



IMPACT OF NEW PRODUCT DEVELOPMENT ON ORGANIZATIONAL PERFORMANCE. A STUDY OF NIGERIAN BOTTLING COMPANY, ENUGU, ENUGU STATE.

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ABSTRACT

The study determined the impact of new product development on organizational performance of the Nigerian bottling company, Enugu, Enugu state. Having analyzed the distributed 93 questionnaire to staff of Nigerian bottling company, Enugu, Enugu state, descriptive survey approach was adopted and analyzed using regressions with the help of SPSS version 22.0. The findings indicated positive and significant impact of new product quality on profitability of Nigerian bottling company, Enugu, Enugu state. Also there is positive and

Introduction

Background of the Study

The efficient and effective introduction of new products into the marketplace is away in which many organisations can gain significant competitive advantage. Product innovation is a mechanism companies use to head off competitors who are also releasing new products into the marketplace, to grow market share or grow the total market, and to obviate the need to compete on price alone (Stawicki, 2010). This is especially true in the manufacture and supply of fast moving consumer goods(FMCG) such as food products.

Developing and managing products is critical to organization's survival and growth. Although several organizational approaches to product management are possibly the share common activity functions, and decisions necessary to guide a product through its life cycle. Product managers coordinate efforts and become the strategic centre for the product in all markets. Marketing managers focuses on products for specific market. Adventure team is sometimes used to develop new products. Members of the venture team come from different functional area within an organization and have authority to execute plans. Product planning requires the coordination of such functional areas such research and development, production and engineering, research and finance, accounting and marketing. Each of these areas of departments has functional authority over some aspects of the product. To maximize the effectiveness of a product mix, an organization usually has to alter its mix through such methods



significant impact of new product design on efficiency of Nigerian bottling company, Enugu, Enugu state. The study concludes that introduction of new products/services was realized through either bringing on board brown sugar, using byproducts after extraction of sugar except for mumias where extra products like water bottling and ethanol was realized. The study recommends that Breweries should always analyze their environment through research in order to identify new market opportunities to develop appropriate products to meet the changing needs and wants of customers. Secondly, Nigerian bottling company, Enugu, Enugu state should ensure that the quality of their products meets the expectation of their customers in the local and international markets since their product quality is a strong and significant factor in the firms' marketing strategy and performance.

Keywords: *Organization, Performance, Productivity, Profitability and Profitability*

as new product or the development of existing product deletion of a product, or the development of a new product.

From the marketing standpoint, the socio-economic justification for the existence of any business organization is the satisfaction of customers' needs and wants. The organizational survival over-time depends on its ability to create loyal customers because its products match the needs of the buyers. Thus, the organization meets its basic responsibility to the society through its product offerings. For a firm to compete effectively in the dynamic and competitive business environment and achieve set goals in terms of profitability, high sales volume, and large market share, it must continuously develop products and product lines to satisfy the constantly changing desires and needs of customers (Grundiche, 2014).

These Organizational adjustments in response to new customer preferences even make it necessary to modify existing products, introduce new ones or eliminate products that are unsuccessful. Product development is a broad field of endeavour dealing with design, creation and marketing of new product, (Yanelle, 2015).

It encompasses product planning as well the technical activities of product research, engineering design, etc. to take advantage of potential opportunities facing a company's product idea in a market. Product development is very critical to organizational performance because the product is the cornerstone of the firm's marketing mix: every other element rests on the product. Product is not used to mean only tangible 'things', but includes services (the intangibles) as well as things that can be touched and seen and tasted. This explains why Kotler (2014) sees it as a bundle of physical, service, and symbolic particulars expected to yield satisfaction or benefits to the buyer. Since the purpose of product development is to provide satisfaction for customers and to face competitive threat, every marketing organization such as the beverage is in a highly dynamic situation. This is because customers' needs are constantly changing. Their incomes, lifestyles, level of education, sophistication and technology are dynamic and not static. Therefore, their marketing



policies have been dynamic, not static, and the products offered to the market have come constantly under review and frequent changes. Market analysis has shown that many beverage industries in Nigeria have introduced many innovations in their product development strategy (Etuk, 2013). Products are packaged in big and small bottles, cans with many lines and depth.

A close observation of the Nigerian beverage industry shows that the post mergers acquisition era in the sector has witnessed phenomenal growth as typified by the performance of big beverage industry such as Nigerian bottling company, Nigerian bottling company made possible by product development (Ojo, 2010). However, other breweries have not been able to operate optimally. This, therefore, suggests that organizational performance, which refers to how well an organization is doing in relation to intended purpose and competition, might depend to a large extent on product development. But this has not yet been ascertained, as the situation in the Nigerian beverage industry appears not to have stimulated interest among researchers and academics in the Nigerian intelligentsia. This might have been informed in part by the apathy, levity and jaundiced perception with which many scholars treat the beverage industry in Nigeria.

In the light of the achievement of few beverage industry and the dismal performance of others which are still struggling to find their feet and rhythm in the Nigerian business environment turbo-charged by competition, volatility and unpredictability, it is necessary to direct empirical search light on this Industry, which can provide information on product development and organization performance in the sector, thereby enriching existing literature. Also, the decision to enter the commercialization phase means that the product has gotten to its full scale of production and that a complete marketing strategy has been developed. The adoption process by which the buyers go through in accepting a product include; awareness, interest, evaluation, trial and adoption. The process of a company in new product requires the establishment of effective organization for managing the new product development process. The development of new product helps in improving the satisfaction of the consumers. Therefore, this research is investigated on the impact of new product development on performance of organization using Nigeria Bottling Company Plc Enugu, Enugu State as a case study.

Statement of the Problem

Company performance is a function of combination of factors. The concepts of environment, strategy and performance have been found to have a linkage that derives from the structure conduct-performance (S-C-P) paradigm of the industrial organization economics. Continued existence of house hold product companies necessitates that they continually consider how product development strategy impacts on their performance. How consistent their strategic behaviours are with environmental changes is expected to have implications in their performance. Also, there has been also an acute problems militating against the standard of new product development in the Nigeria bottling company plc. and other related firms. Consequently, the standard of new product development is limited to the following problems; lack of research or the one made is inadequate, lack of capital, government policies, lack of training among personnel's.



Therefore, proper production management should be maintained to improve or encourage new product development on the growth of Nigeria bottling company plc.

Further, apart from the perceived high performance recorded by the Nigerian bottling company, other breweries have not been able to operate profitably, example, Nigerian bottling company plc, which has been reactivated recently. This tends to imply that the successful beverage industry might have used effective product development strategy to achieve corporate goals and objectives. It equally implies that product failure in other breweries might have been informed by ineffective product development. However, these beliefs, hunches and conjectures have not been clearly substantiated by a concerted empirical effort, thus creating a yawning gap in existing literature which needs to be bridged.

Therefore, this study is undertaken to examine the linkage between new product development and organizational performance in the Nigerian bottling company plc, Enugu, Enugu state.

Objective of the Study

The major objective of this study is to examine the impact of new product development on organizational performance of the Nigerian bottling company, Enugu, Enugu state. Other specific objectives are to;

- i. Ascertain the impact of new product quality on profitability of Nigerian bottling company, Enugu, Enugu state.
- ii. Access the impact of new product size on sale volume of Nigerian bottling company, Enugu, Enugu state.

Research Questions

This following research questions were formulated

- i. What are the impact of new product quality on profitability of Nigerian Bottling company, Enugu, Enugu state?
- ii. What are the impact of new product size on productivity of Nigerian Bottling company, Enugu, Enugu state?

Research Hypotheses

The study formulated the following hypotheses in their null forms as follows;

Ho₁: There is no significant impact of new product quality on profitability of Nigerian Bottling company, Enugu, Enugu state.

Ho₂: There is no significant impact of new product size on productivity of Nigerian Bottling company, Enugu, Enugu state.

REVIEW OF RELATED LITERATURE

Conceptual Review

Meaning and Relevance of Product Development

Chu-Mei, Kuo-Wei and Chien-Jung, (2014), regarded New Product Development (NPD) as the combination of a series of information processing, through which to transform market



opportunities and demands into production knowledge. Huang (2010) considered New Product Development as the key in businesses and the motive of competitive advantages.

In the process of New Product Development, a business does not simply promote new products, but has to satisfy customer demands and cope with competitors' threats. It is therefore important for businesses correctly analysing the consumer market to draw the new product development strategies mostly suitable for the business. Since such strategies are the basis of New Product Development, they would affect the innovation of New Product Development, and valuable information should be mastered in the process of New Product Development. Song and Montoya-Weiss (2011) regarded product strategies as the basis of product development. Referring to Cooper et al. (2019) indicated that clearly defining the product concept could have the company deliberately define and evaluate the target market, product requirements, and product profits in the development process. Accordingly, market-orientation could provide businesses with necessary information in the market, such as characteristics of customer demands, market trend, and competitors' technique, and assist them in drawing the strategic model mostly suitable for the businesses.

Lo (2011) mentioned that small and medium enterprises in Taiwan had to change in the large environment for survival; developing innovative products was regarded as one of the solutions. Referring to Lo's (2011) discrimination of product innovation, the dimensions of Technical Innovation, Functional Innovation, and Marketing Innovation are utilized in this study. In regard to product innovation, the products should be measured from the aspect of consumers and Marketing Innovation should be enhanced.

Moreover, product orientations of style design, brand segmentation, and good deal could enhance the product image and value. The higher product innovation requires stronger control of trade marketing that it is better to establish an autonomic marketing branch in over sea markets in order to directly acquire the first-hand information and enhance the decision-making power of trade marketing. The more direct trade marketing could result in better sales of innovative products. What is more, participating in exhibitions is a critical path to promote innovative products and acquire market responses for orders. Demand-oriented or market-oriented pricing could be applied to innovative products; and, intellectual property rights are the guard of innovative products and the primary condition for industrial competition.

Product development strategy

Product development has been defined as the focus on the needs of the current customers and the wider customer markets (Ansoff, 2017). Kotler (2010) says in product development a firm remains in its present markets but develops new products for these markets. The view that new products are helpful to the financial health of sponsoring firms is well argued by scholars. Schumpeter (1934), for instance, opined that innovative new products when first introduced face limited direct competition and, as a result, allow relatively high profits to sponsoring firms. Over time these high profits are likely to disappear because of imitation and competition, he argued, but



firms that keep on introducing innovative new products may be able to have high profitability for a sustained period.

Large and growing literature supports the positive correlation between innovation and firm profitability. In a study of 721 U.K. manufacturing firms during the period 1972–1983, for instance, Geroski et al., (2013) showed that the number of innovations produced by firms had a positive effect on their operating profit margin.

According to Clark and Fujimoto (1991) performance in a development project is determined by a firm's product strategy and by its capabilities in overall process and organization. They further claim that firms' products help to shape the market environment; the nature of the market environment changes as consumers and competitors learn from new products and services. Goedhuys and Veugelers (2018) found that innovative performance is an important driver for firm growth in particular the combination of product and process innovations that significantly improves firm growth. Financial markets may be attuned sharply to product development outcomes in publicly traded firms (Anurag and Nelson, 2014).

Models of New Product Development

The main models identified focus on: the stages or activities in the New Product Development (NPD) process, the simultaneous and overlapping nature of activities, and the external and network interactions involved in New Product Development (NPD). Each of these types of models makes an important contribution to understanding, but also possess a number of weaknesses.

A significant proportion of the research on New Product Development (NPD) models has focused on developments which encourage a structured approach to New Product Development (NPD) (Cooper & Edgett, 2008). The benefits of this have been widely reported in the literature (Oorschot et al., 2010; Cooper and Kleinschmidt, 2007; Griffin, 1997). This body of the literature consists of a number of different types of models. The emphasis is on examining the constituent phases of the process, and the configuration of activities aimed at realising new products.

Many structured models and methods have been explored and developed, with the aim of improving New Product Development (NPD). This includes a particularly high level of attention to models examining the process, and particular techniques or methods with which to optimise various stages. Many of these models are closely associated with stage gate thinking, which suggests that certain criteria must be met before a project progresses to the next stage. The adoption of these types of models has been found to improve the chances of success.

However, weaknesses of this approach have been identified, particularly on the grounds that these models fail to capture the simultaneous and overlapping nature of activities and the significance of external and network interactions. This had resulted in the development of two further types of models; namely, network; and concurrent (or simultaneous) models. McCarthy (2016) also refers to these frameworks as recursive and chaotic.

- **Stage Based Models and their Evolution**

The history of New Product Development (NPD) literature is largely considered to date back to the 1950s (Conway and Steward, 2008), and the various models to have emerged



can be seen to provide a historical guide of the way in which organisational processes of New Product Development have evolved. This began with the early departmental and activity stage models, commonly referred to as technology push and market pull (Utterback,1971), which represent what Rothwell (2002) and Nobelius (2004) describe as the 'first generation' models of the process.

Departmental stage models have been heavily criticised, as they suggest that a functional department separately handles each activity. This is in contrast to more effective and modern approaches, requiring boundary spanning communications and coordination (Conway &Steward, 2008). The criticisms of these models led to the development of the next 'phase' activity stage models. These represented the process as consisting of a number of individual activities or stages, including idea generation, idea screening, and concept testing. Whilst these have also been criticised for representing an 'over the wall' approach, they are recognised as an improvement, as they incorporate some feedback loops (Conwayand Steward, 2008).Decision stage models have largely superseded the Department stage and activity stage models. Arguably, these represent the latest thinking on New Product Development, alongside network models.

- ***The dominant models of New Product Development: An overview of key stage & activity based models***

Stage based models explicitly state the individual stages of the New Product Development process, their order, the activities involved, and linkages between the stages (Conway and Steward, 2008): thereby aiding understanding of the process, and its management. The practical applicability of these models, for managers and consultants, has been a key factor in their popularity and dominance.

Majority stage based models represent the process as a series of linear activities, with feedback loops between each activity or 'stage'. The key focus is in providing a series of key steps, devised to act as a guide to mode ideas towards successful products (Cooper, 2008). New products must pass through each stage in order to be commercialised or launched. In order to proceed and progress, a number of evaluation criteria must be fulfilled at each stage, enabling it to pass through a 'stage gate'. Hence, the stages are commonly viewed as information gathering activities, followed by go/kill decision gates (Cooper, 2008).This arguably helps focus decision-making and ensures that evaluations are undertaken at critical points.

Process models provide a useful depiction of the key activities involved in New Product Development, effectively acting as a blueprint for organisations to follow and adapt as required(Oorschot et al., 2010). Their adoption and use has been linked to improved profitability and performance. For managers, these models assist portfolio planning and risk management, aiding the allocation of resources to the right projects at the right time (Oorschot et al., 2010). For organisations, their adoption can be beneficial, as in many cases, managers have little confidence in their ability to effectively manage New Product



Development. Utilising these models can help avoid the omission of critical activities from the process, which is not uncommon (Cooper & Kleinschmidt, 2010).

As far back as 1976, Schelker (cited in Nijessen & Lieshout, 1995) suggested that if all the variations of models and methods were considered, over 600 could be identified. This figure has clearly increased since, as a result of the growth of New Product Development literature.

The following, however, provides an overview of a number of the most commonly accepted, relevant, and recent models: revealing differences in terms of the activities or stages identified, and the number of these activities. In practice, the completeness of the process, and proficiency of the activities undertaken, are both of critical importance to success.

Theoretical Review

Resource Based View

This study is anchored resource based view and dynamic capability theory. Resource based view theory has its origin from the work of Penrose (1959), though inadvertently the view was formerly presented by Wernerfelt (1984). A resource based view (RBV) emphasizes the firm's resources as the fundamental determinants of competitive advantage and performance. The model assumes first that firm's within an industry (or within a strategic group) may be heterogeneous with respect to the bundle of resources that they control (Bridoux, 1997). Second assumption is that resource heterogeneity may persist over time because the resources used to implement firm's strategies are not perfectly mobile across firms.

A resource based view (RBV) is one of the most widely accepted theories of strategic management (Powell, 2001). New organisational resources may increase the flexibility in strategic choices, by allowing firms to benefit from new opportunities (Rangone, 1999). The RBV could be considered as an "inside-out" process of strategy formulation: starting from the internal resources of the firm, their potential for value generation has to be assessed in order to define a strategy allowing the firm to achieve the maximum value in a sustainable way (Grant, 1991; Barney, 1986). In this way, the firm product development strategy is determined by the resources available and the capability to deploy them in the best way to obtain a good performance.

Dynamic Capabilities Theory

Dynamic capability philosophy draws on Schumpeterian reasoning, which sees dynamic capability as another rent-creating mechanism based on the competences of organizations (Schumpeter, 1950). Eisenhardt and Martin (2000) defined dynamic capabilities as 'a set of specific and identifiable processes' that are 'idiosyncratic' in details and somehow 'dependent' in their emergence. Dynamic capabilities of firms may account for the emergence of differential firm performance within an industry (Zott, 2000). Zott (2000) synthesizing insights from both strategic and organizational theory, found performance relevant attributes of dynamic capabilities such as innovativeness of products to be the timing of dynamic capability deployment and learning to deploy dynamic capabilities.



Dynamic capability is about organizational competitive survival rather resource based view's achievement of sustainable competitive advantage. Dynamic capability theory explains the capacity of an organization to purposefully create, extend or modify its resource base which refers to the choice of strategy an organization adopts to achieve its goals.

Empirical Framework

Douglas, John and Sam, (2014), presented a study of new product development (NPD) processes in two large Australian organisations (National Foods and Lion Nathan) involved in the production of fast moving consumer goods. The research utilises the Australian Business Excellence Framework as a research lens for exploring NPD processes with a focus on the role of sales and operations management. A case study approach used data collected from employees in the two organisations who were involved the NPD process. The results showed a number of significant differences between the two organisations in the conduct and the effectiveness of their NPD processes. Although both organisations employed a formal Stage-Gate process, Lion Nathan did this more successfully than National Foods, perhaps because of Lion Nathan's greater experience with using stage-gate methodology.

Nwokah, Ugoji and Ofoegbu, (2009), examined product development and corporate performance in the Nigerian brewing industry. Data were gathered from officials drawn from marketing, R&D and production departments in four breweries in the south-south and south east geographical regions of Nigeria through the use of questionnaire. The data were analysed using appropriate statistical tool (spearman rank order correlation co-efficient). The data revealed among other things that product development facets of product quality and product lines/product mix were positively and significantly correlated with the corporate performance facets of profitability, sales volume and customer loyalty. The study also revealed that the relationship between product size, product design and profitability, sales volume and customer loyalty was not significant. The study concluded that a positive and significant relationship exists between product quality productlines/product mix and profitability, sales volume and customer loyalty.

Dabrowski, (2019), examined a model that includes two mediating mechanisms between market knowledge scope and two new product outcomes, respectively: a new product's competitive advantage and its commercial success. In both cases two mediators are used that represent dimensions of creativity i.e. a product's meaningfulness and novelty. The model was tested on a sample of 374 Polish medium-high- and high-technology companies using structural equation modelling. The results indicated that market knowledge is transferred to both new product outcomes through new product creativity, albeit somewhat differently. The first mediating mechanism, which explains the factor of competitive advantage, operates only through the indirect effects of both the product's meaningfulness and its novelty. The second mechanism works directly, through the market knowledge's effect on commercial success, as well as indirectly, through product meaningfulness.

Mbithi, Muturi and Rambo, (2015), examined empirically the effects of new product development strategy on company performance. In doing that, two indicators of product development strategy



which include development of new product and improvement of existing products were considered as independent variable indicators while performance measures were total output turnover, profitability, sales quantities and capacity utilization. The sugar industry in Kenya was chosen as the empirical context for the present study's analysis largely because of its crucial role in agriculture subsector. Consistent with the study's hypothesis, this study's results show that introduction of other new products other than sugar has largely been minimal while improvement of existing products has adopted through packaging and branding. Resultant performance was positive in total output turnover, sugar sales quantities, capacity utilization was moderate while profitability after tax gave fluctuating results. Performance was fairly responsive to improvement of product processes procedures but poor in introduction of new products since actualization is yet to be realized.

Chu-Mei, Kuo-Wei and Chien-Jung, (2014), explored the effects of Product Development on Operating Performance in textile industry with quantitative questionnaire survey. Total 450 copies of questionnaire were distributed to the supervisors, employees, and customers of Tainan Spinning and 384 copies were retrieved, in which 347 copies were valid, with the retrieval rate 77%. The research results show more successful product development could better enhance operating performance in textile industry. Apparently, electronic marketing has largely changed consumers' purchase behaviors.

METHODOLOGY

Research Design

Research design is a plan or blue print on how to go about data collection and analysis, all aimed at providing solutions to the problem under investigation (Okebaram, 2014). In this study, the researcher adopted survey design. It is a research design where a sample of population or item is chosen and data collected, analyzed and report made based on the sample. Here a group of people or item is studied by collecting and analyzing data from a few people or item considered a representation of the entire group population.

Sources of Data

Data collected for this study were sourced from both primary and secondary sources.

Primary Data : Primary data are original data collected basically for the purpose of the research or study. The primary sources of data for this research include questionnaires, etc.

Secondary Data: Secondary data are both published and unpublished works. The published were obtained from library, textbooks, journals, internets, articles publications. The researcher therefore adopted this source of data in order to obtain the information needed.

Population of the Study

A population is made up of all conceivable elements or observations relating to a particular phenomenon of interest of the research subject or element. The population of this study comprised of one hundred and forty two (142) staff of Nigerian Breweries, Enugu, Enugu State.



Sample Size Determination

For the purpose of this study, the researcher derived the sample size statically by using Taro Yamani (Abdullahi, 2012) as follow;

Using the formula;

$$n = \frac{N}{1+N(e)^2} \text{Where;}$$

n = Sample size

N = Population (142)

e = Margin of error (0.05) Thus, the sample size is:

$$n = \frac{142}{1+142(0.05)^2}$$

$$n = \frac{142}{1+142(0.0025)}$$

$$n = \frac{142}{1+0.355}$$

$$n = \frac{142}{1.355}$$

$$= 104.79$$

$$n = 105 \text{ staff}$$

Therefore, the sample size for this study is 105 staff of Nigerian Breweries, Enugu, Enugu State. The study also made use of simple random sampling because it is distinguished by the fact that each population element has not only a known but equal chance of being selected.

Sampling Technique

Simple random sampling technique was used by the researcher in obtaining information for the research. The sampling technique provide employees the same and known chances of being nominated.

Description of the Research Instrument

The researcher extensively used structured format of questionnaire which was formal and standardized. It followed a pattern of questions which the researcher used to obtain the required data. The questionnaire used by the researcher was in line with the research questions as well as research objectives of the study.

Questionnaire: This involves a set of question which relates to the purpose of the study and the hypothesis to be verified. The questionnaire was divided into two sections. Section A and B, Section A contains personal data of the respondent such as sex, marital status, qualification etc. Section B contains questions that requires both direct and indirect answers, which requires the respondent to tick the one that appeals him most and was structured in 5 point Likert scale ranging from Strongly agreed 5, Agreed 4, Undecided 1, Disagreed 3 and Strongly disagreed 2.

Validity of the Research Instrument

To make the instrument valid, the researcher used content validity.



Reliability of the Research Instrument

Reliability is the tendency toward consistency found in repeated measurements. The reliability of the instrument was ascertained using the internal consistency method. 80 questionnaire were given to the respondents, and after two weeks of interval, another 80 questionnaire were issued out to the same respondent to check consistency and reliability. This is called the test re-test method.

Methods of Data Analyses

Data for the study were analyzed using frequency distribution table, and percentages were used to analyses the data from the questionnaire. Also, hypothesis was tested Pearson Product Moment Correlation Coefficients, ANOVA and Regression models with the aid of Statistical Packages for Social Sciences version 23.0, which was designed to investigate the agreement of a set of observed frequencies expected or an assumption of the theoretical pattern of the phenomena being studied.

Data Presentation and Analysis

Table 3.1 Distribution of questionnaire to staff of Nigerian Bottling Company, Enugu, Enugu State and response rate.

Respondents	Distributed questionnaires	Valid and Returned questionnaires	Invalid and returned	Not Returned
Total	105	93	7	5

Source: Field Survey, 2022

As reflected in Table, a total of one hundred and five (105) questionnaires were distributed to staff of Nigerian Bottling Company, Enugu, Enugu State. Ninety three (93) were valid and returned to the researcher. 7 were returned but invalid. The remaining 5 were not returned. Hence, 93 of the respondents constituted the sample of return completed questionnaires.

Table 3.2 Regression analysis showing the impact of new product quality on profitability of Nigerian bottling company, Enugu, Enugu state.

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.972 ^a	.946	.944	.28765	.809
a. Predictors: (Constant), Customer retention, Builds customers trust, Increased market share					
b. Dependent Variable: Introduces referrals from clients					

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.123	.130		-.947	.346



1	Builds customers trust	.082	.107	.075	.769	.444
	Increased market share	.374	.110	.382	3.410	.001
	Customer retention	.553	.092	.528	6.019	.000
a. Dependent Variable: Introduces referrals from clients						
R	=	0.972				
R-Square	=	0.946				
Adjusted R-Square	=	0.944				
T – Statistic	=	6.019				
Durbin Watson Statistic	=	.809				

The regression results showed that the estimated coefficient of the regression parameters have positive sign and thus conform to our a priori expectation. This means that an increase in the independent variables will bring about credibility in the dependent variable.

The coefficient of determination R-square of 0.946 implied that 94.6% of the sample variation in the dependent variable is explained or caused by the explanatory variable while 5.4% is unexplained. This remaining could be caused by other factors or variables not built into the model. The high value of R-square is an indication of a good relationship between the dependent and independent variables.

The value of the adjusted R² is 0.944 this shows that the regression line captures more than 94.4% of the total caused by variation in the explanatory variables specified in the equation with less than 4.6% accounting for the stochastic error term.

Table 3.3 Correlations showing the impact of new product design on efficiency of Nigerian bottling company, Enugu, Enugu state?

Correlations				
		Increased sales rate	Beats competition	Customer retention
Increased sales rate	Pearson Correlation	1	.965**	.957**
	Sig. (2-tailed)		.000	.000
	N	93	93	93
Beats competition	Pearson Correlation	.965**	1	.942**
	Sig. (2-tailed)	.000		.000
	N	93	93	93
Customer retention	Pearson Correlation	.957**	.942**	1
	Sig. (2-tailed)	.000	.000	
	N	93	93	93
** . Correlation is significant at the 0.01 level (2-tailed).				

The result present in table 3.3 shows the impact of new product design on efficiency of Nigerian bottling company, Enugu, Enugu state. The result reveals that there is significant impact of new product design on efficiency of Nigerian bottling company, Enugu, Enugu state. The coefficient of



the correlation is 0.965, 0.957 and 0.942, with a sig. value of 0.000. The effect is significant since the sig. value of 0.000 is lower than the acceptable 0.01 significance level.

Summary of Findings

This study determines the impact of new product development on organizational performance of the Nigerian bottling company, Enugu, Enugu state. Having analysed the distributed 93 questionnaire to staff of Nigerian bottling company, Enugu, Enugu state, descriptive survey approach was adopted and analysed using regressions with the help of SPSS version 22.0. The following findings were made.

- i. There is positive and significant impact of new product quality on profitability of Nigerian bottling company, Enugu, Enugu state.
- ii. There is positive and significant impact of new product design on efficiency of Nigerian bottling company, Enugu, Enugu state.

Conclusion

The study led to the conclusion that introduction of new products/services was realized through either bringing on board brown sugar, using byproducts after extraction of sugar except for mumias where extra products like water bottling and ethanol was realized. Improvement of new procedures was largely through adoption of diffuser technology and ISO certification on major scale. On a smaller scale improvement of offerings in terms of rebranding of drinks into new packaging, improvement of customers' mode of payment and revision in product/service delivery were adopted. Further conclusions indicate there is positive and significant impact of new product quality and profitability of Nigerian bottling company, Enugu, Enugu state. Also there is positive and significant impact of new product design and efficiency of Nigerian bottling company, Enugu, Enugu state.

Recommendations

Based on the findings we strongly recommend as follows:-

- i. Breweries should always analyze their environment through research in order to identify new market opportunities to develop appropriate products to meet the changing needs and wants of customers.
- ii. Nigerian bottling company, Enugu, Enugu state should ensure that the quality of their products meets the expectation of their customers in the local and international markets since their product quality is a strong and significant factor in the firms' marketing strategy and performance.

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