Rethinking Package Aesthetics in a Circular Economy in Urban Markets in Ghana: A Visual Communication Perspective on Design, Waste, and Consumer Perception

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Abstract

This paper investigates how packaging aesthetics and visual communication impact consumer perception and sustainable behavior in Ghana's urban markets. Focusing on the context of the circular economy and Sustainable Development Goal 12 (Responsible Consumption and Production), it examines the role of design in promoting reuse, recyclability, and environmental literacy. Employing a mixed-methods research model combining content analysis and field interviews, the study analyzes packaging from food and beverage products commonly found in Accra and Kumasi. It evaluates the effectiveness of eco-labeling, contrasts global and local best practices, and proposes design-led solutions to enhance sustainable packaging outcomes in urban Ghana.

Introduction

As the material and visual conduit between a product and its customer, packaging is essential to waste production, usability, and brand identity. Packaging is used extensively in the food and beverage industries in Ghana's urban markets, which are thriving economic centres like Accra's Makola Market and Kumasi's Kejetia Market. Nonetheless, the proliferation of single-use plastics and subpar materials has made a substantial contribution to landfill overflow and urban pollution. By creating packaging systems that encourage reuse, recyclability, and biodegradability, the circular economy provides a framework for minimising environmental impact. This study examines how consumer attitudes and behaviour regarding sustainability and waste management are influenced by packaging aesthetics and visual design.

Research Model

Using a mixed-methods approach, the study combines semi-structured interviews with qualitative content analysis. Over the course of three months (January to March 2025), information was gathered from retail settings in Accra and Kumasi. With an emphasis on visual communication elements like typography, colour, labelling, and sustainability messaging, the study looked at 60 packaged food and beverage items that are frequently found in urban markets in Ghana.

Objectives:

- To analyze packaging aesthetics of food and beverage items sold in Ghana's urban markets.
- To assess how visual communication influences consumer understanding of sustainability.
- To evaluate the presence and effectiveness of eco-labels.
- To propose design strategies aligned with circular economy principles and SDG 12.

Content Analysis of Food and Beverage Packaging

The following visual communication indicators were used to evaluate the products and classify them by type (rice, beverages, and snacks):

1. Use of color and imagery
2. Presence of sustainability-related symbols (recycling, compostable, reuse)
3. Clarity of eco-labels and disposal instructions
4. Typography, layout, and messaging

Key Findings:

- Rice Packaging: Onga Rice and Royal Aroma Rice rule the regional rice market. Royal Aroma does not have eco-labelling or disposal guidelines, but it does use high-end visual language with gold and green colour schemes. Without any visual allusion to sustainability, Onga Rice's advertising text emphasises value and taste while utilising striking reds and yellows.
- Beverages: Rush and Milo employ strong, contrasted typography and vibrant imagery to convey strength and vitality, while Don Simon juice (Tetra Pak) features a simple disposal icon. There were no specific recycling or environmental messages in any of these drinks.
- Traditional Drinks: The packaging for Sobolo (hibiscus drink) is very varied and informal, frequently utilising repurposed PET bottles or sachets. Despite promoting a reuse culture, these products hardly ever have brand identity, much less sustainability indicators.

Less than 15% of the examined packages had any sustainability cues, according to the content analysis. Although eco-labels were more frequently found on imported goods, they were either poorly emphasised or concealed within the design hierarchy. Sustainability communication was mostly ignored by locally produced goods.

Visual Communication in the Circular Economy

Packaging design should convey lifecycle awareness, environmental value, and appropriate disposal choices in a circular economy. In order to convey environmental friendliness, elements like green colours, icons that show recycling arrows or leaves, minimalist designs, and tactile finishes are frequently utilised worldwide (Ellen MacArthur Foundation, 2017).

However, maximalist aesthetics, bright colours, large fonts, and dense text dominate packaging in Ghanaian urban markets. Although these designs have cultural resonance, they frequently deviate from international aesthetic standards for environmentally friendly packaging. There are opportunities as well as challenges associated with this cultural mismatch. In order to appeal to Ghanaian consumers and encourage circularity, designers must localise sustainability communication by utilising culturally appropriate symbols, languages, and formats.

Eco-Labelling and Consumer Perception

Although eco-labelling schemes like USDA Organic, EU Ecolabel, and FSC are effective instruments in international markets, their applicability in Ghanaian markets is restricted. Only three out of thirty urban consumers surveyed recognised any standard eco-labels, and even fewer had faith in them. Brand familiarity or observable results (such as reusable or returnable packaging) are frequently associated with trust in environmental information.

Effective eco-labels, according to D'Souza et al. (2006), need to be easily identifiable, verifiable, and conspicuously displayed. For eco-labels to be successful in Ghana, where eco-literacy is still low, public education and straightforward iconography are required.

Global vs. Local Best Practices

In developed markets, multinational corporations such as Coca-Cola and Unilever are implementing digital tracking through QR codes, refill stations, and reusable bottles. However, Ghana's limited infrastructure prevents these innovations from being fully implemented just yet.

Locally, programs like Trashy Bags Africa show off efficient reuse-based packaging by turning discarded sachets into stylish bags. These products, which feature Ghanaian motifs and colour schemes, combine sustainability with eye-catching visual design. These programs are still specialised, though, and need more widespread legislative and business backing.

Packaging and SDG 12: Responsible Consumption and Production

Goal 12 of the Sustainable Development Agenda places a strong emphasis on resource efficiency, waste reduction, and sustainable production and consumption methods. As a communication tool and an environmental concern, packaging is essential to achieving this goal. In Ghana's urban areas, packaging design must be integrated with waste management infrastructure, public education, and policy support in order to achieve SDG 12.

The entire packaging lifecycle, including material sourcing, consumer use, and end-of-life management, must be taken into account by designers. Through user-friendly design, visual communication should direct consumers towards sustainable behaviour. Circular behaviour can be promoted, for instance, by incorporating illustrated disposal instructions, regional sustainability symbols, or unambiguous take-back messaging.

Design Recommendations

Based on the content analysis and research findings, the following recommendations are proposed:

1. **Localise eco-symbols:** Create identifiable sustainability symbols by drawing inspiration from Ghanaian visual culture.

2. **Simplify messaging:** For easier reading, use high-contrast icons with little text.

3**. Emphasise lifecycle:** Include illustrations that demonstrate the product's capacity for composting, recycling, or reuse.

4. **Promote modular packaging:** by using containers that are stackable, resealable, and returnable to facilitate reuse.

5. **Education and policy:** Work with interested parties to implement public awareness campaigns and require eco-labeling.

Conclusion

Ghanaian urban markets serve as a window into the opportunities and problems associated with sustainable packaging in developing nations. Although international best practices provide insightful information, local cultural, economic, and infrastructure realities must be taken into account. One effective method for closing this gap is visual communication. Designers can contribute to the transformation of consumption patterns by rethinking packaging aesthetics to conform to the principles of the circular economy and incorporating sustainability cues in ways that resonate with different cultures. Designers, manufacturers, consumers, and legislators must work together to achieve SDG 12 in Ghana; they are all connected by the simple yet effective medium of packaging.

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