



NEW PRODUCT DEVELOPMENT AND ORGANIZATIONAL PERFORMANCE IN NIGERIA

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Abstract

The idea of New Product Development (NPD) has its origin from constant changes in consumer preference and choices based on available products. The changing trend in customer accessibility to information on product availability and performance driven by Information and Communications Technology (ICT); has emboldened manufacturing firms to modify their NPD process in line with customers' needs and wants for the ultimate purpose of satisfying the end users of their products. The aim objective of this study is to examine the effect of new product development on organizational performance, additional challenging issues include; the far-reaching effect of market research, specific allocation of budget for NPD by manufacturing firms and effective training and re-training of personnel for Research and Development (R&D). The study evaluates the concept of new product development and organizational performance by adopting the dynamic capability theory. The descriptive research methodology was adopted in which 302 questionnaires were administered to respondents who were basically staff, distribution intermediaries and end users of products in Uyo, Akwa Ibom State and Port Harcourt Rivers State.; also, comprehensive interview was conducted on areas where the questionnaire could not cover effectively. The result of the study revealed that there was a significant relationship between New Product Development and organizational performance. The study recommended that key towards outstanding performance by manufacturing firms 'lie in their ability to effectively train their personnel to conduct effective market research to identify the preferences of the consumer, and deliver products that satisfy their exact need, as a pre-requisite for sustainable performance.

Keywords: new product development, organizational performance, research & development, and customer

Introduction

The processes involved in establishing new product ideas is the complete introduction of an entirely new product or extension of existing brand to augment the existing product, for the ultimate purpose of satisfying customers' need and wants. New product Development (NPD) according to dictionary of business management 5th edition could be explained as the conversion of market openings/ideas into product services readily available to end users. This conversion process may often involve the adoption of technologically innovative techniques by firms; in creating product/service needed by their customer, while making profit through the sale of such products. New products could be in the form of manufactured goods (tangibles) that can be seen, touched, or physically consumed, or services (intangibles) which involve a

perceived experience encountered by the customer on service delivered and evaluated within a standardized framework of service offering; calculation based on product cost, production time taken, and the quality of the product when juxtaposed with rivals within a specific industry (Kahn, et al. 2012).

In new product development, a common phenomenon is always adopted for all new products whether they are physical goods or service experience for the purpose of earning income for such investments. NPD involves a process which must be carefully followed, this process is otherwise known as the (Booz, Allen and Hamilton) BAH model. Developed and published in the 1980's, this model affirms that all new products must follow the BAH seven phase processes which include formulation of product strategy, creation of product ideas, Idea screening and appraisal, business evaluation, development of product phase, testing of product and commercial production for onward delivery to end users (Bruiyan et al., 2011).

The main cause for the development of new products is the result of changing trends, consumer preference and awareness, drive to increase or retain market share, volatile business environment, unpredictable product life cycle and the ever-increasing competitive trends in the 21st century. (Christopher et al., 2004). Hence, for NPD process to be sustainable, firms must interact with their customers to ascertain the exact needs of the customers. But the dynamism in global competition amongst industries has been very complex with most firms depending on introduction of new products as a differentiating factor for growth, winning customer loyalty, and increase in market share (Carillo & Franza, 2006, Droge et al., 2000; & Choperana, 1996).

Developing new products in the manufacturing sector has become very complex, based on stiff national and global competitive trend; hence, management of firms have to re-strategize their game plan on how to effectively manage the various stages in the existing product life cycle, in order to retain their market share. (Carillo & Franza, 2006). Additional competitive options could be the need to shorten the existing product life cycle, make room for introduction of new products, and make an adequate plan for all-round profitability (Droge et al., 2000). Companies could also outsmart their business rivals in creating robust supply chain management process, which ensures that all firm products are first-to-be-introduced in the market. This process will guarantee the firm the opportunity to increase product prices before competition sets in, gain a reasonable share of the market, attract the loyalty of its customers, and increase its growth/profitability (Hilteofth et al., 2009; Choperana, 1996).

The process of developing new products in the service industry has its own special characteristics, which is void of physical-product based clues and these include; i) Service Perishability (service cannot be stored or kept for future use as inventory) ii) Intangibility of Service (service an experience that is consumed at the point of purchasing it), iii) Inseparability of Service (service products are produced and consumed simultaneously) and iv) Heterogeneity of Service (service is variable because the pricing depends on the terms of the service provider (Gronroos, 2001; Lovelock & Wirtz, 2011; Woodroffe, 2003; Ziethmal & Bitner, 2003). Service delivery in the financial sector is a unique example of product service development; with its competitiveness and technologically driven innovation offering; customized towards delivering service to customers (David-West et al., 2018; Hine & Greenaway, 1995; Madeira, 2016). The advent of Information and Communication Technology (ICT), has tremendously changed the operational paradigm in the sector, based on changing preferences of banking consumers. In recent years, banks have made huge investments on procurement of ICT infrastructures and training of human resources to operate these facilities. Recent development has equipped the customer to independently engage with the banking platform without assistance from bank staff; for the purpose of self-service delivery (De Oliveira & Rabechini Jr, 2019; David-West et al., 2019a; David-West et al., 2019b, Kim et al., 2018, Ouma & Odongo, 2017; & Pollari, 2016).

Table 1
Previous Conceptualization on New Product Development

Authors	Conceptualization	Item of Performance	Parameter of Measurement
Akroush & Awwad, (2018).	NPD capabilities, improvement, and internal learning,	Internal Capabilities	Empirical Study; knowledge sharing
Chang & Taylor, (2016).	Effectiveness in customer participation	Customer–Centric product development	Empirical Study; Customer active involvement
Vinayak & Kodali, (2014).	Moderating role of best practices in the manufacturing industry	Innovation in new product	Empirical Study; Product Quality
Sheperd & Ahmed (2000).	Competitive Advantage	Innovation in new product	Empirical Study; Solution Innovation
Ganeshkumar & Nambirajan. (2013).	Competitiveness	Supply Chain Management	Empirical Study; On NPD Performance enhancement tool
Smith & Bititci. (2017).	Employee Engagement	Internal Capabilities	Empirical Study; On Performance Measurement
Homburg, Alavi, Rajab & Wieseke. (2017).	Research & Development R&D	Internal Capabilities	Empirical Study; On Contingent Co-operation
Hilletofth1, Ericsson, Olli-Pekka & Hedenstierna. (2009).	Flexible Automation process	Supply Chain Management	Empirical Study; Intelligent Manufacturing
Droge, Jayaram & Vickery. (2000).	Effective customer Awareness of new product	Product Introduction	Empirical Study; Timing of New Product
Ateke & Iruka. (2015).	Effective customer involvement in product development	Customer–Centric product development	Empirical Study; On marketing performance

The aforementioned studies were conceptualization on investigation specifically conducted by researchers in the product service sector. In manufacturing, there have also been documented evidence as shown in table 1, such as introduction of new product (Droge et al., 2000), enhancing internal and external capabilities, knowledge sharing and internal learning, (Akroush & Awwad, 2018; Smith & Bititci, 2017; Homburg et al., 2017), innovative and creative ideas in new product development (Vinayak & Kodali, 2014; Sheperd & Ahmed, 2000), effectiveness of customer participation in new product development (Ateke & Iruka, 2015; Chang & Taylor, 2016), effective supply chain management (Ganeshkumar & Nambirajan, 2013; Hilletofth et al., 2009) and the relationship between innovation and performance; the moderating role of best practices in the manufacturing industry (Vinayak & Kodali, 2014).

The foregoing empirical studies have shown that research on product development in the noodle manufacturing sector in Nigeria is very scanty, hence this research is conducted based on the need to fill a huge literature gap. This study critically examines new product development and organizational performance by encouraging firms to embark on aggressive market research on customer need and wants, as a prerequisite for sustainable new product development and customer satisfaction in Nigeria.

Problem Statement

The broad aim of business organizations is the provision of product/services to their customers at profit. Profit made by firms is most often shared amongst stakeholders (shareholders, management, employees, and community social responsibility). A percentage of profit made by firms is most often ploughed back for future expansion and development; a part of this development includes budgetary allocation to research and development towards the development of new products. New product development as important as it is to the growth of organizations, has certain setbacks that most manufacturing firms find it difficult to implement and this includes the under-listed items.

The core basis of new product and product line extension lies in the ability of firms to create a robust market research team which has the core mandate of investigating on the perceived limitations of existing products, and how the customer will prefer future product; procurement, production, packaging, delivery and after sales service to be delivered by the firm. The problem most production firms have is either a sub-optimal market research team or a non-existing one. This challenge has led to failure of new products as a result of such products lacking the ability to address customers' needs and wants, poor strategy management and late product launch / arrival in the market.

Also, the issue of funding new product development has become a core challenge. Most manufacturing firms have their various research and development teams without necessary budgetary allocation to this unit for the acquisition of needed infrastructural facilities/equipment and overhead cost for the creation of new products or product line extension. Sometimes, where such budgetary allocations are made, the funds are either diverted to other expense head or the projects are underfunded. This has led to existing products lacking in their capacity to compete effectively with their national and global rivals.

A key index in the development of new products or extension of existing product line is the exposure of personnel to effective training and retraining for the purpose of empowering such personnel to acquire new skill and competence in; processing, equipment handling, quality control, packaging, delivery and feedback processes. Where effective training of key production personnel is not encouraged by management, the firm will find it difficult if not impossible to compete with its peers.

Research Aim

The aim of the study was to determine the effect of new product development in the performance of Indomie Nigeria Plc, additional aim also includes the fact that:

- There is no significant effect between market research and the performance of Indomie Nigeria Plc.
- Funding for new product development has no effect on the performance of Indomie Nigeria Plc.
- Training and re-training of personnel has no significant effect on the performance of Indomie Nigeria Plc.

Literature Review

Concept of New Product Development (NPD)

New product development (NPD) is a process that requires objective and analytical application of a coordinated line of activities, approach and procedure (Chang & Taylor, 2016; Kahn et al. 2012). This explains that a successful NPD process must have basic features takeoff

changing the market trends as it affects the; customer (pre and post sales services), suppliers, trending technology and competitors based on the opportunities presented by the assumed product to be developed (Chang & Taylor, 2016; Cooper, 2014; Cooper, 1988).

Kotler et al., (2018) defined *new product development* as a process of evolving an entirely new product, transforming an existing product to reflect refinement of ideas, alteration of certain product features, and creating new varieties of product/services by a firm, based on its new product development strive.

The authors further explained the essence of new product development as attributing added value to the customers and the firms' sales force, while satisfying the customer on one hand and adding increased profitability to the firms that own the new product. In the 21st century, marketplace, embarking on new product development has become a major window for firms' growth, productivity, and accomplishments (Kotler et al., 2018).

Chang and Taylor (2018) posited that the term new product development connotes the process of adapting current technological tools in converting creative product ideas into finished products, readily available at the customers' disposal. It is the point at which new products are launched into the market.

Ansoff (1987) also explained that new product development has its core focal point on the needs and wants of present customers and also, on how to utilize such opportunity in reaching out to the global markets based on industrial trends.

Sheperd and Ahmed (2000) explain new product development by reflecting on the past trends which were a resultant effect of the changing cycles in marketing concepts. The authors observed that in the current periods new product developments have been driven by the dynamic rate in technological changes; with the ultimate emphasis of providing quality products that appeal directly to customers; needs and wants before and after product service delivery.

David et al., (2015) posited that in spite of the merits of new product developments, there are certain setbacks that have made such huge efforts, innovations, funding, and time complete waste based on the high cost and risk involved in venturing into new product development. The author further stated that; based on documented evidence, about 60% of basically all the new product/services initiated by outstanding organization most often fail, also about two-thirds of such ideas are never established.

In recent years, well established firms, such as Google, Apple, and Microsoft have further expanded their R&D units to include the creation of laboratories for other sub-units under R&D to also include research, development, and innovation to assist in their endeavors on development of new products. This has led to greater appreciation by end users through increased sales, and also returns to the firms in terms of profitability, product acceptance by customers, increase in market share and consumption (Cuervo-Cazurra et al., 2018; Santoro et al., 2017; Homburg et al., 2017).

Retrospectively, a well-coordinated NPD process must have underlying features such as in-depth analysis of the basic necessities of products, a comprehensive undertaking by the new product research team to unravel the exact needs and wants of customers, thoroughly understanding the defects at every stage of the life cycle of the outgoing and yet-to-be-launched product, exhaustively undertaking a study on the changing trends as well as suppositions about the product. To this end, certain activities must be conducted, such as customer feelings and anticipations, good product designs, ascertainment of the project requirement, studying existing blueprints and experimental ideas, actual project test tries and debut and product accomplishments evaluation (Ateke & Iruka, 2015).

The success of new products is a combination of shared effort of all stakeholders in the organization, particular mention should be made on the effort of the new product manager and the team working together to achieve a successful launch of the product. The manager must be creative and apt to ensure that the right product development decisions are taken and on time to avert failure of new product (Naghi-Ganji et al., 2017).

Concept of Organizational Performance

Organizational performance explains a process of ascertaining that a given level of input to attain some level of output based on the task required to achieve set objectives by; personnel, unit, or organization Harris et al., (2003). The determination of organizational performance standard is most often preset by the firms' top management in charge of strategic decisions such as the duties and responsibilities of key personnel, expectations on staff conducts, remuneration attached to each position, (Mettler & Rohner, 2009; Smith & Bititci, 2017). The effective performance (productivity) of personnel and reward (remuneration) process in any organization must be carefully planned and well-defined, to encourage effective service delivery through teamwork/collaborations rather than internal rivalry (Peacock et al., 2020; Smith & Bititci, 2017; Zaffron & Steve, 2009).

Van Decker et al., (2017) defined organizational performance as a process of obtaining solutions through effective planning by management of firms on the basic sectors in which an organization revolves, includes; crafting of strategy, current business plans and future projections, management of finances, as well as product distribution and logistics management.

Ateke and Iruka, (2015), posited organizational performance to mean a process of evaluating new product performance is based on how profitable the new product is to the firm, competitiveness of a new product with rivals, increase in market share, how customers are satisfied with the product, the level of product usage by customers and effectiveness of feedback and after sales process.

The foregoing explains what organizational performance means, the evaluation of Product performance itself therefore refers to; how much a product accomplishes in the market amongst its rivals based on various indices, such as effect of new product development on customer adoption, the retention of users, quantum of market share acquired based on new product, extent to which customers are assuaged, premium generated by firm on new products when compared to its rivals, level of profitability as well as pre and post sales service delivery process (Ganeshkumar & Nambirajan, 2013; Namusonge et al, 2017; Schilling & Hill, 1998).

Hence, for firms to make dynamic progress with the introduction of new products, certain goals must be accomplished by optimizing its net earnings from sale of new product based on satisfied customers' expectation and ensuring that a robust Supply Chain Management (SCM) system is established to ensure that new products are made available to customers on time ahead of rival products. This feat can be easily accomplished through a robust strategic plan on how the Research and Development (R&D) unit on new products can accomplish set tasks (Namusonge et al., 2017; Schilling & Hill, 1998).

History of Indomie Nigeria Public Limited Company (Plc)

Indomie is one of the global brands of instant noodle from Indonesia. The company has about 18 companies across the globe with the Nigerian brand produced since 1995 under Dufil Prima Foods. Indomie has rightly upheld its vision statement of wanting to become the trusted consumer food brand in lead of the instant noodle market globally. The total quantum of noodle packets produced annually from these factories is about 15 billion, while the product is also exported from Indonesia to a dozen of countries. In Nigeria, the company has three (3) factories strategically located in Kaduna (North Central), Ogun State (South-West and Porth Harcourt, Rivers State (South-South) Nigeria.

Indomie is a market leader in the noodle industry in Nigeria, delivering its noodle brand across the country, providing job opportunities, and impacting the lives of Nigerians through its robust Community Social Responsibility (CSR) programs.

In line with this study, Indomie is a key industrial player with creative/innovative capacity that has done more in terms of new product development that is in line with customers through its delightful taste, improved product quality and strict adherence to customers' preference in its new product development stride. Some of its popular brands include Standard pack, super-pack, Hungry-man belle-full, Relish and with outstanding flavor such as: Onion Flavor, Chicken Flavor, Indomitable.

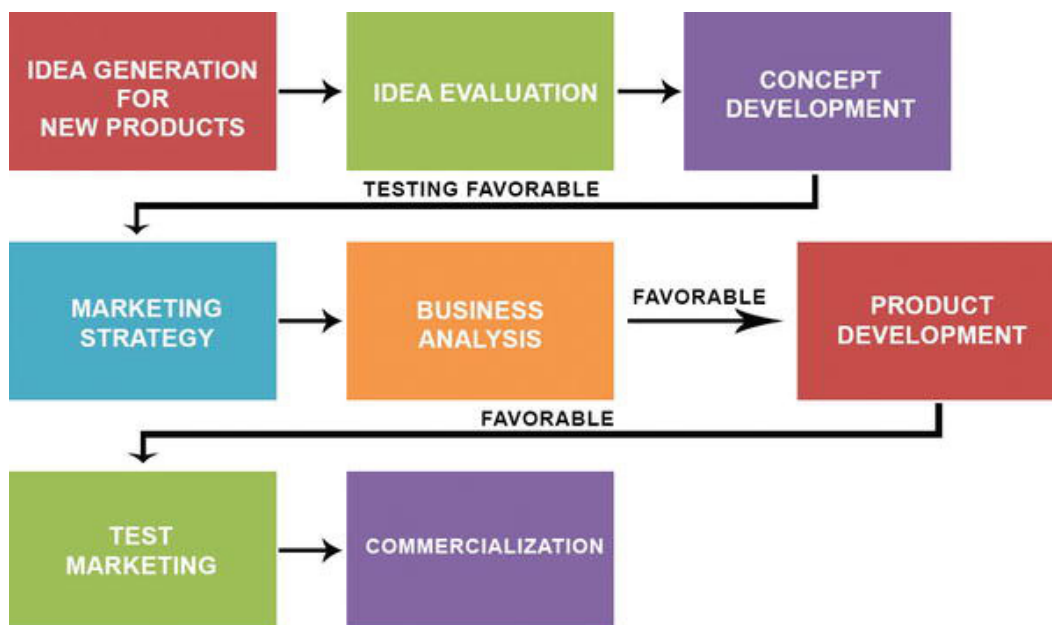
Theoretical Framework – Organizational Dynamic Capability Theory (DCT)

The main essence for examining theoretical concept in any study is to establish a basis in which the study derives its foundation. Hence the DCT theory explains about the potentiality of an organization to persistently consolidate on its internal/external capabilities for the purpose of addressing dynamic trends within the environ (David et al., 1997; Helfat et al., 2009).

The proposition for this theory connotes that the organizational capabilities of such organization should be harnessed towards generating momentary competitive disposition that will evolve into an enduring competitive edge (Douma & Schreuder, 2002; Nelson, 1982). This capability explains the need for firms to efficiently determine to create sustainable human and material resources in its operational processes, this involves crafting strategies to handle technologically-driven dynamic changes in the industry, example; whenever changes occur in industry, managers are expected to formulate policies (operational, financial and logistic) that will keep the firm balanced between existing technology and acquiring new technological innovational processes (Basiouni et al., 2019; David et al, 1997; Douma & Schreuder, 2002; Ludwig & Pemberton, 2011; Nelson, 1982).

A swift move by other authors has suggested the advent of 'The New Dynamic Capabilities' which suggests the adaptation of firms' capabilities in mobilizing and modifying their needs by making provision to outsource for external resources, where such needs cannot be provided for internally, and as such still leverage in its position, market share and profitability within the industry. This method is currently practiced with outstanding successes by Apple, Google Android, and IBM Linux (Shuen & Sieber, 2009; Shuen, 2008). This new approach gives due consideration to changing trends in Information and communication technology (ICT) and cost savings arising from using previous methods in which the operational paradigm was based on internal capabilities (Shapiro & Varian, 1998; Williamson, 2009). Other authors believe that the above proposition on 'the new capabilities' as it applies to management of organizations product operations is not exhaustive, and hence still needs additional investigation (Basiouni, 2012; Cordes-Berszinn, 2013). Others see the proposition on the model as mere rhetoric and superfluous (Wang, 2007; Wheeler, 2002).

Figure 1
Application of New Product Development



Adapted: Garbuz E, (2018), Theory of New Product and its Applications, <https://doi.org/10.5772/intechopen.74527>

It is quite interesting to note that, while the critiquing of the new dynamic capability proposition is on-going, the theory still remains for now the best available approach for firms to tackle dynamic changes in business domain, hence a tough challenge in the operationalization of this theory. Lawson, (2001), Figure. 1 shows how the dynamic Capability Theory is adapted to the Gurbuz, theory (2018), by consistently consolidating on internal/external capabilities, to create sustainable competitive edge beyond its rivals (Basiouni et. al., 2019; Douma & Schreuder, 2002; Helfat et al., 2009).

The new product development framework which adapts the eight stages of the basic NPD process of ‘Idea Generation for new product; (this involves effective and dynamic market research to create customer driven product), Idea Evaluation (screening new products to ensure it guarantees anticipated sales volume, and steady profitability), Concept Development (transforming product concept to brand concept), Marketing Strategy (detail plan to introduce product based on identified target markets), Business Analysis (envisage product attractiveness to ensure it is in line with organizational objectives), Product Development (transforming new product ideas into physical product brand), Test Marketing (product is launched into the market to test its acceptability by customers, channel intermediaries and rivals) and Commercialization’ in product development.

It is expected that managers should make efficient decisions at the end of each stage based on available information and resources. Hence, this theory culminates with the fact that organizational performance could be significantly impacted by new product development based on augmented sales volume, increased market shares over rivals, and all-round profitability.

Research Methodology

The study adopts the descriptive research approach in which structured questionnaire was administered in two different locations; Port Harcourt, Rivers State where the production

plant is located and Uyo Akwa Ibom State. The challenge in this study was the cost implication aspect of conducting personal interviews in two different locations; interviews became necessary to cover all aspects that the structured questionnaire could not accommodate effectively (Saunders et al., (2009); Probability sample approaches became necessary, to afford the chance of the selected locations equal opportunity to be chosen from the entire population of the study Saunders et. al., (2009); hence, cluster/random sampling technique was adopted by stratifying the samples from both locations to ensure that, it shows a proper representation of the population under consideration (Liedtka, 1992; Patton, 2002).

Based on Krejcie and Morgan (1970) proposition on how to determine the sample size for finite population at 95 Percent level of confidence the sample for the study is 263 based on a population frame of 2800. The respondents under consideration were; employees, channel intermediaries and the customers; it was quite necessary to access these respondents to enhance appropriate data collection Robson, (2002).

To ensure credibility and dependability of the study, the research instruments were subjected to validity and reliability test (Mitchell, 1996; Robson, 2002); by deploying the services of scholars in the field of marketing, to ensure the authenticity of the research instrument used for the study (Field, 2005; Taherdoost, 2016).

Method of Data Collection, Presentation and Analysis

Primary (questionnaires and personal interviews) and secondary (journals, books, and periodicals) sources of information were deployed in obtaining data for the study. Data collected from both was analyzed confirming the relationship between the variables of the construct. Table 1 shows a breakdown of data collected which indicates that; out of 302 questionnaires issued to respondents, 263 questionnaires representing 87% were returned, and were valid for use in the study, 23 questionnaires representing 8% were not returned at all, while 16 questionnaires representing 5% were unacceptable for the study due to cancellation, mutilation, and observable errors by the respondents in the process of filling the questionnaires,

Table 2
Respondents Rate Table

Questionnaires	Number of questionnaires	Percentage of questionnaires
Returned	263	87
Rejected	16	5
Not returned	23	8
Total	302	100

Research Results

Based on the outcome of the analysis of the data collected for the study, the results for each of the three (3) hypotheses analyzed are outlined in the tables below;

Hypothesis One

There is no significant effect between market research and the performance of Indomie Nigeria Plc.

Table 3
Correlation

		New Product Development	Market Research
New Product development	Pearson Correlation	1.000	.863
	p		.000
	N	263	263
Market Research	Pearson Correlation	.863	1.000
	p	.000	
	N	263	263

** . Correlation is significant at the .01 level (2-tailed).

The correlations coefficient analysis obtained was .863, which indicates that market research has a significant effect on the new product development in Indomie Nigeria Plc. The sample represented by N used for the analysis was 263, the level of significance of the study or otherwise known as the p value of the study is 0.000 which is less than the 0.05 alpha level of significance. Hence, the outcome of the analysis affirms that there is a positive correlation between the dependent and independent variables. The analysis result summary could be expressed as follows; [$r = .863, n = 263, p < .0005$].

Hypothesis Two

Funding for new product development has no effect on the performance of Indomie Nigeria Plc

Table 4
Correlation

		New Product Development Funding	
New Product Development	Pearson Correlation	1.000	.711
	p		.000
	N	263	263
Funding	Pearson Correlation	.711	1.000
	p	.000	
	N	263	263

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

The outcome of the correlation coefficient analysis obtained which is represented by r was .711, which reveals funding has facilitating effect on new product development in Indomie Nigeria Plc. The sample represented by N used for the analysis was 263, the level of significance of the study the p value was 0.000, which is less than the 0.05 alpha level of significance. Considerably, the result of the study analysis confirms that there is a significant relationship between the dependent and independent variables. The outcome of the correlation analysis could be summarized as, [$r = .711, n = 263, p < .0005$].

Hypothesis Three

Training and re-training has no significant effect on the performance of Indomie Nigeria Plc

Table 5
Correlations

		New Product Development Training and Re-Training	
New Product Development	Pearson Correlation	1.000	.702
	p		.000
	N	263	263
Training and Re-Training	Pearson Correlation	.702	1.000
	p	.000	
	N	263	263

** . Correlation is significant at the .01 level (2-tailed).

The outcome of the correlation coefficient analysis obtained which is represented by r was .702, which reveals that there is a significant effect of training and re-training on new product development in Indomie Nigeria Plc. The sample represented by N used for the analysis was 263, the level of significance of the study the p value was 0.000, which is less than the 0.05 alpha level of significance. Consequently, the result of the study analysis affirms that there is a significant relationship between the dependent and independent variables. The outcome of the correlation analysis could be summarized as, [$r = .702, n = 263, p < .0005$].

Discussion

This study findings and discussions are drawn from the objectives of the study, which set out to determine the effect of new product development in the performance of Indomie Nigeria Plc, as well as the outcome of the analysis of the variables, which examined the effect of market research in organizational performance. The result of the study revealed that there was a positive relationship between market research and the performance of Indomie Nigeria Plc.

Based on the study findings in hypothesis one, the result states that market research on new product development has a significant effect on the performance of Indomie Nigeria Plc, as summarized; [$r = .863, n = 263, p < .0005$].

- The results of the correlation analysis .863 indicates a positive statistical value for market research as a key index to be considered in new product development, effective market research will result in sustainable products that are customer driven Douma et al., (1982), hence consistent patronage that will increase customers’ satisfaction and profitability to the firm (Shuen & Sieber, 2009; Shuen, 2008).

Consequently, the outcome of the study in hypotheses two also revealed that funding for new product development has a facilitating effect on the organizational performance of Indomie Nigeria Plc, and summarized as follows; [$r = .711, n = 263, p < .0005$].

- The result of the correlation analysis in hypothesis two reveals that funding of new products ideas by firms shows a dwindling trend in Nigeria, Ateke and Iruka, (2015),

the research and development unit is the engine room where new product ideas are transformed into reality Helfat et al., (2009); but where funding is lacking, it gives room to competing products from abroad to out stage existing locally made products. The outcome of the analysis shows a statistically established correlation coefficient of .711.

Apparently, the result of the analysis of the null hypothesis three shows that training and re-training of personnel on new product development has a significant effect on the organization performance of Indomie Nigeria Plc, this is also summarized as [$r = .702, n = 263, p < .0005$].

- The outcome of the correlation analysis in hypothesis three reveals that there is an interrelationship between training of personnel and organizational performance; (Shapiro & Varian, 1998; Williamson, 2009) this is shown on positive statistical value of .702; Training and re-training of personnel increase productivity and position of the organization to compete effectively with rival products from abroad (Alojairi, 2019; Naghi et al, 2017).

Theoretically, the DCT theory enhances organizational competitive edge by adopting technologically proven methods of production in the industry Helfat et al., (2009), ensuring that environmentally sustainable processes are adopted (David et al., (1997). DCT also encourages firms to effectively manage their production changeover processes from manual to technologically driven production processes to ensure organizational balance (Basiouni et al., 2019; Ludwig & Pemberton, 2011; Helfat et al., (2009). The foregoing confirms the adaptation of a completely new theory, (DCT) which was never considered by previous studies. In essence, this proposition will help in filling the theoretical gap in previous investigations conducted by other studies.

Empirically, most of the studies undertaken were based on critical examination of introduction of new product Droge et al., (2000), enhancing internal and external capabilities, knowledge sharing and internal learning, (Akroush & Awwad, 2018; Smith & Bititci, 2017; Homburg et al., 2017), innovative and creative ideas in new product development, (Vinayak & Kodali, 2014; Sheperd & Ahmed, 2000), effectiveness of customer participation in new product development (Ateke & Iruka, 2015; Chang & Taylor, 2016), effective supply chain management (Ganeshkumar & Nambirajan, 2013; Hilletoft et al., 2009) and the relationship between innovation and performance: the moderating role of best practices in the manufacturing industry Vinayak and Kodali (2014). None of these studies holistically evaluated the link between new product development and its significant effect on organizational performance in Nigeria.

In essence, the implication of the study based on its findings confirms that, implementation of effective market research, provision of funding and training/re-training of personnel on new product development could enhance the overall organizational performance of Indomie Nigeria Plc.

Conclusions and Recommendations

The study holistically examined the effect of new product development on organizational performance. It revealed that conducting effective market research on the needs and wants of consumers, budgetary allocation and implementation and training/re-training of personnel could aid the firm to 'weather the storm' of competitiveness in the industry and harness its market leadership in the industry.

The study was conducted in Port Harcour, Rivers State and the urban and semi-urban areas of Uyo, Akwa Ibom State. The detailed information was gathered using questionnaire as a research instrument, 263 questionnaires were received from the field. The study hypotheses

were tested; data collected were subjected to statistical analysis using Pearson Correlation Analysis. The outcome of the study indicates a positive relationship between the dependent and independent variables.

Based on the study outcome, it is quite revealing that the actualization of customer satisfaction through sustainable product life cycle could be achieved by; effective and customer-centric market research on new products, provision of funding for the procurement of resources needed to develop new products and the training/re-training of personnel required to implement the development of new products. These activities could trigger the growth of the firm and by extension industrial revolution in Nigeria. Based on the findings of this study, the following was made;

i) To enhance increasing level of organizational performance in Indomie Nigeria Plc. Shareholders should make available funding to R & D unit to conduct effective market research that will reveal the exact need and wants of the consumers.

- Implication;

The increase in budgetary allocation to customer-driven new product development will increase the organizational internal/external capabilities in effectively competing with proliferated products from abroad; through confidence building in customers, through improved product quality and effective customer engagement. Market research that is customer driven could produce sustainable products that could compete effectively with global rivals.

ii) Funding provided should be reasonably deployed into effective market research of customer-driven products, required technology/equipment, and human resources required for the implementation of the new product ideas.

- Implication;

The acquisition of state-of-the-art technology in new product development will position the firm to compete effectively with global rivals, it will aid the firm in transferring new technology to local employees and in expanding the economies of scale production amongst operational firms.

iii) Effective training and re-training of personnel handling new product development is essential to the organizational performance. This will reduce cost of production and enhance competitiveness with global rivals.

- Implication:

Training and re-training of personnel by firms makes new product development successful. It makes room for increased productivity and boosts the confidence of stakeholders in firm's ability to meet its set organizational objectives.

The NPD winning strategy adopted by Indomie Nigeria Plc is the customization of its new products to reflect the cultural, social, economic diversities within the framework of the Nigerian society. Each of the new products introduced by the firm such as (Standard pack, super-pack, Hungry-man belle-full, Relish and with outstanding flavor such as: Onion Flavor, Chicken Flavor, Indomitable), is to address socio/cultural and economic realities, and create new noodle products that reflect on these realities. In achieving success and competitive edge, the firm has expanded its operational activities, by creating differentiated products that match its target market. This strategy has increased the companies' earnings, boosted its growth and the entire sector; as well as increased shareholders confidence in firm's ability to deliver dividend on investments at all times.

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Declaration of Interest

The authors declare no competing interest.

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