

RESEARCH ARTICLE

Enhancing Product Design: An Exploration of Simple Technological Methods in Packaging

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Article History

Received 2025-11-20

Revised 2026-01-17

Accepted 2026-02-11

Published 2026-03-02

Keywords

Cultural identity

Marketing

Packaging

Packaging design

Product packaging

Abstract

The sales ratio is clearly determined by equal product exposure to customer attention. In these situations, packaging quality is the most important factor in sales. Given the importance of Ghanaian-made goods in our daily lives, it is critical that business professionals use high-quality packaging to guarantee their safety. The purpose of this paper is to examine how packaging affects a product's marketability in Ghanaian markets. The methods and processes used in package design and construction were described using the studio-based method of qualitative research design. With a sample size of thirty (30)

How to cite

Odjeyem M., Azaglo A. K., Opoku-Mensah K., Yegbe P.K. & Aheto-Domi B. (2026). Enhancing Product Design: An Exploration of Simple Technological Methods in Packaging. *Adom Social Science and Humanities Journal*, 2(1): 539-560

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participants, the data was purposefully gathered using an observation checklist and interview guide. Through data organization, transcription, and interpretation, the study's data underwent a thematic analysis. The findings indicated that plastic diminishes the efficacy of herbal medication when exposed to sunlight over time. The study revealed that manufacturers of locally produced items, including *akpeteshie*, *pito*, palm wine, and traditional herbal medicine, utilize second-hand bottles sourced from the environment for packaging their products. Lastly, despite the health risks, some locally made alcoholic beverages, such as *pito*, *akpeteshie*, and palm wine, are still drunk in the same old traditional manner. The research analysis reveals that packaging materials, such as glass bottles, plastic packs, and polythene bags used on domestically produced products, are categorised as industrial products. To the local producers in Ghana, such packaging materials are viewed to be expensive, something that would increase the cost of production. The study advocates for the use of durable paper card material in packaging due to its cost-effectiveness, accessibility, ease of manipulation without heavy machinery, efficient storage, clear labelling, resistance to leakages, lack of additional production costs, and enhanced consumer-friendliness.

Introduction

The prevailing attitude that most Ghanaian products are of poor quality, primarily due to inadequate packaging, has negatively impacted their consumption. The quality of the preparation and labelling of Ghanaian goods fail to satisfy the overall requirements of competitiveness in any given market. Although some items made in the country are thought to be of excellent quality and distinctive to that country, but they are hard to sell since they don't meet packaging criteria in most cases, especially when trying to sell them to other countries (Institute of Packaging Ghana, 2014). According to the Institute of Packaging Ghana (2014), Ghana's packaging sector continues to struggle due to limited technical expertise, inadequate technology, and gaps in packaging design knowledge.

These challenges make it difficult for locally produced goods to compete effectively, leading to lower sales for domestic producers and reduced foreign exchange earnings for the country. In today's highly competitive marketplace, packaging plays a crucial role in influencing consumer choice. Even when a product is of high quality, poor packaging can prevent it from achieving commercial success. Ghanaians will choose imported goods from nations with

modern packaging industries, such as China, the US, India, Malaysia, Indonesia, Thailand, South Africa, the Far East, and Europe, over locally made goods. Ghanaian customers think that the packaging and quality of goods created in other nations are better. This is mostly because the goods come from China, the United States, India, and several European and Asian countries (Opoku & Akorli, 2009).

Ghanaians prefer the first option since their packaging is of higher quality and looks better, and the prices are still competitive. A lot of Ghanaians buy things on impulse, which is interesting. As a result, companies that make items in Ghana can boost their sales by making sure that their packaging is bright and attractive. This method can successfully draw in customers and make them more likely to buy the goods, even if they don't need them right away. Some consumers do buy things made in Ghana, but none of them did so because they are pretty, have good looks, or show Ghanaian cultural values. Amisah (2017) pointed out that adding Ghanaian cultural features to packaging design, like Adinkra symbols and local patterns, made people much more interested in buying the product. His study found that people were more likely to buy packaging that was made with their culture in mind than packaging that was not. This shows that people would buy more Made-in-Ghana products if they looked good and showed off Ghanaian culture.

Aesthetic and culturally infused packaging have a significant potential to enhance the appeal and marketability of Made-in-Ghana products. Evidence shows that while some consumers do purchase these products, very few are motivated by their visual or cultural appeal. Decardi-Nelson & Rahman (2018) found that many Made-in-Ghana products suffer from poor packaging design, which reduces their appeal compared to foreign products. Respondents emphasised that attractive and culturally relevant packaging could act as a "silent salesman" and increase sales by enticing consumers at the point of purchase. Conversely, a primary factor influencing the purchase of foreign products is their appealing packaging, aesthetic qualities in colour and shape, and the comprehensive information they provide. The inherent qualities of these products provide them with a competitive advantage over local alternatives. Amponsah (2017) pointed out that shape, layout, and colour work together to act as a "silent salesman," recommending designs that combine form and message, such as sculpted shapes integrated with embossed branding.

Thus, they are bought when the buyer has to choose. People who buy Made-in-Ghana products think that the packaging is not good enough, is not appealing, and often has designs that are not well done and do not reflect Ghanaian culture. For a multitude of reasons, more and more Ghanaians are buying Chinese goods, which is bad for local options. Because of this, consumers are more likely to reject Made-in-Ghana products than products made in other countries. A set of product attributes conveyed through the packaging plays a crucial role in determining quality judgments, and thus, they help build brand preferences. In many cases, when the team communicates high quality in a package, the consumers deduce that the actual product is also of high quality. When the package indicates that low quality is in store, the consumer associates the product with their perception (Underwood et al., 2001).

The package serves as a symbol, conveying either positive or negative implied messages about the product.

According to Underwood et al. (2001), consumers can easily visualise the visual, gustatory, tactile, olfactory, or auditory characteristics of a product as they gaze at images on the product's packaging. The process of making something isn't done until it gets to the person who will use it. This means that goods must look good and be useful for people to buy them. The necessity of a product is the primary factor; nevertheless, when a buyer has a choice between two alternative items, additional factors become relevant. The initial aspect evaluated is the visual appeal of the packaging. Novixoxo et al. (2019) reported that a lack of local packaging experts hinders innovation in packaging form and structure. They call for training and tech transfer to empower SMEs to adopt current global shape trends such as compartmentalised pouches and curved-edge boxes.

This attraction would result in the preference for one product over another, despite their potential to address the same issue. Only after a decision has been reached does the consumer proceed to examine the label for pertinent details, including manufacturing and expiry dates, weight, storage instructions, and usage guidelines, among others. There are many levels of factor consideration, and Ghanaian manufacturers and packaging designers need to understand and value this in order to make the most of the chances it gives them. The aforementioned analogy illustrates the necessity for a product to possess aesthetic appeal, as this significantly enhances its likelihood of being acquired. Consequently, given the significance of packaging, its aesthetic appeal takes precedence over the essential information that must be conveyed. There exists a correlation in the minds of consumers between the aesthetic appeal of packaging and the perceived quality of the product contained within. This is quite intriguing, as it challenges conventional reasoning and rational thought. The quality of a product cannot be assessed solely by the appeal of its packaging.

In European marketplaces, Ghanaian items, notwithstanding their excellence, possess package designs that inadequately convey product value and explicit customer advantages. Ghanaian exporters seem to lack awareness of the complexity and volatility of consumer behaviour, resulting in their inability to fulfill expectations. Every exporter aims for their product to reach its final destination in an acceptable state, appropriate for sale and consumption. Trade liberalization, the free-zone market system, and globalization have heightened rivalry among products in the worldwide market. Novixoxo et al. (2019) observed that several made-in-Ghana items exhibit deficiencies in visual appeal and design inventiveness.

Symbolic cuts enhance customer impression and compete with imported goods. Exporters must adhere to increasingly intricate international norms and regulations, together with the demands and requirements of target markets concerning safety, health, environmental protection, and packaging. International trade legislation and the packing requirements of importers and purchasers are undergoing significant and quick changes. International

marketplaces have established norms and restrictions for their imports. All exporters must adhere to regulations or risk penalties and blacklisting. Consumer expectations and sentiments about products impose significant pressures on exporters. They have different needs that need to be met. Because transactions often happen in loud and hectic stores, it's important to make sure that things on shelves stand out when they're next to competing brands.

Packaging plays a critical role in meeting consumer expectations and creating brand awareness by offering ease of use, brand recognition, and essential information at the point of sale (Ene & Özkaya, 2016). The answer fundamentally depends on exceptional packaging design. Packaging will enhance revenue from items shipped to overseas markets. Exporters face regulatory and consumer-driven pressures that demand strategic packaging solutions to capture attention and comply with standards in competitive and noisy retail markets. Exporters must understand foreign packaging standards and consumer preferences to succeed in markets like China, where advanced and high-quality packaging directly affects consumer choice (Zhao et al., 2000). This paper aimed to investigate simple technology approaches in packaging design to enhance the appeal and identification of Ghanaian products. Products for consideration encompass locally made alcoholic drinks, traditional herbal remedies, and locally processed fruit juices.

The entire study is pivoted on the following research questions:

- (i) What are the simple technological methods and measures to adopt to facilitate quality and attractive delivery of products through packaging?
- (ii) What innovative shapes could the structure of packages be made in to improve packaging in Ghana?

Concept of Package Design

In the current competitive economy, attracting customer attention is increasingly challenging. "The average consumer is estimated to spend less than one second scanning shelves, during which they decide whether to purchase a specific product" (Rabinowitz, 2002, p. 2). As the creator of the goods, it is essential to ensure that throughout that pivotal timeframe, consumers are attracted to your products, feel compelled to examine it, and ultimately decide to purchase it. No matter if this is a new product or a new version of an old one, it's smart to talk to a package designer to make sure that your target audience can see your product at that important moment.

Packaging design is very important because it makes containers that not only keep the product safe but also work as potent marketing tools. In increasingly competitive and cluttered retail environments, packaging must do more than inform, it must also attract. Skilled package designers utilize a mix of vibrant visuals, unique shapes, textures, and

illustrations to capture the consumer's eye and differentiate the product from others on the shelf. These visual strategies aim to create an immediate emotional connection with potential buyers, encouraging them to engage with the product. In many cases, the design of the packaging becomes the decisive factor in whether a product is picked up, examined, and ultimately purchased. This is particularly true in scenarios where consumers make quick decisions based on visual cues, often within seconds. As such, regardless of the inherent quality or benefits of the product itself, its success in the market can hinge on whether the packaging is compelling enough to invite consumer interaction (Sharma & Chaturvedi, 2024).

Agyeman-Budu and Komashie (2024) found that elements like packaging colour, creativity, and labelling significantly influence consumer buying decisions, especially in local product categories like Alata Samina (African black soap). Similarly, good packaging, achieved through the use of the proper style of lettering, colours, layout, drawings, and high-quality printing, constitutes the silent salesman that maximises the sale of many products in Ghana (Amponsah, 2017). Rabinowitz (2002, p. 5) quotes Romanuck as saying that "retail packs are not designed to allow products to remain on the shelves for an extended period unless they are sold, due to intense competition for shelf space." Because of the competition, you have to do a lot more to get someone. Kumah et al. (2015) found that visual cues like colour, wrapper quality, and innovation strongly influenced purchasing decisions, especially in traditional medicine, where first impressions are crucial.

This supports the claim that packaging must first grab attention. The design of the packaging is quite important for staying competitive in the market. The goals outlined above mean that a package must be high quality and look good. Consequently, graphic designs must effectively capture and retain customer interest to initially secure market presence and subsequently enhance it. Packaging holds significant importance. It is regarded as a fundamental component of the product and the initial point of interaction with the brand (Beckeman & Olsson, 2012). Packaging plays a key role in how consumers experience, perceive, and choose products, especially in retail. Agyeman-Budu and Komashie (2024) found that shape, label design, and material choice have strong positive correlations with consumer purchase intentions, especially for personal care products like African black soap.

Theoretical Framework

This study is anchored on the Consumer Perception Theory, which evolved from psychology and was developed in marketing by scholars like Louis Leon Thurstone, Philip Kotler, and William Wilkie, among others (Wilkie & Pessemier, 1973). Packaging plays a critical role in influencing consumer decision-making, especially in highly competitive and low-involvement product categories. As packaging evolves from being a protective shell to a vital communication tool, the importance of understanding consumer responses to packaging cues becomes even more pronounced. Consumer Perception Theory provides a valuable theoretical framework to study how individuals interpret and react to the design, structure, and technology embedded in product packaging. Consumer Perception Theory is rooted in

the psychological study of how people interpret sensory information to form opinions and make purchasing decisions. It posits that consumers do not respond to products solely based on their intrinsic value but rather based on how they perceive those products through visual, tactile, and emotional cues (Schiffman & Wisenblit, 2015). In the context of packaging, perception is influenced by elements such as colour, shape, size, texture, material, typography, and imagery.

These cues contribute to the consumer's first impression, which then informs their evaluation of product quality, brand trustworthiness, and purchase intent. As Dichter, quoted in Pilditch (1961), famously said, "The package must shout attention to the product." This underscores the idea that perception precedes cognition and persuasion in consumer behaviour. When applied to product packaging, Consumer Perception Theory explains why aesthetic appeal, visual balance, and material quality influence consumers' willingness to try or repurchase a product. Packaging becomes a "silent salesman" that speaks to quality and brand positioning without verbal interaction (Amponsah, 2017).

Studies have shown that consumers form strong judgments about product quality based solely on packaging appearance. Agyeman-Budu and Komashie (2024) found that 92.3% of consumers were influenced by packaging innovation, particularly colour, imagery, and structure, when purchasing local African black soap in Ghana. Similarly, Novixoxo et al. (2019) demonstrated that Made-in-Ghana products suffer from lower patronage in part because their packaging lacks aesthetic appeal and does not communicate value effectively.

Study Area

Due to the large number of small and large-scale industries in the catchment area, the Eastern region and the Greater Accra region were chosen for the study. All participants in the packaging industry, primarily the Institute of Packaging, Ghana (IOPG), Accra, Ghana Standards Authority (GSA), Accra, and the Centre for Scientific Research Institute on Traditional Herbal Medicine, Mampong-Akwapim, were visited, along with a few large and small organizations and business enterprises within the packaging industry. Grocery shop operators and attendants such as Shoprite, Madina Mall Accra, Unique Tolo, Galaxy shop, K.K. Yeboah shop, Zinaida Pharmacy, and Nagisa Pharmacy all in Somanya.

Methodology

The study utilised a studio-based methodology situated within the framework of qualitative research design. The researchers employed a descriptive methodology to examine the composition and arrangement of the designs on the merchandise (Turkson, 2011). This was used to talk about badly made packages for things made in the area and to come up with new, better ways to package them. The study's population included all stakeholders in the packaging business, particularly the Institute of Packaging, Ghana (IOPG), the Ghana Standards Authority (GSA) in Accra, and the Center for Scientific Research Institute on Traditional Herbal Medicine in Mampong-Akwapim. There were thirty (30) people in the sample: ten (10) manufacturers, three (3) institutions, five (5) store operators, two (2) shop

attendants, and ten (10) consumers. The researchers employed a homogenous purposive sample strategy to select respondents based on their evaluations of the layout and composition of packages (Pandey & Pandey, 2015). The Participants were selected using purposive sampling to ensure diverse industry perspectives. The research data were obtained by interviews, observations, and photographs. Patton (2002) asserts that employing multiple data gathering instruments enhances the reliability, authenticity, and dependability of the study's conclusions.

The analysis of the study's findings was conducted conceptually by organizing, transcribing, and interpreting the dataset (Creswell, 2013; Braun & Clarke, 2006). The research data were obtained through interviews, observations, and photos.

Patton (2002) says that employing more than one way to collect data makes the study's results stronger and more credible, authentic, and reliable. The outcomes of the study were thematically analyzed through the organization, transcription, and interpretation of the data set (Creswell, 2013; Braun & Clarke, 2006). Thematic analysis was employed to extract recurring themes and insights from the interview data (Braun & Clarke, 2006). The participants were informed about the purpose of the study and consented to participate voluntarily. All responses were anonymized to ensure confidentiality and integrity in data reporting.

Results and Discussion

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

The interview data showed that the people who sell or make alcoholic drinks (like *akpeteshie*, *pito*, and palm wine), fruit juices (like mango juice and pineapple juice), and traditional herbal medicines don't care about the packaging structure of the product; they care more about 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 researchers noted that the producers utilize outdated plastic bottles to package the alcoholic drinks and that the fruit juice isn't easy to carry about. The only easy approach is to purchase a polythene bag and carefully put the product inside so it doesn't spill while being moved. The researchers believed it would be a good idea to make a package for manufacturers and merchants that would make it easier for customers to buy things. They did this by adding a handle to the package that customers could easily grab, making it easier for them to carry their purchases. This won't spill, therefore clients will be able to buy the merchandise without any problems.

People in the area sell things like alcoholic drinks (*akpeteshie*, *pito*, and palm wine), fruit juices (mango and pineapple juice), and traditional herbal medicine. It's not easy for customers to

make use of the product and keep the rest in the box. Most of the bottles that stores use to sell the product don't have the right or any cap. These few problems with the packaging that producers and retailers use led the researchers to add a closing to the box. Plastics are still the most popular materials for closures, followed by metal. Plastic closures, especially those constructed of polypropylene (PP), are naturally light and cheap. They can also handle stress and don't react with other materials in formulae. Mehta et al. (2023) used eye tracking and found that attention to visual features (like logos and shapes) had the strongest effect on initial consumer response. Consumers usually drink alcoholic drinks such *akpeteshie*, *pito*, and palm wine at parties and ceremonies. People don't buy the bottles very often since they don't have suitable closures that keep flies and other bugs away. The researchers believed it was a good idea to make a package with a proper opening so that customers could pour out the contents and save the rest for later. This easy-to-use technology will improve the quality of the goods and bring in more customers.

Most of the retail establishment owners who were interviewed said they are having problems with their packaging but don't have the technical know-how or resources to fix them. They think that as long as their customers know about their product and it is protected, that's all they need. Printing labels is a waste of resources because the package will eventually go in the garbage.

The researchers told the shop owners that today is a time of technology and that their items are competing with foreign products. Their local products also need to meet specific standards to meet customer needs. The researchers found that if sixty percent of customers say they care about how products are packaged, then local producers and store owners need help repackaging their goods well and coming up with new ideas for the packages. This is the key to making their products more marketable.

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

The goal of packaging design is to make a container that stands out. The package designer is an important part of a company's marketing strategy since they know how to use bright colours, unique shapes, and other eye-catching approaches. Package design significantly impacts customers by visually conveying product information and inciting spontaneous purchases. Eye-catching visuals like colour, typography, shape, and illustrations are especially powerful in attracting attention and shaping consumer preferences (Verma, 2024; Sharma & Chaturvedi, 2024). No matter how useful the item inside the container is, it will never be tested unless a customer chooses to pick it up. One of the study's goals is to find out what kinds of packaging materials are currently used for products like traditional alcoholic drinks (*akpeteshi*, *pito*, palm wine), fruit juices (mango juice, pineapple juice), and traditional herbal medicines (typhoid medicine) in Ghana.

Packaging that is easy to hold, reseal, and reuse, such as can both attract consumers and reduce waste. These stackable hexagonal or modular cube containers, designs also fit better

in storage and transportation, a key need in Ghana's logistics chain (Boachie, 2015).The researchers figured out what items were used throughout the interviews and observations. The recognized materials were paper containers, glass, plastic containers, and calabash or gourd containers. Inspired by local crafts, packaging shaped like calabashes, Adinkra symbols, or stools can enhance brand identity and pride in local products. This leverages indigenous aesthetics to build emotional connections (Dzisi & Selvarajah, 2020).

Working Procedure



Figure 1: Coral Draw X7 and Adobe Photoshop software.

Source: graphicdesign.about.com.

The researchers employed Coral Draw X7 and Adobe Photoshop to make the packaging structure on the computer. Construction lines are used for drawing, and they usually look like thick black lines and thin broken lines. After printing, the solid black outline is cut out along the thick lines using a paper cutting knife. The thin, broken line is scored with the back of the paper cutting knife.

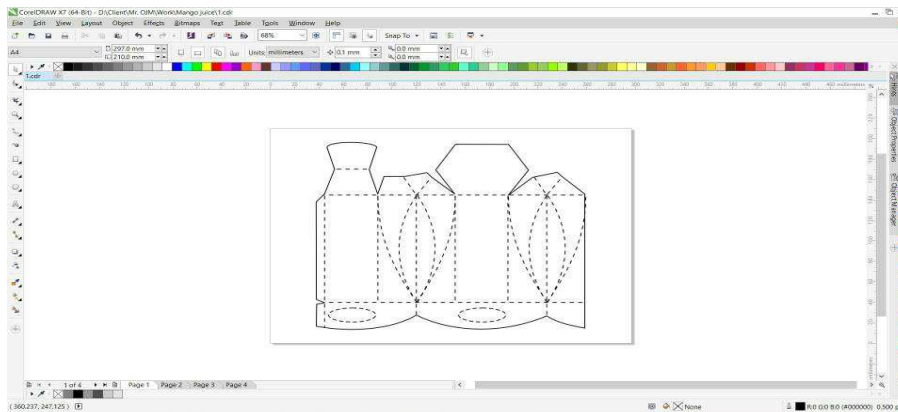


Figure 2: Coral Draw X7 and Photoshop software were used to design the pattern.

Source: (Fieldwork data, 2024)

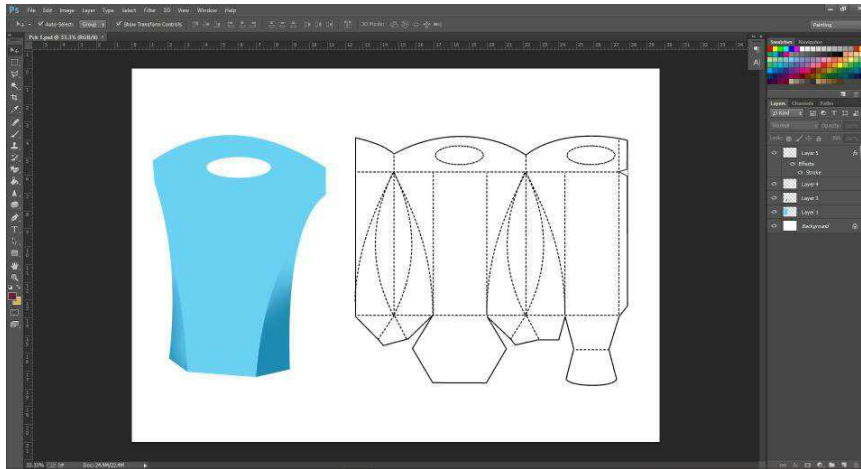


Figure 3: Coral Draw X7 and Photoshop software were used to design the pattern.

Source: (Fieldwork data, 2024)

The package was made using Coral Draw X7 and Photoshop. The structure's necessary dimensions are taken into account. There are other things to think about, like giving extra room for the inner protective lining, wasting material during production, and making sure the box fits on pallets. Afeliga (2020) emphasized that Ghanaian consumers value shape, size, and environmental impact when selecting packaged foods like plantain chips, suggesting a need for packaging that is both visually engaging and eco-conscious. The researchers constructed a package for the alcoholic product 'pito'.



Figure 4A: Coral Draw X7 and Photoshop software are used to design the package.

Source: (Fieldwork data, 2024)

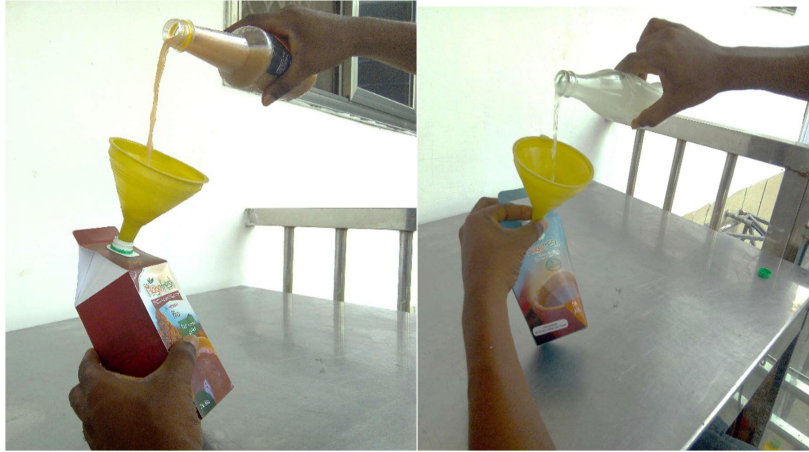


Figure 4B: Filling the package with its content

Source: (Fieldwork data, 2024)



Figure 5: Mango juice being poured into a package.

Source: (Fieldwork data, 2024)



A

B

Figure 6 (A and B): How palm wine is packaged and served to customers.

Source: (Fieldwork data, 2024)



Figure 7: Packaging structure of palm wine.

Source: (Fieldwork data, 2024)



Figure 8: Packaging structure of traditional herbal medicine 'typhoid medicine'.

Source: (Fieldwork data, 2024)



Figure 9: Packaging structure of traditional herbal medicine, typhoid fever.

Source: (Fieldwork data, 2024)

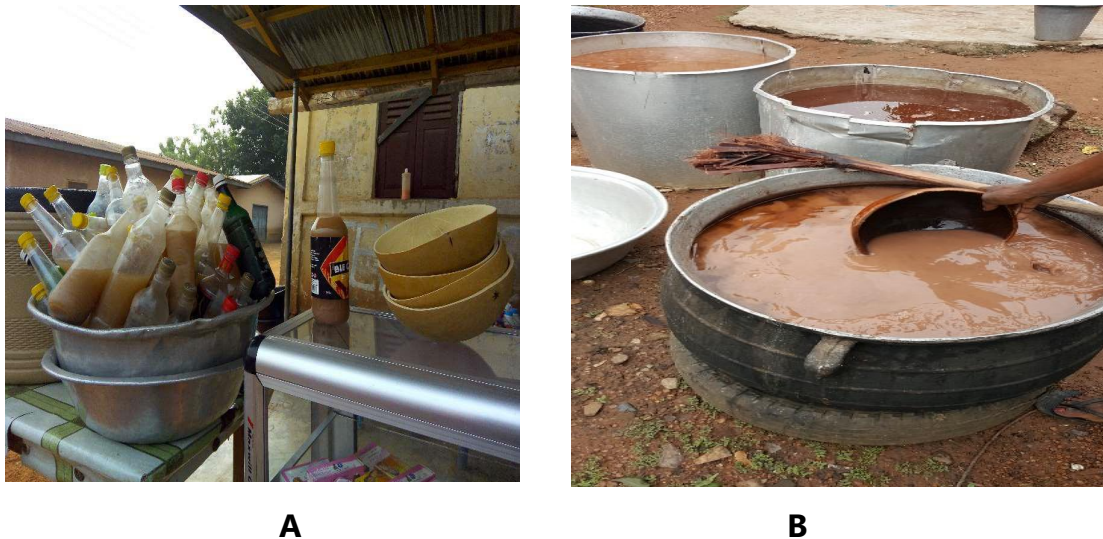


Figure 10 (A and B): How 'pito' is stored, packaged and retailed to customers

Source: (Fieldwork data, 2024)



Figure 11: The finished package structure of an alcoholic beverage "pito".

Source: (Fieldwork data, 2024)

Evaluation of the Package

To see if the samples of products (*akpeteshie*, *pito*, palm wine, mango and pineapple juice, and the traditional herbal medicine) will do well in their containers, the different contents were put into the packets and their weights were written down. They were stored for 12 hours to test if any water leaked, seeped, or soaked the construction. The *pito* drink, palm

wine, and fruit juice were all stored in a refrigerator for a week. After that, another test was done to see whether there was any leakage in the structure.

The only things that weren't maintained in the fridge were the traditional medicine and the *akpeteshie*. The items were put in the fridge since they are fresh and don't have any additives, preservatives, colours, or flavors. The only way to keep them from fermenting for a long is to put them in the fridge. The results showed that the weight was collected again after one week of preservation and that it was still the same. The researchers kept the product for another 12 hours and looked for any leaks or seepage, but there weren't any. The main package of the herbal medication was sealed so that no air could get in or out. The hand was used to apply pressure to the package to see if air would escape. The main packaging was still intact after one minute, which means it can keep the contents safe from bugs and moisture and keep them fresh has been put in a box. This way of packaging doesn't require any heavy machinery, which would cost the producer money, and it won't cost them any more to make the products. This would help them sell more products and promote products created in Ghana.

Appraisal of Packages

The study shows that clients make a choice at the point of sale, and the way the product is made is very important in that choice. When you look at the products being studied, Producers of these goods (*akpeteshie*, *pito*, palm wine, mango juice, pineapple juice, and herbal medication) don't do anything to promote their sale. Making them look bad and dirty. The package that the researcher made protects its contents, tells people about the product's benefits, and talks about them. The building is made from a simple material, a paper card. A substance that is easy to find and cheap. The best thing about it is that the material breaks down naturally. The outcome demonstrates that the pack's packaging material is good and works well with the samples. The software was made to be very basic and easy for anybody to use. Adding a comfortable handle to the package makes it easy to carry the goods around while eating. Most people who drink these locally made drinks think it's uncomfortable to carry them around. The addition of this handle, along with the attractive packaging, will give people the confidence to carry the product around.

Also, the packaging contains an opening that lets customers open and close it whenever they want. This isn't strange for the usual bundles that are on the market. Customers don't have to use the product right away after opening it; they can save it and utilize it later. The product is one of a kind because of the way certain design aspects work together, which also helps the brand name. This has also made it easy to tell what the product is. The new design makes the package easier to handle and stand out, which is a great way to strengthen the brand image. People know about this promotional effect, thus the target group has no choice but to take it up and try it. The colours and text have been arranged in a way that makes them look good with the pictures on both sides of the building. The researchers developed the packages so

that the packing structure would showcase the products. This will make a huge difference in the sales of these Ghanaian goods. The researchers believes that the goals have been reached based on the designs of the packages. The packages will help answer the problem statement from the previous chapter.

Conclusion

The paper has shown that people who make alcohol in their own country, like *akpeteshie*, *pito*, palm wine, and traditional herbal medicine, employ bottles and containers they find in the environment. There is no sanitary treatment or sterilization of the containers and bottles. The study also found through field observation that several locally made alcoholic drinks, including palm wine and *pito*, are still used in the same traditional way, even though they can be bad for your health. There are only a few calabashes on display for consumers to use, and the calabash isn't cleaned properly from the start of sales until the conclusion of the day. The same calabash is used to serve all clients that come to buy, which keeps some people away because it is not clean. Innovative packaging in Ghana can be improved by embracing culturally inspired, eco-conscious, ergonomic, and multifunctional shapes. Collaboration between designers, SMEs, and regulatory bodies is crucial to translating these design innovations into widespread market adoption. As the study earlier revealed, plastics are highly used among all the other materials. As the survey showed, retailers have used plastics more than any other material for packaging over the years. However, they don't know that plastics can be hazardous and dangerous to our health if the product is kept in the container in the sun for too long. The sun diminishes the effectiveness and efficacy of herbal medication in treating medical ailments.

The study showed that it was hard to move products like *akpeteshie*, palm wine, and *pito* from the producer or the store because there wasn't a good way to handle the packaging. Also, the bottles didn't have the right lids or any lids at all to keep bugs out and keep the product from spilling when being moved. People who make things like *akpeteshie*, *pito*, palm wine, fruit juice, and herbal medicine make delicious drinks and herbal medicine, but they use scavengers from the community to bring them used bottles and containers that don't have adequate lids. The bottles are dirty and not clean.

Recommendation

The optimal packaging material is paper card, as it is cost-effective, widely accessible, and easily manageable without specialized equipment. The packaging must utilize robust paperboard material to facilitate storage and labeling, mitigate leaks, lower production expenses, and enhance consumer convenience. This will allow the entrepreneur to attain consumer pleasure and, consequently, optimize sales.

Funding: This research received no external funding

Conflicts of Interest: The authors declare no conflict of interest.

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