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Abstract

*This paper aimed at examining how the technology of Eco-packaging can be harnessed for optimum marketing performance. In light of the above, survey research was carried out among top management employees of soft drinks production companies in Port Harcourt. With a total population of 70, Taro-Yamane sampling technique was employed to obtain a sample size of 63. Structured copies of the questionnaire were used to collect primary and secondary data from respondents, and was analyzed using the Pearson Product Moment Correlation Coefficient analytical tool with aid of the Statistical Package for Social Sciences version 22. Furthermore, the findings of the study revealed a significant association among the studied variables with a significant p -value of 0.000**. Prominent among the dimensions was the recyclable packaging with a correlation coefficient of 0.854, a type of packaging that encourages the use of biodegradable materials for packaging for environmental sustainability and further processing of a new container while striving for the attainment of organization's goals. It was therefore recommended that producers of soft drinks should adopt Eco-packaging with emphasis on the use of recyclable packaging in order to optimize sales performance.*

Keywords: Socially responsible packaging, Green packaging, Green consumption, Biodegradable, Sustainable Development Goals (SDGs)

1. Introduction

Performance is a key indicator of growth and sustainability in the business terrain. Performance in marketing has been variedly measured using indices such as sales volume, profit, market share, customer traffic, customer retention, customer satisfaction, etc. Advancement in technology should be one that

considers environmental and ecological benefits to the people, in that, technology does not cause any adverse damage to the society while pursuing corporate performance (Horváthová, 2012).

Eco-packaging exists basically to minimize environmental impact, ensure fair labor practices, and promote economic sustainability. Eco-packaging employs the tenets of green packaging and socially responsible packaging (Nguyen, Parker, Brennan & Lockrey, 2020).

Many businesses are now adopting socially responsible packaging practices as a way to demonstrate their commitment to sustainability and corporate social responsibility. The use of socially responsible packaging strategies would not only reduce the environmental impact of packaging but also can enhance a company's reputation and appeal to environmentally conscious consumers (Wang, Xue, Wang & Li, 2018).

There is growing evidence that adopting socially responsible packaging practices can have a positive impact on the sales performance of manufacturing firms. As consumers become more environmentally and socially conscious, they are more likely to purchase products that meet environmentally friendly and ethical considerations (Magnier & Crié, 2015) which in turn leads to attainment of sustainable development goals.

Scholars have highlighted the ecological benefits of preserving the environment in pursuant of firm's objectives. A study conducted in Czech Republic by Horváthová (2012) examined the danger of environmental pollutant to financial performance of business. Similarly, Nguyen, Parker, Brennan and Lockrey (2020) conducted a study to examine consumers' perception of eco-packaging and its impact on the environment. An empirical study conducted by Zhao, Pan, Cai, Xin and Wu (2021) revealed that eco-packaging can be a viable tool for achieving brand attachment among online consumers. More so, Ling and Halabi (2024) demonstrated in a recent study that green packaging design significantly influences consumer purchase behaviour. In light of the above, the current paper tends to investigate the impact of eco-packaging on marketing performance of producers of soft drinks, particularly in the Nigerian context.

Objectives of the study

The study's objectives include to examine the impact of reducible packaging, reusable packaging and recyclable packaging on marketing performance.

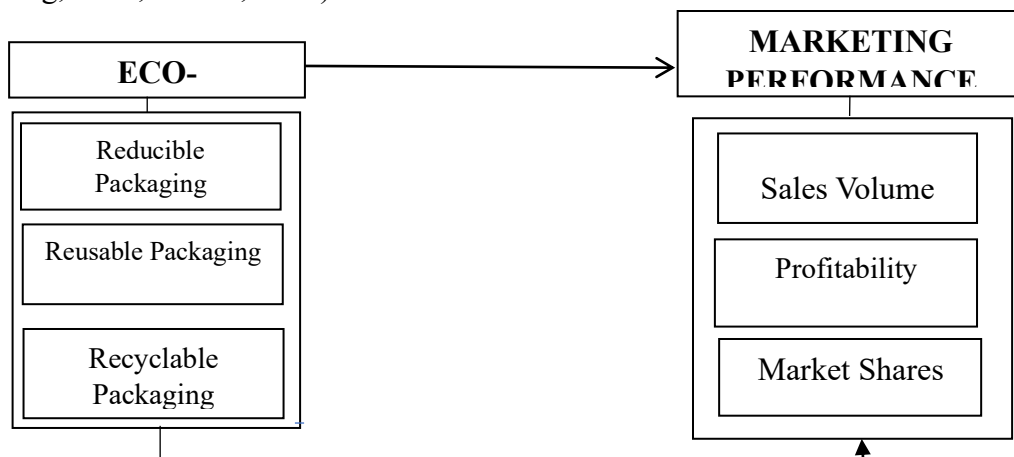
In order to achieve set objectives, the study sought to answer the following research questions; to what extent does:

- i. Reducible Packaging impact on marketing performance of Producers of Soft Drinks in Port Harcourt
- ii. Reusable Packaging relate to marketing performance of Producers of Soft Drinks in Port Harcourt
- iii. Recyclable Packaging impact on marketing performance of Producers of Soft Drinks in Port Harcourt

2. Literature Review

2.1 Theoretical Foundation

The study anchors its theoretical underpinning on the Green consumption theory. Green consumption is the consciousness of a consumer to patronize only those products that are considered environmental friendly. Green consumption emanates from consumer's long-held values and considerations for obtaining a product and at the same time preserving and protecting the environment from immense danger (Wu & Chen, 2014). To influence green consumer behaviour on part of the consumers, creation and improvement of a consumer's self-regulation abilities in terms of enhancing their green consumption self-efficacy is essential (Wang, Shen, & Chu, 2021).



Source: *Eco-Packaging* (Nguyen, Parker, Brennan and Lockrey, 2020; Magnier & Crie, 2015); *Marketing Performance* (Homburg, Artz, & Wieseke, 2012).

In other words, consumers who are expected to act on their purchase intentions might not display that behavior without a high level of self-efficacy on the consumers' part (Wang, Wang, Wang, Li & Zhao, 2018). Eco-packaging satisfies the customer's curiosity in that the customer is conscious of ensuring his/ her environment is not damaged in the process of consuming a product.

2.2 Marketing Performance

Performance refers to the accuracy and consistency in carrying out a task. Performance is mostly used as a conjunction than it is used as a stand-alone word (Folan, Browne & Jagdev, 2007). E.g. music performance, education performance, business performance, marketing performance, sales performance, etc.

Marketing performance is the consistency and accuracy in carrying out marketing related activities. In other words, marketing performance is achieved when specific marketing related goals are met in line with the firm's central aim. Some of the most popularly adopted performance indicators in marketing include sales volume, market share, profitability, customer satisfaction, customer traffic and foot traffic, etc. These performance measures in marketing serve as scorecard for assessing a comprehensive marketing related achievement towards the actualization of organization's set goal (Homburg, Artz, & Wieseke, 2012).

Sales volume refers to the quantity or number of products or services sold by a company within a specific period. It represents the total amount of goods or services that customers have purchased from the company. Sales volume can be seen as tangible output that arise from the efforts of a firm's salesforce (Cook & Hababou, 2001). Sales volume is a crucial for determining sales performance and an important measure of a firm's success and revenue generation. Hartmann, Homburg and Ruhnau (2024) pointed at sales volume as key indices for measuring salesperson performance, others include revenue and profitability.

Profit is the financial gain and reward that comes in the form of difference between amount invested and amount received within a given time period. Profitability is a formidable pillar for long-run survival of a business (Alarussi & Alhaderi, 2018). Young (2013) maintained that even not-for-profit organization indirectly have some profit intentions. Profit is therefore another popular measure of marketing performance.

Market share refers to the portion or percentage of total industry sales or revenue that a company captures within a specific market or industry. It is a measure of a company's relative position and competitiveness within the market. One major objective of an organization is to widen its customer base and increase its market share (Adeleke, Obi-Anike & Okafor, 2020). Market share is a crucial indicator of a company's performance and can influence its bargaining power, profitability, and economies of scale. It is often used to evaluate a company's market position, growth potential, and effectiveness in capturing a share of the target market.

2.3 Eco-packaging and Marketing Performance

Eco packaging" refers to packaging practices that prioritize environmental sustainability and social responsibility. It involves the use of materials, designs,

and processes that minimize negative environmental impacts, conserve resources, and promote ethical practices throughout the product life cycle. This concept is important for addressing environmental concerns, meeting consumer expectations for sustainable products, and enhancing brand reputation (Cherian & Jacob, 2016). Socially-responsible packaging demonstrates a company's commitment to environmental stewardship and aligns with consumer values, contributing to a more sustainable and responsible business approach.

Reducible packaging has become increasingly popular among food producers due to Emerging consumer demands and market trends (Kordjazi & Aji, 2022). Reducible packaging refers to packaging designs and practices aimed at minimizing the overall amount of packaging material used. It involves strategies such as optimizing packaging size, weight, and design elements to reduce the environmental impact associated with packaging waste generation and disposal.

Reusable packaging refers to packaging materials and systems that are designed to be used multiple times for different purposes. It involves the use of durable materials and designs that can withstand repeated use without significant degradation or loss of functionality (Coelho, Corona, Klooster & Worrell, 2020). Reuse basically means that package can be used more than one time. Business should work on that to find suitable materials that is reliable and reusable. Reusing packaging involves utilizing it multiple times before disposal. This can be done by returning the packaging to the manufacturer or retailer for refilling. For example, glass bottles, plastic containers, or tote bags can be designed for repeat use. Reusable packaging aims to minimize packaging waste and the environmental impacts associated with single-use packaging (Bradley & Corsini, 2023).

Recyclable packaging refers to packaging materials that can be collected, processed, and transformed into new products through recycling processes. It involves using materials that have the potential to be recovered and reintegrated into the production cycle, reducing the demand for virgin materials and minimizing waste generation (Zhang & Zhao, 2012). Recycle is the process of making new products from waste materials. This process not only helps reduce the waste of materials but also reduce the use of new raw materials. Therefore, it reduces the use of materials which leads to prevent air pollution and water pollution. Recycling packaging involves processing the materials to create new products. Materials such as paper, cardboard, metals (e.g., aluminum, steel), and glass are commonly recyclable. By recycling packaging materials, valuable resources are conserved, energy is saved, and the environmental impact of waste disposal is reduced (Franz & Welle, 2022). Effective recycling requires consumer participation in proper waste sorting and recycling programs.

3. Methodology

This study adopted the survey design, and a mix method whereby literatures were reviewed and primary and secondary data were collected using copies of the questionnaire. The study's respondents include top management employees of soft drinks companies, producers of canned and bottled drinks. With a total population of 70, the Taro-Yamane sampling technique was employed to obtain a sample size of 63. To this end, bivariate and multivariate analyses were conducted using Pearson Product Moment Correlation Coefficient (PPMCC) analytical tool to ascertain the impact of the independent variable on the dependent variable. A reliability threshold of 0.8 was achieved, all with the aid of the SPSS 22.0 software.

4. Results and Discussion

Table 1: Reducible Packaging and Sales Performance of Nigeria Bottling Company

	N	Mini mum	Maxi mum	Mean	Std. Deviation
Reducible optimizes packaging size, weight, and design elements to reduce the environmental impact associated with packaging.	63	1.0	4.00	2.54	1.2239
The goal of reducing packaging is to minimize the amount of material used.	63	1.0	4.00	2.20	.72843
Reducible packaging helps reduce resource consumption, energy usage, and carbon emissions associated with the production, transportation, and disposal of packaging materials	63	1.0	4.00	2.40	.90711
Valid N (listwise)	63				

Source: Researcher Field Study (2024)/SPSS Computation

The table above showed items used in measuring reducible packaging and sales performance. Item 1 has mean score of 2.5400 standard deviation of 1.23239, Item 2 has mean score of 2.2000 and standard deviation of .72843, Item 3 has mean score of 2.4400 and standard deviation of .90711. This implies that reducible packaging enhanced sales performance of Nigeria bottling company in Rivers State.

Table 2: Reusable Packaging and Sales Performance of Nigeria Bottling Company

	N	Minimum	Maximum	Mean	Std. Deviation
Reusable packaging can be done by returning the packaging to the manufacturer or retailer for refilling.	63	1.0	4.00	2.32	.84370
Reusable approach reduces the need for constant production of new packaging materials, leading to resource conservation and waste reduction.	63	1.0	4.00	2.52	.70682
Reusable packaging contributes to a circular economy by extending the lifespan of packaging materials	63	1.0	4.00	2.20	.75593
Valid N (listwise)	63				

Source: Researcher Field Study (2024)/SPSS Computation

The table above showed items used in measuring reusable packaging and sales performance of Nigeria bottling company in Rivers State. Item 1 has mean score of 2.3200 and standard deviation of .84370, Item 2 has mean score of 2.5200 and standard deviation of .70682, Item 3 has mean score of 2.2000 and standard deviation of .75593 and standard deviation of 1.23239. This shows that reusable packaging enhanced sales performance of Nigeria bottling company in Rivers State.

Table 3: Recyclable Packaging and Sales Performance of Nigeria Bottling Company

	N	Minimum	Maximum	Mean	Std. Deviation
Recyclable packaging helps reduce the waste of materials but also reduce the use of new raw materials.	63	1.0	4.00	2.40	.90351
Effective recycling requires consumer participation in proper waste sorting and recycling programs.	63	1.0	4.00	2.32	.81916
It offers the potential for reducing landfill waste and conserving resources by reusing materials in a continuous loop.	63	1.0	4.00	2.76	1.02140
Valid N (listwise)	63				

Source: Researcher Field Study (2024)/SPSS Computation

The table above showed items used in measuring recyclable packaging and sales performance of Nigeria bottling company in Rivers State. Item 1 has mean score of 2.4000 and standard deviation of .90351, Item 2 has mean score of 2.3200 and standard deviation of .81916, Item 3 has mean score of 2.7600 and standard deviation of 1.02140. This implies that recyclable packaging enhances marketing performance of Nigeria bottling company in Rivers State.

Correlations

		Reducible packaging	Marketing performance
Reducible packaging	Pearson Correlation	1	.823**
	Sig. (2-tailed)		.000
	N	63	63
Marketing performance	Pearson Correlation	1	.823**
	Sig. (2-tailed)		.000
	N	63	63

**** Correlation is significant at the 0.05 level (2-tailed)**

Hypothesis one shows that the significant proportion of respondents 0 000 is less than the correlation significant at 0.05 level. Also, the correlation coefficient of 0.823 indicates 82.3% relationship. We therefore reject the null hypotheses H_0 and conclude on the alternate hypotheses that there is a significant relationship between reducible packaging and sales performance of manufacturing firms in Rivers State.

H₁: There is a significant relationship between reducible packaging and marketing performance of producers of soft drinks in Port Harcourt metropolis.

Correlations

		Reusable packaging	Marketing performance
Reusable packaging	Pearson Correlation	1	.847**
	Sig. (2-tailed)		.000
	N	63	63
Marketing performance	Pearson Correlation	.847**	1
	Sig. (2-tailed)	.000	
	N	63	63

**** Correlation is significant at the 0.05 level (2-tailed)**

For hypotheses two, the significant proportion of respondents 0.000 is less than the correlation significant at 0.05 level. More so, the variables correlate at 84.7% coefficient. We therefore reject the null hypotheses H_0 and conclude on the alternate hypotheses that;

H₂: There is a significant relationship between reusable packaging and marketing performance of producers of soft drinks in Port Harcourt.

Correlations

		Recyclable packaging	Marketing performance
Recyclable packaging	Pearson Correlation	1	.854**
	Sig. (2-tailed)		.000
	N	63	63
Marketing performance	Pearson Correlation	.854**	1
	Sig. (2-tailed)	63	63
	N		

** Correlation is significant at the 0.05 level (2-tailed)

For hypotheses three, the significant proportion of respondents 0.000 is less than the correlation significant at 0.05 level. Furthermore, the correlation coefficient of 0.854 is an indication that recyclable packaging contributed to 85.4% of the firms' marketing performance. We therefore reject the null hypotheses H_0 and conclude on the alternate hypotheses that there is significant relationship between recyclable packaging and marketing performance of producers of soft drinks in Port Harcourt.

H₃: There is a significant relationship between recyclable packaging and marketing performance of producers of soft drinks in Port Harcourt.

5.2 Conclusion

The study found a significant relationship between eco-packaging and marketing performance of producers of soft drinks in Port Harcourt. More so, recyclable packaging had greater significance on marketing performance among producers of soft drinks in Port Harcourt.

5.3 Recommendations

Based on the findings of the study, we recommended that producers of soft drinks in Port Harcourt should:

1. Adopt reducible packaging for the attainment of marketing performance
2. Adopt reusable packaging in order to achieve marketing performance

3. Most importantly, emphasize the use of recyclable packaging as it has the most significant contribution to marketing performance.

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