the researcher is able to cut the straight edges. This is done by placing the ruler on the drawing to avoid accidentally cutting through the design. A pair of scissors is use to cut areas with curves. The researcher takes all the necessary precautions to prevent cutting through the designs or his non-cutting hand.



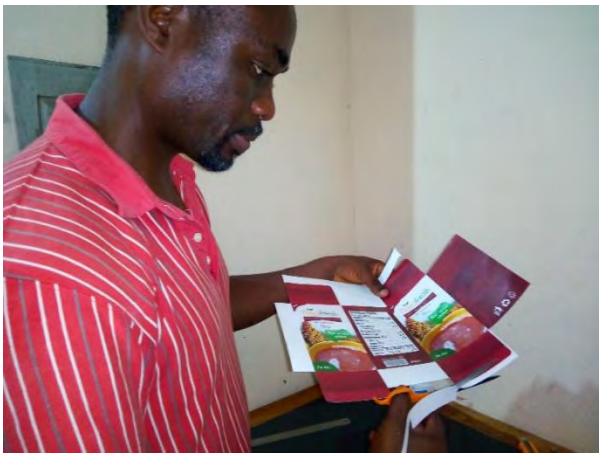


Figure 15: Cutting design along construction line.

Source: Working procedure by researcher.

4.11.4 Scoring

Scoring is the act of making tucks on the paper so that the paper can be folded easily. In the process of scoring, the researcher uses the back of the paper cutting knife to press the outline of the fold lines, guided by the steel rule.

Scoring is to guide the designer when demarcating the outlines to be folded. Scoring that has to be done on hard boards for the package structure has to be done on the outside of the planned fold lines. This means, folding is done away from the score lines. However, if the card on which scoring is made is smooth, then it should be scored on the inside of the fold.

Figure 16: Scoring design along construction line.

Source: Working procedure by researcher.

4.11.5 Lining

Lining is done to reinforce the inner part of the structure. A polythene is used as the lining in the package to prevent any leakage or seepage when the liquid content is filled into the package. The polythene lining is cut according to the size of the printed structure and folded gently to fit into the structure. It is then placed under the sealing machine, with the right temperature regulated, pressed for the polythene to seal tight into the shape of the structure. Check to be sure if the process is successful before placing into the structure. If not successful, check the heat regulator, adjust it and press again till it is well sealed.

Figure 17: Using sealing machine to seal Polythene lining.
Source: Working procedure by researcher.

Figure 18: Checking if sealing is successful.

4.11.6 Folding

Folding is done after scoring is complete. The patterns are demarcated after which they are folded. This is done along the scored lines using the hand. Folding is done carefully in other not to fold across the demarcated lines to cause reduction of measurement to other sides but rather alone the demarcated lines.

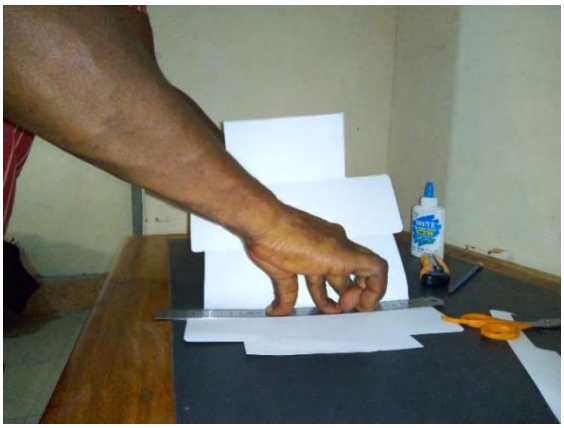


Figure 19: Folding design along construction line.
Source: Working procedure by researcher.

4.11.7 Gluing

After folding, the paper is molded according to the design pattern with the aid of white glue. A painting brush is used to spread the glue before fixing the various edges to have the packaging structure.

Figure 20: Gluing design along the edge of the structure.

Source: Working procedure by researcher.

4.11.8 Forming the structure

After gluing, join the various edges gently. Press the edges with your hand and be sure the edges are aliened properly. Be more couscous with the joints to be sure every tiny hole is sealed. Enforce the outer edges with white glue and allow to dry properly.

This is to prevent any seepage, leakage or allowing air from entering the package. Also any tiny hole will be enough to allow insects and germs to infest the product.

Figure 21: Forming the structure.

Source: Working procedure by researcher

The finished package

Figure 22: The finished package structure of an alcoholic beverage "pito".

Source: Finished work by researcher.

Researcher used same procedure for the other packaging structures, thus palm wine package, akpeteshie package, mango juice package, pineapple package and typhoid medicine package since the material for these packages are all made of paper card.

4.12 Evaluation on the package:

To evaluate whether the samples of products (*akpeteshie, pito,* palm wine, mango and pineapple juice and the traditional herbal medicine) will do well in their packages, the various contents were poured into the packages and their weights recorded. They were kept for 12 hours to check for any leakage, seepage or the content will soak the structure. With the exception of the traditional medicine and the *akpeteshie*, the *pito* beverage, palm wine and the fruit juice were kept in a refrigerator for a period of one week after which another test was run to assess whether there is any leakage on the structure. The products were kept in a refrigerator due to the fact that the products are fresh, no additive, preservative, colour or flavour is added to it so the only way to preserve it from fermentation for a while is by refrigerating.

The findings revealed that after one week preservation, the weight was taken again and realised that the weight is still the same. The researcher kept the product for another12 hours and checked for any leakage or seepage but there wasn't any.

The primary package in the herbal medicine was sealed air tight and controlled pressure applied to it by the hand to see if air will escape. After one minute, the primary package was intact meaning it can protect the content from insects and moisture, leaving the content as fresh as it has been packaged.

This package method doesn't need any heavy machinery that will put any financial strain on the producer and producers will also not bear any additional cost in production. This will help them boost marketability and promote made in Ghana products.

Filling the package with its content

Figure 23: *Pito* being poured into package.

Figure 24: *Akpeteshie* being poured into package.

Figure 25: Palm wine being poured into package.

Figure 26: Pineapple juice being poured into package.

Figure 27: Mango juice being poured into being put package.

Figure 28: Typhoid medicine into primary package.

4.13 Appraisal of packages.

From the study, it is realized that customers make a decision at the point of purchase and the product structure plays a crucial role in that decision. Looking at the products under study, (*akpeteshie, pito*, palm wine, mango juice, pineapple juice and herbal medicine), producers of these products do not project the sale of the products in anyway. Making them unattractive and unhygienic.

The package designed by the researcher is protective of its content, informs and communicates the advantages of the product. A simple material (paper card) is used in producing the structure. A material which is easier to come by and very affordable. The good aspect of it all is that the material is biodegradable. The result shows that the packaging material used for the pack is suitable and appropriate for the samples.

The package has been designed so simple and easy for consumer use. The introduction of a comfortable handle into the package makes it convenient to carry the product about

while consuming. Since most consumers of such locally produced beverages have the perception of discomfort carrying it about, the introduction of this handle, coupled with the attractive nature of the package will give consumers the confidence to move about with the product.

Furthermore, an opening has been created on the package for consumers to open and close the package anytime convenient. This is not peculiar with the traditional packages found on the market. Consumers need not consume the product immediately after opening but can preserve and use anytime later.

The combination of specific design elements makes the product unique and strengthens the brand name. This has also allowed for easy recognition of the product. The innovative shape has also allowed easy handling, making the package look distinct giving it a good opportunity to reinforce the brand image. This promotional effect is well communicated to the general public, leaving its target group no choice but to pick it and have a taste of it. The various elements of colour and text have been graphically organized to blend with the images on all sides of the structure.

Since packaging structure is a silent salesman, the researcher designed the packages such that it will advertise the products, bringing a tremendous change in the sale of these Ghanaian products. Looking at the packages designed, the researcher thinks the said objectives have been met and the packages will go to solve the problem statement in the above chapter.

4.14 Samples of Packaging Structures and their construction lines

Packaging structure **Construction line**

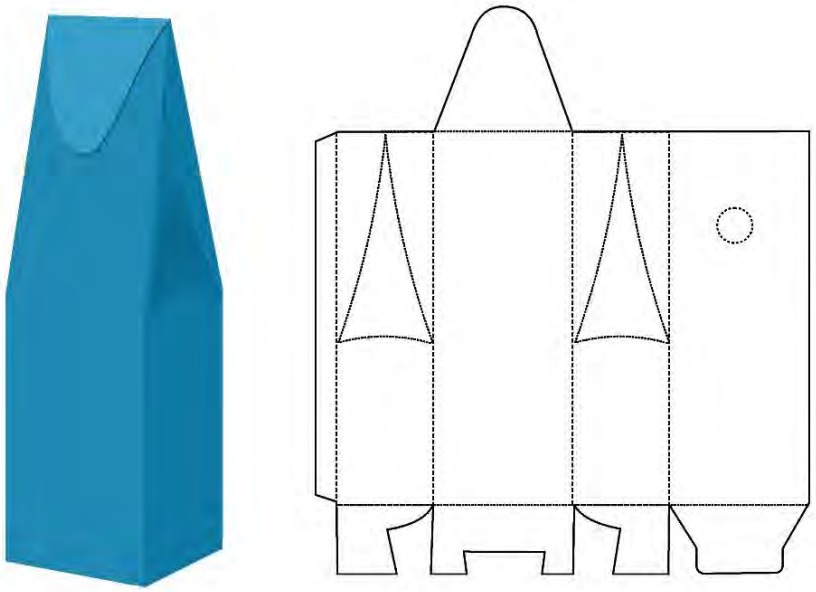


Figure 29: Packaging structure and construction line of an alcoholic beverage (*akpeteshie).*

Source: Structural design by researcher.

Figure 30: Packaging structure and construction line of an alcoholic beverage (palm wine).

Source: Structural design by researcher.

Packaging structure **Construction line**

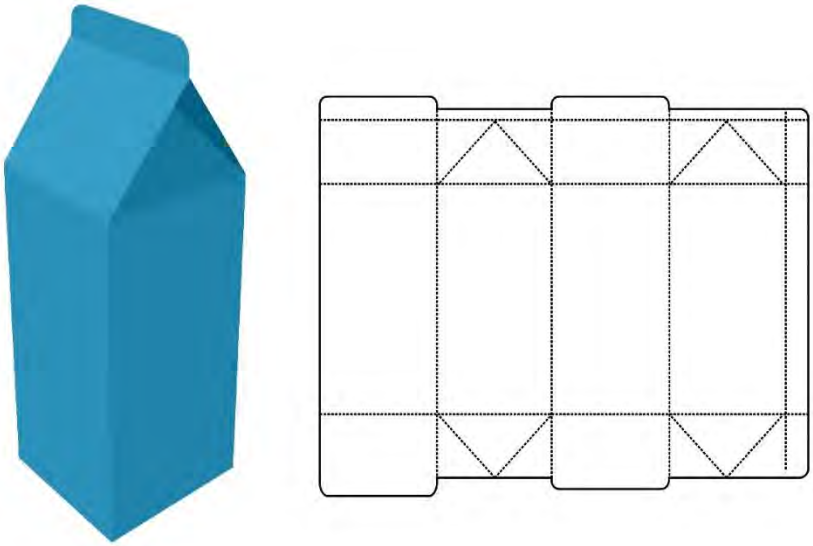


Figure 31: Packaging structure and construction line of an alcoholic beverage (*pito).*

Source: Structural design by researcher.

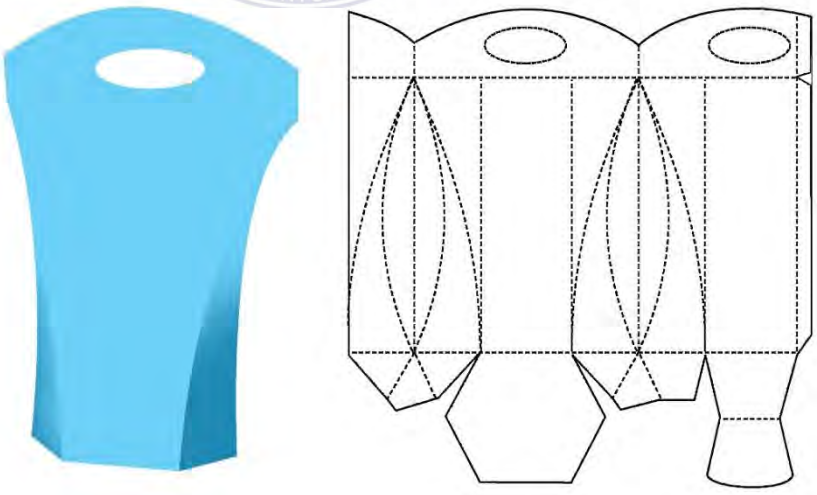


Figure 32: Packaging structure and construction line of fruit juice (mango juice).

Source: Structural design by researcher.

Packaging structure **Construction line**

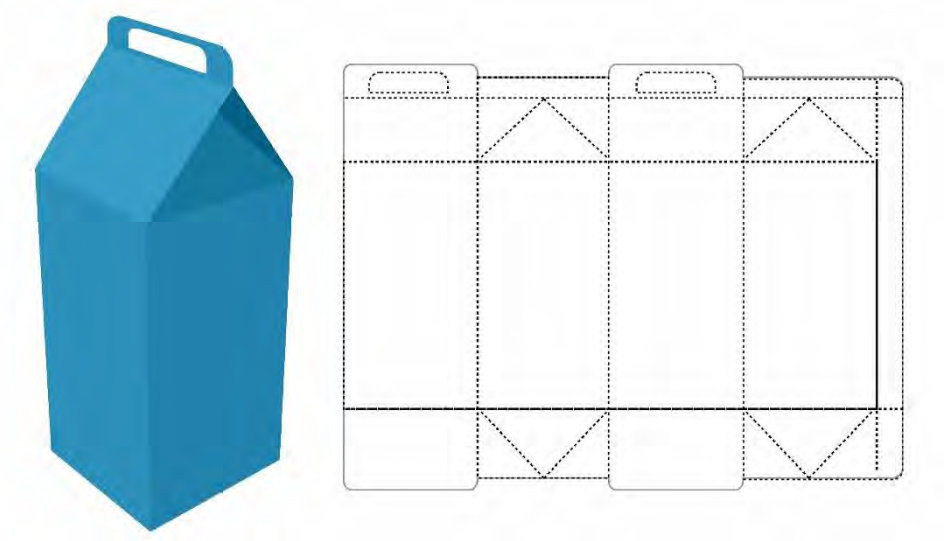


Figure 33: Packaging structure and construction line of fruit juice (pineapple juice).

Source: Structural design *by* researcher.

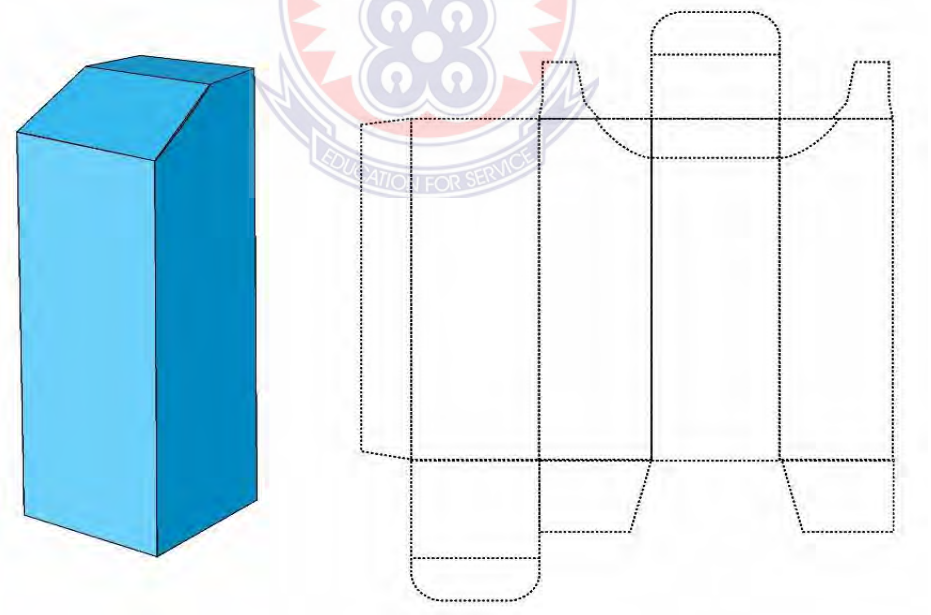


Figure 34: Packaging structure and construction line of traditional herbal medicine (typhoid medicine*).*

Source: Structural design *by* researcher.

4.15 Innovative structural packaging as compared to product packaging on the local market.

The researcher did a comparative analysis on the way made in Ghana products (*akpeteshie, pito,* palm wine, mango juice, pineapple juice and traditional typhoid medicine) are packaged and sold on the local market with the newly design package.

4.15.1 *Akpeteshie*

This is a locally distilled alcoholic beverage sold on the local market. It is stored in large plastic barrels and gallons. During retailing, the product is poured into smaller bottles such as fanta, coke or sprite bottles, using a glass to serve all customers who come to buy. The nature of retailing the product has raised concern from some customers in terms of the hygienic conditions associated with the sharing of the glass with another customer. This practice informed the researcher on how best such product could be sold in a more hygienic way and will make the product also look attractive.

Figure 35. How '*akpeteshie*' is sold on the local market

Figure 36: Packaging structure of an alcoholic beverage '*akpeteshie*'.

Source: Structural design by researcher.

4.15.2 *Pito*

Pito is a locally brewed alcoholic beverage sold on the local market. It is stored in large gourds or aluminium pots or containers. When retailing, the product is poured into 'voltic' bottles and served with calabash to customers. The 'voltic' bottles are used ones scavenged in the environment by the *pito* seller or sold to the *pito* seller by scavengers. Customers who will want the beverage to be packaged for them will have to bring their bottle or the product will be poured into polythene rubber for them. This practice informed the researcher to design a package which can be used to package the product for customers.

Figure 37: How '*pito*' is stored, packaged and retailed to customers

Figure 38: Packaging structure of an alcoholic beverage '*Pito*'.

Source: Structural design by researcher.

4.15.3 Palm wine

Palm wine is an indigenous alcoholic beverage tapped from palm tree. The product is harvested into a gourds or plastic gallons and stored. Plastic gallons are commonly used since they are easier to come by. Gourds, plastic gallons and plastic bottles (voltic bottles) are recently used to retail the product and served with calabash. Customers who prefer to buy and send it will have to bring their bottle or the producer will have to look for an old bottle to serve the customer. The plastic bottles and gallons used are not new. They are used bottles and gallons either scavenged from the environment by the producer or bought from scavengers. Due to the hygienic conditions in serving customers with the same calabash and selling to customers with old used bottles, this informed the researcher to design and produce a package for producers to serve their customers. The new package designed by the researcher will make the product look more attractive, convenient to transport the product and increase marketability.

Figure 39: How palm wine is packaged and served to customers.

Figure 40: Packaging structure of an alcoholic beverage Palm wine.

Source: Structural design by researcher.

4.15.4 Mango Juice and Pineapple Juice

Mango juice and pineapple juice are products normally packaged in plastic gallons and containers and stored. The products are bottled in either glass bottles or plastic bottles and served. Due to their unattractive label and the bottle also the same as used by other products such as Vita milk, Ice kenkey, '*sobolo'* and some traditional herbal medicine, the researcher thought it prudent to design a unique package for both the mango and pineapple juice product to distinct itself from the other products in terms of the packaging structure.

Figure 41: How some producers packaged and sell the product to customers.

Figure 42: Packaging structure of a fruit juice 'mango juice'.

Source: Structural design by researcher.

Figure 43: Packaging structure of a fruit juice 'pineapple juice'.

Source: Structural design by researcher.

4.15.5 Traditional Herbal Medicine (Typhoid Medicine)

Traditional herbal medicine is an indigenous medicine being patronized till today and its way of packaging hasn't changed much. The only innovation introduced is by using polythene bags to wrap the product for customers. The dry roots, leaves and tree bark are packaged in polythene rubbers and displayed for sale. Others are displayed bare and when customers come, the medicine is packaged in a black polythene bag for them. The exposure of the medicine without any covering or package defeat its purpose because insects attack it, serving as a habitat for them and later the medicine grow moldy. The medicine is also exposed to dust and germs. This drew the attention of the researcher to find a better way to design and package the typhoid medicine to be sold on the local market. This is a step in the right direction which it is expected the other

herbal medicines will follow suit.

Figure 44: How traditional medicine is packaged on the local market.

Figure 45: Traditional herbal medicine, typhoid.

Figure 46: Packaging structure of traditional herbal medicine 'typhoid medicine'.

Source: Structural design by researcher.

Product Imagery on Marketability

Figure 47: Packages of local products and their innovative packaging.

Locally produced alcoholic beverage and traditional herbal medicine has been patronised by Ghanaians from time immemorial till date but its packaging has devalued the product and its marketability. Constant awareness on our health and what we consume has made it necessary for locally produced products to enhance the packaging of products to sensitize consumers on the quality of products they buy.

The distinctive shape of packaging arouses the curiosity of the consumer and also gives the product its hallmark and this has been the aim of the researcher to achieve.

The shape and features of the package helps to identify the product but unfortunately, most locally produced alcoholic beverages and traditional herbal medicines lack these important features making patronage reduce day in and day out.

Paper card has the advantage of shaping the package to various shapes in different degrees. The package structure can be given a distinctive shape, making the product stand out uniquely among its competitors on the market.

4.15.6 Finished Packaging Structures

Figure 48: Packaging structure of pineapple juice.

Figure 49: Packaging structure of mango juice.

Figure 50: Packaging structure of '*akpeteshie*'.

Figure 51: Packaging structure of palm wine.

Figure 52: Packaging structure of '*pito*'.

Figure 53: Packaging structure of traditional herbal medicine, typhoid fever.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Overview

This chapter presents a summary of the research and conclusions that are drawn from the study. It also offers recommendations to help improve the image and identity of made in Ghana products with regard to their structural packaging so as to gain both local and international acceptance and patronage.

5.1 Summary

This research is geared towards exploring the concept of packaging structures as well as the opportunities and prospects it has on made in Ghana products. For this reason, the researcher adopted the following objectives to assist in achieving the following solution.

(i) To identify specific Ghanaian products and determine the trend the products have gone through in the packaging process.

(ii) To examine simple technological methods and measures to adopt to facilitate quality and attractive ways of packaging products.

(iii) To design a sample package structure for a locally manufactured product.

Interview guides were administered to shopping malls, shop owners, general consumers and to packaging related institutions in Ghana to sample their views on the packaging structure of Ghanaian products, its patronage and how it could be improved. The analysis gathered from the field revealed that many consumers (about 75%) do not

patronize made in Ghana products because they are not attractive enough, both graphically and structurally.

Furthermore, the governmental laws that are to guide and protect proper labelling and packaging of products manufactured locally are compromised due to challenges facing institutions such as Institute of Packaging Ghana (IOPG), Food and Drugs Authority (FDA), Ghana Standards Authority (GSA), Federation of Ghanaian Exporters (FAGE), among others that are mandated to enforce it. Due to this, products with no user information and sub standardize quality are found on the market. From the above discussion, the packaging industry in Ghana needs to do better to ensure that made in Ghana products make the necessary economic impact on the lives of the people through good packaging (graphically and structure-wise), that will compete well on the international market, in addition to the good quality nature of the product.

To achieve the set objectives, the researcher reviewed literature based on the topic, interviewed thirty respondents made up of shop owners, sales girls, consumers, producers, companies and institutions. The researcher adopted the descriptive method of research to arrive at the proposed research.

From the findings, the study showed that producers of locally manufactured products such as *akpeteshie, pito,* palm wine and traditional herbal medicine package their products using second hand bottles and containers scavenged from the environment. The containers and bottles go through no form of hygienic treatment or sterilization. Through the field observation, the researcher found out that some locally produced alcoholic beverage such as palm wine and *pito* are consumed the same old traditional way despite the health implications. Few calabashes are displayed to serve customers and from the period sales begin till sales end for the day, the calabash is not properly

washed. The same calabash is used to serve all customers who come to buy and this act deters some customers due to the hygienic implications.

As the study earlier revealed, plastics are highly used among all the other materials in packaging by the retailers over the years but unknowing to them, plastics become harmful and dangerous to our health after keeping the product in the bottle under the sun for a longer period. In the case of the herbal medicine, the sun reduces its potency and efficacy to cure medical conditions.

The study revealed that transporting products such as *akpeteshie*, palm wine and *pito* from the producer or the retailer was a problem because there was no proper way of handling the package. Moreover, the bottles used did not have proper covers or no covers to prevent the attraction of insects and product from spilling during transportation.

Based on the research findings, the researcher designed and produced various packages to be used by producers of palm wine, mango and pineapple juice, *akpeteshie, pito* and traditional herbal medicine.

5.2 Conclusions

Based on the findings of the study, the following conclusions are drawn:

- Producers of locally manufactured products such as *akpeteshie, pito,* palm wine, fruit juice and herbal medicine produce good beverages and herbal medicine but employ the services of scavengers in the society who supply the producers with used bottles and containers without proper covers. The bottles are unhygienic and not sterilized.
- In conclusion, the various packaging materials such as glass bottles, plastic containers, polythene bags used to package locally manufactured goods are

industrial products and Ghanaian local producers consider these packaging materials to be more expensive and would increase cost of production.

- In conclusion, it is observed that the packages used by the producers are not customer friendly. The packages have no handles and no proper covers which creates a lot of inconvenience to the customer.
- In conclusion, producers of *akpeteshie, pito*, palm wine, fruit juice and herbal medicine are using packages of different products to package their products leaving the customers to guess what type of product is actually been sold. This doesn't allow for easy recognition of the products, giving the foreign products more advantage over the local products.
- In conclusion, the researcher has designed and produced a package that has been tested over a period of time and found that the package can contain, protect, preserve, promote customer choice and inform.

5.3 Recommendations

To ensure increase in the demand of locally manufactured and packaged goods, the following recommendations are made:

- It is recommended that producers of locally manufactured products such as *akpeteshie, pito,* palm wine and traditional herbal medicine are to desist from using second hand bottles and containers scavenged from the environment. Producers in the process of increasing productivity must employ the services of professional graphic designers to design proper packages that can attract and sell the products both on the local and international market. Institutions such as Food and Drugs Authority (FDA), Ghana Standard Authority (GSA) as well as private organizations such as Association of Ghana Industries (AGI) and

Institute of Packaging Ghana (IOPG) mandated by government to monitor, control, supervise, advise and prosecute producers who go contrary to the law when packaging and labelling must be educated accordingly.

- It is recommended that the appropriate packaging material to use is paper card because it is cheaper, easy to come by and can be manipulated without heavy machinery. Durable paper card material for packaging is encouraged because it will allow for easy storage, clear labeling, no leakages, wouldn't add additional cost to production and will make products consumer friendly. This will make the entrepreneur reach the aim of consumer satisfaction and hence maximize sales.
- It is recommended that producers of locally manufactured products use this designed package since the package have been specifically designed with the customer in mind. The researcher has adopted simple technology in his design by creating proper handles on the packages for comfortability. Customers can conveniently consume the product in bits, cover the rest and consume later without any challenge. This gives the product a unique outfit among others and allow easy recognition of the product and strengthens the brand name.
- It is suggested that producers should use this package because innovative shapes have been introduced into the structure, making the package look distinct from others. This gives the package a good opportunity to reinforce the brand image. This promotional effect will communicate to the general public, leaving its target group no choice but to pick the product and have a taste of it. Also, Institute of Packaging Ghana (IOPG), Federation of Ghanaian Exporters (FAGE), Ghana Export Promotions Council (GEPC), Association of Ghana Industries (AGI) together with Ministry of Trade and Industry and all other

stakeholders in the industry should educate the producers on current trends of the industry tailored towards improving made in Ghana products to meet international standards.

- It is recommended that producers of locally manufactured products use this package designed by the researcher because after testing the package, it can contain, protect, preserve, promote customer choice and inform. It will add value to their products. Also, to be able to improve upon the structural design of our locally made products, a course such as Product Design must be introduced in our tertiary institutions such as University of Education, Winneba (UEW), Kwame Nkrumah University of Science and Technology, Kumasi (KNUST) and the Polytechnics, using Computer Aided Design (CAD) software such as Adobe Photoshop, Cape Pack, Corel Draw and Artios CAD just to mention a few to help improve upon our structural design to meet world standard.

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APPENDIX A

UNIVERSITY OF EDUCATION, WINNEBA

SCHOOL OF CREATIVE ARTS

DEPARTMENT OF MUSIC EDUCATION

INTERVIEW GUIDE FOR CONSUMERS

1. From which market do you normally buy?
2. What are your opinions on the packages of locally manufactured products?
3. What accounts for the bad impression about the packaging of locally made Ghanaian products?
4. What will make you buy a particular made in Ghanaian product from the shelf?
5. Is your purchasing decision influenced by the attractiveness of the package?
6. Which of the following influences your purchasing decision of a new product.
7. Among made in Ghana products and foreign products, which of them do you normally buy? If both, specify.
8. What are your impressions of packaging of foreign products?
9. What improvements do you want to see in the packaging of Ghanaian products especially as regards their structure?
10. Among the many materials used in packaging, which material will be appropriate if used for packaging Ghanaian products wouldn't add extra cost to the commodity?
11. What is your reason to the previous question?
12. Which locally-made products would you want to see repackaged or properly packaged? Name as many products as possible.

APPENDIX B

UNIVERSITY OF EDUCATION, WINNEBA

SCHOOL OF CREATIVE ARTS

DEPARTMENT OF MUSIC EDUCATION

INTERVIEW GUIDE FOR PRODUCERS AND PACKAGING INDUSTRIES

1. What product(s) does your company produce?
2. Does your company sell only on the local market or export some of the products?
3. What material is commonly used to produce your products' packaging structure?
4. Among the many materials used for packaging, why did your company choose to use this materials?
5. Has your company ever changed the packaging structure of the products before?
6. If yes, what ideas were put into the new packaging structure?
7. Did the new package bring any difference into the sales of the product(s)?
8. Does the company design the labels for the products or a professional designer is employed?
9. Are your packages produced locally or imported?
10. Are there any rules regarding packaging in Ghana?
11. To what extent do producers adhere to these rules if any?
12. Are there any sanctions for producers who flout these rules?
13. What are some of these sanctions (if any)?

14. What are some of the advantages of good packaging structures?
15. What accounts for the relatively poor package of locally made products?
16. Are there some made in Ghana products you would like to see improvement in their packaging? Please mention as many as possible.
17. How can the packaging of Made in Ghana products be improved?

APPENDIX C

UNIVERSITY OF EDUCATION, WINNEBA

SCHOOL OF CREATIVE ARTS

DEPARTMENT OF MUSIC EDUCATION

INTERVIEW GUIDE FOR FOOD AND DRUGS AUTHORITY AND GHANA STANDARD AUTHORITY

1. What is your institution doing to ensure that standards are met, as regards to packaging of made in Ghana goods
2. What account for the relatively poor package of locally made products?
3. Please can you give instances of any inappropriate packaging on the local market?
4. What did your institution do about this inappropriate packaging?
5. What are some of the advantages of good packaging?
6. To what extent is packaging promoting made in Ghana products?
7. How can the packaging of Made in Ghana products be improved?

APPENDIX D

UNIVERSITY OF EDUCATION, WINNEBA

SCHOOL OF CREATIVE ARTS

DEPARTMENT OF MUSIC EDUCATION

INTERVIEW GUIDE FOR SHOP OPERATORS AND ATTENDANTS

1. Name of shop?
2. Location of shop?
3. Types of products sold?
4. Which class of people frequently buy from here?
5. How often do you take stock?
6. Do you have any considerations as to the packaging of your products before stocking them?
7. Which of the following do you look out for in stocking your shop with made in Ghana products with regard to their packaging?
8. From your experience, to what extent does the structural packaging of a product determine the purchasing decision of consumers?
9. What are the differences between the packaging of foreign products and their locally made counterparts?
10. What are your impressions of packaging of locally manufactured products?
11. Has there ever been an instance where a poorly packaged product has been rejected by consumers?
12. If yes, what is the product?
13. What was the reaction of the consumer?
14. In your opinion, how could made in Ghana products be improved?

APPENDIX E

OBSERVATION CHECK LIST

1. Shelf display of made in Ghana products and graphical appearance.
2. Customers perception and reaction to made in Ghana products
3. Comparing made in Ghana products shelf display and appearance to imported products.
4. Checking packages and labels of made in Ghana products to see if they meet ISO Ghana standard of labelling and specifications.
5. A quick glance made through the whole package of made in Ghana products; checking for flaws such as bar coding, poor typography or use of typefaces, choice and application of colour and images among others.