



## Effect of Innovative Designs on the Superior Performance of Telecommunication Firms in Nigeria

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**Abstract:** Innovation process is working and cranking out the new products that need to grow the business. But the reality is that over half of the companies out there are dissatisfied with their innovation. Often, the response is to install new product development processes hoping to see big gains. But the result is usually just bureaucracy, more overhead, and frustration leading to a process those entrepreneurs are constantly searching for a way around. Therefore, this study evaluated the effects of innovative design on superior performance of telecommunication firms in Nigeria. To achieve the spelt objective, the study employed survey design, and data was extracted through a self-administered questionnaire from the study respondents of 383 been a sample size drawn from the population for this study which comprised of the top and middle-level management staff of the telecom operators across the south-west states in Nigeria. The findings inter alia revealed that: there is a significant relationship between innovative designs and firm's superior performances in organization. Therefore, the work among other things recommends That telecommunication firms need to utilize innovative designs strategy. In order to gain from this strategy, the telecommunication firms should pay attention to the market segment which is sustainable so as to avoid the dangers encountered with innovative design strategy because of the problem of imitation.

**Key words:** Innovative design; Innovation process; Superior performance; Marketing innovation

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### 1.0 INTRODUCTION

Computers and the Internet have changed the world in a more fundamental way than have most political programmes. To be innovative means to provide organizational and technical improvements that can be sold successfully in the marketplace. In order to create innovations a firm must overcome thresholds. Technology trends seem to come and go with frightening regularity, some have a lasting impact on business. These are ones that change the way businesses operate and provide dramatic improvement for those that adopt them. Such technologies help organizations become operationally lean, agile and responsive, increase effectiveness and improve outcomes. Innovative technology also empowers executives, managers and workforces to operate their businesses more effectively.

Technology innovations – big data, business analytics, business collaboration, cloud computing, mobile technology and social media – can enable new computing methods for the lines of business and IT in any industry as they strive to unlock full value from people, process, information and technology investments. Innovation process is working and cranking out the new products that need to grow the business. But the reality is that over half of the companies out there are dissatisfied with their innovation.

Often, the response is to install new product development processes hoping to see big gains. But the result is usually just bureaucracy, more overhead, and frustration leading to a process those entrepreneurs are constantly searching for a way around. The goal of any

innovation process must be to generate more money in the future – more money than the operations would generate without new products and services.

In today's market for companies that cannot continually envision, conceptualize, and bring innovations to market that customers perceive as high value. Not only is it critical that businesses innovate and implement products and services in highly profitable ways, but also in the infrastructure of people and processes that enable a business to compete and win. The need to continually deliver more and higher value to the market is critical to every company's ability to compete, yet many companies spend little or no time preparing their people to think and work in ways that will bring this about. Companies may end up on tread-mills of improvement and work to squeeze every penny from current products and every internal group in order to maintain margins and profit goals. These efforts end up leaving no time for any truly innovative new products (or services) to be developed since everyone in the organization is working maximum effort to maintain a profitable status quo. Hence this study evaluated the effects of innovative design on superior performance of telecommunication firms in Nigeria.

## 2.0 LITERATURE SEARCH

The term “innovation” as such was used for the first time by Schumpeter at the beginning of the 20th century. His ideas and research have been developed by a number of other authors. Schumpeter defined innovations as product, process and organizational changes that do not necessarily originate from new scientific discoveries (Žižlavský, 2011), but may arise from a combination of already existing technologies and their application in a new context (Žižlavský, 2011).

Innovation also originates from public research (Autant-Bernard, 2001). It is therefore possible to summarize that according to these definitions innovations do not cover only technical and technological changes and improvements, but in particular practical application and particularly originates from research. Human capital and creative research work are according to Zemplerová (2010) and Autant-Bernard (2001) considered the most important determinants of innovation. Adair (2004) state that any innovative organization should have a bucketful of ideas.

According to Košťuriak & Cha (2008), Skarzynski & Gibson (2008), Tidd, Bessant & Pavitt (2007) an innovative process can be divided into two essential parts. One part is inventive – associated with the generation of the original idea, thought or concept – and the second innovative, during which the invention is implemented and marketed. Pitra (2006) stated that innovation is the result of employees' creativity in an organization and must be always targeted at customers and bring added value. It is therefore necessary to realize that the inventive part is based on people's knowledge, skills and experience (Molina-Morales, Garcia-Villaverde & Parra-Requena, 2011).

According to Kotler (2006) and Aliu (2010), an innovation is any good service or idea that is perceived by someone as new. The Oxford Learner Dictionary defined it as the introduction of new things, ideas, or ways of doing things/something, which is yet to be carried out by anyone or that is unique. Heunk (2007) defined innovation as the successful implementation of a creation and this innovation seems to foster growth, profits and success. Many companies today because of the competitive nature of the market are innovative bringing about new ideas and modifying existing ones into their offerings (Aliu, 2010).

Aliu (2010) stated that there exist features that are peculiar to innovation, though some

products catch on immediately, whereas others take a longer time to gain acceptance. He listed these features as relative advantage which is the degree to which innovation appears superior to existing product, compatibility which is the degree to which the innovation can go with existing product of the organization, complexity which defines the degree to which the innovation is relatively difficult to understand, divisibility which defines the degree to which the innovation can be tried on a limited basis, and communicability which is the degree to which the beneficial results of usage are observable or describable to others. All products and services in the market must have gone through new product development process or program as a result of the fact that organization need to grow their revenue, market share and build their sales level by developing new products and expanding into new markets. In order to do these, organizations then put product innovation as well as process innovation in all they do.

The human factor is an indispensable element in the process of innovation. Based on analyses of external and internal conditions, people generate ideas that might help an organization gain a competitive advantage and thus distinguish it, at least for a certain period of time, from its competitors. Innovation capability of an organization according to Martín-de Castro, Delgado-Verde, Navas-López & Cruz-González (2013) depends closely on its intellectual and/or organizational knowledge assets and on its ability to employ these assets. Noruzy, Dalfard, Azhdari, Nazari-Shirkouhi & Rezaza-deh (2012) researches showed that organizational learning and knowledge management directly influenced organizational innovation, whereas organizational learning and organizational innovation directly influenced organizational performance.

### **Classification of Innovation**

Innovation can be classified into product innovation and process innovation. Product innovation refers to the new or improved product, equipment or service that is successful on the market. Process innovation involves the adoption of a new or improved manufacturing or distribution process, or a new method of social service. This is no to mean that the two types of innovations are mutually exclusive. Process innovation for instance may lead on to product innovation and product innovation may also induce innovation in processes. Some authors have emphasized a third category of innovation, that of organizational change within the firm. Beside product innovation and process innovation, there is organizational innovation. Organizational innovation can lead to more effective utilization of human resources that are crucial to the successful exploitation of ideas. Hence, innovations can occur in three broad dimensions – product, process and organizational.

Creativity is sometimes used to mean innovation. This study does not however view creativity as innovation; instead it sees creativity as a start point for innovation. According to Amabile (2006), creativity by individuals and teams is a starting point for innovation. She further opined that creativity being the starting point for innovation is a necessary condition but not a sufficient condition. According to her innovation is the successful implementation of creative ideas within an organization and successful innovation also depends on other factors as well and it can stem from not only from creative ideas that originate within the organization but also from ideas that originate from elsewhere for example technology transfer.

According to Schumpeter (1986), there are five areas in which companies can introduce innovation. Generation of new or improved products; Introduction of new production process;

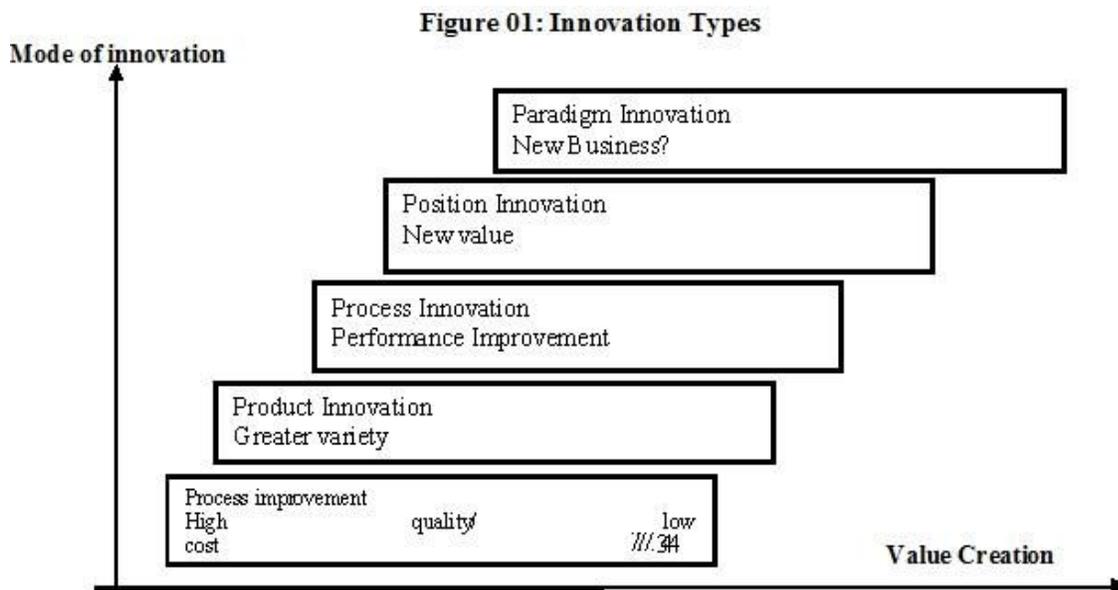
Development of new sales market; Development of new supply market; Reorganization and/ or restructuring of the company. The above definition clearly distinguishes innovation from minor changes in the makeup and/ or delivering of products in forms of extension of product lines, adding service components or product differentiation. Innovation is not related to production fields only, but there are other fields and activities which can be innovated as the following (Ferberberg, 2004; Subrahmanya, 2005):

**Process innovation:** is the adoption of new or significantly improved production methods. These methods may involve changes in equipment or production organization or both. The methods may be intended to produce new or improved products which cannot be produced using conventional plants or production methods, or essentially to increase the production efficiency of existing products.

**Marketing innovation:** is an innovation that satisfies customer needs and develops a competitive advantage through differentiation along one or more of the following: Desired Product Features and Design, Size, Usability, Quality, Time, Price, Cost savings/ Incremental Revenues... in other words is the implementation of new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing.

**Organizational innovation:** is the implementation of a new organizational method in the firm's business practices, workplace organization or external relations. It can be intended to increase a firm's performance by reducing administrative costs or transaction costs, improving workplace satisfaction (Jobber, 2006).

Moreover, there are other sorts of innovation adopted by companies which can be illustrated in the Figure below:



Source: Joe Tidd. (2006). *Managing Innovation for Global Competitiveness*. Renaissance Project Symposium. Tokyo.

The paradigm above indicates that in every type of innovation there is a created value whether from costs, quality or performance. This classification of innovation's types according to Joe Tidd (2006) is conformed with the global value of innovation, for example, the paradigm innovation leads to the opening of new frameworks and developing the company's activities, however; the created value from the organizational innovation is restricted on the current company's activities through the introduction of new leadership models and new management methods. At the lowest level, Tidd (2006) suggested the Process improvement as a kind of innovation which means the introduction of new modifications to the existing activities and operations without complete changes, and the result is the reduction of costs and quality improvement. Despite the differences between the created values of each type of innovation, the main and essential objective is to increase the global benefit of the company.

What we can remark from the different kinds of innovation is that there is a common idea which is the improvement and the development which indicates the main role of the technological knowledge. And because any company aims to cover the largest market part or at least to protect and maintain its market position, the innovation plays a big role in that, so it can be (market) considered as an important factor to determine the type of innovation, as the following diagram denotes.

### **Theoretical Anchor**

This work anchored on Miles and Snow Theory and Typology This theory was founded by Miles and Snow in 1978. It is one of the most frequently empirically proven classifications (Peng, 2004). Its usefulness has been demonstrated by numerous studies confirming the basic assumptions of the proposed model in the area of strategic management and strategic marketing (Moore, 2005; Pleshko & Nickerson 2008).

According to Sumer and Bayraktar (2012), Miles and Snow proposed four strategy types which include; defenders, prospectors, analysers and reactors that a firm can employ to compete in the industry. The typology proposes that firms develop relatively stable patterns of strategic behaviour that are compatible with perceived environmental conditions. Defenders focus on improving the efficiency of their existing operations by becoming more successful in existing markets with existing products, with the lowest level of uncertainty compared to other strategic types.

On the other hand, reactors have no systematic proactive strategy. They react to events as they occur. Miles and Snow contend that the prospector, defender and analyser styles are capable of leading to competitive advantage within the industry. However, they caution that the reactor style is often a manifestation of a poorly aligned strategy and structure, therefore, unlikely to lead to competitive advantage. The authors believe that companies develop their adaptive strategies based on their own perception of the environment in which they compete. According to Hitt et al., (2001), modern researchers have undoubtedly recognised a great usefulness of Miles and Snow's strategic typology which results precisely from the requirements of the increasing dynamism, complexity and unpredictability of the environment a modern manager has to face. In light of the present research, a moderation approach is adopted in the specification of

fit in order to investigate if competitive intensity modifies the strength of the hypothesised relationships.

Companies using this strategy maintain internal focus by concentrating on a narrowly defined product-market domain. Prospectors always search for new market opportunities and analyses show some characteristics of both prospectors and defenders. They try to achieve efficient production for current lines and at the same time emphasise the creative development of new product lines. They achieve competitive advantage by company entering markets with new products, by being innovative and by quickly embracing new technologies. The company maintains external focus on constantly adapting to market changes, but with a possible significant loss in operational efficiency.

### 3.0 METHODOLOGY

This study adopted survey method. The area of this study was south west, Nigeria. The population for this study comprised of the top and middle-level management staff of the telecom operators across the south-west states in Nigeria. The populations of the staff were 910. A total sample size of 383 was drawn. Data for this study was collected mainly from primary source through questionnaire that was self-administered. The answer options for the questionnaire were developed using 5-point Likert scale with: SA – Strongly Agree, A – Agree, U – Uncertain, D – Disagree, SD – Strongly Disagree.

### 4.0 DATA ANALYSIS AND RESULTS DISCUSSION

The researcher distributed a total of 383 three hundred and eighty-three questionnaires which covered the entire sample size being the staff. 340 (88.8%) of the administered questionnaire were properly completed and returned. This makes (89%) response rate upon which the analysis of this study is based

**Table 4.1: Biographical data of the respondents**

Biography Info	Options	Freq	Percent
<b>Sex</b>	Male	177	52.1%
	Female	163	47.9%
	<b>Total</b>	<b>340</b>	<b>100%</b>
<b>Age</b>	Less than 18	75	22.1%
	18-35	187	55.0%
	35-50	46	13.5%
	50 and above	32	9.4%
	<b>Total</b>	<b>340</b>	<b>100%</b>

<b>Marital Status</b>	Married	133	39.1%
	Single	207	60.9%
	<b>Total</b>	<b>340</b>	<b>100%</b>
<b>Managerial Position</b>	Top Level	24	7.1%
	Middle Level	49	14.4%
	Lower Level	267	78.5%
	<b>Total</b>	<b>340</b>	<b>100%</b>
<b>Years in Service</b>	0-2years	85	25.0%
	3-4years	146	42.9%
	5years and above	109	32.1%
	<b>Total</b>	<b>340</b>	<b>100%</b>

**Source:** Researcher Field Survey, 2018

Table 4.1 above is a distribution of the gender, age and degree programme respectively.

**Hypothesis:**

**HO:** There would be a significant negative relationship between innovative designs and firm’s superior performances

**HA:** There would be a significant positive relationship between innovative designs and firm’s superior performances

**Table 4.2: Correlations**

			Innovative Designs	Superior Performances
Correlation	Innovative	Correlation Coefficient	1.000	.672

Designs	Sig. (2-tailed)	.	.014
	N	340	340
Superior Performances	Correlation Coefficient	.672	1.000
	Sig. (2-tailed)	.014	.
	N	340	340

### Interpretation of Result

Having analyzed the data from the questionnaire using correlation analysis to examine if there is a significant relationship between innovative designs and firm's superior performances in organization, the **Tables 4.2** revealed that the correlation result shows the existence of significant result on the variables ( $r_{calc} = 0.672 >$  at  $p < 0.05$ ). The significant level was found to be 0.014, and due to this we reject the null hypothesis and accept the alternate one which states *there would be a significant positive relationship between innovative designs and firm's superior performances.*

### Discussion

The test of hypothesis for this study was done with the correlation analysis with the result which show the existence of the correlation result on the variables ( $r_{calc} = 0.672 >$  at  $p < 0.05$ ). The significant level was found to be 0.014, and due to this we accept the alternate hypothesis that states that *there would be a significant positive relationship between innovative designs and firm's superior performances.* The findings from the descriptive statistics showed that most respondents agreed that the highly innovative telecom organizations would able to identify and quickly seize new market opportunities. Similarly, the findings from the descriptive statistics revealed that that most respondents agreed that customers feel happier with a firm that develop creative product designs that meet their latent and stated need. Most respondents from the descriptive statistics were also of the opinion that entering new markets by developing products will build superior performance for telecom firms. Furthermore, most of the respondents agreed that organization with unique product designs tends to be have a technology/marketing synergy and market attractiveness.

The result of this work is similar with the outcome of work done by Prajogo (2007) which found out that innovative design affect performances. The result of this work also conforms with the outcome of work done Pulaj, Kume & Cipi (2015) who found out that key product decision such as new product designs were determinants of most of the high market shares of today's organization, i.e., high product quality conscious, brand value and equity go a long way in stimulating market demand from the customers. The study is also in line with the study of Yasar (2010) and the study of Robert and Loice (2014) which showed that if the outcome of distinct product quality is usually on core competencies for the firm. The findings also gave nod to the work of Gathoga (2001) who explain the long-run market scope of any

organization is largely depending on its innovative product quality and designs.

The study negates the findings by Karanja, (2002) which state that factors responsible for stellar performance are enormous and product designs cannot be studied in isolation of others. The competitive advantage of firms goes beyond ordinary designs and quality of product but include price and marketing promotion. Product quality was not found to be completely applicable in all situations having concluded that the value of organization could be best derived from key issues.

## 5.0 CONCLUSION AND STUDY RECOMMENDATIONS

The study concludes that organizations that employ differentiation strategies, conforms to specifications that greatly influence the reliable performance of the product, ensures quality systems from the coherence of process capabilities and lastly provide many unique and superior products to the market. The study concludes that organizations that employ service differentiation enjoy stellar performance outcomes and favourable word of mouth. On overall, strategies pursued by firms improve the overall organization growth of which indicators include sales and market share, customer retention, superior performance, corporate perception and image.

The telecommunication firms need to utilize innovative designs strategy. In order to gain from this strategy, the telecommunication firms should pay attention to the market segment which is sustainable so as to avoid the dangers encountered with innovative design strategy because of the problem of imitation. Similarly, the firms should scan the environment fully to identify the best segment to target and adopt innovative strategy to satisfy customer wants and needs in market segments that are sustainable.

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