Impact of Recycling and Marketing Effectiveness of Food and Beverages Firms in Nigeria.

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Abstract
The study examined the relationship between recycling and marketing effectiveness of food and beverages firms in Rivers state, Nigeria. An extensive literature review was carried out covering the study variable and measure. The study adopted cross-sectional survey framework. Fourteen (14) food and beverage firms in Nigeria, listed in the Nigerian Stock Exchange Facts Book of 2017/2018 constituted the population of our study. Eighty-Four (84) respondents were drawn from the Fourteen (14) food and beverage firms under review. A self-administered, structured questionnaire was employed to obtain primary data and data was analyzed. The research hypotheses were tested with the Pearson product moment correlation statistical tool to establish the degree of relationship. The reliability of the research instrument was tested using the Cronbach's Alpha which revealed that all the scores of the variables satisfied the standard Cronbach's Alpha threshold of 0.7. With the aid of the statistical package of social sciences software (SPSS) version 20.0, frequencies were computed to establish the sample characteristics. The study found that; recycling is positively and significantly related to marketing effectiveness. Based on the results of the analysis, the paper concludes that recycling has a positive and significant relationship with marketing effectiveness. The paper therefore, recommends that; effort should be made by the organizations in the food and beverages industry to develop better understanding of recycling strategies as a matter of necessity.

Introduction

In Nigeria, the changing dynamics of food and beverages and other manufacturing industries market forced players at all levels to remanufacturing. The food and beverages industry operations and functions were remodelled to meet emerging challenges of diversification, slashing operating cost, outsourcing, portfolio investment, production and manufacturing systems. The change brought about by recycling in food and beverages industry are reflected in product and services to give a new form or structure by introducing product and service scheme such as soft and alcoholic drink (plastic bottle waters, aluminium cans and polyethylene terephthalate (PET) plastic bottles) and sachet waters of different price range. Firms have become increasingly concerned over sustainability and environmental management. Recycling has gained prominence due to its ability to provide solutions to this concern. The rise of recycling is driven by several factors. Customers have put immense pressure on companies to become more environmentally responsible. In an online study conducted by the Nielsen Company (2015), 66% of worldwide respondents are willing to pay more for goods and services that come from companies that are committed to corporate social responsibility and environmental conservation, a rise from 55% in the year 2014, and 50% in 2013. Government and non-governmental bodies have acted as drivers to the adoption of reverse logistics through formulation and implementation of environmental acts, policies and agreements. Economic incentives have also contributed to the

growth of recycling. According to Ruiz-Benítez & Cambra-Fierro (2011), recycling leads to reduced costs, improved customer service, increased productivity, increased facility output and improved service levels.

This study aims to examine the relationship between recycling and marketing effectiveness of food and beverages firms with respect to beverage containers of soft and alcoholic drink (plastic bottle waters, aluminium cans and polyethylene terephthalate (PET) plastic bottles) in Nigeria.

Literature Review

Theoretical Implication

The resource-based view theory regards the firm as a cognitive system, which is characterized by idiosyncratic and context-dependent competences that are core to strategic purposes. These are conditioned by hierarchical capabilities, or sets of routines, involved in the management of the firm's core business processes that help to create value. An organization may choose to focus on implementing recycling to expose the negative environmental performance of its competitors. In this way, the organization can cut a niche for its products. Developing and implementing recycling can only be achieved through creating environmentally responsible policies and investing in the necessary equipment and training. Creating a competitive advantage through implementing recycling would lead to improved market share and consequently higher profit margins (Fortes, 2009). In conclusion, this theory leverages upon the fact that in order to drive performance, an organization needs to develop a distinct competency that will push their competitiveness. One of the ways of achieving this is through having an integrated recycling.

Concept of Recycling

Recycling involves the reduction of products to their basic elements which are then reused (Rogers & Tibben-Lembke, 1998). Recycling encompass the process of collecting used products, components, and materials from the field, disassemble them, separating them into sorts like materials, and processing into recycled products, components, and materials (Beamon, 1999). Another description of recycling is the process by which materials that would otherwise become waste are collected, separated or processed are returned to the economic mainstream to be reused in the form of raw materials or finished goods (Global Recycling Network, 2008). Organizations can recycle when the product is broken down and mined for components that can be reused or resold (Ji, 2008).

Recycling saves firms the cost of transportation of materials to be disposed and the cost of land acquisition for a landfill. For instance, in New Zealand, the setup costs for a landfill vary between $2m to $30m with annual capacities between 10,000 tonnes to 500,000 tonnes (Denne et al., 2007). Secondly, recycling saves the firm energy consumption and promotes material recovery. The material usage per unit of output is reduced and therefore yield improved eco-efficiency (World Business Council for Sustainable Development, 2000). Thirdly, recycling promotes environmental conservation. According to NEMA (2007), over 2,000,000 plastic bags are generated in

Nairobi. This shows a growing concern for the need to recycle. When a firm recycles for the sake of being more environmentally responsible, consumers would find it more legitimate therefore they would be more willing to buy the firm's products.

Marketing Effectiveness

The purpose of marketing effectiveness is to optimize marketing spending for the short and long term in support of, and in alignment with, the brand strategy by building a market model using valid and objective marketing metrics and analytics (Powell, 2008).

Marketing effectiveness has attracted a great deal of attention in academic and managerial circles (Kotler 1977; Dunn et al., 1994; Ghosh et al., 1994; Appiah-Adu et al., 2001; Vorhies & Morgan 2003; Homburg et al., 2007). According to Connor & Tynan (1999), the majority of studies of marketing effectiveness have relied essentially on the use of one or more of three key approaches developed by Kotler (1977), Hooley & Lynch (1985) & Carson (1990). Marketing effectiveness calls for managers to have sufficient information for the purposes of planning and effective resource allocation to varying markets, products and territories. Marketing effectiveness is also contingent upon the adeptness of managers to deliver profitable strategies from their philosophy, organization and information resources. Ultimately, marketing effectiveness depends on the ability to implement marketing plans successfully at various levels of the organization (Adu et al, 2001). There are four basic dimensions of marketing effectiveness (Nwokah, 2006; Nwokah & Ahiauzu, 2008):

(1) Corporate - A company's budget, size and ability to make organizational changes determine its bounds which operate within.

(2) Competitive - A company which operates in a certain category is not alone and it is monitored by many other companies.

(3) Customers - Information of customers' behaviour such as making purchasing decisions can help marketers to enhance their marketing effectiveness. Customers who have similar needs act in the same way which causes their segmentation. Customers of each segment make their choices in relation to product values and characteristics in return for the price they paid. Customers also build brand value through information they receive from advertising, word of mouth and any other company promotional actions.

(4) Exogenous factors - Corporate, competitive and customer environmental factors can influence marketing effectiveness. Interest rate, weather, government regulations are examples of external factors that affect marketing effectiveness.

There are five factors driving the level of marketing effectiveness that marketers can achieve (Nwokah, 2006; Nwokah & Ahiauzu, 2008):

(1) Marketing strategy - Marketing strategy is important for achieving organizational goals. It draws insights from market research and focuses on positioning a product mix correctly.

(2) Marketing creative - Creative marketing can improve company's outcomes even without a change in its strategy. Creative directly connected to growth rate. Consequently, the introduction of a new creative can increase it.

(3) Marketing execution - Marketers can improve marketing effectiveness by improving how they go to market. For example, optimization of the way they enter a market can achieve great results without making any changes in the marketing strategy or marketing creation.
(4) Marketing infrastructure - Improving marketing creates a competitive advantage for each company and organization and can lead to significant gains for them.
(5) Exogenous factors - Marketers have to take advantage of the environmental factors which affect marketing effectiveness. Opportunities that have been drawn from monitoring these exogenous factors can help marketers to improve the effectiveness of their marketing activities.
However, Kotler (1977) and Webster (1995) argue that marketing effectiveness has a strong association with many valuable organizational outcomes such as stable long-term growth, enhanced consumer satisfaction, a competitive advantage, and a strong marketing orientation.
According to Kotler (1977), marketing effectiveness of a business concern is determined by the extent to which the business exhibit the five attributes of marketing orientation, Customer Philosophy, Integrated Marketing Organization, Adequate Marketing Information, Strategic Orientation and Operational Efficiency. Appiah-Adu et al. (2001) cited in Nwokah & Ahiauzu (2008) operationalized marketing effectiveness as combination of five components: customer philosophy, integrated marketing organization, adequate marketing information, strategic orientation and operational efficiency.

Conceptual Framework

The conceptual framework for this study illustrates recycling as its independent variable and marketing effectiveness as the dependent variable with strategic orientation, customer philosophy, integrated marketing organization, adequate marketing information and operational efficiency as its measures.

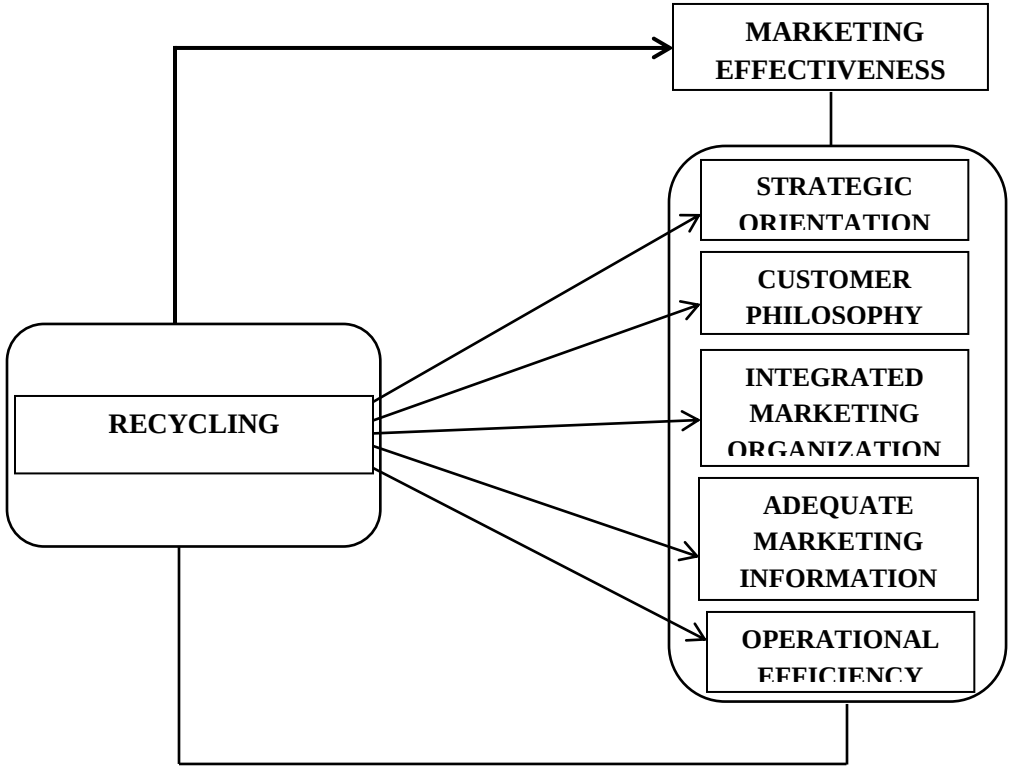

Figure 1: Conceptual Framework of Recycling (a dimension of reverse logistics) and Marketing Effectiveness

Recycling and Marketing Effectiveness

Recycling is a form of reverse logistics practice that is done on products that are not reusable. It is a process where a recycling firm collects non-reusable or destroyed products from the consumer with the aim of entirely modifying them again into new products either of same kind or of different form. Examples of reusable products include parts of metallic or plastic materials. However, not all materials are recyclable, recycling firms select the materials of interest and which are recyclable and destroy or landfill the rest. The difference between recycling and remanufacturing practices is that the recycled products are not usable and it is not a must that the end product

must be of the original form or utility. In other words, the materials from the products to be recycled become raw materials to produce other products (De Brito & Dekker, 2003).

In the world today, organizations that enact product recovery programs, greatly enhancing the image of their brand, are the leading firms in their various industries. Increasing the use of recyclable materials and becoming an industry leader in developing environmentally sustainable business practices were perceived as having the greatest positive influence. All this can be done by implementing a reverse logistics program (Laosirihongthong et al., 2013).

Recycling enables firms to reduce the cost of generating of raw materials for production. Although the recycling firms manufacture their products from scratch, research has proved a huge difference between the costs of natural generation of raw materials and costs of generating raw materials by way of recycling. Recycling firms may buy destroyed or non-reusable products with materials of interest from consumers of the public which they recycle to make completely new products which are sold at multi-fold prices. While most recyclable materials are non-biodegradable, it goes without saying that recycling firms save the environment from potential deterioration (Fawcett et al., 1995).

Such firms remove millions of tons of non-biodegradable wastes from the surroundings. Some firms opt to pay recycling firms to recycle their destroyed products. If a firm recycles its products, it is not worth mentioning that such a firm nets huge amounts of returns and greatly abate its environmental pollution. Recycling is considered green reverse logistics practice; it is a cheaper process of generating raw materials to ensure that the firm is able to produce more products and thus satisfy the market in terms of mainstreaming and sustaining its supply chain (Fleischmann & Kuik, 2003).

We therefore hypothesis that;

Ho_1 There is no significant relationship between recycling and customer philosophy.

Ho_2 There is no significant relationship between recycling and strategic orientation.

Ho_3 There is no significant relationship between recycling and operational efficiency.

Ho_4 There is no significant relationship between recycling and integrated marketing organization

Ho_5 There is no significant relationship between recycling and adequate marketing information

Methodology

This study adopted a cross-sectional survey and a correlation investigation to establish the relationship between recycling and marketing effectiveness of food and beverages firms in Nigeria. The target population for this study was fourteen (14) firms in Nigeria, listed in the Nigerian Stock Exchange Facts Book of 2017/2018, and a sample of eighty-four (84) respondents were drawn from the staff of the selected firms under our study. A structured questionnaire was used to collect primary data; and the questionnaire was designed in Likert

scale five-point form- ranging from Strongly Disagree (SD) to Strongly Agree (SA). The testing of hypotheses was done using Pearson product moment correlation with the statistical package for social sciences software SPSS version 20.0; frequencies were computed to show the sample characteristics.

Reliability

The study tested for reliability at the verge of validating the factors in the context proposed. The reliability of the research instrument was tested using the Cronbach's Alpha threshold of 0.7.

Table 1: Result of Reliability Analysis

VARIABLE	CRONBACH'S ALPHA
Reuse	0.743
Customer Philosophy	0.788
Strategic Orientation	0.750
Integrated Marketing Organization	0.810
Adequate Marketing Information	0.826
Operational Efficiency	0.846

Source: SPSS 22 Output (based on 2019 field survey data)

Test of Hypotheses

Ho_1 There is no significant relationship between recycling and customer philosophy

Table 2 Correlation Analysis showing the relationship between Recycling and Customer Philosophy

Correlations

Type	Variables1	Statistics	Recycling	Customer Philosophy
Spearman's rho	Recycling	Correlation Coefficient	1.000	.665**
		Sig. (2-tailed)	.	.000
		N	75	75
	Customer Philosophy	Correlation Coefficient	.665**	1.000
		Sig. (2-tailed)	.000	.
		N	75	75

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS 20.0 Output (based on 2019 field survey data)

The information in table 2 above shows that the estimated correlation coefficient is 0.665**, based on the categorisation above, the value is high indicating that a strong relationship exists between recycling and customer philosophy. The correlation coefficient is positive implying that a positive relationship exists between them, i.e. increase in recycling is associated with increase in customer philosophy. Table 2 also showed that the probability/significant value is 0.000, this value is less than 0.05 level of significance, hence the researcher rejects the null hypothesis and the alternate is accepted which concludes that a significant relationship between recycling and customer philosophy.

Ho_2 There is no significant relationship between recycling and strategic orientation

Table 3 Correlation Analysis showing the relationship between Recycling and Strategic Orientation

Correlations

Type	Variables1	Statistics	Recycling	Strategic Orientation
Spearman's rho	Recycling	Correlation Coefficient	1.000	.770**
		Sig. (2-tailed)	.	.000
		N	75	75
	Strategic Orientation	Correlation Coefficient	.770**	1.000
		Sig. (2-tailed)	.000	.
		N	75	75

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS 20.0 Output (based on 2019 field survey data)

The information in table 3 above shows that the estimated correlation coefficient is 0.770**, based on the categorisation above, the value is high indicating that a strong relationship exists between recycling and strategic orientation. The correlation coefficient is positive

implying that a positive relationship exists between them, i.e. increase in recycling is associated with increase in strategic orientation. Table 3 also showed that the probability/significant value is 0.000, this value is less than 0.05 level of significance, hence the researcher rejects the null hypothesis and the alternate is accepted which concludes that a significant relationship between recycling and strategic orientation.

Ho_3 There is no significant relationship between recycling and integrated marketing organization

Table 4 Correlation Analysis showing the relationship between Recycling and Integrated Marketing Organization

Correlations

Type	Variables1	Statistics	Recycling	Integrated Marketing Organization
Spearman's rho	Recycling	Correlation Coefficient	1.000	.578**
		Sig. (2-tailed)	.	.000
		N	75	75
	Integrated Marketing Organization	Correlation Coefficient	.578**	1.000
		Sig. (2-tailed)	.000	.
		N	75	75

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS 20.0 Output (based on 2019 field survey data)

The information in table 4 above shows that the estimated correlation coefficient is 0.578**, based on the categorisation above, the value is moderate indicating that a moderate relationship exists between recycling and integrated marketing organization. The correlation coefficient is positive implying that a positive relationship exists between them, i.e. increase in recycling is associated with increase in integrated marketing organization. Table 4 also showed that the probability/significant value is 0.000, this value is less than 0.05 level of significance, hence the researcher rejects the null hypothesis and the alternate is accepted which concludes that a significant relationship between recycling and integrated marketing organization.

Ho_4 There is no significant relationship between recycling and adequate marketing information

Table 5 Correlation Analysis showing the relationship between Recycling and Adequate Marketing Information

Correlations

Type	Variables1	Statistics	Recycling	Adequate Marketing Information
Spearman's rho	Recycling	Correlation Coefficient	1.000	.503**
		Sig. (2-tailed)	.	.000
		N	75	75
	Adequate Marketing Information	Correlation Coefficient	.503**	1.000
		Sig. (2-tailed)	.000	.
		N	75	75

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS 20.0 Output (based on 2019 field survey data)

The information in table 5 above shows that the estimated correlation coefficient is 0.503**, based on the categorisation above, the value is moderate indicating that a moderate relationship exists between recycling and adequate marketing information. The correlation coefficient is positive implying that a positive relationship exists between them, i.e. increase in recycling is associated with increase in adequate marketing information. Table 5 also showed that the probability/significant value is 0.000, this value is less than 0.05 level of significance, hence the researcher rejects the null hypothesis and the alternate is accepted which concludes that a significant relationship between recycling and adequate marketing information.

Ho_5 There is no significant relationship between recycling and operational efficiency

Table 6 Correlation Analysis showing the relationship between Recycling and Operational Efficiency

Correlations

Type	Variables1	Statistics	Recycling	Operational Efficiency
Spearman's rho	Recycling	Correlation Coefficient	1.000	.579**
		Sig. (2-tailed)	.	.000
		N	75	75
	Operational Efficiency	Correlation Coefficient	.579**	1.000
		Sig. (2-tailed)	.000	.
		N	75	75

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS 20.0 Output (based on 2019 field survey data)

The information in table 6 above shows that the estimated correlation coefficient is 0.579**, based on the categorisation above, the value is moderate indicating that a moderate relationship exists between recycling and operational efficiency. The correlation coefficient is positive implying that a positive relationship exists between them, i.e. increase in recycling is associated with increase in operational efficiency. Table 6 also showed that the probability/significant value is 0.000, this value is less than 0.05 level of significance, hence the researcher rejects the null hypothesis and the alternate is accepted which concludes that a significant relationship between recycling and operational efficiency.

Discussion

This study examined the relationship between recycling and marketing effectiveness of food and beverages firms in Nigeria. It was hypothesized that there is no relationship between recycling and measures of marketing effectiveness which are strategic orientation, customer philosophy, integrated marketing organization, adequate marketing information and operational efficiency. However, the result from the Pearson product moment correlation analysis shows that a significant relationship exist between them. Based on that, the null hypotheses were rejected and the alternate hypotheses were accepted. This is in line with the views of Agunwamba (2003) observed that a well-planned recycling program in Nigeria could result in savings of up to 78% in waste management costs and 79.5% in landfill avoidance costs. Aside from the economic gains of recycling, environmental benefits, such as the reduction of greenhouse gas emissions, air, and water pollution associated with production from virgin raw materials, are likely to accrue from waste recycling (Adu & Aremu, 2012). The importance of recycling cannot be overemphasized; it decongests the environment of nuisance items that constitutes pollution while providing opportunity for reuse of items.

Conclusion

The results of the data analysis anchored on review of related literature reveals that recycling has a positive, significant relationship with marketing effectiveness. Therefore, the study concludes that recycling has a substantial, affirmative relationship with marketing effectiveness. Recycling effort should be made by the organizations in the food and beverages industry to develop better understanding of recycling strategies as a matter of necessity.

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