



**INNOVATION PERFORMANCE, MARKET
ORIENTATION, TECHNOLOGY ORIENTATION AND
FIRM PERFORMANCE IN NORTHWESTERN NIGERIA:
THE ROLE OF BUSINESS ENVIRONMENT**

by

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LIST OF ABBREVIATIONS

AVE	Average Variance Extracted
BE	Business Environment
EP	Entrepreneur's innovation
FP	Firm Performance
GDP	Gross Domestic Product
GoF	Goodness-of-Fit
IP	Innovation Performance
MO	Market Orientation
NBS	National Bureau of Statistics
PLS	Partial Least Square
RBV	Resource Based View
RBT	Resource Based Theory
SEM	Structural Equation Modelling
SmartPLS	SmartPLS Statistical Package
SME	Small and Medium Enterprise's
SMEDAN	Small and Medium Enterprises Development Agency of Nigeria
SMEs	Small and Medium Enterprises
SMIDEC	Malaysia Manufacturing Industry
SPSS	Statistical Package for Social Science
TO	Technology Orientation

**Prestasi Inovasi, Orientasi Pasaran, Orientasi Technology dan
Prestasi Firma Dalam Northwestern Nigeria: Peranan Terhadap
Persekitaran Perniagaan.**

ABSTRAK

Peningkatan secara global dengan kemajuan pesat teknologi dalam beberapa dekad kebelakangan ini, terdapat keperluan untuk memupuk inovasi, orientasi pasaran dan semangat orientasi teknologi di kalangan pengusaha kecil dan sederhana (PKS) di Nigeria kerana Nigeria berusaha untuk menjadi antara 20 ekonomi terkemuka di dunia. Menurut Laporan Perdagangan Dunia (2016), PKS di Nigeria berhadapan dengan beberapa cabaran yang termasuk kekurangan kemahiran dan teknologi, inovasi dan ketidakpastian peraturan menyebabkan berlaku kesukaran bagi pengusaha kecil dan sederhana (PKS) untuk bertahan dalam persaingan yang kompetitif. Tujuan kajian ini adalah untuk mengkaji pengaruh prestasi inovasi (IP), orientasi pasaran (MO) dan orientasi teknologi (TO) yang akan membawa kepada prestasi firma yang lebih baik. Khususnya, kajian ini mengkaji peranan persekitaran perniagaan (BE) yang sederhana mengenai hubungan antara prestasi inovasi (IP), orientasi pasaran (MO), orientasi teknologi (TO) dan prestasi PKS di Nigeria Utara Barat. Persampelan yang diambil adalah sebanyak 266 sampel berasal dari PKS yang berdaftar dengan agensi pembangunan Perusahaan Kecil dan Sederhana (SMEDAN) di Nigeria. Pemodelan Persamaan Struktur Secara Minimum Separata (PLS-SEM) digunakan untuk menguji hipotesis kajian. Kajian ini mendapati bahawa prestasi inovasi, orientasi pasaran, dan orientasi teknologi merupakan strategi penting untuk prestasi PKS di Nigeria. Penemuan ini mendedahkan hubungan yang signifikan antara IP, MO, TO, BE dan prestasi firma. Kajian juga mendapati persekitaran perniagaan (BE) telah mengukuhkan tahap hubungan antara prestasi inovasi (IP) dan orientasi pasaran (MO). Selain itu, penemuan kajian menunjukkan bahawa persekitaran perniagaan (BE) tidak menyederhanakan hubungan antara orientasi teknologi (TO) dan prestasi firma. Penemuan memberikan pandangan penting kepada pemilik / pengurus PVS, pembuat dasar, dan penyelidik untuk terus memahami kesan prestasi inovasi (IP), orientasi pasaran (MO), orientasi teknologi (TO) dan persekitaran perniagaan (BE) terhadap prestasi PKS.

Kata kunci: Prestasi inovasi, orientasi pasaran, orientasi teknologi, prestasi firma, persekitaran perniagaan.

Innovation Performance, Market Orientation, Technology Orientation and Firm Performance in Northwestern Nigeria: The Role of Business Environment

ABSTRACT

With increasing globalization and fast pace of technology advancement in recent decades, there is a need to instil innovation, market orientation and technology orientation spirit amongst Nigerian SMEs as Nigeria is striving to become an among the top 20 leading economies in the world. According to World Trade Report (2016) SMEs in Nigeria faced with several challenges namely: lack of skills and technology, innovations and regulatory uncertainty make it difficult for SMEs to survive in the competitive environment. The aim of this study is to investigate the influence of innovation performance (IP), market orientation (MO) and technology orientation (TO) that will lead to better firm performance. This study also examines the moderating role of business environment on the relationship of between innovation performance, market orientation, technology orientation and SMEs performance in the North-western Nigeria. The samples of 266 were obtained from SMEs registered with Small and Medium Enterprises Development Agency of Nigeria (SMEDAN). The Partial Least Squares Structural Equation Modelling (PLS-SEM) was used to test the study hypotheses. This study found that innovation performance, market orientation, and technology orientation are an important strategy for SMEs performance in Nigeria. The findings reveal a significant positive relationship between IP, MO, TO, BE and firm performance. Similarly, the study found that business environment strengthens the degree of the relationship between innovation performance and market orientation. Contrary, the findings of the study indicate that business environment does not moderate the relationship between technology orientation and firm performance. The findings provide important insights to owner/managers of SMEs, policy makers, and researchers to further understand the effects of innovative performance, market orientation, technology orientation and firm performance on SME performance. Similarly, the findings has contributed several practical implications in the context of entrepreneurship, understanding the influence of IP, MO, TO and BE is important to policymakers such as Small and Medium enterprise development agency of Nigeria (SMEDAN), Central Bank of Nigeria, Civil societies, Nigeria Bureau of Statistics (NBS) and Northwest State Government in designing the policies and programs on entrepreneurship programs in the country through applying innovation performance, market orientation, technology orientation and as well as creating enabling business environment that will support SMEs to improve performance.

Keywords: Innovation performance, market orientation, technology orientation, firm performance, business environment.

CHAPTER 1 : INTRODUCTION

1.1 Background of the Study

In today's rapidly evolving business domain, it is not only the large organizations that are powering both develop and developing economies, but also the Small and Medium Enterprises (SMEs) (Ibrahim & Mahmood, 2016; Murtala, 2015). Over the years, SMEs have gained an increasing attention from all over the world due to the role they play in the economic growth and the development of any economy (Ibrahim & Mahmood, 2016). SME sector constitutes greater part of the business organization, they serve as an engine for employment generation, wealth creation, poverty reduction, improve per capita income, sustainable economic growth, and development, increase value addition to raw materials supply, step up capacity utilization in key industries and improve export earnings (SMEDAN, 2013). Nowadays, SMEs performance is generating amount of discussion among business researchers, practitioners, investors and government organizations due to the constraint and limitations such as lack of innovativeness, limited number of employees, market orientation, inadequate access to finance, skills, educational background and experience and lack of managerial expertise (Ibrahim & Mahmood, 2016; Murtala, 2015; Akingunola 2011).

Therefore, SME performance characteristics and determinant such as market orientation, innovativeness, social networking, technology orientation are always focused on debate and interest (Ibrahim & Mahmood, 2016; Murtala, 2015; McKelvie & Wiklund 2010). In addition, several researchers are continuously making efforts to understand how their performance could be improved and further enhanced. These efforts are significant since they are recognized as an instrument for supporting economic growth and

development in both industrialized and developing countries (Aigboduwa, & Oisamoje, 2013; Abu Kassim & Sulaiman 2011).

SMEs constitute dominant sector in many countries and contribute enormously toward their economies. For example, the registered SMEs in Malaysia signify over 97.3 percent of the entire industrial capacity and contributing the GDP of 36.6 percent from 36.3 percent recorded in last year 33.1 percent. The performance of SMEs GDP outpaced the Malaysia GDP in 2016 with a growth of 5.2 percent compared to Malaysia GDP which stood at 4.2 percent (Department of Statistics Malaysia, 2016; Kee-Luen, Thiam-Yong & Seng-Fook., 2013). According to the China Statistical Yearbook, SMEs made up about 97.9% of all registered companies in China. They also contributed nearly 58 percent of the GDP and 68 percent of exports. (Hoffmann, 2017). Similarly, in Japan SMEs contributes almost 70 and 53 percent of their nation exports and GDP respectively. So also, the SMEs' contribution toward GDP in the UK is about 51 percent, Korea and Germany 49 and 53 percent. While, SMEs contributions to the GDP of Singapore and Thailand is 49 percent and 38 percent respectively (Ibrahim & Mahmood, 2016; Ebitu, Glory, & Alfred, 2016; Nadada 2013). Also, in West Africa, SMEs contribution to Ghana economy is encouraging with a total number of 4,170 SMEs constituting 92 percent and contributing 70 percent to the country's GDP (Essien, 2017; Ndumanya, 2013). Equally, SMEs have significantly improved Kenya economy by contributing 45 percent of their GDP (Katua, 2014).

SMEs serve as a backbone for the economic revival of various nations in Sub-Saharan Africa (Ebitu, *et al.*, 2016; Babajide, 2011). They are featured with various micro and other small businesses and employed a large number of labor force in an economy as well as increase their Gross Domestic Product (GDP) (SMEDAN, 2013; Babajide, 2011). Most nations all over the world employed SMEs as a tool for generating employment,

poverty reduction as well as to improve the growth domestic product (SMEDAN, 2013; Mahmood & Hanafi, 2013).

Despite the importance of SMEs to the development of any economy, they faced several challenges which affect their performance compared with the larger organizations (Mwobobia, 2012; SMEDAN, 2012; Lucky, & Minai, 2011). Lack of skills and technology, innovations, social network, poor access to finance, logistics and infrastructure costs and regulatory uncertainty make it difficult for SMEs to survive in the competitive environment (World Trade Report, 2016). Even though SMEs constitute 96 percent of the business in Nigeria, their impact on GDP growth is very low compared to the aforesaid countries, SMEs contribute only less than 10 percent to the GDP (Bello, 2014; Gbandi & Amissah, 2014). Similarly, according to the Nigeria Bureau of Statistics, Micro, Small and Medium Scale Enterprises (MSMEs) in Nigeria have contributed about 48% of the national GDP in the last five years (Abbakin, 2017). The inconsistency of SMEs contribution highlights the poor performance of Nigerian SMEs in recent years which is far less than anticipated (Iweka *et al.*, 2016; Irefin, Abdu-Azeez, & Tijani, 2012). Among some of the reasons for the poor performance of SMEs towards the GDP include infrastructural decay; entrepreneurial and marketing inability; enabling environment limited application of technology, training, poor creativity and unfavorable competition from foreign goods and services (Bangudu, 2013; Mwobobia, 2012). Also, Statistically, three out of every five SMEs fail before they reach five years to their establishment and eight out of ten potential entrepreneurs are discouraged from their passion in establishing a new venture every year in Nigeria (Iweka *et al.*, 2016). This insubstantiality of SMEs, essentially at start-up, explains why they require support from the government at all levels. Similarly, many firms that intend to innovate in Nigeria are face with wide range intense barriers (Adeyeye, *et al.*, 2018). Other factors that hinders were highlighted that

hinder the innovative capabilities of manufacturing SMEs in Nigeria include lack of venture capital, weak institutions for technical and financial support for research on innovation (Nassir & Falode, 2015). The sector contributed about 9% to the country's GDP and has a manufacturing capacity utilization of about 51% in the second quarter of 2016 (NBS, 2016; World Bank, 2017). Therefore, this study aims to empirically investigate the impacts of innovation performance, market orientation, technology orientation and business environment on SME performance in Nigeria.

1.1.1 The Progress of Nigerian SMEs as Compared to other Nations

Nigerian economy is facing a lot of challenges as a result of declining oil revenue, very high foreign exchange rates high youth unemployment. To tackle these challenges, there is a need for urgent need for diversification and resuscitation of the economy. Although SMEs are recognized as one of the key to economic growth and development in many countries (Ebitu, *et al.*, 2016; Mahmood & Hanafi; 2013; Hilmi, Ramayah, Mustapha & Pawanchik, 2010) and constitute 96 percent of the entire economy, unfortunately their contribution to the overall economy in Nigeria is still low when compared with developed and other developing countries (Ebitu, *et al.*, 2016; Ghandi & Amissah, 2014; Eniola, 2014; Aliyu & Bello, 2013; Oyeyinka, 2012). Ebitu, *et al.*, (2016) stated that the failure of SMEs in Nigeria is an issue of concern to the Nigerian government and other interested parties.

Additionally, Report on SMEs across the country stated that the contribution of SMEs to GDP and employment is not encouraging (Ebitu, *et al.*, 2016; Ndumanya, 2013; SMEDAN, 2013). Micro, Small and Medium Enterprises (MSMEs) contribution to export stood at 7.27 percent (SMEDAN, 2013). The aggressive competition comes

mainly from Asia. Studies show that there is a decrease in export by exporters due to the competitive pressures from Asian counterparts (Oyelaran-Oyeyinka, 2012).

Furthermore, the total output from the manufacturing as evident from the manufacturers association of Nigeria has continued to decline (PGPFRN 2012). Moreover, the current President Muhammadu Buhari administration seeks rescue SME sector by employing economic diversification, especially in the agro-based and mining sectors in order to thrive and promote the growth, attaining peak economic development, and to decrease dependency on crude oil for redistribution of income among the citizens (Wakili, 2016; Osinbajo, 2015).

Currently, Nigeria's position in both the Global Competitiveness and the Ease-of-Doing-Business Indices are at the very low. The country scored only 3.39 points out of 7 on the 2016-2017 Global Competitiveness Report and ranked 169 among 190 economies in the ease of doing business Innovation and productivity (World Economic Forum, 2016). Productivity improvement often materializes through innovation (Lileeva and Trefler, 2010). Similarly, firms that innovate are more likely to start exporting (Cassiman & Golovko, 2011). In some cases, the innovation of both products and processes, and in particular of their combination, appears to be a driver of firms' disposition to export (Caldera, 2010; Van Beveren & Vandenbussche, 2010). In other cases, only product innovation has a significant impact on firms' propensity to export.

Table 1.1: Global Competitiveness Index 2016-2017(Ranking of 138 Countries)

Index	USA	UK	India	Malaysia	China	Singapore	South Africa	Nigeria
Overall index	3	7	39	25	28	2	47	127
Quality of Overall Infrastructure	11	9	68	24	42	2	64	132
Goods Market Efficiency	14	5	60	12	56	1	28	100
Labor Market Efficiency	4	5	84	24	39	2	97	37
Technological Readiness	14	3	110	47	74	9	49	105
Innovation	4	7	29	22	30	9	35	113
Business Sophistication	4	13	35	20	34	19	30	99

Source: World Economic Forum (2016).

The selected indicators from the Table 1.1 above show that Nigeria economic performance has been very poor compared to other countries. It is clear from the table that, out of 138 countries, Nigeria is at 132nd position in quality of overall infrastructure, 100th position in Goods market efficiency 37th in Labour market efficiency, 105th in technological readiness, 113th position in Innovation and 99th position in Business Sophistication. Equally, the report indicated that the important pillars for innovation-driven economies are innovation and sophistication factors. Furthermore, the overall index of Nigeria is 127th out of 138 countries as compared with 3rd 7th 39th 25th 28th 2nd and 47th in USA, UK, India, Malaysia, China, Singapore and South Africa respectively. This shows that there is a declining trend of Nigeria in world competitiveness and it is a worrying phenomenon as survival of SMEs depends on innovativeness, creativity, knowledge, innovation, entrepreneurship, and technology. To rectify this situation, there is a need to foster entrepreneurship and innovativeness amongst Nigeria SMEs to enhance performance and productivity.

Also, using Global Innovation Index 2017 report, out of 127 countries, Nigeria was rank 119 and scored only 21.9 points out of 100. The report further shows a slide decline against 2016 report which indicates Global Innovation Index rank of 114 out of 128

countries and score of 23.1 points out of 100. From these rankings, it is clear that SMEs in Nigeria needs to explore new strategies in catching up with others in the world.

Since 1970 government have introduced several policies, programs, institutions and schemes for the purpose of promoting SMEs (Babajide, 2012). Similarly, they injected a huge amount of money into the many schemes and programs with intention to offer accessible and financial support and to improve SMEs growth. Despite all these programs and policies majority of Nigeria SMEs failed in their first to five years of existence, a smaller proportion goes into another sixth to the tenth year whereas only 5 to 10 percent subsist, prosper and also grow to maturity (Mwobobia 2012; Aremu, & Adeyemi, 2011). SMEs performance is very low due to the issues related to poor access to the market, government policies, innovativeness, low managerial and entrepreneurial skills, and lack of access to modern technology (SMEDAN, 2013). Of all these issues, innovation performance, market orientation, technology orientation and business environment occupy a very central position. Thus, these fundamental problems have forced many SMEs to become either micro business or cease to exist (Lawson, 2012; SMEDAN, 2012; National Planning Commission [NPC], 2011; Okpara, 2011).

However, current studies maintained that effective and innovative management of resources owned and controlled by the organization will determine its performance (Lonial & Carter, 2015). Aminu, Mahmood, and Muharram (2015) have attributed the lack of performance of SMEs in Nigeria to lack of creativity and inadequate utilization of organization's intangible resources.

Since strategic orientation is strategic activities performed by the organization develop and improve firm activities for better performance (Talke, Salomo, Kock, 2011). It is important to identify these key factors that most likely influence their performance.

Previous studies have shown that innovation performance (IP), market orientation (MO), and technology orientation (TO) are more likely to give firms a competitive advantage which will lead to better performance (Janeway, 2012; Akgün, Keskin, & Byrne, 2012; Guha, 2011). Hence, the combination of these three variables might provide organizations with resources that are valuable, rare, and difficult to imitate and substitute. “...Any business enterprise has two – and only two – basic functions: marketing and innovation (Drucker, 1954, p. 37).”

Several studies show that innovation plays an important role in determining the growth and competitiveness of any organization (Pletcher & Mann, 2013). Innovation signifies an economy that combines knowledge, technology, and entrepreneurship in order to increase productivity for economic growth (Janeway, 2012; Schumpeter, 1943). Therefore, it has become a pre-requisite and associated to the growth, performance, competitiveness, increase in profit as well as the long-term survival of organizations (Pletcher & Mann, 2013; Jiménez-Jiménez & Sanz-Valle, 2011; Bowen, Rostami, Steel, 2010). To Van deVrande *et al.*, (2009) innovation is particularly important to small firms with limited resources. Presently, many entrepreneurs have paid their attention to the ability of organizations to develop their innovations in order to bring financial and non-financial value to the firm and development towards major technological innovations (Rhee, Park & Lee., 2010).

Studies on MO advocates that organizations that continually studying their competitors' actions and customers' needs will have a better understanding in combating their opponents as well as meeting the needs of their consumers (Odondo, Okibo, & Odhiambo, 2016; Lee, Choi & Kwak 2015; Laukkanen *et al.*, 2013; Eris & Ozmen, 2012; Wang, Chen, & Chen, 2012;). A lot of studies used market orientation to examine firm performance (Ansah & Chinomona, 2017; Huhtala, Sihvonen, Frösén, Jaakkola, &

Tikkanen, 2014; Charles, Joel, & Samwel, 2012; Polat & Mutlu, 2012; Suliyanto & Rahab, 2012; Wang, Chen, & Chen, 2012). Arief, Thoyib, Sudiro and Rohman (2013) and Oyedijo, Idris and Aliu (2012) emphasizes MO as a vital factor that affects firm performance and indicates that poor MO will hamper SMEs performance. Similarly, Melarly, Pichanic and Srpova (2012) attributed low SMEs performance in Nigeria as a result of poor market orientation.

Studies on TO show that organizations can achieve competitive advantage by contributing better products to their target market through continuous development of new and improved existing products and investing heavily in R & D (Odondo, *et al.*, 2016; Hakala & Kohtamaki, 2011; Mu & Di Benedetto, 2011). TO is also defined as organizations ability to utilize its technical knowledge in order to build a new technical solution to satisfy the needs and wants of the target market (Spanjol, Qualls, & Rosa, 2011). Similarly, Rusetski (2011) stated that TO is the ability and willingness of firms to obtain technical knowledge and apply it to improve product development.

Moreover, SMEs are not operating in a vacuum, they operate within a particular environment. Thus, the favorable business environment is a good predictor of firm performance (Smit & Watkins, 2012). The favorable business environment is associated with the achievement of SMEs performance (Smith & Watkins, 2012). According to SMEDAN (2013) business environment such as lack of infrastructure and support from government, community and other environmental issues poses another reason for poor SMEs development in Nigeria. Similarly, Bangudu (2013a) described the environmental situation for businesses in Nigeria as complicated. All these have obstructed competitiveness of hotel in Nigeria and consequently, the circumstance has made the expansion of the economy very difficult (Bangudu, 2013b).

Therefore, based on the above discussion on the existing literature on marketing, management and SMEs, the study have identify major obstacles affecting the performance of SMEs in Nigeria as lack of innovativeness, poor and inadequate market orientation inadequate access to technology and unfavourable business environment (Shehu and Mahmood 2016; Ibrahim & Mahmood 2016; Naala, 2016; Mwobobia, 2012; SMEDAN, 2012).

1.2 Problem Statement

This study is designed to investigate the effect of innovation performance, market orientation, technology orientation and firm performance on SMEs in Northwestern Nigeria. Comprehensively, the role of the business environment as a moderator in the relationship between IP, MO, TO and firm performance. The current performance of Nigerian SMEs is a subject matter of concern to interested parties as result of poor performance, poor contribution to the GDP and large percentage of SMEs that perished at their early stage of their establishment (Bello, 2014; SMEDAN, 2012). In Nigeria, 96 percent or 72,838 are registered SMEs out of the total business establishments (SMEDAN & NBS 2013). Despite the numerous initiatives and programs by the government to increase their productivity, the majority of SMEs are not performing to the expectation and contribute less than 10 percent to the GDP (Bello, 2014; Gbandi & Amisah, 2014). This indicates that the contribution of SMEs to GDP in Nigeria is very low compared to that of Europe, US, and Asian countries (Bello, 2014; Gbandi & Amisah, 2014). Therefore, Nigerian SMEs poor performance is a serious issue, particularly as the country wishes to be among the world biggest 20 economies by the year 2020 (Thomas & Brycz, 2014). Similarly, SMEs performance remains unimpressive as a result of inconsistency in government policies, access to finance, poor infrastructure, unfavorable market, access

to technology, lack of innovation, multiple taxations and unfavorable competitions (Osolor, 2017; SMEDAN, 2013).

It is contended that the poor performance is predicated on a number of issues, particularly the variables already identified, innovation performance (IP), market orientation (MO), technology orientation (TO), and business environment (BE) with many more established in the literature as having far-reaching implications on SMEs positively or otherwise (Naala, Nordin & Ahmed, 2017; SMEDAN, 2013). The resource base view (RBV) of firms developed by Penrose (1959) recognizes the significance of specific strategic resources for enhancing firm performance (Barney & Turk 2016). RBV further analyses the link between an organization's internal qualities and its performance.

There are many considerable evidence from the literature regarding the antecedents of small and medium firm performance. A review of the literature has identified several factors influencing firm performance. The most commonly investigated factors include entrepreneurial orientation (Ibrahim & Mahmood, 2016; Kraus, Rigtering, Hughes, & Hosman, 2012; Fairoz, Hirobumi, & Tanaka, 2010), dynamic capabilities (Wilden, Gudergan, Nielsen, & Lings, 2013; Protogerou, Caloghirou, & Lioukas, 2012;), organizational learning (Jiménez-Jiménez & Sanz-Valle, 2011), absorptive capacity (Mustafa Kamal & Flanagan, 2012; Flatten, Greve, & Brettel, 2011), and total quality management (Kober, Subraamanniam, & Watson, 2012), among others. Although the factors have provided important insights into the determinants of firm performance, a limited number of studies, however, investigated the idea that performance of SMEs may be influenced by IP, MO, and TO.

There is increasing evidence from the literature that innovation plays a vital role in shaping the growth and competitiveness of firms and nations (Forsman & Temel, 2011; Maldonado Dias & Varyakis., 2009). Innovation has become a pre-requisite and linked