

ECO BASED RECYCLABILITY AND SALES GROWTH OF QUOTED FOOD AND BEVERAGES FIRMS IN NIGERIA

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ABSTRACT

The study investigated the influence of eco-based product recyclability on sales growth of food and beverages firms in Nigeria. The study is a quantitative research using panel data framework. Alpha reliability coefficient calculated for each of the dimensions of eco-based product strategies is above the threshold value of 0.7. All empirical analysis were done using excel version 2016, SPSS version 22 and EViews version 10 respectively. Package recyclability shows positive influence on sales growth. However, while the influence is highly significant for market share, it is weakly significant for profitability and insignificant for sales growth. Based on this finding, the study concludes that when each of the marketing success measures was modeled to depend on the three dimensions of eco-based product strategies, the results shows that the market share model performed better than those of sales growth and profitability. Following this, the study recommends that food and beverages firms should package their products with materials that are reusable which helps them to reduce the cost of production thereby increasing profitability.

Key words: Eco-based product Recyclability, Sales Growth, Eco, Pooled Regression Analysis.

INTRODUCTION

On the account of increasing ecological challenges and its unpleasant impact on the changing marketing landscape; today, firms across the globe are increasingly seeking ways of improving their performance in the production and marketing of consumer goods. A marketing response in this direction has received widely spread marketing attention; where producers have modified existing or even introduced new production strategies to reduce ecological impact, enhance the environmental performance as well as increase marketing success (Gbadeyan & Omolekan, 2015).

Focusing on customer and total adherence to environmental issues has been adjudged to be a strong veritable tool for business success outcome (Ambler & Kokkinaki, 1997; Nwokah & Maclayton, 2006; Hasan & Ali, 2015; Katsikeas, Leonidou & Zeriti, 2016; Abdulrahman, 2017). What is observed in today's marketing endeavors is the abysmal performance of firms dealing in consumer goods. This perhaps could be attributed to non-adherence to "eco-based products" best practices. Food and beverages firms operating in Nigeria are not expected to experience low optimal marketing success if they apply their strategies correctly. However, Chukwu (2009) stated that there is an evidence of poor performance in the food and beverages firms and highlighted the negative impact of their activities on land use and land capability, noise and vibration, as well as environmental insensitivity which affected their performance.

The food and beverages industry must be aware of the contents of the wastes they generate with the view to making them environment friendly. This is more so when it is realized that waste from food industry has the potential of polluting the environment. Pollution of environment resulting from unrestrained activities of the food and beverages firms has impacted negatively on land use and land capability for man, and aquatic life (Chukwu, 2009). This is obvious in the published annual report of some of the quoted food and beverages firms. A case in point is the annual statement of

Nigeria breweries Plc from 2014-2016 and UAC Plc that reported fluctuations in market share, sales growth and profitability. The agitating question here is; what could have accounted for this unexpected performance? How then can eco-based products be strategized to make it effective in contributing significantly to superior marketing success? Based on these uncertainties, this study investigated the nexus between "eco-based product strategies and marketing success."

Hypothesis

Ho₁: Package recyclability does not significantly influence sales growth.

Resource-Based View

The theoretical footing of this study is founded on Resource-Based View (RBV). This theory postulates that organizational performance outcomes are dependent on its resources and capabilities. It further stresses that the basis for the competitive advantage of a firm lies primarily in the application of a bundle of valuable tangible or intangible resources at the firm's disposal (Wernerfelt, 1984; Rumelt, 1984; Penrose, 1959). By supporting the potency of this theory, Vandermerwe (1996) and Barney (1991) contend that the possession of strategic resources enables an organization to gain a golden opportunity to develop competitive advantages over its rivals. Such resources are strategically divided into tangible and intangible. The tangibility of a firm's resource is an important consideration within resource-based view theory. Tangible resources are resources that can have a physical presence. They include among others, a firm's technology, property, assets, plant, and equipment, as well as cash. In contrast, intangible resources are not physically present. Among these comprise, the knowledge and skills of employees, a firm's reputation, and a firm's culture, capabilities which are key element of intangible resources, information in form of labeling, organizational processes. In the context of this theory, resources refer to what an organization owns; while capabilities refer to what the organization can do (Barney, 1991).

Capabilities often arise over time while the firm takes actions that build on its strategic resources (Hart & Dowell, 2010). Some firms develop a dynamic capability, where a company has a unique ability of creating new capabilities to keep pace with changes in its environment. The theory also holds that it is important to recognize that strategic resources can be created by taking several production strategies, such as product packaging; product labeling, package recyclability, advertising, to mention a few; and resources that each could be put together in a way that cannot be imitated (Hart & Dowell, 2010).

Discussing the relevance of this theory, Barney (1991) argues a resource is strategic to the extent that it is valuable, rare, difficult to imitate, and non-substitutable. Strategic resource is an asset that is analyzed using the tool of VRIN; which stands for strategic resources that are valuable (V), rare (R), difficult to imitate (I), and non-substitutable (N). From the analytical tool of VRIN, the resources-based theory postulates that a resource is valuable to the extent that it helps a firm create strategies that capitalize on opportunities and ward off threats. It aids in improving the organization's performance and success while neutralizing the opportunities and threats of competitors.

Package Recyclability

Package recycling is the process of converting waste materials into new materials and objects (Hammed, Soyingbe & Adewole, 2011). According to Hammed *et al.*, (2011) product package recycling is an alternative to "conventional" waste disposal that can save materials and help lower greenhouse gas emissions (compared to plastic production). Package recycling can prevent the waste of potentially useful materials and reduce the consumption of fresh raw materials, thereby reducing energy usage, air pollution (incineration), and water pollution (land filling) (Hammed *et al.*, 2011). There are some ISO standards related to recycling such as ISO 15270:2008 for plastics waste and ISO 14001:2004 for environmental management control of recycling practice.

Drawing from the view of Hammed et al (2011) package recycling leads broadly to less waste sitting in landfills which is generally considered a public bad, hence it is a form of environmental conservation. Package recycling is the practice of reusing items that would otherwise have been discarded as waste (Oke, 2016). Variations of recycling according to Oke (2016) include up-cycling, which involves adding value to an item for reuse, and down-cycling which involves breaking down an items or substances into its component elements to reuse anything that can be salvaged. Again Hammed (2013) states recycling of a material would produce a fresh supply of the same material such as used office papers which would be converted into new office papers or used polystyrene foams into new polystyrenes.

Similarly, Edom (2016) identified pre-cycling as an alternative approach which involves avoiding the acquisition of unnecessary items that would have been recycled or dealt with as waste and e-cycling which is the practice of reusing, or distributing for reuse, electronic equipment and components rather than discarding them at the end of their life cycle. Edom (op. cit.) notes discarded electronics and electronic components (e-waste) are creating serious problems because of toxic elements involved in their production. They stated that usually, discarded computers and other electronic devices, such as cell phones, are functional and could be passed on to another individual or organization. Often, even non-functioning devices can be refurbished and resold or donated (Edom, 2016).

Concept of Marketing Success

Presumably, success is some combination of revenue, conversion rate, traffic, engagement, and/or leads. There's probably a logical influence of what firms do and their success metric, but does their success mean their competitors' failure? For a company to succeed, all departments need to be working together: marketing generates leads and awareness, sales generates booked revenue, while operations deliver the service or product. This symbiotic relationship works because each team is dependent on the others to keep the flywheel spinning.

Marketing success according to Arnold (2016) is defined as the number of new customers, revenue, and the return on investment (ROI) of a firm. Ultimately, these are the three items that will determine the success of any business and what senior management will care about most. If they can deliver results to in these three areas, then marketing success is guaranteed (Arnold, 2016). In the marketing literature market share and profitability are the most common performance measures (Day, 1990; Green et al, 1995). The essence of a business strategy is an integrated set of actions in the pursuit of a competitive advantage thus placing the emphasis on market share (Day, 1984). Green et al (1995) define performance as the degree of market success attained by a product at market maturity or the point at which product boundaries change.

The concept of marketing success is an unwritten law of every organization. This suggests that every organization should see success as an absolute prerequisite for its sustenance. A critical concern for firms is success hence, unique, invaluable and difficult to imitate resources is considered to be the major drivers to succeed for any firm especially food and beverages firms (Graci & Dodds, 2008). Excellence in success is the main competitive advantage for any firm. Many scholars have defined success in similar way yet, there is a variation in measuring success criterion. Thus this study pins tent with Ambler and Kokkinaki (1997), Hunt and Arnett (2006); Katsikeas, Leonidou and Zeriti, (2016), and Abdulrahman (2017) to determine the success measurement index (sales growth, market share and profitability) for this study.

Sales Growth as a Measure of Marketing Success

Marketing success is a central issue in marketing studies, and sales growth is often believed to be an adequate indicator of organizational success. As Whetten (1980) remarked, firm's growth is an implicit assumption in research studies because it is generally assumed that "growth is synonymous with effectiveness", that "bigger is better" and that "there is a positive correlation between size and age" (p. 577). By reacting to this line of thought, sales growth is conceived to be the extent to which

the average sales of a firm's products or services has grown, typically over the years. Bilal et al (2016) argues that "sales growth" usually means success, because a growing business is a thriving business.

Growth in sales and market share are important to a business to ensure long-term viability and resource availability (Vorhies & Harker, 2000:150). Bilal et al (2016) examined empirically the influence of green marketing strategy on sales growth of green cars in Jordan. The findings of their study reveal both positive (green product, green promotion and green process) and negative (green price, green physical evidence, green people, green distribution on sales growth) influence of green marketing strategy on sales growth. The study further found adoption of green marketing strategy significantly increased the sales growth of green cars. However, the adoption of marketing strategies declined the sales growth of non-green cars.

The adoption of green marketing strategies is essential for the growth in sales of green cars as suggested by the finding of the study Eneizan et al (2016) on the effects of green marketing strategies on sales volume of green cars Singaporean. According to them it is difficult to increase the sale if the adoption of the green marketing strategy is ignored. To increase the sale of green products the product specifications have to be superior to those of the non-green ones. The adoption of green strategies is thus the most important for firms to grow their sales. Also Eneizan et al (2016) found green product, green promotion, green process positively relates to the sales growth while green price, green physical evidence, green people, and green distribution has a negative relationship with the sales growth.

Effective sales growth can be achieved by implementing successful eco-based product strategies as it has strong evidence of relationship under the condition of adopting the eco-strategy by firms (Eneizan et al, 2016). The growth in harmful effects on bio-physical environment has been responsible for a huge quantity of small enterprises to adopt a sophisticated strategic stance for utilizing eco-related opportunities. Accordingly, firms will be motivated by adopting the internal green-marketing strategies such as green product, green price, green distribution, green promotion, green people, green process, and green physical evidence which may be a positive outcome of green marketing. A strong correlation is found between environmental issues, capability to integrate and financial performance in form of ROI, earning or growth in sales and market share in a study conducted by Klassen and McLaughlin (1996). Adopting the natural environmental orientation also has a positive influence on market and financial performance.

In their view understanding how fast a firm is growing is a critical component of any marketing analysis. Selling a product or service is the most fundamental factor in the success of any business, and sales growth rates are a direct way to assess how successful a firm is actually doing. Sales growth is the increase in sales over a specific period of time. However, positive growth refers to an expansion in business sales (Abdulrahman, 2017).

Drawing from the view of Bilal et al, (2016) sales growth is an increase of a firm's sales when compared to a previous quarter's revenue performance. The current quarter's sales figure can be compared on a year-over-year basis or sequentially. Sale growth is the extent to which firms gain intensity, magnitude, and value, hence the greater the sales growth the better (Bilal et al. 2016). For example, a company reports ₦1.2 billion in total revenue last year and ₦1.8 billion for the most recent year. This year's ₦1.8 billion minus last year's ₦1.2 billion is \$600 million in actual revenue growth. Next divide ₦600 million with last year's ₦1.2 billion revenue number. That's 0.5, then multiply by 100 which gives 50%. Therefore, this hypothetical company had total revenue growth of 50% from last year to this year.

Eco-Product Packaging and Marketing success

Packaging is widely described as an ultimate selling proposition stimulates impulsive buying behavior, increasing market share and reducing promotional costs. Packaging can be defined as the container which is necessary to convey a product to the ultimate consumer, as contrasted with packing (cartons, crates, etc.) that is required for bulk shipment. Also, packaging is the art of enclosing or protecting products for distribution, storage, sale which is bought by the consumer. Corroborating this view, Gbadeyan and Omolekan (2015) in their study found the adoption of sustainable, eco-friendly, biodegradable or natural products and greener packaging, as an ecological footprint and way of reducing the soil pollution, degradation or other environmental impacts associated with the previous emphasis on conventional packaging of products.

Boye and Arcand (2013) found packaging also provides a means of communication with consumers and allows foods to be portioned in convenient formats. Under-packaging puts foods at risk, whereas over-packaging has high environmental footprint. Earlier Simpson, Rui, and XiuJie, (2012) found greener packaging design considerations should include the maintenance of required functionality, material use minimization, increasing recycled content and use of recyclable materials, and avoidance of potentially toxic constituents.

Taiye, Ogunaike, Dirisu and Onochie (2016) empirically studied packaging and its effect on consumer purchase decision in a food and beverages firm. The study was carried out to ascertain the impact of packaging on consumer purchase decision. Regression was used to test the four hypotheses for the study and it was revealed that labeling can create consumer awareness. Their study also revealed product cataloguing and tagging can draw the attention of consumers, and again that consumers are attracted to buy the product because of its shape, color and design of the product. Taiye et al (2016) conclude packaging plays a positive role in the consumer purchase decision.

Research Design

The research approach found to be appropriate in this study is the quantitative approach. This study involves hypotheses testing, cross-sectional survey and panel data in a non-contrived study setting (environment) with firms and managerial executives as unit of analysis.

Population of the study

The population of this study comprises all quoted food and beverages firms in Nigeria. Information obtained from the official website of the Nigerian stock exchange (NSE) shows that a total number of fifteen (15) firms were actually quoted under the food and beverages sector as at 2016 financial year.

Sampling Technique and Sample Size

The sample consists of all the fourteen (14) companies in the study population. To obtain reliable data for this study, the key informant approach was used. Therefore six (6) key informants from each of the firm constituted our respondents. With the key informant approach data were collected from senior managers from the following departments: marketing, production, procurement/purchasing, customer-service, research and development, and quality assurance from each of the firm on information pertaining to the construct under study.

Methods of Data Collection

This study used both primary and secondary data. For the primary data, the management personnel of the quoted food and beverages firms in Nigeria were given the questionnaire for the purpose of addressing the issues raised on the independent variables; to ascertain the influence of eco-based product strategies and marketing success.

Data Analysis Technique

This research thesis used several different statistical tools and techniques to analyze the data. These include percentages mean, standard deviation, pooled regression analysis. While percentages were used to analyze the demographic data, mean and standard deviation were used to describe each of the dimensions of both eco-based product strategies and marketing success. The main relationships of interest were analyzed under the panel data framework using the pooled regression technique. All empirical analysis were done using excel version 2016, Statistical Software Package for Social Science SPSS version 22 and EViews version 10 respectively.

Results

Influence of Package Recyclability on Sales Growth

Test of Hypothesis 1

H_{01} : Product recyclability does not significantly influence Sales growth

The same method was used to examine the influence of package recyclability and sales growth of food and beverages firms in Nigeria. Table 4.24 shows the panel estimation results for model 8 based on pooled regression method. As stated previously in chapter 3, model 8 expresses log of sales growth as a linear function of package recyclability (PR), eco-friendly technology (EFT) and the product of the two variables (PR*EFT) which captures their interaction.

Table 1: Linear Regression result showing the influence of Package Recyclability on Sales Growth (n=14)

	1	2	3
Variable		Beta Coefficient	p-value
Constant		1.693970	0.0520
PR		0.096331	0.6644
EFT		-0.248936	0.1462
PR*EFT		-0.435785	0.0958
R-square	0.0581	Adj. R-squared	0.0153
		Prob(F-statistic)	0.2631

Source: EViews version 10 outputs

From table 1, the probability of F-statistic (= 0.2631) is well above the standard significance levels (that is, 1%, 5% and 10% levels), indicating that the fitted pooled regression model for sales growth is statistically insignificant. The Adjusted R-squared of 0.0153 suggests that only approximately 1% of the total variation in sales growth is explained by the joint influence of all included regressors (PR, EFT, PR*EFT). Thus, like the case of model 8, almost all the observed variability of sales growth is due to factors not considered in the specified pooled model.

CONCLUSIONS

We found evidence that package recyclability is positively related to sales growth and. However, while the relationship with market share is highly significant, the relationship with profitability is weakly significant. The relationship with sales growth is not significant. There is evidence that eco-friendly technology has moderating effect on the influence of package recyclability, market share and profitability.

RECOMMENDATIONS

The fundamental objective of this study was to empirically establish the influence of eco-based product strategies and marketing success. Based on the findings and conclusions drawn from the study, we make the following recommendations.

1. Though a positive relationship exists between package recyclability and sales growth, but such a relationship is not significant. Therefore, it is recommended that quoted food and beverages firms should recycle their package materials rather than dispose them to increase sales since customers perceive package recycling as the major features of a green product.

2. They should adopt the use of eco-friendly technology which logically does not disturb the business environment but conserves natural resources, recycles packages, plant-based materials, and reduction of polluting substances, reduction of greenhouse gas emissions, renewable energy, energy-efficiency, multi-functionality, and low-impact manufacturing to optimize the influence of eco-based product strategies on marketing success.

3. The quoted food and beverages firms in Nigeria should view eco-based product strategies as a process (not a programme), that involves continuous innovation of packaging, labeling and recycling of packages to ensure availability of eco-based products that can respond accordingly to competitiveness of the 21st century business environment.

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