

### Product Innovation and Competitive Advantage of Aluminium Manufacturing Firms in Rivers State, Nigeria

### Ohia, Gift Ejike and Dr. S. Lebura

Department of Management, Faculty of Management Sciences, Rivers, State University, Nkpolu-Oroworukwo, PMB 5080, Port Harcourt, Nigeria

Abstract: This study examined the relationship between relationship between product innovation and competitive advantage of aluminium manufacturing firms in Rivers State, Nigeria. The study adopted the cross-sectional survey in its investigation of the variables. Primary source of data was generated through structured questionnaire. The population of the study was (84) managers and supervisors of ten (10) aluminium manufacturing firms in Rivers State. Census sampling was adopted since the population was not large. Hence, the entire accessible population (census) of 84 managers and supervisors of ten aluminium companies in Rivers State was used. The reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. The hypotheses were tested using the Spearman's Rank Order Correlation Statistics at the 0.05 significance level. The findings revealed that there is a significant relationship between product innovation and competitive advantage of aluminium manufacturing firms in Rivers State, Nigeria. The study therefore recommends that management of aluminium manufacturing companies should put mechanisms in place to enhance more internal innovations. This should include giving employees enough space to innovate new products and services. In addition, there is need for aluminium manufacturing to set aside a budget that will be used exclusively for product innovation.

Keywords: Product Innovation, Competitive Advantage, Cost Advantage, Differentiation, Market Focus.

#### **INTRODUCTION**

At the advent of the twenty-first century, it becomes imperative for organizations to come up with precise strategies. Except the organizations come up with a precise vision as to how to be clearly peculiar, providing products/services that are dissimilar to their rivals to some dissimilar set of clients, they are going to be eaten raw by the height of rivalry (Porter, 2011). The world is indeed too dynamic for any organization that is succeeding today to do nothing and expect the continuity of the success. To attain and sustain a competitive advantage, organizations should innovate (Hyde, 2013; Porter, 2011). It has been advocated that a culture of positive crisis should be so established in such a way that what is good now is not being adequately good (Markides, 1998; Wood, 2007). The reason is to ensure that we have innovation take place in the face of adequate financial resources to take care of the said innovation (Wood, 2007).

In order to beat competition, organizations are charged to embark on innovation so as not to only compete for the same finite customers but equally create and expand the market space for all players (Hyde, 2013). Innovation strategies are asserted to produce more profits than competitive strategies (Kim & Mauborgne, 2005). In addition, they are viewed to be more

sustainable in offering competitive advantage; it might take well over 15 years for competition to erode profits earned from innovation (Burke, Stel & Thurik, 2010).

Furthermore, innovation strategies have the potential to do away with the need for a trade-off, meaning companies are no longer bound to make decisions about whether they will be low cost or highly differentiated (Kim & Mauborgen, 2005).

Organization embarking on innovation should make two strategic decisions; innovation emphasis and innovation timing. Innovation emphasis comprises scientific research, product development and process improvement. The first two lead to differentiation and the last option leads to cost advantage. Another strategic decision is the timing – is the organization prepared to be the first mover or it wants to be a follower in the industry to avoid some of the risks associated with being the first mover. Robbin and Coulter (2013) opined that for an organization to be successful in hypercompetitive world of business, it should be innovative but differs in that innovation should not be in part but must be whole. To him, innovation is all about providing offerings in a manner that is entirely different, embarking on novel combinations. Innovation is not just small, incremental improvements – these are just part of being a dynamic organization. Innovation is essentially finding new ways of combining things generally.

Davila, Marc and Robert (2006) defined innovation as the art of acting on the inventive thoughts with a view of making some specific and tangible distinction in the domain in which the innovation occurs. It can take the form of a new service or product, a new structure, a new production process, or a new administrative system (Bilgihan, Okumus & Kwun, 2011). Innovation is influenced by several environmental and firms dimensions and brings about results. Hence, the research about innovations encompasses not only the study of their sources, determinants, mechanisms or processes, but also their consequences (Van, Polley, Garud & Venkataraman, 2001). According to Chen, Ming-Ji and Ching-Hsun (2009), the ability of a firm to absorb new changes is one of the most important determinants of the firm's innovation performance through the development of ability to acquire, assimilate, and profitably utilize new knowledge. To this end, when firms have a greater absorptive capacity, it would increase their performance in innovation.

Innovation constitutes part of the system that produces it which leads to a shift in the focus of innovation towards providing individuals with unique and customized experiences when they purchase products and services. For this experience to be meaningful, companies will have to understand their user's behavior and include them early on in the innovation process to provide them with solutions that satisfy their needs. As consumers and users become more informed, and are able to exchange and utilize globally-available knowledge, they are placing higher demands on products and services delivered by companies as well as the public sector. At the same time, the world is becoming flat, offering all individuals the possibility of participating in the economy and value creation. The ability of an organization to innovate is a pre-condition for the successful utilization of inventive resources and new technologies. Conversely, the introduction of new technology often presents complex opportunities and challenges for organizations, leading to changes in managerial practices and the emergence of new organizational forms (Macrouse, Hodder & Stoughton, 2003).

Hyde (2013) argued that innovation strategy is superior to the traditional competitive strategy and is key to attaining competitive advantage, and further divided innovation into three categories which are blue ocean innovation, disruptive innovation, and strategic innovation.

Nielson (2014) towing the similar line had divided innovation into four categories which are as follow: breakthrough innovation, sustaining innovation, new market innovation, and disruptive innovation. When a firm can sustain profits that supersede the average for its industry, the firm is rightly considered to have a competitive advantage over its competitors. The essence of business strategy is to attain a sustainable competitive advantage. Porter (1998) came up with two main types of competitive advantages which are; differentiation advantage, and cost advantage.

A firm is said to possess a competitive advantage if it can come up with the same benefits as rivals but at a lower cost (cost advantage), or come up with benefits that supersede those of competing products (differentiation advantage. Thus, a competitive advantage allows the organization to deliver superior value for its customers and superior profits for itself. Even though research on innovations and sustainable competitive advantage has been done in a variety of industries, hardly any comprehensive research to the best of the researcher's knowledge been done in this respect in the aluminium manufacturing companies in Rivers State. This study therefore examines the relationship between product innovation and competitive advantage of aluminium manufacturing firms in Rivers state, Nigeria.

Furthermore, this study was also guided by the following research questions:

- i. What is the relationship between product innovation and cost advantage of aluminium manufacturing companies in Rivers State?
- ii. What is the relationship between product innovation and differentiation of aluminium manufacturing companies in Rivers State?
- iii. What is the relationship between product innovation and market focus of aluminium manufacturing companies in Rivers State?

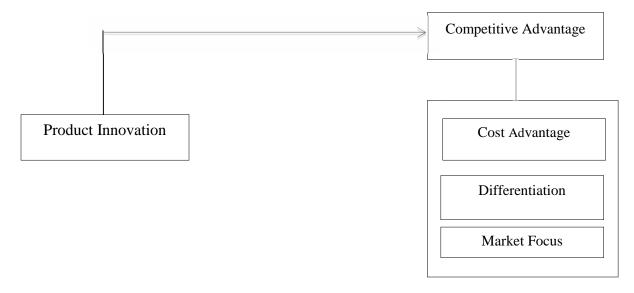


Fig.1: Conceptual framework for the relationship between product innovation and competitive advantage

**Source:** Conceptualized based on desk research (2019) with product innovation sourced from Porter (1996) and measures of competitive advantage sourced from Nolan (2015)

#### LITERATURE REVIEW

#### **Theoretical Foundation**

#### **Resource -Based View Theory**

This theory tries to explain the internal sources of a firm's sustained competitive advantage (Kraaijenbrink, Spender and Groen, 2010). The resource-based strategy paradigm emphasizes distinctive, firm-specific, valuable, imperfectly inimitable and rare resources and capabilities confer competitive advantage on the firm that possesses them (Wernerfelt, 1959). Its innermost proposition is that if a firm is to attain a state of sustainable competitive advantage it must obtain and control valuable, rare, inimitable, and non-substitutable (VRIN) resource and capabilities, plus have the firms in the place that can absorb and apply them. Resources relate to a firms intangible and tangible assets whereas capabilities are the way of accomplishing firm activities, depending on the availability of resources (Wernerfelt, 1959; Barney, 1991).

Simply stated, in order to produce a competitive advantage that is sustainable, firms should base their success in their distinctive competencies which are grounded in their resources and routines. For Menguc and Auh (2006), innovativeness is a rare, valuable and hard-to-copy firm level competence. It is the key driver of innovation in a firm (Damanpour, 1991; Dobni, 2006), and represents a firm's ability to continually develop innovations (Damanpour, 1991; Dobni, 2006; Paleo and Wijnberg, 2008). Fundamentally, innovativeness increases a firm's capacity to innovate (Damanpour, 1991) by encouraging innovative behaviours through strategic practices (Siguaw, Simpson&Enz, 2006). The essence of the argument is that innovativeness is constructed by the purposeful orchestration and strategic application of practices that accumulate bundle and leverage resources (Wernerfelt, 1959; Moingeon&Lehmann-Ortega, 1998). In order to create innovativeness a firm must implement strategic practices that enhance their innovativeness competence (that is, strategic practices are the "how to" for creating innovativeness).

According to Resource Based Theory (RBT), human capital is considered to be a source of competitive advantage for entrepreneurial firms. Ownership of firm-specific assets enables a company to develop a competitive advantage. Sustainable competitive advantage results from resources that are inimitable, not substitutable, tacit in nature, and synergistic (Barney, 1991). Therefore, managers need to be able to identify the key resources and drivers of performance and value in their organizations. The RBT also states that a company's competitive advantage is derived from the company's ability to assemble and exploit an appropriate combination of resources. Such resources can be tangible or intangible, and represent the inputs into a firm's production process; such as capital, equipment, the skills of individual employees, patents, financing, and talented managers. As a company's effectiveness and capabilities increase, the set of available resources tends to become larger. Through continued use, these "capabilities", defined as the capacity for a set of resources to interactively perform a stretch task or an activity, become stronger and more difficult for competitors to understand and imitate.

#### **Product Innovation**

A product innovation is the introduction of a good or service that is new or significantly improved regarding its characteristics or intended uses; including significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics (OECD Oslo Manual, 2005). Product innovation is considered an obvious means of generating revenue and thus improving performance. Camison and Lopez

(2010) state that product innovation not only acts as a means of improving and safeguarding quality but also for cost saving. It is further lauded for retaining and growing the competitive position of a firm, as well as retaining a strong market presence. Products that are constantly improved are particularly important for long term business growth and performance (Bayus, Erickson & Jacobson, 2003). Product innovation is prevalent among new entrants in any industry as it has been used to boost their popularity in the market in a surprising short time (Hult et al., 2004).

Product innovation is the introduction of a good or service that is new or has significantly improved characteristics or intended uses. In SMEs, not only the R&D staff but also the owners may play a major role in acquiring and applying the new knowledge for product innovation (Migdadi, 2009, Omerzel & Antoncic, 2008). Product innovation requires appreciation of customer needs, design and production while innovation process is linked to the application of technology to improve efficiency in the development and commercialization of the product, (Alegre et al 2002). Furthermore, theories of organizational innovation argue that information imported from sources outside an organization facilitate the creation of new ideas and enhance product innovation.

Product innovation is however not always successful, with a main inhibitor to its success being regulation (Lado & Olivares, 2001). Regulations are set by governments to protect policyholders from illegal malpractices against them by insurance companies but on some instances these very regulations limit the range of potential products offered by the firms. Consumer distrust is noted in literature too as another inhibitor to product innovation (Bhalla, 2010). This restricts innovation in that, consumers need a lot of convincing whenever a new product is released to the market.

#### **Competitive Advantage**

The rapid change in the economic and business environment in recent times has lead organizations to strive harder in other to increase the revenue they generate, their market share, and also the quantum of their customers with quality goods and services that satisfy customers needs. Competition on a global scale has led to changes in technology whereby customers demand for superior products/services at low prices. The escalation in worldwide competition has brought the decline in product life cycle. Emphasis is now being place on the competency of the organization and competitive advantage which is believed to give an edge over other competitors in the industry. Raduan*et al* (2009) relates that "though there are many objectives an organization would want to achieve these days, the two major ones are: (i). to achieve a competitive advantage position and (ii). Enhance their organization's performance in relation to that of their competitors.

Hence it is necessary that organizations recognize the relationship between its strengths and weaknesses and the potential effects it has on the organizations competitive advantage and performance. Organizations should make a choice of the type of competitive advantage to adopt and the scope to attain it. Porter (1985) developed the generic strategies which when implemented effectively helps an organization to achieve competitive advantage. The strategies are: product differentiation and cost leadership. Porter (1980), explains that a differentiation strategy involves the firm creating a product/service, which is considered unique in some aspect that the customer values because the customer's needs are satisfied. On the other hand, cost leadership emphasizes low cost relative to that of the competitors. Porter (1985) argued that cost

leadership and differentiation strategies are mutually exclusive.

According to Barney (1991), when a firm is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors, such a firm has competitive advantage. In addition, competitive advantage is an added advantage one organization has over other organizations in the industry. Competitive advantage exist when organizations provide the same value as other competitors to customers at a lower cost( cost advantage ) or provide value that exceed those of competing products (differentiation). According to Prahalad& Hamel (1990) the source of the advantage can be something the business does that is distinctive and difficult to replicate, also known as a core competency.

According to Stalk, Evans & Shulman (1992) "sustained competitive advantage has become more of a matter of movement and ability to change than of location or position. Prahalad& Hamel (1990) posit that competitive advantage is ultimately built and maintained by adding value to customers. Value is added by cost leadership. That is, offering equal quality products or services at a lower cost than competitors, or by differentiation, that is, offering products or services that are perceived to be unique relative to some important characteristic (Markides& Williamson, 1994). Understanding how each competitively relevant resource and capability affects costs and uniqueness is an important aspect of understanding how, or if, each adds value to the services provided" (Duncan, Ginter& Swayne, 1998).

Competitive advantage is at the heart of an organizations performance. It is concerned with the interplay between the types of competitive advantage, i.e., cost and the scope of the organizations activities. The value chain plays an important role in order to diagnose and enhance the competitive advantage. A sustainable competitive advantage creates some barriers that make it difficult to replicate.

### Measures of Competitive Advantage Cost Advantage

This is Porter's generic strategies known as cost leadership (Malburg, 2007). This strategy focuses on gaining competitive advantage by having the lowest cost in the industry (Porter, 1987, 1996; Cross, 1999). In order to achieve a low-cost advantage, an organization must have a low-cost leadership strategy, low-cost manufacturing, and a workforce committed to the low-cost strategy (Malburg, 2007). The organization must be willing to discontinue any activities in which they do not have a cost advantage and should consider outsourcing activities to other organizations with a cost advantage (Malburg, 2007). For an effective cost leadership strategy, a firm must have a large market share (Hyatt, 2001). There are many areas to achieve cost leadership such as mass production, mass distribution, economies of scale, technology, product design, input cost, capacity utilization of resources, and access to raw materials (Malburg, 2007).

Lower costs and cost advantages result from process innovations, learning curve benefits, and economics of scale, product designs reducing manufacturing time and costs, and reengineering activities. A low-cost or cost leadership strategy is effectively implemented when the business designs, produces, and markets a comparable product more efficiently than its competitors. The firm may have access to raw materials or superior proprietary technology which helps to lower costs. Cost leadership strategy seeks to achieve above-average returns over competitors through low prices by driving all components of activities towards reducing costs. To attain such a relative cost advantage, firms will put considerable effort in controlling and production costs, increasing their capacity utilization, controlling materials supply or product

distribution, and minimizing other costs, including R&D and advertising.

Firms do not have to sacrifice revenue to be the cost leader since high revenue is achieved through obtaining a large market share (Porter, 1987). Lower prices lead to higher demand and, therefore, to a larger market share (Helms et al., 1997). As a low cost leader, an organization can present barriers against new market entrants who would need large amounts of capital to enter the market (Hyatt, 2001). The leader then is somewhat insulated from industry wide price reductions (Malburg, 2000). The cost leadership strategy does have disadvantages. It creates little customer loyalty and if a firm lowers prices too much, it may lose revenues (Cross, 1999).

#### **Market Focus Strategy**

The focuser's basis for competitive advantage is either lower costs than competitors serving that market segment or an ability to offer niche members something different from competitors. Focusing is based on selecting a market niche where buyers have distinctive preferences. The niche is defined by geographical uniqueness, specialized requirements in using the product or by special attributes that appeal to members, (Stone, 1995).

A focus strategy based on low cost depends on there being a buyer segment whose needs are less costly to satisfy than the rest of the market. On the other hand, a focus strategy based on differentiation depends on there being a buyer segment that demands unique product attributes. In the focus strategy, a firm targets a specific segment of the market (Porter, 1996). The firm can choose to focus on a select customer group, product range, geographical area, or service line (Martin, 1999). For example, some service firms focus solely on the service customers (Stone, 1995). Focus also is based on adopting a narrow competitive scope within an industry.

Focus aims at growing market share through operating in a niche market or in markets either not attractive to, or overlooked by, larger competitors. These niches arise from a number of factors including geography, buyer characteristics, and product specifications or requirements. A successful focus strategy (Porter, 1980) depends upon an industry segment large enough to have good growth potential but not of key importance to other major competitors. Market penetration or market development can be an important focus strategy. Midsize and large firms use focus-based strategies but only in conjunction with differentiation or cost leadership generic strategies. But, focus strategies are most effective when consumers have distinct preferences and when the niche has not been pursued by rival firms (David, 2000).

#### **Differentiation Strategy**

Differentiation strategies are marketing techniques used by a firm to establish strong identity in a specific market; also called segmentation strategy. Using this strategy, a firm will introduce different varieties of the same basic product under the same name into a particular product category and thus cover the range of products available in that category. Differentiation strategy can also be defined as positioning a brand in such a way as to differentiate it from the competition and establish an image that is unique, (Davidow & Uttal, 1989). Differentiation strategy aims to build up competitive advantage by offering unique products which are characterized by valuable features, such as quality, innovation, and customer service. Differentiation can be based on the product itself, the delivery system, and a broad range of other factors. With these differentiation features, firms provide additional values to customers which will reward them with a premium price.

#### **Innovativeness and Competitive Advantage**

Several studies discussed the relationship between innovation and firm performance. Baker and Sinkula (2002); Kim and Mauborgne (2005) found a positive relationship between innovation and firm performance. Baker and Sinkula (2002) found that innovation helps companies deal with the turbulence of the external environment and is therefore one of the key drivers of long term success in business, particularly in dynamic markets. However other studies challenge this view and give conditions under which innovation is successful. According to Danneels (2000) big organizations are more likely to have experience with innovation projects leading to organizational innovation capabilities. Smaller and especially new firms often lack this organizational capability and thus run the risk of engaging in managerial undertakings without experience.

Additionally, empirical studies on the innovation-performance relationship present mixed findings. According to Siguaw, Simpson and Enz (2006), innovation is an expensive and risky activity, with positive outcomes on firm performances but also with negative outcomes, such as increased exposure to market risk, increased costs, employee dissatisfaction or unwarranted changes. Similarly, Wright, Palmer and Perkins (2005), using a sample of small businesses, found that product innovation does not affect performance in benign environment, but has a positive effect on performance in hostile environment.

Evidence on the relationship between innovation and business growth, profitability and exporting has become more common in recent years (Love and Roper, 2013). Four main conceptual perspectives underlie studies of the links between innovation and survival. The first, relates to the efficiency effects of innovation. Here, the line of argument, which either implicitly or explicitly reflects the notion of entrepreneurial learning (Jovanic, 1982), runs that as firms become more mature, innovation may lead to efficiency improvements and higher productivity which then reduces the probability of failure: 'Firms that obtain innovations improve their efficiency, which makes them fitter to survive' (Esteve-Perez and Manez-Castillejo, 2008). Consistent with the liability of newness (Stinchcombe, 1965), there is some evidence to support the efficiency-effect model (Colombo and Delmastro, 2001).

From the foregoing the study stated the following hypotheses to be tested:

- **Ho<sub>1</sub>:** There is no significant relationship between product innovation and cost advantage of aluminium manufacturing companies in Rivers State.
- **Ho<sub>2</sub>** There is no significant relationship between product innovation and differentiation of aluminium manufacturing companies in Rivers State.
- **Ho**<sub>3</sub> There is no significant relationship between product innovation and market focus of aluminium manufacturing companies in Rivers State.

#### **METHODOLOGY**

The study adopted the cross-sectional survey in its investigation of the variables. Primary source of data was generated through structured questionnaire. The population of the study was (84) managers and supervisors of ten (10) aluminium manufacturing firms in Rivers State. Census sampling was adopted since the population was not large. Hence, the entire accessible population (census) of 84 managers and supervisors of ten aluminium companies in Rivers State was used.

The reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. The hypotheses were tested using the Spearman's Rank Order Correlation Statistics at the 0.05 significance level.

#### DATA ANALYSIS AND RESULTS

#### **Bivariate Analysis**

The Spearman Rank Order Correlation coefficient is calculated using the SPSS 23.0 version to establish the relationship among the empirical referents of the predictor variable and the measures of the criterion variable. Correlation coefficient can range from -1.00 to +1.00. The value of -1.00 represents a perfect negative correlation while the value of +1.00 represents a perfect positive correlation. A value of 0.00 represents a lack of correlation. In testing hypotheses one to nine, the following rules were upheld in accepting or rejecting our alternate hypotheses: all the coefficient values that indicate levels of significance (\* or \*\*) as calculated using SPSS were accepted and therefore our alternate hypotheses rejected; when no significance is indicated in the coefficient r value, we reject our alternate hypotheses. Our confidence interval was set at the 0.05 (two tailed) level of significance to test the statistical significance of the data in this study.

Table 1: Correlation for between product innovation and measures of competitive advantage

			Product Innovation	Cost Advantage	Differentiation	Market Focus
Spearman's rho	Product Innovation	Correlation Coefficient	1.000	.662**	.596**	.748**
		Sig. (2-tailed)		.000	.000	.000
		N	59	59	59	59
	Cost Advantage	Correlation Coefficient	.662**	1.000	.898**	.947**
		Sig. (2-tailed)	.000		.000	.000
		N	59	59	59	59
	Differentiation	Correlation Coefficient	.596**	.898**	1.000	.932**
		Sig. (2-tailed)	.000	.000		.000
		N	59	59	59	59
	Market Focus	Correlation Coefficient	.748**	.947**	.932**	1.000
		Sig. (2-tailed)	.000	.000	.000	
		N	59	59	59	59

<sup>\*\*.</sup> Correlation is significant at the 0.01 level (2-tailed).

Source: Research Data 2019, (SPSS output version 21.0)

# Ho<sub>1:</sub> There is no significant relationship between product innovation and cost advantage of aluminium manufacturing companies in Rivers State.

From the result in the table above, the correlation coefficient shows that there is a positive relationship between product innovation and cost advantage. The *correlation coefficient* 0.662 confirms the magnitude and strength of this relationship and it is statistically significant at p

0.000<0.05. The correlation coefficient represents a strong correlation between the variables. Therefore, based on empirical findings the null hypothesis earlier stated is hereby rejected and the alternate accepted. Thus, there is a significant relationship between product innovation and cost advantage of aluminium manufacturing companies in Rivers State.

## Ho<sub>2</sub>: There is no significant relationship between product innovation and differentiation of aluminium manufacturing companies in Rivers State.

From the result in the table above, the correlation coefficient shows that there is a positive relationship between product innovation and market focus. The *correlation coefficient* 0.596 confirms the magnitude and strength of this relationship and it is statistically significant at p 0.000<0.05. The correlation coefficient represents a moderate correlation between the variables. Therefore, based on empirical findings the null hypothesis earlier stated is hereby rejected and the alternate accepted. Thus, there is a significant relationship between product innovation and market focus of aluminium manufacturing companies in Rivers State.

# Ho<sub>3:</sub> There is no significant relationship between product innovation and differentiation of aluminium manufacturing companies in Rivers State.

From the result in the table above, the correlation coefficient shows that there is a positive relationship between product innovation and market focus. The *correlation coefficient* 0.748 confirms the magnitude and strength of this relationship and it is statistically significant at p 0.000<0.05. The correlation coefficient represents a strong correlation between the variables. Therefore, based on empirical findings the null hypothesis earlier stated is hereby rejected and the alternate accepted. Thus, there is a significant relationship between product innovation and market focus of aluminium manufacturing companies in Rivers State.

#### **Discussion of Findings**

This study using inferential statistical methods examined the relationship between product innovation and competitive advantage of aluminium manufacturing companies in Rivers State. The findings revealed a significant and positive relationship between product innovation and competitive advantage of aluminium manufacturing companies in Rivers State using the Spearman Rank Order Correlation tool and at a 95% confidence interval. The findings of this study confirmed previous studies conducted by Baker and Sinkula (2002); Kim and Mauborgne (2005) who found a positive relationship between innovation and firm performance. Baker and Sinkula (2002) found that innovation helps companies deal with the turbulence of the external environment and is therefore one of the key drivers of long term success in business, particularly in dynamic markets. However other studies challenge this view and give conditions under which innovation is successful. According to Danneels (2000) big organizations are more likely to have experience with innovation projects leading to organizational innovation capabilities. Smaller and especially new firms often lack this organizational capability and thus run the risk of engaging in managerial undertakings without experience.

The test of the first, second and third hypotheses revealed that there is a significant positive relationship between. Product innovation and cost advantage of aluminium manufacturing companies in Rivers State. This finding agrees with the arguments of Camison and Lopez (2010) state that product innovation not only acts as a means of improving and

safeguarding quality but also for cost saving. It is further lauded for retaining and growing the competitive position of a firm, as well as retaining a strong market presence. Products that are constantly improved are particularly important for long term business growth and performance (Bayus, Erickson & Jacobson, 2003). Product innovation is prevalent among new entrants in any industry as it has been used to boost their popularity in the market in a surprising short time (Hult et al., 2004).

Product innovation is the introduction of a good or service that is new or has significantly improved characteristics or intended uses. In SMEs, not only the R&D staff but also the owners may play a major role in acquiring and applying the new knowledge for product innovation (Migdadi, 2009, Omerzel&Antoncic, 2008). Product innovation requires appreciation of customer needs, design and production while innovation process is linked to the application of technology to improve efficiency in the development and commercialization of the product, (Alegre et al 2002). Furthermore, theories of organizational innovation argue that information imported from sources outside an organization facilitate the creation of new ideas and enhance product innovation.

#### CONCLUSION AND RECOMMENDATIONS

In the globalization, integration and liberalization era, the business environment is becoming fiercer than before, businesses of all types and sizes are facing continually changing situations externally and internally. Furthermore, the question at the heart of every strategist in every business enterprise is how to cope with these ambiguities, leverage competitive edge and expected level of performance (Vazquez, Santos, and Alvarez, 2001). In highly dynamic and uncertain environments, competitiveness must be regarded as a multi-dimensional construct comprising customer values, shareholder values and an organization's ability to act and react.

As a result of the foregoing, the study recommends that management of aluminium manufacturing companies should put mechanisms in place to enhance more internal innovations. This should include giving employees enough space to innovate new products and services. In addition, there is need for aluminium manufacturing to set aside a budget that will be used exclusively for product innovation.

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