THE ROLE OF INNOVATION ON PERFORMANCE OF FIRMS ON NIGERIAN STOCK EXCHANGE

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ABSTRACT

This paper examines the role of innovation on performance of firms on the Nigerian Stock Exchange. The central objective of the paper is to look at the relationship between innovativeness and firm performance in Nigeria. The paper took critical interest in the contents of a number of studies which concluded that among Nigerian managers, lack of innovation, pro-activeness, aggressiveness, and aversion to risk-taking, which are critical factors for growth of SMEs, were found to be high in a study in 2007. The target population is 176 firms listed in the Nigerian Stock Exchange with financial returns as at August, 2014. Out of the population, a sample of 60 firms was taken. Methods of statistical analyses include mean, standard deviation, and Pooled, Random and Fixed regression models based on the preferences suggested by the Hausman specification test results. The results of panel analysis of the relationship between Entrepreneurial Orientation dimension – Innovation, and performance of firms listed in the Nigerian Stock Exchange, with returns on assets and returns on equity as proxy revealed a negative relationship between innovation and returns on assets and innovation and returns on equity. This results, confirmed a study conducted in 2007 in Nigeria on 88 SMEs earlier mentioned. But, it negated the outcome of a study carried out among Kenya’s manufacturing firms operating under the EAC in 2012, which showed that there existed a positive relationship between entrepreneurial orientation adoption and firm performance. Innovation was found to have negative relationships with both returns on assets, and returns on equity. This result suggests that, in Nigeria, like in Kenya, innovation has been widely adopted and practiced, but it was yet to have positive relationship with returns on assets and returns on equity in Nigeria. The implication of this result is that, innovation was still at infancy level, as asserted by earlier studies or the firms were operating in a seller’s market or both.

Keywords: Innovation, Firm Performance, Listed Firms, Nigerian Stock Exchange.

INTRODUCTION

In a dynamic, fast-changing, and intense worldwide competitive environment of today, the importance of entrepreneurial orientation (EO) is manifest in its rapid diffusion throughout the strategy literature (Corbo, 2012; Carton, 2004; and Rauch el la, 2009, Soininem, et al, 2013). Different strategic orientation of businesses such as market, customer, learning, technology and EOs have gained considerable attention from both management and management scholars (Hakala, 2011). Entrepreneurial orientation has been noted as a key ingredient for organizational success and has been found to lead to higher performance (Wiklund and Shepherd, 2005, Soininem, 2013). It is further argued that firms that possess higher levels of entrepreneurial orientation will perform better than those with lower levels of entrepreneurial orientation (Rauch,2009, and Dada, 2012). Higher levels of entrepreneurial orientation allows firms to have the ability to
identify and seize opportunities in a way that differentiates them from non-entrepreneurial firms (Covin, Slevin and Shephard, 2006; Soininen, 2013).

In a study carried out on Malaysia public enterprises by Sumon, et al (2010), the researchers agreed with Wiklund (1999) who stated that Scholars and practitioners often associate the entrepreneurial orientation (EO) of a firm with private owned business entities. Within the context of organizational entrepreneurship, research shows that EO of a firm has a significant relationship with its performance (Wiklund, 1999). EO is the demonstration of a firm’s innovativeness, proactivity and risk-taking (Covin and Slevin, 1989; Miller, 1983). On the other hand, the overall performance of public enterprises in Malaysia continues to be a major concern. Perhaps, the underperformance of these enterprises is due to low degree of their entrepreneurial orientation.

Innovativeness portrays organizational willingness and a tendency to achieve the desired innovation demonstrated in terms of behaviors, strategies, activities and processes. As a consequence, innovativeness usually result in new products/services or changes in service/product lines, developing new R&D processes, new methods of production, developing new systems/applications or introducing as well as implementing new procedures. Accordingly, the impact of organizational innovativeness on its performance depends on the degree of innovation that is being pursued. It has been argued that more substantial and radical types of innovation tend to have a significant impact on organizational overall performance, while incremental innovation seems to have a low and short term impacts because such innovation usually concentrate on minor or process improvement initiatives or activities. Given this, when there is a major disruption occurs, organizations concentrating too much on incremental innovation initiatives may find themselves less competitive and lack of sustainability.

In another study in South Africa, (Kroop, et al 2006) discovered that international entrepreneurial business venture performance is positively related to the innovative component of EO. And, exploring the entrepreneurial underpinning of low export involvement level of manufacturing firms in Nigeria, (Kelvin and Young, 2006) discovered from the study of a 78-firm representative sample that high export entrepreneurial firm are typically more innovative in developing export, less averse to exporting risk and have more proactive motivations for export. Investigations, however, show that majority of studies carried out in Nigeria are on the following areas: exports (Kevin, and Young, (2006), Kevin (2010). Entrepreneurial burnout (Shepherd et al, 2010) and the role of technology in firms’ performance (Prodromos et al, 2011).

Nigeria is naturally endowed with entrepreneurship opportunities; however the realization of the full potential of these opportunities has been dampened by the adoption of inappropriate industrialization policies at different times. Though several policy interventions that were aimed at stimulating entrepreneurship development via small and medium scale enterprises (SMEs) promotion have failed to achieve the desired goals, as it has produced indigenous entrepreneurs who are basically distribution agents of imported products, as opposed to the desired objective of building in-country entrepreneurial capacity for manufacturing, mechanized agriculture, improved outputs and experts needed for rapid industrialization. EO as the process, practice, and decision-making activity that leads to new entry. They delineated five dimensions of EO including innovativeness, risk taking, pro-activeness, competitive aggressiveness and autonomy, which underlie nearly all entrepreneurial processes. Innovativeness is an organization’s tendency to engage in and
support new ideas, novelty, experimentation, and creative processes that may result in new products, (Mehrdad, et al, 2011).

Recent developments in the previously less-explored areas of telecom, transport, hospitality, entertainment and food processing has a high probability of success, hence, the need for a concerted effort by government and an organized private sector and well motivated entrepreneurs to create the enabling environment to support the exploration of opportunities in these areas (Ebirinya, 2012). However, available evidence shows that Nigerians are not lacking in EO traits. The Igbos in the East, commonly likened to the Kikuyus of Kenya, the Ijebus and the Ijesas of the South Western Nigeria have exhibited certain entrepreneurial traits over the years. For example, the Ijesas are regarded as the ‘Osomaalos’ of Nigeria. The appellation was initially a term of abuse to characterize the aggressive Ijesa textile traders. The word ‘Osomaalo’ is tied to the process of debt collection by the traders. This can simply be interpreted as ‘i will not sit down until I have collected my money’, showing an inflexible determination to succeed in the face of all odds. It may also be interpreted as ‘i will not allow bad debts to cripple my business’. So, undoubtedly, this posture constitutes a form of aggressiveness and pro-activeness, which are components of EO.

The role of government in entrepreneurship development in Nigeria became significant only after the Nigeria civil war (1967-1970). Since the mid 1980s there has been an increased commitment of government to entrepreneurship development especially after the introduction of the Structural Adjustment Program (SAP) in 1986. Added to this is the establishment of the National Directorate of Employment (NDE), National Open Apprenticeship Scheme (NOAS) and the Small and Medium Enterprise Development Association of Nigeria (SMEDAN). Fundamentally, the Nigerian government promotes entrepreneurial culture through initiatives that build business confidence, positive attitude, pride in success, support and encouragement of new ideas, social responsibility, providing technological supports, encouraging inter-firm linkages and promotion of research and development. In the early 2000s, entrepreneurship studies were introduced into the Nigerian educational system especially in higher institutions as a mandatory course.

A study 88 SMEs conducted by Adegbite and Abereijo (2007) confirms the assertion that the development of EO is at infancy stage among Nigerian corporate firms. The outcome of the study on the three entrepreneurial orientation factors shows a very great disparity from the personality traits expected of a good entrepreneur. The study concludes that aversion to risk taking, lack of innovation and pro-activeness by the respondents, which are critical factors necessary for the growth of small enterprises is very high among the respondents. Therefore, there is an urgent need to evolve a comprehensive training package for entrepreneurs in Nigeria to develop and sharpen their entrepreneurial orientation so as to enhance their competitiveness particularly in this age of globalization and market driven economy.

The Nigerian Capital market represents the arm of the Nigerian financial system that is responsible for the listing, supervision and management of business in Nigeria. It came into existence in 1960 under the nomenclature of Lagos Stock Exchange (LSE) and later came to be known as the Nigerian Stock Exchange (NSE) in December 1977. NSE began operations in 1961other branches that were later opened include: Kaduna (1978), Port Harcourt (1980), Kano (1989), Onitsha (February 1990), Ibadan (August 1990), Abuja (October 1999), Yola (April 2002), Benin (January 2005), Uyo (2007), Ilorin (2008), and
Abeokuta (2008). The NSE continues to evolve to meet the needs of its valued customers, and to achieve the highest level of competitiveness. With about 200 companies and 258 Securities listed, The Exchange operates fair, orderly and transparent markets that bring together the best of African enterprises and the local and global investor communities. The Nigerian Stock Exchange is currently championing the acceleration of Africa's economic development.

In recent times, firms in Nigeria have actively utilized the NSE to raise funds for business expansion. In 2007, a third-tier market was introduced by the NSE which in effect, has small and medium enterprises more opportunity to raise funds. Some real sector operators are already taking advantage of this opportunity. One of the major reforms in the NSE is the granting of SMEs the privilege of raising capital from the public domain. This development has provided a boost to the operations and capabilities of SMEs in employment generation, payment of taxes to governments and overall contribution to the nation’s GDP. This paper is aimed at establishing the role of Innovation in Performance of firms listed in Nigerian Stock Exchange.

Theories of Entrepreneurship
Schumpeter’s Theory

The theory of entrepreneurship innovation was propounded by Joseph Schumpeter (1949). According to him, entrepreneurs help the process of development in an economy, entrepreneurs are the people who are innovative, creative, and with foresight in a given community. Schumpeter went further and added that innovation occurs when the entrepreneur introduce a new product or a new production system, open a new market, discover a new source of raw materials or introduce a new organization in to the industry. He further stated that entrepreneurship is about combining resources in a new way such as introducing new products, new method of production, identify new source or source(s) of raw materials/inputs and setting a new standard either in the market or the industry that alters the equilibrium in the economic system. However, Schumpeter’s entrepreneurs are, essentially, large scale businessmen and women which are common in the advanced economies. The class of entrepreneurs common in developing countries are entrepreneurs who needs to imitate, rather than innovate to survive.

The theory of high achievement motivation was propounded by McClelland. Here, he identified two characteristics of entrepreneurship, namely; (1) Doing things in a new and better way and (2) Making decisions under uncertainty. He stated further that people with high achievement motivation were likely to become entrepreneurs. That these people are not influenced by money or external incentive, but consider profit making in any venture as a measure of success or competency. Achievement motivation can be measured by the achievement motivation inventory which is a drive that is developed from emotional state. One may feel to achieve by get striving for success and avoiding failure. Another theory developed by McClelland was the theory of Acquired Needs motivation. He categorized a person’s needs into three; (1) Need for Achievement- success with individuals own effort (2) Need for Power- need to dominate and influence others, and, (3) Need for Affiliation -to maintain friendly relations with others. McClelland concluded by stating that the need for achievement is essential for successful new entrepreneurship.

McClelland also carried out an experiment which is popularly known as Kakinada findings. The study was conducted in an industrial town in Andhra Pradesh between January and
March 1964. In that study, young adults were selected and put through three months training program at Small Industry Extension Training Institute (SIETI). The program was designed to induce achievement motivation in them. The program subjected the trainee to control their thinking and talk to themselves positively, imagined themselves in need for challenge to succeed, set planned and achievable goals, strive to get concrete and frequent feedback and imitate their role model. The experiment revealed the following results (1) Traditional belief do not inhibit an entrepreneur or destroy entrepreneurial orientation (2) Sustainable training can supply the required motivation to an entrepreneur (3) Achievement motivation has a positive impact on performance of participant. The general conclusion was that it was the Kakinada studies that made people realize the importance of EDP—Entrepreneurial Development Program. Other writers have defined entrepreneurship as the ability to exploit creative innovations, create and sell new ideas or build new businesses (Wood, et al, 2009). Schumpeter (2005) also opined that entrepreneurship is about combining resources in new ways, such as introducing new products, new method of production, discovery of new market, identify new sources of raw materials and inputs and setting a new standard in the market or industry that alters the market equilibrium in the economic systems.

Innovation-Performance Model

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<thead>
<tr>
<th>INDEPENDENT VARIABLES</th>
<th>DEPENDENT VARIABLE</th>
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<tbody>
<tr>
<td><strong>INNOVATION:</strong></td>
<td><strong>FIRM PERFORMANCE:</strong></td>
</tr>
<tr>
<td>Product Innovation</td>
<td>Returns on Assets (ROA)</td>
</tr>
<tr>
<td>Process Innovation</td>
<td>Returns on Equity (ROE)</td>
</tr>
<tr>
<td>Technological Innovation</td>
<td></td>
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</table>

Innovation

Quoting Drucker (1909-2005), Schillo (2011) stated that innovation is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or a different service. It is capable of being presented as a discipline, capable of being learned, capable of being practiced. Entrepreneurs need to search purposefully for the sources of innovation, the changes and their symptoms that indicate opportunities for successful innovation. And they need to know and to apply the principles of successful innovation. Innovative or die. Since the beginning of the recent decade when the competitive environment went through a major transformation due to globalization, business organizations have intensified their search for strategies that will give them a sustainable competitive advantage. Such strategies generally require that the firm continuously differentiates its products and process, that is, firms must constantly be innovative (Popadiuk and Choo, 2007, Mehrdad, et al, 2011). In such condition, where innovation in products and process regarded as an essential prerequisite for the organizational survival and success, attention to entrepreneurship orientation and change to an entrepreneur organization attracted the much attention of academic researchers and organizational members (Wang and Ahmed, 2004, Mehrdad, et al 2011). Ireland and Webb (2007) confirmed that Entrepreneurial orientation is manifest in product and process innovations. Lumpkin and Dess (1996),
described EO as the process, practice, and decision-making activity that leads to new entry. They delineated five dimensions of EO including innovativeness, risk taking, proactiveness, competitive aggressiveness and autonomy, which underlie nearly all entrepreneurial processes. Innovativeness is an organization’s tendency to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products.

The organization researchers are of the view that adoption of innovation is a main vehicle for organization adaptation and change to improve firm performance especially under the conditions like scarce resources, dynamic business environment, intense competition and changing customers demand for better quality (Jansen et al, 2006, and Oscar et al, 2013). Schumpeter (1934, 1942) emphasized the role of innovation in the entrepreneurial process. He stated that this was a process of “creative destruction” where wealth was created when existing market structures were disrupted by the introduction of new goods or service that shifted resources away from existing firms and caused new firms to grow. Innovativeness has become an important factor used to identify entrepreneurship. Drucker (1985), Oscar, (2013) believe that innovation is the specific tool for entrepreneurs, the means by which they exploit change as an opportunity for a different business or a different service. The scholars further believe that innovation is better practiced in phases. Innovation involves the exploitation of new ideas. Oscar, et al (2013), claimed that innovation is the ability to take quick advantage of scientific or technological discoveries, commercializing them in ways that translate the new discoveries into added-value goods and services and processes for their customers/clientele.

In its original sense, innovativeness can be defined as the degree to which an individual or other entity is relatively earlier in adopting new ideas than the other members of a system (Rogers, 2003, Oscar, and Hassan, 2013). Similarly it is the tendency to support new ideas, experimentation and creative processes (Lumpkin and Dess, 1996). Oscar and Mashood Ul-Hassan, (2013) also associate innovation closely with creativity; however they suggest that it must be linked to entrepreneurship if the innovation is to become a commercial opportunity to be exploited. Milling and Stumpf (2000) classified innovations into three: product, process and technological. According to them, product innovation involves shortening the product life cycle, expand commercial production process, generate sales and revenue and recoup development investments. This also connotes the number of implemented innovations in the product line. Firms’ ability to launch new and sophisticated products in increasingly fast cycle is essential to success in the currently dynamic business environment. Process innovation entails the number of innovations implemented in the manufacturing or service process. Product and Process innovations are inter-connected and interwoven in an effort to meet certain production targets. And, according to Kim, et al (1992) technological innovation involves acquisition of more and flexible process equipment, in combination with more flexible organization and administrative processes that facilitates or enables frequent changes in the production line.

**Methodology**

The target population is 176 firms listed in Nigerian Stock Exchange with financial returns as at August, 2014. Out of the population, a sample of 60 firms were selected. Secondary data collection instruments were applied on the sampled firms. Tools used in the analysis included statistical mean, standard deviation and regression coefficient.
Analysis and Findings

This subsection deals with the distribution of sampled firms based on the number of times they undertake or adopt components of Innovation during the period covered by this paper. The table reveals that only 4 firms (6.7) did not adopt product innovation, while the other firms: 56 (93.3%) adopted innovation for between 2 years or 9 years during the period under study. Also, the same percentage (6.7) or four firms did not practice process innovation while the rest- 56 firms or 93.3% of the firms adopted process innovation. Technological innovation was adopted by 56 firms or 93.3% the firms for between 2 years and 9 years, while only four firms did not.

**Response Rate**

<table>
<thead>
<tr>
<th>Entrepreneurial Orientation</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td><strong>INNOVATIVENESS</strong></td>
<td></td>
</tr>
<tr>
<td>Product Innovation</td>
<td>4(6.7)</td>
</tr>
<tr>
<td>Process Innovation</td>
<td>4(6.7)</td>
</tr>
<tr>
<td>Technological Innovation</td>
<td>4(6.7)</td>
</tr>
</tbody>
</table>

**Role of Innovativeness on ROA**

The table below indicate that using fixed regression model, there is negative and insignificant relationship between innovation and returns on assets ROA, which implies that as the firms increase their innovativeness, returns on assets declines among the Nigerian listed firms.

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>PP</th>
<th>RR</th>
<th>FR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovativeness</td>
<td>-0.003</td>
<td>-0.003</td>
<td>-0.001</td>
</tr>
<tr>
<td>Constant</td>
<td>0.078</td>
<td>0.331***</td>
<td>2.267***</td>
</tr>
<tr>
<td>R2</td>
<td>0.022</td>
<td></td>
<td>0.336</td>
</tr>
<tr>
<td>F</td>
<td>1.864</td>
<td></td>
<td>37.244</td>
</tr>
</tbody>
</table>

**The Role of Innovativeness on ROE**

The relationship between innovativeness and returns on equity is similar to that of returns on assets. Here the relationship is also negative implying that as the firms intensify their innovative strategy, returns on equity nose-drives. These results basically negates Otieno (2012) findings among Kenya’s manufacturing firms.
DISCUSSION AND IMPLICATIONS

A quantitative research study was undertaking in respect of the relationship between innovation and performance of firms listed in Nigerian Stock Exchange (NSE). The objectives of the paper was as stated hereunder or specifically, To establish the role of innovation on performance of firms listed in the Nigerian Stock Exchange; This paper sought to answer the question of what is the relationship between innovation and performance of firms listed in the Nigerian Stock Exchange. The components of innovation include: Product, Process, and Technological innovation. As noted by Osoro (2012) that certain learning related factors did potentially contributed to shaping EO and contribute significantly to increase in firms earnings in Kenya, this study also discovered that in Nigeria, there is a negative relationship between Innovation and ROA, and between Innovation and ROE. A separate analysis was carried out for firms in the financial services sector, where a negative relationship was established between innovation and ROA and ROE. This finding therefore confirms in Nigeria, the result of a study conducted by Petzer (2012) among financial institutions in South Africa. The result negates Otieno (2012) among manufacturing firms operating under the EAC (East African Community) in Kenya, where there existed a positive relationship between EO adoption and performance of manufacturing firms. Furthermore, it confirms Adegbite and Abereijo(2007) assertion that EO was at infancy stage among Nigerian firms.

CONCLUSION

This paper concludes by fully agreeing with Ebiringa (2012) who asserted that entrepreneurship development, especially innovation and aggressiveness in Nigeria is at the peak of awareness, creation and participation by the people, the organized private sector and government at all levels. According to him, policies of government should shift to address the problems of infrastructural decay and finance. The problem of power supply is still very much an issue while credit framework via micro-financing banks should be put in place to assist entrepreneurs with soft loans when still in their infancy. Innovation by Nigerian entrepreneurs brings about technical progress through capital-saving, efficient production techniques and higher levels of output or economic growth. These entrepreneurs stimulate growth in various enterprises and industrial organizations. However, Nigerian entrepreneurs still face problems and challenges in their struggle for innovation and technical progress.

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