

The Moderating Effect of External Environmental Characteristics on the Relationship between Entrepreneurial Orientation and SMEs Performance

Buba Musa Pulka^{1*}, Azahari Ramli² and Armanurah Mohamad³

¹Division of General Studies, University of Maiduguri, Nigeria.

^{2,3}School of Business Management, College of Business, Universiti Utara Malaysia.

ABSTRACT

The purpose of the study is to examine the moderating effect of the external environmental characteristics on the relationship between entrepreneurial orientation and SMEs performance. Survey method of research was used by personally administering questionnaires to the owners/managers. Multistage sampling technique was used in selecting 470 SMEs that partook in the survey. SPSS 24 and PLS-SEM 3.0 were employed in the analysis of the data. The results indicated that EO significantly affects SMEs performance. Similarly, there is a significant moderating effect of environmental dynamism on the relationship between EO and SMEs performance. Surprisingly, there is an adverse moderating effect of environmental complexity and hostility on the relationship between EO and SMEs performance. While environmental diversity shows insignificant moderating effect. Therefore, the study put forward that to attain high SMEs performance. There is a need for owners/managers to consider environmental characteristics and how they affect SMEs performance.

Keywords: Entrepreneurial Orientation, External Environment, Complexity, Diversity, Hostility, Dynamism, SMEs Performance.

1. INTRODUCTION

Entrepreneurial orientation is receiving greater research interest and attention among researchers because of its significance in improving performance of the SMEs (Brown, Davidsson, & Wiklund, 2001; Covin & Lumpkin, 2011; George & Marino, 2011; Lumpkin & Dess, 1996; Rauch, Wiklund, Lumpkin, & Frese, 2009; Wales, Gupta, & Mousa, 2011; Wiklund, 1999). According to Lumpkin and Dess, (1996) and Wiklund and Shepherd, (2005), entrepreneurial orientation is one of the vital firms' resources been formulated and implemented that provide the SMEs with a basis for making entrepreneurial choices and decisions.

Several studies have discovered and illuminated that the EO improves the survival and continuity of the SMEs and aid in achieving superior performance (Al-Swidi & Mahmood, 2012; Awang, Yusof, Kassim, Ismail, & Zain, 2009; Fatoki, 2014; Idar & Mahmood, 2011; Moorthy *et al.*, 2012). These researchers further argued that SMEs that have high risk-taking tendencies are innovative and proactive, hence, have chances of enhancing their performance. Miller (1983) expounded that EO allows SMEs to undertake process, products and services innovation, undertake risky entrepreneurial activities and be proactive. Furthermore, EO aids SMEs to respond to the needs and demand of the customers in the market by introducing new product/services or modifying existing ones, initiating new and valuable ideas for the SMEs, support SMEs process management and enhance SMEs practices and other activities (Jianfeng Jia, Wang, Zhao, & Yu, 2014; Lumpkin & Dess, 1996).

*Corresponding Author: bubapulka@unimaid.edu.ng

In theory, the resource-based view (RBV) assumes that different firms possess different types of resources that serve as a source of competitive advantage and performance. The firms' resources are categorised into two; tangible and intangible resources. However, it has been argued in the literature that only the intangible resources of the firms that give them a competitive advantage and superior performance. The intangible resources that serve as a source of competitive advantage to the firms have specific characteristics; namely, value, rare, difficult to imitate by competitors, and the resources are not substitutable (Barney, 1991; Hunt & Morgan, 1995; Penrose, 1959; Peteraf, 1993). Therefore, EO is regarded as one of the intangible resources of the firms that help firms in generating competitive advantage and for achieving superior performance (Covin & Slevin, 1989; Lumpkin & Dess, 1996; Miller, 1983; Zahra, & Covin, 1995). Consequently, lack of, or insufficient level of entrepreneurial orientation in a firm may result in a low level of innovation, competitive disadvantage and reduced or low firm performance. These could further have negative consequences on the economy in general.

Even though, it is clear that EO is essential for firms to attain superior performance (Barney, 1991; Grant, 1991, 1996; Teece & Pisano, 1994). However, previous studies have paid less research attention to empirically examine the effect of EO on SMEs performance in developing countries like Nigeria. There is a paucity of research that has examined the moderating role of the four external environmental characteristics (dynamism, diversity, hostility and complexity) on the relationship between EO and SMEs performance in one study (Chi, 2006; Chi, Kilduff, & Gargeya, 2009). However, one or two environmental characteristics were studied (Aminu, 2015; Hakala & Kohtamaki, 2011; Shehu & Mahmood, 2014). However, it is not sufficient to give a clear picture of the external environment and its relationship with EO and SMEs performance.

As a result, the study fills in the gaps in EO and SMEs performance research by examining the moderating effects of external environmental characteristics (dynamism, diversity, hostility and complexity) on the relationship that between EO and SMEs performance in Nigeria. Therefore, the objective of the study is to examine the effects of EO on SMEs performance and also to examine the moderating role of external environmental characteristics on the relationship between EO and performance of SMEs in Nigeria.

Thus, the study contributes to the body of knowledge in five ways. Firstly, the study contributes to the EO and firm performance research in this field by empirically testing the effect of EO on SMEs performance. Secondly, it provides a scientific report from a developing country that is grossly underrepresented in the literature. Thirdly, the study contributes toward the further understanding of RBV. Fourthly, to provide a framework of EO- SMEs performance relationship that includes four dimensions of the external environment (dynamism, diversity, hostility and complexity). Lastly, it provides implications to the owners/managers of the SMEs to what level of EO is needed in which environmental characteristics. The structure of the paper is as follows after this section is followed by a literature review, theoretical framework, methodology, analysis and results, implications and trend for further studies.

2. LITERATURE REVIEW

2.1 Entrepreneurial Orientation

Entrepreneurial orientation is regarded as one of the vital resources in firms that has leads to the achievement of competitive advantage and better performance (Covin, Green, & Slevin, 2006; Covin & Slevin, 1988; Miller, 1983). According to Lumpkin and Dess, (1996), Wiklund and Shepherd, (2003) and Walter, Auer, and Ritter, (2006) EO is seen as a decision making and taking styles, process, practices and behaviour that enable firms entry into new/established market with new or modified products/services in response to changes in environment and demand of the customers.

Hence, proper utilization of EO in the firms results to identifying and exploitation of several market opportunities, attaining certain level innovation and facilitate market entry/penetration (Baker, & Sinkula, 2009; Boso, Story, & Cadogan, 2013; Hakala & Kohtamaki, 2011; Pehrsson, 2016; Slater & Narver, 1995). EO also helps the firms by been first-movers to create and introduce products/services into the market, thereby, gaining so many advantages that aid in drastically creating competitive advantage (Kerin, Varadarajan, & Peterson, 1992; Lieberman & Montgomery, 1988). Similarly, EO helps to improve firms capabilities of identifying and exploiting market opportunities in competitive markets.

Literature indicated that EO is defined and operationalised using three or five dimensions. For example, Covin and Slevin, (1989) defined and operationalised entrepreneurial orientation using three dimensions namely, innovativeness, proactiveness and risk-taking. Whereas Lumpkin and Dess, (1996) defined and operationalised entrepreneurial orientation using five dimensions by adding autonomy and competitive aggressiveness. Kraus, Rigtering, Hughes, and Hosman, (2012) and Wiklund (1999) maintained that the majority of researchers in this field are using three dimensions of EO. These dimensions are innovativeness, proactiveness and risk-taking (Aminu, 2015; Covin & Slevin, 1989; Kemelgor, 2002; Samson, 2015; Shehu, 2014; Slevin, 1993; Zahra & Garvis, 2000).

Innovativeness refers to the ability of the SMEs to introduce new ideas, product, process, marketing, and structural innovation that strengthen the ability of the SMEs to achieve competitive advantages and overall performance. Covin and Slevin (1988) saw innovativeness as the willingness of SMEs to attach more importance to “research and development, new products, new services, improved product lines, and global technology in the industry they are operating”. In the words of Aminu (2015), innovativeness has to do with the capabilities of the firm to provide new and creative ideas on how things are done in the firm. Moreover, several studies found that the innovation in a firm is playing a crucial role with regards to enhancing its performance (Dorenbosch, Engen, & Verhagen, 2005; Ramamoorthy, Flood, Slattery, & Sardessai, 2005).

Proactiveness is the second dimension identified in the literature. Lumpkin and Dess (1996) defined proactiveness as the “acting opportunistically to shape the business environment by influencing trends, creating demand, and becoming a first of pioneer mover in a competitive market. Zahra and Covin (1995) emphasised that proactiveness leads to that attainment of competitive advantage for SMEs through “initiating the first move, planning novel requests and market, and by charging high prices” (Jalali, Jaafar, & Ramayah, 2014). According to Hughes and Morgan (2007), proactiveness is the ability the SMEs to look into the future regarding opportunities and demand in the business environment and response by creating and developing new products/services to be ahead of the competitors in that industry. In other words, SMEs can forecast into future and act on the customers’ needs in the market via developing and supplying into the market new products, services, or processes fast and ahead of the competitors (Lumpkin & Dess, 2001; Lyon, Lumpkin, & Dess, 2000). Brendle (2001), maintained that a proactiveness is vital to any given firm and that it is one of the needed resources for firms to gain competitive advantage.

Risk taking is the ability and willingness of SMEs to be “bold and aggressive in searching, sighting and tracking entrepreneurial opportunities with a high rate of risks that could yield a high rate of returns (Katz, Brockhaus, & Hills, 1993). That is why Frese, Brantjes and Hoorn (2002) and Lumpkin and Dess (1996) emphasised that SMEs with specific risk-taking propensity are likely to become successful firms. Risk-taking has usually been described as the uncertainties that come into entrepreneurial activities. Tolerance to risk is the propensity, willingness and ability of an entrepreneur to accept, take, endure and bear risks resulting from running a business. Cerri (2012) asserted that entrepreneurs prefer to take moderate risks in

situations where they have some degree of control for risks in releasing profits. Therefore, it is hypothesised that:

H1: Entrepreneurial orientation is positively and significantly related to SMEs performance in Nigeria.

2.2 External Environment

The external environment in which the SMEs reside keep on changing. The changes could take along about opportunities or threats to the SMEs. Therefore, the SMEs need to bring into line their strategies with the activities in the external environment. Different characteristics have different effects on SMEs (Wang, Chen, & Chen, 2012). This implies that different SMEs may experience the effect of the characteristics of the environment on its operations and others. According to Chi *et al.*, (2009) four environmental characteristics affect the SMEs, diversity, complexity, dynamism and hostility/magnificence.

Environmental diversity is one of the important characteristics of the external environment. Diversity is the extent to which the SMEs are facing “homogenous or diffuse conditions” in their business activities (Chi *et al.*, 2009). Environmental Complexity is explained as the heterogeneity and concentration of the elements in the external environment of the SMEs (Keats & Hitt, 1988). Complexity refers to the degree to which SMEs are required to possess, own and control sophisticated knowledge and process regarding its products, services, customers and other resources (Chi *et al.*, 2009).

Environmental dynamism is another important environmental characteristics. Jiao, Alon, Koo, and Cui (2013) explained dynamism as difficulties facing SMEs as a result of sudden changes taking place in the external environment. These definitions have emphasised that SMEs are unavoidable to experience challenges owing to the high level of unpredictable and uncertain circumstance in the external environment in which they are residing (Muddaha & Kheng, 2016). Consequently, this demand for innovative, risk-taking and proactive measures from the SMEs owners/managers to meet to generate the required competitive advantage and to achieve better performance. Therefore, environmental dynamism signify the unpredictability and uncertainties that SMEs face as they interrelate and interact with the external environmental elements (Perez-Luno, Wiklund, & Cabrera, 2010). Environmental dynamism as the rate at which products/services keep on changing, frequent changes in the preference of customers and operational environment (Milliken, 1987; Sharfman & Dean, 1991). The dynamism in the external environment of SMEs has a considerable effect on entrepreneurial behaviour of the SMEs (Suarez & Lanzolla, 2007; Subramaniam & Youndt, 2005). As a result, environmental dynamism. Likewise, research that established that dynamism in the external environment is likely to affect the entrepreneurial orientation and the performance of the SMEs (Perez-Luno *et al.*, 2010; Wiklund & Shepherd, 2005). Therefore, the more dynamic the external environment is, the more it requires a high level of EO, to efficiently and effectively respond to the changes taking place such as needs of the customers, technological innovation and competition to achieve better performance.

Environmental hostility is the unfavourable external factors in the external environment that affect the SMEs in diverse ways (Zahra & Garvis, 2000). Environmental hostility is the degree of threats SMEs are facing as a result of the vigour, intensity and multifaceted of competition (Calantone, Schmidt, & Benedetto, 2003). Therefore, environmental hostility is as a result of rapid and drastic changes that keep occurring and that lead to radical changes in the firms, placing intense regulatory procedures and burdens on the firms and the presence of aggressive competition among firms, shifting of customers demand and constant technological innovation. (Agarwal & Ramaswami, 1992; Steve Werner, 1996; Shaker A Zahra & Garvis, 2000). Hostility in the external environment can also result from perceived market competition, market

uncertainties, and products/services uncertainties (Sharfman & Dean, 1991; Tang & Hull, 2012). Therefore, SMEs need to harness and deploy the resources at their disposal and continue searching for opportunities in the external environment to be able to manage and succeed in a hostile environment (McGee & Rubach, 1996; Zahra, 1993). Nevertheless, as environmental hostility intensifies, SMEs need to change from present needs of customers to pursue the satisfaction of the likely needs to continue sustaining the competitive advantage and performance (Narver & Slater, 1998).

Consequently, there is a paucity of studies that have established a model connecting the four environmental characteristics (diversity, complexity, dynamism and hostility) into the EO and SMEs performance relationship. Majority of the studies in this aspect concentrate on looking at one or two environmental characteristics, while ignoring the studies of all the four characteristics in one studies (Jiao *et al.*, 2013; Muddaha & Kheng, 2016; Muddaha, Kheng, & Sulaiman, 2018; Perez-Luno *et al.*, 2010; Suarez & Lanzolla, 2007; Tang & Hull, 2012). Thus, to fill the identified gaps in the literature, the study hypothesised that:

H2: environmental diversity positively and significantly moderates the relationship between Entrepreneurial orientation and SMEs performance in Nigeria.

H3: environmental complexity positively and significantly moderates the relationship between Entrepreneurial orientation and SMEs performance in Nigeria.

H4: environmental dynamism positively and significantly moderates the relationship between Entrepreneurial orientation and SMEs performance in Nigeria.

H5: environmental hostility positively and significantly moderates the relationship between Entrepreneurial orientation and SMEs performance in Nigeria.

2.3 SMEs Performance

SMEs performance is essential in strategic management studies and is usually used as a dependent variable (Bayo-Moriones, Billon, & Lera-Lopez, 2013; Foss, 1997; Richard, Devinney, Yip, & Johnson, 2009). It is added that, even though SMEs performance is essential, there is no agreement among researchers about its definition, dimensionality and its measurement (Combs, Crook, & Shook, 2005; Crook, Ketchen, Combs, & Todd, 2008; Richard *et al.*, 2009).

Moullin (2003) defined performance as how well the firms are being managed and “the values of the firms are delivered to the customers and stakeholders. Zahra and Covin (1995), see SMEs performance as the engine that drives the marketing and financial performance of the SMEs. Similarly, Ricardo and Wade (2001) defined SMEs performance as the ability of the SMEs to succeed in achieving their defined aims, goals and objectives. Therefore, in the literature, the measurement of SMEs performance is divided into financial and nonfinancial performance (Liang, You, & Liu, 2010). Financial performance of the SMEs are measured by using indicators such as sales growth, profitability, return on investment, market share, and economic value added (Li, Su, Liu, & Li, 2011). On the other side, nonfinancial performance indicators differ with the firms’ characteristic, strategies and other factors (Jaworski & Kohli, 1993). However, Santos and Brito (2012) expounded seven components of SMEs performance; these include profitability, market values, growth, employee satisfaction, customer satisfaction, environmental performance and social performance. Hence, these components are made up of financial and nonfinancial performance indicators.

2.4 Theoretical Framework (Resource Based View)

This study is supported by the resource-based view (RBV). The RBV is seen as one of the theoretical perspectives for achieving a better performance utilising internal and specific bundle of resources by the SMEs (Amit & Schoemaker, 1993; J. B. Barney, 1991; Collis, 1994; Grant, 1991; Peteraf, 1993; Wernerfelt, 1984). They also argue and emphase that it is the bundle

and uniqueness of the firm’s resources that enable it to achieve a substantial competitive advantage. Based on the hypotheses of the study, the following (figure 1) conceptual framework is proposed.

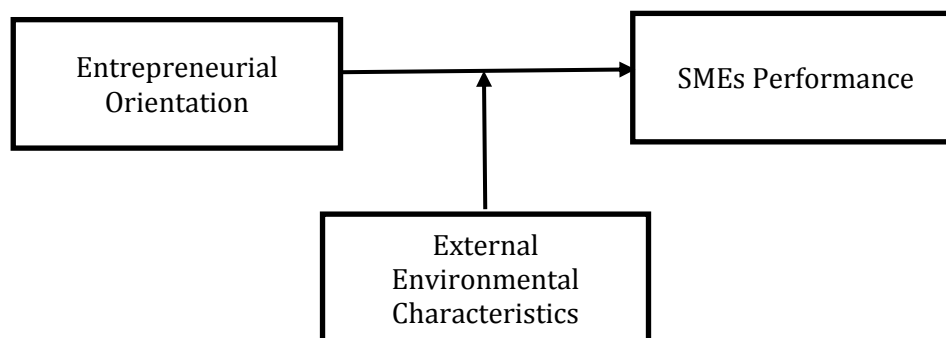


Figure 1. Framework for the Study of the hypothesised relationships.

3. METHODOLOGY

The study examined the moderating effects of the external environment on the relationship between entrepreneurial orientation and SMEs performance in Nigeria. The northeastern is made up of Adamawa, Bauchi, Borno, Taraba and Yobe states. The sample of the study was drawn from the 1, 726 SMEs operating in north-eastern Nigeria using data from SMEDAN and NBS (2013) and SMEDAN (2012). Krejcie and Morgan (1970) sample size determination were used to compose a sample size of 313. To minimise non-response bias, 50% was added to the original sample size to make 470 (Bartlett, Kotrlik, & Higgins, 2001; Salkind, 1997). The data for the study were collected through the use of structure and self-administered questionnaire.

The study employed a multistage random sampling technique in selecting the sampling of the study. Cluster sampling was in grouping the sample according to the states. Proportional to size simple random sampling was used in determining subsample in each cluster. Simple random sampling was utilised to select the SMEs that participated in the study. Consequently, the owner/managers of the SMEs were the respondents of the study. The owners/managers are in a better position in the SMEs to answer the study questions since they are vigorously running the activities of the SMEs and they know the SMEs’ objectives, policies and accomplishments and they play an essential role in the implementation of several strategies in the SMEs (Bayo-Moriones *et al.*, 2013; Rodrigues & Carlos Pinho, 2012). Hence, the data collected reflect the owners/managers perception (Bayo-Moriones *et al.*, 2013; Hakala & Kohtamaki, 2011; Vij & Bedi, 2016). The data collected from the respondents were analysed using SPSS 24 and PLS-SEM 3.0. Table 1 displays the population, cluster and sample of the study.

Table 1 Population and sample size based on cluster sampling technique

S/No.	States	No. of SMEs per State	Sample/Respondents Per State
1.	Adamawa	245	67
2.	Borno	168	46
3.	Bauchi	651	177
4.	Gombe	255	69
5.	Taraba	247	67
6.	Yobe	160	44
	Total	1,726	470

3.1 Measurement

A structured questionnaire was used, employing five points Likert scale, ranging from strongly disagree to strongly agree. The unit of analysis for the study is the organisation. All the measurements were adapted from previous studies. Firstly, SMEs performance was measured using 16 items adapted from the work of Santos and Brito (2012). Secondly, to measure entrepreneurial orientation, 12 items instrument were adapted from the work of Hakala and Kohtamaki (2011) which was initially rooted from the work of Covin and Slevin (1989) and Wiklund (1999). During the validity stage in the pilot study, it was noted that the first item in the questionnaire “we emphasise R&D, technological leadership and innovativeness instead of trusting only those products and services, which we have traditionally found to be good” has a triple barrel. Based on the suggestions made the item was separated into three. For example, (i) our firm emphasises R & D instead of trusting only those products/services, which we have traditionally found to be good. (ii) Our firm emphasises technological leadership. (iii) Our firm emphasises the innovation of new products and services. As a result, the item becomes 14 instead of 12 (Pulka, Ramli, & Mohamad, 2018). Thirdly, to measure the external environment, 17 item instrument was adapted from Chi (2006). The instrument is made up of four external environment characteristics, namely, diversity, complexity, dynamism and hostility.

4. ANALYSIS AND RESULTS

4.1 The preliminary Analysis and Results

The study has achieved a response rate of 65.5%. This is in agreement with the study of Aminu (2015), 89.46%, Shamsudeen, Yeng, and Hassan (2016) 66%, Gorondutse (2014) and Shehu (2014). Out of 470 questionnaires that were administered, 321 questionnaires were successfully retrieved, out of which 13 were found to be invalid. While the remaining 308 were used for further analysis. The univariate outliers were checked using the threshold of ± 3.29 (Tabachnick & Fidell, 2007). Out of 308 cases, 34 were found to be univariate outliers, hence, were deleted from the data set. Two hundred seventy-four cases were considered for further analysis. The multivariate outliers were also checked, but none of the cases has exceeded the threshold. Therefore all the 308 cases were retained.

The non-response bias was analysed; the independent samples t-test is compared with Levene’s test for equality of variance at a 0.05 significance level (Coakes, 2013; Field, 2009; Pallant, 2010a). The results point out that the equal variance no statistical differences between the early and late respondents. Thus, there is no problem of non-response bias in the study. This means that the sample sufficiently represents the whole population and the outcomes can be generalised.

The results of the normality show that the Skewness and Kurtosis of the metric variables of the study are within the accepted borders of less than 2 and 7 respectively (Curran, West, & Finch, 1996; Tabachnick & Fidell, 2007; West, Finch, & Curran, 1995). Therefore, it indicated that the data is normally distributed. Given the above, multicollinearity was examined by applying correlation matrix, tolerance and level of VIF for the independent variables in the study (Hair, Hult, Ringle, & Sarstedt, 2017; Hair, Ringle, & Sarstedt, 2013). As a result, the outcomes of the correlation matrix point out that no any variable in the study that is hugely correlated with other variables (Hair, Anderson, Babin, & Black, 2010; Pallant, 2010b).

The un-rotated factor analysis with 63 items was used in the analysis of the CMV. The results revealed that there is no single factor accounted for up to 50% of the total variance. The results produced 9 factors explaining an aggregate of 63.524% of the total variance. The first factor accounted for 28.122% of the total variance. This is lower than the threshold of 50% (Lowry &

Gaskin, 2014; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). It implies that the non-appearance of CMV in the study. Therefore, the data were subjected to further statistical analysis.

4.2 Assessment of the Measurement Model

4.2.1 Individual Item Reliability

The study established the reliability of the instruments through the use of standardised loading of each item in a construct, Cronbach's alpha, composite reliability and average variance extracted (AVE). The indicators with outer loadings from 0.50 are retained (Hair *et al.*, 2017). However, items with loadings less than 0.50 were removed from the analysis (Duarte & Raposo, 2010; Hair *et al.*, 2017; Sarstedt, Ringle, Smith, Reams, & Hair, 2014). The results showed that acceptable values of 0.50 to 0.87. The results of the Cronbach's alpha are also within the acceptable range with values higher than 0.70 except for environment diversity which has 0.677. The composite reliabilities are all above 0.70. Similarly, all the AVE exceeded the value of 0.5. Therefore, the results showed that the standardised loading, Cronbach's alpha, composite reliability and AVE have acceptable values (Gefen, Straub, & Boudreau, 2000; Meng, Reyes, Xu, & Shen, 2017; Nunnally & Bernstein, 1994). Table 2 presents the loadings, Cronbach's alpha and composite reliabilities' and the AVE.

Table 2 Loadings, cronbach's alpha, composite reliability and average value extracted values

Items	Standardized Loadings	Cronbach's Alpha	Composite Reliability	AVE
SMEs Performance		0.748	0.835	0.514
SP1	0.417			
SP13	0.715			
SP14	0.761			
SP15	0.793			
SP16	0.822			
Environmental Diversity		0.677	0.820	0.603
EE1	0.746			
EE2	0.816			
EE3	0.766			
Environmental Complexity		0.759	0.858	0.669
EE4	0.746			
EE5	0.876			
EE6	0.826			
Environmental Dynamism		0.764	0.839	0.515
EE7	0.798			
EE8	0.641			
EE9	0.546			
EE10	0.746			
EE11	0.820			
Environmental Hostility		0.827	0.872	0.578
EE12	0.790			
EE13	0.794			
EE14	0.738			
EE15	0.675			

EE16	0.797			
Entrepreneurial Orientation		0.936	0.941	0.945
EO1	0.770			
EO10	0.726			
EO11	0.536			
EO12	0.717			
EO13	0.703			
EO14	0.786			
EO2	0.838			
EO3	0.724			
EO4	0.729			
EO5	0.659			
EO6	0.783			
EO7	0.784			
EO8	0.866			
EO9	0.726			

4.2.2 Convergent Validity

Convergent validity was tested as recommended by (Chin, 1998; Fornell & Larcker, 1981; Hair *et al.*, 2017). For the examination of convergent validity, the average variance extracted (AVE) of every single latent construct and the outer loadings of all the indicators are used. All the indicators have achieved acceptable values. The discriminant validity of the constructs was tested. The Fornell- Larcker criterion was observed. It used to measure the discriminant validity by comparing the square-root of the AVE) values with the latent variable correlations (Hair *et al.*, 2017). It means that reflective constructs have discriminant validity when the square root of its AVE is higher than its correlation compares to other reflective latent constructs in the same model of research work (Fornell & Larcker, 1981). All the constructs have attained the discriminant validity in the study. Table 3 presents the convergent validity of the study.

Table 3 Convergent validity

Latent Variables	Complexity	Diversity	Dynamism	EO	Hostility	SP
Complexity	0.818					
Diversity	0.763	0.776				
Dynamism	0.594	0.633	0.718			
EO	0.471	0.465	0.525	0.743		
Hostility	0.688	0.645	0.663	0.602	0.760	
SP	0.252	0.228	0.346	0.522	0.248	0.717

4.3 Assessment of the Structural Model

The study assessed the structural model by applying the standard bootstrapping procedure with a total of 5000 bootstrap samples. This is done to assess the significance of path coefficients (Hair *et al.*, 2017; Hair *et al.*, 2013; Henseler, Ringle, & Sinkovics, 2009). Therefore table 4 presents the results of the direct and moderating relationship among the variables of the study and figure 2 present the estimate of the full research model.

The results from table 4 shows that the results indicated positive and significant of EO on SMEs performance ($\beta = 0.280$, $t = 2.367$ and $P < 0.01$). Unexpectedly, environmental complexity has a

negative moderating effect on the relationship between EO and SMEs performance ($\beta = -0.205$, $t = 1.633$ and $P < 0.1$). Similarly, there is an insignificant moderating effect of environmental diversity on the relationship between EO and SMEs performance ($\beta = -0.120$, $t = 0.716$ and $P = 0.237$). Conversely, there is a significant and positive moderating effect of environmental dynamism on the relationship between EO and SMEs performance ($\beta = 0.134$, $t = 1.634$ and $P < 0.051$). Lastly, there is also a negative moderating effect of environmental hostility on the relationship between EO and SMEs performance ($\beta = -0.188$, $t = 1.659$ and $P < 0.049$). Consequently, H1 and H4 are supported, while H2, H3 and H5 are rejected.

Table 4 Assessment of the structural model

Hypotheses	Relationships	β	Std. Dev.	T Stat.	P Values	Decision
H1	EO => SP	0.280	0.110	2.367	0.009***	Supported
H2	EO = COM => SP	-0.205	0.132	1.623	0.052*	Not Supported
H3	EO = DIV => SP	0.120	0.134	0.716	0.237	Not Supported
H4	EO = DY => SP	0.134	0.105	1.634	0.051*	Supported
H5	EO = HOS => SP	-0.188	0.120	1.659	0.049**	Not Supported

Note: ***Significant at 0.01 (1-tailed), **significant at 0.05 (1-tailed), *significant at 0.1 (1-tailed).

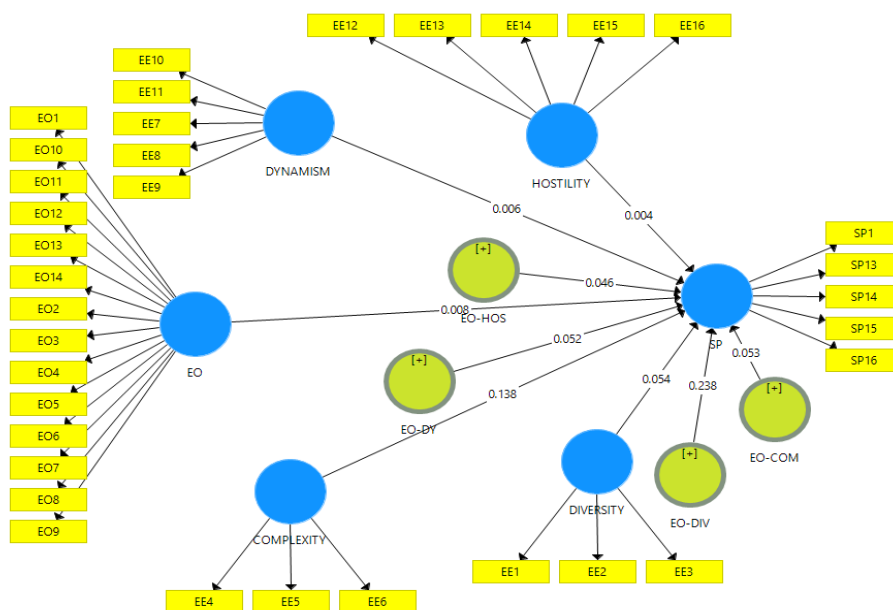


Figure 2. Structural model assessment with moderator (full model).

4.4 Variance Explained in the Endogenous Latent Variables (R²)

The R² value or the coefficient of determination is the percentage of variation in the SMEs performance (dependent variable) as explained by the EO (Elliott & Woodward, 2007; Hair *et al.*, 2017; Hair *et al.*, 2013). Although the acceptable level of R² value depends on the research context. Cohen (1988) recommended that the value of R² of 0.27 is being considered as substantial, 0.13 is moderate, and 0.02 is considered as a weak. While in another perspective, the value of R² should be a minimum of 0.10 as acceptable level (Falk & Miller, 1992; Hair *et al.*, 2010). The study has achieved the R² of 31%, hence, consider as having substantial predictive accuracy. Hence, table 5 depict the results of the variance explain (R²) in the study.

Table 5 Variance explained in the endogenous latent variables (R²)

	R Square	R Square Adjusted
SMEs Performance	0.305	0.292

4.5 Assessment of Effect Size (f²)

Effect size shows the relative effect of the EO on the SMEs performance through variations in the f² (Chin, 1998). The f² values of 0.02, 0.15 and 0.35 are regarded as weak, moderate and substantial. Therefore, table 6 present the results of the effect sizes of all the exogenous variables. Specifically, the effect size of EO is moderate (0.260), while that of environmental complexity (0.004), diversity (0.003), dynamism (0.029) and hostility (0.028) have small effects respectively.

Table 6 Assessment of effect size (f²)

Latent Variables	F ²	Effect size
EO	0.260	Moderate
Complexity	0.004	Small
Diversity	0.003	Small
Dynamism	0.029	Small
Hostility	0.028	Small

4.6 Assessment of Predictive Relevance (Q²)

In assessing the predictive relevance of the model, the cross-validated redundancy measure of was used (Geisser, 1974; Hair *et al.*, 2017; Stone, 1974; Vinzi, Chin, Henseler, & Wang, 2010). As revealed in Table 7 the Q² for the SMEs performance is above zero (0.153). This implies that the model has predictive relevance (Chin, 1998; Hair *et al.*, 2017; Henseler *et al.*, 2009).

Table 7 Assessment of predictive relevance (Q²)

Endogenous variable	SSO	SSE	Q ² (=1-SSE/SSO)
SMEs Performance	1,370.000	1,160.381	0.153

5. DISCUSSION

The purpose of the study is to examine the moderating effect of external environment characteristics on the relationship between EO and SMEs performance. Firstly, the results of the study found a significant and positive effect of EO on SMEs performance. Therefore, the findings of the study suggest that the SMEs need to be innovative, proactive and risk-taking to achieve better performance. Similarly, the findings imply that the higher the level or degree of EO in SMEs, the more likely for the SMEs to achieve better performance.

The findings is in agreement with previous studies that found EO to be significantly and positively affecting SMEs performance (Gupta & Batra, 2015; Kovacs, Zulauf, Urkmez, Brockhaus, & Wagner, 2016; Krauss, Frese, Friedrich, & Unger, 2005; Rogo, Noor, Shariff, & Hafeez, 2017; Tricahyadinata, Hamzah, Taba, & Hamid, 2015; Wiklund & Shepherd, 2005; Zahra & Covin, 1995; Zahra & Garvis, 2000). Thus, this denotes that the findings from this study on the SMEs could contribute to enhancing the understanding of EO and SMEs performance relationship, especially, from a developing country like Nigeria.

Similarly, environmental dynamism has a significant and positive moderating effect on the relationship between EO and SMEs performance. The findings of the study point out that environmental dynamism moderates the relationship between EO and SMEs performance. The findings provide support for some of the previous studies that have established the moderating effect of environmental dynamism on the relationship between EO and SMEs performance (Nandakumar, Ghobadian, & O'Regan, 2010). It implies that to enhance the SMEs performance through EO is more effective in a highly dynamic environment of the SMEs.

However, environmental diversity of the SMEs has a positive moderating effect on the relationship between EO and SMEs performance, but the effect is insignificant. This implies that diversity of the environment does not necessarily affect the SMEs performance. Unexpectedly, the environmental complexity and hostility were found to be negatively moderating the relationship between EO and SMEs performance. It implies that the complexity and hostility of the external environment and EO do not jointly improve the SMEs performance. The circumstances could expound the results that the greater part of SMEs in Nigeria are operating in an unfriendly external environment and non-supportive business environment (Aminu, 2015). Moreover, the external environment that is characterized by sparse and insufficient infrastructure, inadequate government support, frequent changes and inconsistencies in government policies, stiff competition and unstable power supply cannot adequately support the performance of the SMEs (Adebisi, Alaneme, & Ofuani, 2015; Agabi, 2016; Femi Egbesola, 2015; Folabi, 2015; Nkechi, 2013; Rogo *et al.*, 2017; SMEDAN, 2012; SMEDAN & NBS, 2013).

Consequently, the findings from the study have tremendously contributed to the knowledge and literature in this field. Firstly, the study contributes to the understanding of the relationship between EO and SMEs performance. It also contributes to the understanding of the moderating effect external environmental characteristics on the relationship between EO and SMEs performance. Therefore, it provides support for the resource-based view (RBV). Since the RBV is advocating that unique bundle of SMEs resources, serve as a source of its competitive advantage and superior performance (Barney, 1989; Barney, Wright, & Ketchen, 2001; Connor, 2002; Wernerfelt, 1984).

6. CONCLUSION

The study examined the moderating effect of the external environment on the relationship between EO and SMEs performance. Specifically, the study examined the moderating effect of dynamism, diversity, hostility and complexity on EO and performance relationship. Therefore, the study contributes to knowledge. The study contributes to the EO and SMEs performance research in this field by empirically testing the effect of EO on SMEs performance. Then, it provides a scientific report from a developing country that is grossly underrepresented in the literature. Similarly, the study contributes toward the further understanding of RBV. Moreover, the study provides a framework of EO- SMEs performance relationship that includes four dimensions of the external environment (dynamism, diversity, hostility and complexity). Finally, it provides implications to the owners/managers of the SMEs to what level of EO is needed in which environmental characteristics to enhance performance of the SMEs.

REFERENCES

- Adebisi, S. A., Alaneme, G. C. & Ofuani, A. B. (2015). Challenges of Finance and the Performance of Small and Medium Enterprises (SMESs) in Lagos State. *Developing Country Studies*, 5(8), 46-58.
- Agabi, C. (2016). Challenges of SMEs operation in Nigeria. *Daily Trust Newspaper, Nigeria*, pp. 11-13.

- Agarwal, S. & Ramaswami, S. N. (1992). Choice of foreign market entry mode: impact of ownership, location and internalization factors. *Journal of International Business Studies*, 23(1), 1–27.
- Al-Swidi, A. K. & Mahmood, R. (2012). Total quality management, entrepreneurial orientation and organizational performance: The role of organizational culture. *African Journal of Business Management*, 6(13), 4717–4727.
- Aminu, I. M. (2015). *Mediating Role of Access To Finance and Moderating Role of Business Environment on the Relationship Between Strategic Orientation Attributes and Performance of Small and Medium Enterprises in Nigeria*. PhD Thesis.
- Aminu, M. I. (2015). *Relationships between Organizational Memory, Intellectual Capital, Entrepreneurial Orientation, Dynamic Capabilities and Firm Performance in Nigeria*.
- Amit, R. & Schoemaker, P. J. H. (1993). Strategic Assets and Organizational Rent. *Strategic Management Journal*, 14(1), 33–46.
- Amran Awang, Ab Aziz Yusof, Kamsol Mohamed Kassim, Mohammad Ismail, Rosihana Shekh Zain, A. R. S. M. (2009). Entrepreneurial Orientation and Performance Relations of Malaysian Bumiputera SMEs : The Impact of Some Perceived Environmental Factors. *International Journal of Business and Management*, 4(9), 84–96.
- Baker, W. E. & Sinkula, J. M. (2009). The complementary effects of market orientation and entrepreneurial orientation on profitability in small businesses. *Journal of Small Business Management*, 47(4), 443–464.
- Barney, J. B. (1989). Asset Stocks and Sustained Competitive Advantage : A Comment. *Management Science*, 35(12), 1511–1513.
- Barney, J. B. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99–120.
- Barney, J., Wright, M. & Ketchen, D. J. (2001). The resource-based view of the firm: Ten years after 1991. *Journal of Management*, 27(6), 625–641.
- Bartlett, J. E., Kotrlik, J. W. & Higgins, C. C. (2001). Organizational Research: Determining Appropriate Sample Size in Survey Research. *Information Technology, Learning, and Performance Journal*, 19(1), 43–50.
- Bayo-Moriones, A., Billón, M. & Lera-López, F. (2013). Perceived performance effects of ICT in manufacturing SMEs. *Industrial Management & Data Systems*, 113(1), 117–135.
- Begley, T. M. (1995). Using founder status, age of firm, and company growth rate as the basis for distinguishing entrepreneurs from managers of smaller businesses. *Journal of Business Venturing*, 10(3), 249–263.
- Boso, N., Story, V. M. & Cadogan, J. W. (2013). Entrepreneurial orientation, market orientation, network ties, and performance: Study of entrepreneurial firms in a developing economy. *Journal of Business Venturing*, 28(6), 708–727.
- Brendle, M. (2001). *Personality and Company Culture: Important Contributions to Innovation and A Source of Competitive Advantage for Small Businesses*, Unpublished Doctoral dissertation, Clemson University, Clemson.
- Brown, T. E. Davidsson, P., & Wiklund, J. (2001). An operationalization of Stevenson's conceptualization of entrepreneurship as opportunity-based firm behaviour. *Strategic Management Journal*, 22(10), 953–968.
- Calantone, R. J., Schmidt, J. B. & Benedetto, C. A. (2003). New Product Activities and Performance: The Moderating Role of Environmental Hostility. *Journal of Product Innovation Management*, 14(3), 179–189.
- Cerri, S. (2012). Exploring Factor Affecting Trust and Relationship Quality in a Supply Chain Context. *Journal of Business Studies Quarterly*, 4(1), 74–90.
- Chi, T. (2006). *A Study of the Relationships between Business Environment Characteristics, Competitive Priorities, Supply Chain Structures, and Firm Performance in the U.S. Technical Textile Industry*. A Dissertation Submitted to the Faculty of The Graduate School at The University of North Carolina at Greensboro.

- Chi, T., Kilduff, P. P. D. & Gargeya, V. B. (2009). Alignment between business environment characteristics, competitive priorities, supply chain structures, and firm business performance. *International Journal of Productivity and Performance Management*, 58(7), 645–669.
- Chin, W. W. (1998). Commentary: Issues and Opinion on Structural Equation Modeling. *MIS Quarterly*, 22(1), 1.
- Coakes, S. J. (2013). *SPSS version 20.0 for windows: Analysis without anguish*. Australia: Wiley.
- Collis, D. J. (1994). Research Note : How Valuable Are Organizational Capabilities? *Strategic Management Journal*, 15, 143–152.
- Combs, J. G., Crook, T. R. & Shook, C. L. (2005). The Dimensionality Of Organizational Performance And Its Implications For Strategic Management Research and True Reflection Of The SMEs. *Research Methodology in Strategy and Management*, 2, 259–286.
- Connor, T. (2002). The resource-based view of strategy and its value to practising managers. *Strategic Change*, 11(6), 307–316.
- Covin, J. G., Green, K. M., & Slevin, D. P. (2006). Strategic process effects on the entrepreneurial orientation - Sales growth rate relationship. *Entrepreneurship: Theory and Practice*, 30(1), 57–81.
- Covin, J. G. & Lumpkin, G. T. (2011). Entrepreneurial orientation theory and research: Reflections on a needed construct. *Entrepreneurship: Theory and Practice*, 35(5), 855–872.
- Covin, J. G. & Miller, D. (2014). International Entrepreneurial Orientation: Conceptual Considerations, Research Themes, Measurement Issues, and Future Research Directions. *Entrepreneurship: Theory and Practice*, 38(1), 11–44.
- Covin, J. G. & Slevin, D. P. (1989). Strategic Management of Small Firms in Hostile and Benign Environments. *Strategic Management Journal*, 10(1), 75–87.
- Covin, J. & Slevin, D. (1988). The Influence of Organization Structure. *Journal of Management Studies*, 109(May), 321–334.
- Crook, T. R., Ketchen, D. J., Combs, J. G. & Todd, S. Y. (2008). Strategic resources and performance: A meta-analysis. *Strategic Management Journal*, 29(11), 1141–1154.
- Curran, P. J., West, S. G. & Finch, J. F. (1996). The robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. *Psychological Methods*, 1(1), 16–29.
- Dewett, T. (2007). Linking intrinsic motivation, risk-taking, and employee creativity in an R&D environment. *R and D Management*, 37(3), 197–208.
- Dorenbosch, L., Engen, M. L. van & Verhagen, M. (2005). On-the-job Innovation: The Impact of Job Design and Human Resource Management through Production Ownership. *Creativity and Innovation Management*, 14(2), 129–141.
- Duarte, P. A. O. & Raposo, M. L. B. (2010). *A PLS model to study brand preference: An application to the mobile phone market*. In *Handbook of partial least squares* (pp. 449-485). Springer Berlin Heidelberg.
- Elliott, A. C. & Woodward, W. A. (2007). *Statistical analysis quick reference guidebook: With SPSS examples*: Sage.
- Falk, R. F. & Miller, N. B. (1992). *A primer for soft modeling*: University of Akron Press.
- Fatoki, O. (2014). The Entrepreneurial Orientation of Micro Enterprises in the Retail Sector in South Africa. *Journal of Sociology and Social Anthropology*, 5(2), 125–129.
- Femi Egbesola. (2015). Challenges of SMEs operation in Nigeria. *Daily Trust Newspaper, Nigeria*.
- Field, A. (2009). *Discovering Statistics using SPSS* (3rd ed.). London: Sage Publication.
- Folabi, F. (2015). *Issues, Challenges and Prospects of Small and Medium Scale Enterprises (SMEs) In Africa. (A Survey of Small and Medium Scale Enterprises in Nigeria) Degree Programme in Innovative Business Services 2015*.
- Fornell, C. & Larcker, D. (1981). Evaluating structural equation models with unobservable variable and measurement error. *Journal of Marketing Research*, 39–50.
- Foss, N. J. (1997). *The resource-based perspective: An assessment and diagnosis of problems*. *Scandinavian Journal of Management* (Vol. 14).

- Frese, M., Brantjes, A. & Hoorn, R. (2002). Psychological success factors of small scale businesses in Namibia: The roles of strategy process, entrepreneurial orientation and the environment. *Journal of Developmental Entrepreneurship*, 7(3), 259–282.
- Gefen, D., Straub, D. W. & Boudreau, M. C. (2000). "Structural equation modeling and regression: guidelines for research practice". *Communications of the Association for Information Systems*, 4(7), 1–77.
- Geisser, S. (1974). A Predictive Approach to the Random Effect Model. *Biometrika*, 61(1), 101–107.
- George, B. A. & Marino, L. (2011). The epistemology of entrepreneurial orientation: Conceptual formation, modeling, and operationalization. *Entrepreneurship: Theory and Practice*, 35(5), 989–1024.
- Gorondutse, A. H. (2014). *Effect of business social responsibility (BSR) on Performance of SMEs in Nigeria*.
- Grant, R. M. (1991). The Resource-Based Theory of Competitive Advantage: Implications for Strategy Formulation. *California Management Review*.
- Grant, R. M. (1996). Toward a Knowledge-Based Theory of the Firm. *Strategic Management Journal*, 17(May), 109–122.
- Gupta, V. K. & Batra, S. (2015). Entrepreneurial orientation and firm performance in Indian SMEs: Universal and contingency perspectives. *International Small Business Journal*, (April 2015), 1–23.
- Hair, J. F., Anderson, R. E., Babin, B. J. & Black, W. C. (2010). *Multivariate data analysis: A global perspective (Vol. 7)*. Upper Saddle River, NJ: Pearson.
- Hair, J. F., Hult, G. T. M., Ringle, C. M. & Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modelling (PLS-SEM)*. 2nd Edition, SAGE Publishers.
- Hair, J. F., Ringle, C. M. & Sarstedt, M. (2013). Partial Least Squares Structural Equation Modeling: Rigorous Applications, Better Results and Higher Acceptance. *Long Range Planning*, 46(1–2), 1–12.
- Hakala, H. & Kohtamäki, M. (2011). Configurations of entrepreneurial- customer- and technology orientation. *International Journal of Entrepreneurial Behavior & Research*, 17(1), 64–81.
- Henseler, J., Ringle, C. M. & Sinkovics, R. R. (2009). The Use of Partial Least Squares Path Modelling in International Marketing. *Advances in International Marketing*, 20, 277–319.
- Hughes, M. & Morgan, R. E. (2007). Deconstructing the relationship between entrepreneurial orientation and business performance at the embryonic stage of firm growth. *Industrial Marketing Management*, 36(5), 651–661.
- Hunt, S. D. & Morgan, R. M. (1995). The comparative advantage theory of competition. *The Journal of Marketing*, 1–15.
- Idar, R. & Mahmood, R. (2011). Entrepreneurial and marketing orientation relationship to performance: The SME perspective. *Interdisciplinary Review of Economics and Management*, 1(2), 1–8.
- Jalali, A., Jaafar, M. & Ramayah, T. (2014). Entrepreneurial orientation and performance: the interaction effect of customer capital. *World Journal of Entrepreneurship, Management and Sustainable Development*, 10(1), 48–68.
- Jaworski, B. & Kohli, A. (1993). Market Orientation: Antecedents and Consequences. *The Journal of Marketing*, 57(3), 53–70.
- Jianfeng Jia, Wang, G., Zhao, X. & Yu, X. (2014). Exploring the relationship between entrepreneurial orientation and corporate performance. *Nankai Business Review International*, 5(3), 326–344.
- Jiao, H., Alon, I., Koo, C. K. & Cui, Y. (2013). *When should organizational change be implemented? The moderating effect of environmental dynamism between dynamic capabilities and new venture performance*. *Journal of Engineering and Technology Management - JET-M* (Vol. 30).
- Katz, J. A., Brockhaus Sr, R. H. & Hills, G. E. (1993). *Demographic variables in entrepreneurship research*. *Advances in Entrepreneurship, Firm Emergence and Growth*, London, UK: JAI Press Inc, 1.

- Kemelgor, B. H. (2002). A comparative analysis of corporate entrepreneurial orientation between selected firms in the Netherlands and the USA. *Entrepreneurship and Regional Development*, 14(1), 67–87.
- Kerin, R. A., Varadarajan, P. R. & Peterson, R. A. (1992). First-mover advantage: A synthesis, conceptual framework, and research propositions. *The Journal of Marketing*, 33-52.
- Koh, H. C. (1996). Testing hypotheses of entrepreneurial characteristics A study of Hong Kong MBA students. *Journal of Managerial Psychology*, 11(3), 12–25.
- Kovacs, D., Zulauf, K., Ürkmez, T., Brockhaus, D. & Wagner, R. (2016). Linking Entrepreneurial Orientation To Firm Performance in a Post- Socialist Market Context : the Moderating Role of Environment and Age. *Management Dynamics in the Knowledge Economy*, 4(4), 571–589.
- Kraus, S., Rigtering, J. P. C., Hughes, M. & Hosman, V. (2012). Entrepreneurial orientation and the business performance of SMEs: A quantitative study from the Netherlands. *Review of Managerial Science*, 6(2), 161–182.
- Krauss, S. I., Frese, M., Friedrich, C. & Unger, J. M. (2005). Entrepreneurial orientation: A psychological model of success among southern African small business owners. *European Journal of Work and Organizational Psychology*, 14(3), 315–344.
- Krejcie, R. V & Morgan, D. W. (1970). Determining Sample Size for Research Activities Robert. *Educational and Psychological Measurement*, 38(1), 607–610.
- Kropp, F., Lindsay, N. J. & Shoham, A. (2006). Entrepreneurial, market, and learning orientations and international entrepreneurial business venture performance in South African firms. *International Marketing Review*, 23(5), 504–523.
- Li, Y., Su, Z., Liu, Y. & Li, M. (2011). Fast adaptation, strategic flexibility and entrepreneurial roles. *Chinese Management Studies*, 5(3), 256–271.
- Liang, T. P., You, J. J. & Liu, C. C. (2010). “A resource-based perspective on information technology and firm performance: a meta-analysis”. *Industrial Management & Data Systems*, 110(8), 1138–1158.
- Lieberman, M. B. & Montgomery, D. B. (1988). First-Mover Advantages. *Strategic Management Journal*, 9, 41–58.
- Lowry, P. B. & Gaskin, J. (2014). Partial least squares (PLS) structural equation modeling (SEM) for building and testing behavioural causal theory: When to choose it and how to use it. *IEEE Transactions on Professional Communication*, 57(2), 123–146.
- Lumpkin, G. T. & Dess, G. G. (1996). Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance. *Academy of Management Review*, 21(1), 135–172.
- Lumpkin, G. T. & Dess, G. G. (2001). Linking two dimensions of entrepreneurial orientation to firm performance: The moderating role of environment and industry life cycle. *Journal of Business Venturing*, 16(5), 429–451.
- Lyon, D. W., Lumpkin, G. T. & Dess, G. G. (2000). Enhancing entrepreneurial orientation research: Operationalizing and measuring a key strategic decision making process. *Journal of Management*, 26(5), 1055–1085.
- Madsen, E. L. (2007). The significance of sustained entrepreneurial orientation on performance of firms - A longitudinal analysis. *Entrepreneurship and Regional Development*, 19(2), 185–204.
- McGee, J. E. & Rubach, M. J. (1996). Responding to Increased Environmental Hostility: A Study of the Competitive Behaviour of Small Retailers. *Journal of Applied Business Research*, 13(1), 83–94.
- Meng, F. X., Reyes, T. B., Xu, A. G. & Shen, W. (2017). The Electronic Library. *The Electronic Library*, 35(2), 234–247.
- Miller, D. (1983). The Correlates of Entrepreneurship in Three Types of Firms. *Management Science*, 29(7), 770–791.
- Milliken, F. J. (1987). Three Types of Perceived Uncertainty about the Environment: State, Effect, and Response Uncertainty. *The Academy of Management Review*, 12(1), 133–143.
- Moorthy, M. K., Tan, A., Choo, C., Wei, C. S., Tan, J., Ping, Y. & Leong, T. K. (2012). A Study on Factors Affecting the Performance of SMEs in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 2(4), 224–239.

- Moullin, M. (2003). "Defining Performance Measurement." *Perspectives on Performance*, 2(2), 3.
- Muddaha, G. & Kheng, Y. K. (2016). Nigerian SMEs Marketing Innovation Performance : Influence of Business Process Management and Environmental Dynamism. *International Journal Advances in Social Science and Humanities*, 4(9), 6–22.
- Muddaha, G., Kheng, Y. K. & Sulaiman, Y. Binti. (2018). Impact of Management Capabilities and Environmental Dynamism on Nigerian SMEs Marketing Innovation Performance. *International Journal of Management Research & Review*, 8(1), 20–35.
- Nandakumar, M. K., Ghobadian, A. & O'Regan, N. (2010). Business-level strategy and performance: The moderating effects of environment and structure. *Management Decision*, 48(6), 907–939.
- Narver, J. C. & Slater, S. F. (1998). Customer-Led and Market-Oriented : Let ' s Not Confuse the Two. *Strategic Management Journal*, 19(10), 1001–1006.
- Nkechi, N. (2013) . Women and economic development. *Daily Trust Newspaper, Nigeria*, p. 1.
- Nunnally, J. C. & Bernstein, I. H. (1994). *Psychometric Theory*, (3rd edn), McGraw-Hill: New York.
- Pallant, J. (2010a). *SPSS survival manual, 4th edition*. England: McGraw-Hill Education.
- Pallant, J. (2010b). *SPSS survival manual: A step by step guide to data analysis using*.
- Pehrsson, A. (2016). Firm's strategic orientation, market context, and performance Literature review and opportunities for international strategy research. *European Business Review*, 28(4), 378–404.
- Penrose, E. (1959). *The theory of the growth of the firm*. Oxford: Oxford University Press.
- Perez-Luno, A., Wiklund, J., & Cabrera, R. V. (2010). The dual nature of innovative activity: How entrepreneurial orientation influences innovation generation and adoption. *Journal of Business Venturing*, 26(5), 555–571.
- Peteraf, M. A. (1993). The Cornerstones of Competitive Advantage : A Resource-Based View. *Strategic Management Journal*, 14(3), 179–191.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y. & Podsakoff, N. P. (2003). Common method biases in behavioural research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903.
- Pulka, B. M., Ramli, A. & Mohamad, A. (2018). Examining the Moderating Role of External Environment on the Firms ' Resources and Performance of SMEs in Nigeria : A Pilot Study. *IORS-JBM*, 20(11), 20–26.
- Ramamoorthy, N., Flood, P. C., Slattery, T. & Sardesai, R. (2005). Determinants of Innovative Work Behaviour: Development and Test of an Integrated Model. *Creativity and Innovation Management*, 14(2), 142–150.
- Rauch, A., Wiklund, J., Lumpkin, G. T. T. & Frese, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice*, 33(3), 1–54.
- Ricardo, R. & Wade, D. (2001). *Corporate performance management: How to build a better organization through measurement driven strategies alignment*.
- Richard, P. J., Devinney, T. M., Yip, G. S. & Johnson, G. (2009). Measuring Organizational Performance: Towards Methodological Best Practice. *Journal of Management*, 35(3), 718–804.
- Rodrigues, A. P. & Carlos Pinho, J. (2012). The impact of internal and external market orientation on performance in local public organisations. *Marketing Intelligence & Planning*, 30(3), 284–306.
- Rogo, H. B., Noor, M., Shariff, M. & Hafeez, M. H. (2017). Moderating effect of access to finance on the relationship between total quality management, market orientation and small and medium enterprises performance: A proposed framework. *International Review of Management and Marketing*, 7(1), 119–127.
- Salkind, N. J. (1997). *Exploring research (3rd ed.)*. Upper Saddle River, NJ: Prentice Hall.
- Samson, A. T. (2015). *Strategic Orientations, Reconfiguring Capability, Environmental Turbulence and Export Performance of SMEs in Nigeria*. Doctor of Philosophy Universiti Utara Malaysia. Universiti Utara Malaysia.

- Santos, J. B. & Brito, L. A. L. (2012). Toward a subjective measurement model for firm performance. *BAR - Brazilian Administration Review*, 9(SPL. ISS), 95–117.
- Sarstedt, M., Ringle, C. M., Smith, D., Reams, R. & Hair, J. F. (2014). Partial least squares structural equation modeling (PLS-SEM): A useful tool for family business researchers. *Journal of Family Business Strategy*, 5(1), 105–115.
- Shamsudeen, K., Yeng, K. & Hassan, H. (2016). The Mediatory Role of Access to Finance between Finance Awareness and SMEs Performance in Nigeria. *International Business Management*, 10(18), 4304–4310.
- Shane, S. (2003). *A general theory of entrepreneurship*. Northampton, MA: Edward Elgar Publishing.
- Sharfman, M. P. & Dean, J. W. (1991). Conceptualizing and Measuring the Organizational Environment: A Multidimensional Approach. *Journal of Management*, 17(4), 681–700.
- Shehu, A. M. (2014). *Market orientation, knowledge management, entrepreneurial orientation and performance of Nigeria SMEs (Doctoral dissertation, Universiti Utara Malaysia)*.
- Shehu, A. M. & Mahmood, R. (2014). Influence of Entrepreneurial Orientation and Business Environment on Small and Medium Firm Performance : A PLS Approach. *Advances in Management & Applied Economics*, 4(4), 101–114.
- Slater, S. F. & Narver, J. C. (1995). Market Orientation and the Learning Organization. *Journal of Marketing*, 59(3), 63.
- SLEVIN, J. L. N. & D. P. (1993). Entrepreneurship and the Concept of Fit : A Model and Empirical Tests. *Strategic Management Journal*, 14(2), 137–153.
- SMEDAN. (2012). *Annual report*. Retrieved from http://www.smedan.gov.ng/images/annual_report.pdf
- SMEDAN & NBS. (2013). *SMEDAN and the National Bureau of Statistics*.
- Steve Werner, L. E. B. & K. D. B. (1996). International Risk and Perceived Environmental Uncertainty : The Dimensionality and Internal Consistency of Miller ' s Measure Palgrave Macmillan Journals Stable URL, 27(3), 571–587.
- Stone, M. (1974). Cross-Validatory Choice and Assessment of Statistical Predictions. *Journal of the Royal Statistical Society. Series B (Methodological)*, 34(2), 187–220.
- Suarez, F. F. & Lanzolla, G. (2007). The Role of Environmental Dynamics in a First Mover Advantage Building Theory. *The Academy of Management Review*, 32(2), 377–392.
- Subramaniam, M. & Youndt, M. A. (2005). The Influence of Intellectual Capital on the Types of Innovative Capabilities. *The Academy of Management Journal*, 48(3), 450–463.
- Tabachnick, B. G. & Fidell, L. S. (2007). *Using multivariate statistics (5th ed.)*. Boston, MA: Allyn & Bacon/Pearson Education.
- Tang, Z. & Hull, C. (2012). An investigation of entrepreneurial orientation, perceived environmental hostility, and strategy application among Chinese SMEs. *Journal of Small Business Management*, 50(1), 132–158.
- Teece, D. & Pisano, G. (1994). The Dynamic Capabilities of Firms: An Introduction", *Industrial & Corporate Change*, 3(3), 537–556.
- Tricahyadinata, I., Hamzah, D., Taba, M. I. & Hamid, N. (2015). The Relationship Between Entrepreneurship Orientation, 4as, And Servmo To Hotel Performance Study of Hotel Performance in East Kalimantan, Indonesia. *Journal of Research in Business and Management*, 3(9), 22–35.
- Venkatraman, N. (1989). Strategic Orientation of Business Enterprises : The Construct, Dimensionality, and Measurement. *Management Science*, 35(8), 942–962.
- Vij, S. & Bedi, H. S. (2016). Are subjective business performance measures justified? *International Journal of Productivity and Performance Management*, 65(5), 603–621.
- Vinzi, V. E., Chin, W. W., Henseler, J. & Wang, H. (2010). *Perspectives on partial least squares*. In *Handbook of Partial Least Squares*. Springer Berlin Heidelberg.
- W.Keats, B. & A. Hitt, M. (1988). A Causal Model of Linkages among Environmental Dimensions, Macro Organizational Characteristics, and Performance. *Academy of Management Journal*, 31(3), 570–598.

- Wales, W. J., Gupta, V. K. & Mousa, F.-T. (2011). Empirical research on entrepreneurial orientation: An assessment and suggestions for future research. *International Small Business Journal*, 3(4), 357–383.
- Walter, A., Auer, M. & Ritter, T. (2006). The impact of network capabilities and entrepreneurial orientation on university spin-off performance. *Journal of Business Venturing*, 21(4), 541–567.
- Wang, C. H., Chen, K. Y. & Chen, S. C. (2012). Total quality management, market orientation and hotel performance: The moderating effects of external environmental factors. *International Journal of Hospitality Management*, 31(1), 119–129.
- Wernerfelt, B. (1984). A Resource-Based View of the Firm. *Strategic Management Journal*, 5(2), 171–180.
- West, S. G., Finch, J. F. & Curran, P. J. (1995). Structural equation models with nonnormal variables: Problems and remedies. In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 56-75). Thousand Oaks, CA: Sage Publications.
- Wiklund, J. (1999). The sustainability of the entrepreneurial orientation performance relationship. *Entrepreneurship: Theory & Practice*, 24(1), 39–50.
- Wiklund, J. & Shepherd, D. (2003). Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strategic Management Journal*, 24(13), 1307–1314.
- Wiklund, J. & Shepherd, D. (2005). Entrepreneurial orientation and small business performance: A configurational approach. *Journal of Business Venturing*, 20(1), 71–91.
- Zahra, S. A. & Covin, J. G. (1995). Contextual influences on the corporate entrepreneurship-performance relationship: A longitudinal analysis. *Journal of Business Venturing*, 10(1), 43–58.
- Zahra, S. A. (1993). Environment, corporate entrepreneurship, and financial performance: A taxonomic approach. *Journal of Business Venturing*, 8(4), 319–340.
- Zahra, S. A. & Garvis, D. M. (2000). International corporate entrepreneurship and firm performance: The moderating effect of international environmental hostility. *Journal of Business Venturing*, 9026(99), 469–492.

