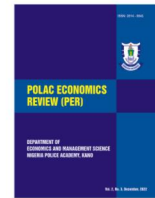




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IMPACTS OF PRODUCT PACKAGING SIZE ON MARKET SHARE OF SMALL AND MEDIUM ENTERPRISES IN FEDERAL CAPITAL TERRITORY ABUJA, NIGERIA

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Abstract

This paper examines the impact of product packaging size on market share of small and medium enterprises in FCT Abuja, Nigeria. Data was collected through structured questionnaire and were analysed using percentages, frequency and structural Equation Model of Partial Least Square (PLS). The sample size for this thesis is 398 SMEs which was calculated using Taro Yamane formula with 95% confidence level. The findings revealed that the null hypotheses were rejected. Statistically, the study established product packaging size as significant element of market share of in SMEs. In conclusion, there exist a positive significant impact between product packaging size and packaging information and market share in the study area. The study recommends that Government should capitalize in increasing raw materials developed and processed in Nigeria used to manufacture packaging for locally produced goods.

Keywords: packaging size, market share, organizational performance, product packaging

1. Introduction

Small and medium scale enterprises (SMEs) have been recognized as main sustenance of the national development because of their capacity in enhancing the economic output and human welfare (Akingunola, 2011). SMEs experience difficulties in absorbing and coping with obstacles, they need to develop an ability to deal with the ever-increasing challenges in the global market (Dzisi & Ofosu, 2014). More so Small and Medium Enterprise drives development as they create employment and contribute to the gross domestic product (GDP) (Kuteyi, 2013). The sector is a nursery of entrepreneurship, often driven by individual creativity and innovation (Ayozie and Latinwo, 2010).

Packaging is the container of a product, encompassing the physical appearance of the container and including the design, colour, shape, labelling and materials used (Deliya, 2014). Meanwhile, packaging appeals to consumer's attention to a particular brand, improves its image, and influences consumer's insights about product (Kolade & Oluwafisayo, 2018).

Furthermore, as packaging impacts supply chain costs such as transportation, warehousing, order processing and information, inventory carrying and lot sizing costs, operations and supply chain management research has traditionally considered packaging from an economic perspective to enable cost efficiency in supply chains (Sohrabpour *et al.*, 2012). According to Haghghinasab *et al.* (2013) performance can be measured based on growth, market share and

profitability. The higher the indices the greater the performance of the business and vice versa.

Significantly, there is a realization that almost all countries that have focused on SMEs sector have ended up in the reduction of poverty level and its attendant enhancement in the quality and standard of living, reduction in crime rate, increase in per capita income as well as rapid growth in national output among other salutary effects (Alese, 2017).

Most Nigerian businesses lack the quality product packaging that can give an edge in competitive global market (NAFDAC, 2021). Nigerian SMEs lack efficiency, innovation, competitiveness and large market share are capable of creating more employment opportunity in the country as the unemployment rate in Nigeria was 33.5 % in 2020 and was 32.5% in March, 2021 (National Bureau of Statistic report, 2021).

Product packaging of most Nigerian businesses lack the variety of sizes that can make them competitive on the local and global market place. Small and medium enterprises are instruments of growth in developing countries and Nigeria is not left out but the number of SME's breaking down each year in the battle of business is really lamentable.

According to Duro (2013), in countries like America, Thailand, China, and India, SMEs have been accountable for more than 70 percent of exports and this is why these countries have been growing economically. Manufacturing enterprises in Nigeria operate below capacity in the last two decades and the capacity utilization has been as low as thirty percent (30%), the placement of enterprise in Aba both locally and internationally and given the potential that Aba has, one would expect products from these industries to have gained global recognition but the opposite is the case (Onugu, 2005).

In the view of the problems confronting SMEs market share in Nigeria, The Government will benefit from the research because it will help in beneficial investment of developed raw materials gotten and processed in Nigeria that can be used to manufacture packaging for locally produced goods. This would lead to reduction in cost of SMEs production and increase competitive advantage of Nigerian products amongst foreign goods.

Against this backdrop, it is important to investigate how packaging influences SMEs innovation and SMEs market share growth. Therefore, this paper examines product packaging design and market share of selected SMEs in the Federal Capital Territory Abuja, Nigeria.

1. Literature Review

2.1 Conceptual Review

Background on Package Size Research

Package size is an often-overlooked attribute in models of differentiated-product demand. In fact, consumers may differ in their package-size preferences for (at least) three reasons. First, consumers with different consumption rates tend to choose different package sizes (Gerstner and Hess 1987). Second, consumers are generally risk-averse (Erdem, *et al.*, 2003) When consumers purchase an unfamiliar product, they face the risk that it does not meet their prior expectations, so tend to choose a smaller package because doing so can minimize their exposure to uncertainty of buying a large amount of a product they don't like (Shoemaker & Shoaf 1975). By using smaller packages, consumers can flexibility accommodates any preference for variety or deviation from planned consumption that may arise after purchase. Package size is therefore a critical decision variable for packaged goods manufacturers.

In view of Arun, (2012) packaging size also considered the tool of the product. Availability of the different size of the product in the market is due to extension of the product in the market. By seeing of the packaging size, the smaller size of the product become the intention of the small family and the larger size of the product are considered wastage of the product by them Silayoi, (2004).

Concept of Small and Medium Enterprises (SMEs)

Conceptualized SME's performance using market share. Performance can be measured based on growth, market share and profitability. The higher the indices the greater the performance of the business and vice versa (Ebitu 2016). Respondents rated the extent to which they were satisfied with performance criteria compared with their major competitors and market share was an important measurement criterion (Jintong *et al.*, 2016). SMEs performance act as a significant part that is linked to the strengthening and enhancement of the development of the country. The SME performance and growth in manufacturing, agriculture, services, and so on, has been considered as the engine drive and has contributed to the Nigeria economy (Eniola & Ektebang, 2014).

The Nigerian concepts of SMEs are somewhat divergent but the Central Bank of Nigeria agrees with the Small and Medium Industries and Equity Investment Scheme (SMIEIS) in their definition of a SMEs as any enterprise with a maximum asset base less than N200 million (equivalent of about \$1.43 million) excluding land and working capital, and with the number of staff employed not less than 10

(otherwise will be a cottage or micro-enterprise) and not more than 300 (Sanusi, *et al* 2004). The more presence of SMEs in the economy of a particular area, the more important is the SMEs role for achieving sustainability (Welford & Gouldson, 1993). SMEs not only contribute significantly to improving living standards, they also bring about local capital formation and achieve high levels of production. For these reasons the presence and development of SMEs are desirable at the national development. Ekanem (2006), summarizes the importance of SMEs to include ensuring rapid development, increased utilization of local resources

and provision of a training ground for indigenous managers and semi-skilled workers, reduction of the rural-urban drift, development of indigenous technology and raising the living standard of rural dwellers and so on. In fact, SMEs accounts for the economic development in most developed economies of the World today. It has helped in the balance of payment position of countries; it reduces over dependence on inputs relative to their capital investment.

Figure 1 is the conceptual framework that shows the product packaging and Organizational Performance

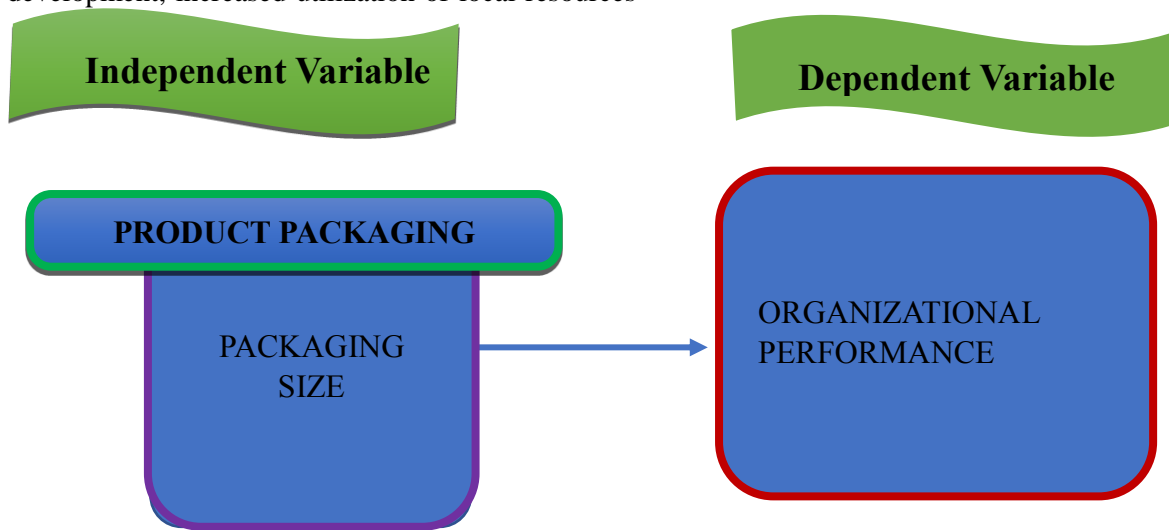


Figure 1: Conceptual framework for this study.
Source: Author (2021)

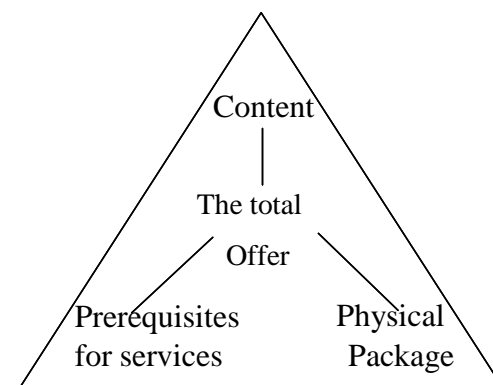
This study aims to determine whether packaging size in Nigeria has an impact on the performance of small and medium-sized manufacturing businesses.

2.2 Theories of Product Packaging

The Total Offer from a Packaging Perspective

Packaged consumer products can, on a comprehensive level, be viewed as a total offer with three major parts: the physical package, prerequisites for services, and the content of the package (Figure 2.2).

Figure 2.2: The total offer from a packaging perspective.



The content of the package is obviously an important part of the total offer. The focus however, is on the combination of the physical package and the prerequisites for services, as the content of a package is product specific and difficult to discuss in overall terms. Previous research has, to a great extent, had the physical package as the point of departure

(Underwood, 2003) and neglected the service aspects. With our perspective, the physical package is a carrier of the prerequisites for services, which is intended to mediate the intangible assets of the package in interaction with the customer. For example, instructions of how to use a product or a cake recipe that is printed on a package can be seen as prerequisites for services that become services as they are experienced by the customer. With this perspective, however, the tangible assets can also be seen as prerequisites for services depending on the customers' experience of them.

From the customer's view, this service could be defined in abstract terms like 'fun and easy to use' or in a more concrete way like 'it facilitates dosing the detergent'. The scoop device can be viewed as a part of the physical product (a material product attribute) or as a prerequisite for a service (something that can create different kinds of customer value).

2.3 Empirical Review on Product Packaging and SMEs Performance

Empirical study by Goele & Tim (2017) studied the package size effect: How package size affects young children's consumption of snacks differing in sweetness. Research was piloted in a well-ordered location. Children within ages 3 and 6 years were given snacks in regular or large packages during school break time. Satisfaction was measured by deducting the pupil's package post-snack weight from its pre-snack weight. Thereafter, the package size consequence was stronger for sugared foods in the experiments. The results have important implications for snack producers, package designers, and policy makers.

Similarly, Husić-Mehmedović *et al* (2017), investigated on "seeing is not necessarily liking: advancing research on package design with eye-tracking". This research contributes to the package size research by proposing and verifying process-based framework that explain how various package size affect customers visual attention. An exploratory study was carried out in virtual settings, deploying eye-tracking methodology in combination with package collages in order to assure a reasonably realistic product category context, yet better control over non-package factors that affect attention. Findings suggest that physical and semantic package

size affect attention during the 'orientation' phase and reveal how efficiently attention is transferred to the brand in the 'discovery' phase. Results in addition reveal that packages that attract the most attention are not necessarily likeable or suitable, but also that recall is a questionable measure of attention.

3. Methodology

The research design for this study is quantitative in approach using a survey method of research in order to establish the impact between packaging size and market share of small and medium enterprise to acquire data from sources such as the SMEs managers and employees in F.C.T Abuja, Nigeria. The unit of analysis of this study is the managers or CEOs of SMEs and employees. According to the survey carried out by the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), there are 68,168 small business and 4,670 mediums sized, making a total of 72,838 SMEs in Nigeria. These areas were chosen because the tempo of economic activities being carried out by this various SMEs to meet every day demands of Nigerian consumers is very high. The sample size for this thesis is 398 SMEs which was calculated using Taro Yamane (Yamane, 1973) formula with 95% confidence level. It can be more realistic than randomization in terms of time, effort and cost needed in finding informants.

However, in determining the influence of product packaging size on market share of small and medium enterprises in FCT Abuja, Nigeria, an econometrics model of simultaneous equation modeling through structural equation model of SmathPLS was built around the indicators of product packaging size and market share of SMEs as the main objective of the paper. The model was used in estimating the impact of these indicators on the market share of SMEs in FCT Abuja, Nigeria.

An econometric model of structural equation modelling was used in formulating the model for this study. The model is as follows;

$$\text{SMEP} = f(\text{PP}) \text{-----} 1$$

$$\text{Where PP} = (\text{PS}) \text{-----} 2$$

When substitute equation 1 into 2 the model becomes;

$$\text{SMEP} = f(\text{PS}) \text{-----} 3$$

Transforming equation 3 into linear form, the equation 3 becomes:

$$SMEP = \beta + \beta_1 PS + U \text{-----}4$$

Where; SMEP = Small and Medium Enterprise Performance.

PS= Packaging Size.

U= Error Term.

β_0 = Constant.

β_1 = Parameter estimate or coefficient associated with the influence of the product packaging on the SMEs performance in F.C.T Abuja and Niger State, Nigeria.

4. Date Presentation and Analysis of Result

Table 1: Result and Discussion of Findings

QUESTIONS	VALIDITY	FREQUENCY	TOTAL (%)
YOUR GENDER	MALE FEMALE	39.6 % 60.4 %	398 (100%)
AGE GROUP	18-30YRS 31-45YRS 46-65YRS ABOVE 65 YRS	75.8 % 22.6 % 0.8 % 0.8 %	398(100%)
ORGANIZATION	FOOD PRODUCTS DRINK PRODUCTS	55 % 45 %	398(100%)
EDUCATIONAL BACKGROUND	NO_FORMAL_EDUCATION ARABIC/PRIMARY_SCHOOL SECONDARY/TECHNICAL NCE/OND HND/BSC POSTGRADUATE DEGREE OTHER	0.8 % 2.3 % 8.0 % 8.7 % 66.8 % 12.9 % 0.5 %	398(100%)

Source: Field Survey, 2021

Question one (1) shows that one-third of the sample size are men, while two-third are women; which indicates that women are well represented in this enterprise in comparison to men. That is why Hunt *et al.*, (2018) in the workplace pipeline data claimed that a more diverse workforce will lead to a more comprehensive culture, according to the report. When a company's culture feels fair and inclusive, women and underrepresented groups are happier and more likely to thrive.

Question two (2) shows that majority of the respondents fall within the age brackets of 18-30 years at 75.8%, 31-45 years at 22.6%, while the least are between the ages of 46-65 years and 65 years and above with less than 1%. This finding is important because the age group involved in the SME enterprise is likely to be agile with the propensity for greater

innovation. That is why Binnewies, *et al.*, (2008) claimed that age in particular influence innovation and also contended that as age increases an individual's innovation and creativity declines.

Question three (3) shows the percentage distribution of the organization of the respondents. It shows that majority of the respondents are involved in food production business (55%), followed by drinks business (45%). This supports Flanders Investment and Trade Market Survey (2020) assertion that percentage of the companies in the Nigerian food sector are more than the drinks sector.

Question four (4) shows that majority of the respondents are first degree/higher diploma holders (66.8%), then master's degree holders (12.9%), NCE/OND holders (8.7%), Secondary/technical education (8%), Arabic/Primary school (2.3%) and

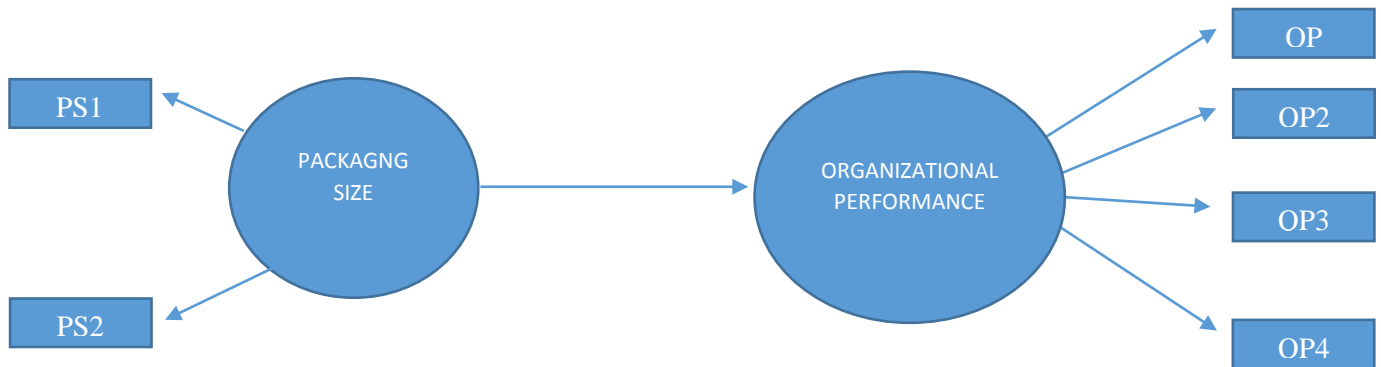
less than 1% have no formal education. This implies that most of the small business owners are well educated and are well informed about their global competitors. Knowledge or information gap presupposes that there is a differentiation in information access and acquisition among the different

categories of people in a society (Udeze and Theophilus, 2013).

4.1 Models Estimation

Model 1 is based on food products, Model 2 focused on Drinks while Model 3 is the pool of both food (Model 1) and drink products (Model 2) to achieve each of the specific objectives (Product Packaging).

Figure 2: Model 3 of Product Packaging: POOL



Source: Author’s computation, (2021).

4.2 Composite Reliability to Evaluate Internal Consistency

Table 2: Composite Reliability of Reflective Constructs

Variables	Composite Reliability	
	Food Product Model 1	Drinks Model 2
Organizational Performance	0.814	0.819
Product Packaging	0.877	0.880
Packaging Size	0.941	0.856

Source: Author’s computation, (2020).

The Composite reliability for each reflective construct were more than 0.80, signifying internal consistency according to Fornell and Larcker, 1981. Organizational Performance loaded at 0.814 (Model 1) and 0.819 (Model 2), Product Packaging loaded at 0.877 (Model 1) and 0.880 (Model 2), Packaging Size loaded at 0.941 (Model 1) and 0.856 (Model 2).

Test of Hypothesis and Interpretation of Result

Hypothesis one

H₀: There is no significant impact of packaging size on the performance of small and medium enterprises (SMEs).

Packaging size does not affect organizational performance in the selected, SMEs in the FCT.

Packaging size recorded a coefficient value of 16.3%. The regression analysis result between the dependent variable (organizational performance) and packaging size indicates a significant effect between both Model 1 and Model 2 with significant level (0.011) and

(0.016) respectively. The direct influence packaging size on organizational performance is significant (0.013). Therefore, the Hypothesis is rejected.

Statistically, the study established packaging size as a significant element of organizational performance by the SME owners. It is also evident that emphasis is placed on organizational performance of their food and drink products. From the quantitative findings of previous research conducted (Yonezawa & Richards, 2016), manufacturers may change package sizes, and hence unit prices, without changing the shelf price as a means of passing along higher costs. Yonezawa and Richards (2016) find that manufacturers change package sizes, rather than price, because consumers tend to ignore changes in unit-prices.

5. Conclusion and Recommendations

This study investigated the effect of product packaging on organizational performance in selected small and medium enterprises in the Federal Capital Territory, Abuja Nigeria. The selected SMEs were food and drink-based businesses in Abuja Nigeria.

The study revealed that Packaging size significantly affects organizational performance. Buyer's demand depends at least partly on packaging size offered by different producers, and these producers are likely to use package size as a strategic variable. Hence, business owners often distinguish products on the basis of packaging size of their products in order to draw different market share. SMEs design package size taking into account buyer's demand, producer and retailer costs, and rivalry in package size and organizational performance. Product package size

concluded on by SMEs business owners reflects both buyer's preferences, and competition in price. Producers in the SMEs have a habit of reducing package sizes in response to complex expenses as means of mitigating the possible negative impact on profits. Package downsizing can serve as a more effective means of increasing profit than a change in shelf-price as buyers are less sensitive when it comes to packaging size.

There is need for the development of product packaging size in FCT Abuja to promote a very high level of Organizational performance of SMEs in order to improve Globalization of Nigerian products and national output. The study therefore recommends as follows:

- a) SMEs should spread their businesses beyond the Nigerian marketplace and aim for global acknowledgement by meeting global product packaging standard requirements. Focused on ensuring better product life as well as enhancing product quality and safety of the final consumers.
- b) Government should capitalize in increasing raw materials developed and processed in Nigeria used to manufacture packaging for locally produced goods. This is aimed at dropping cost of SMEs manufacture and increase competitive advantage of Nigerian products amongst foreign goods.
- c) Favorable taxation policy conditions should be introduced by the Government for SMEs business boost locally and better exportation of SMEs products.

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