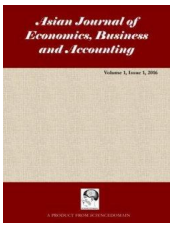

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Role of Entrepreneurial Orientation in the Performance of Small and Medium Enterprises: Evidence from Federal Capital Territory, Abuja, Nigeria

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

This study investigated the role of entrepreneurial orientation in the performance of Small and Medium Enterprises in FCT, Abuja, Nigeria. The study employed a descriptive and quantitative research design. The instrument for data collection was structured questionnaire and works on entrepreneurial orientation-Performance nexus. The data was analyzed using the Principal Component Analysis and multiple linear regression analysis. The results showed that five entrepreneurial orientation dimensions as identified in the literature were not exhibited by SMEs in the study area. The entrepreneurial orientation dimensions exhibited by SMEs in Abuja in order of importance were: autonomy, proactiveness, innovativeness, and risk-taking. The entrepreneurial dimension of competitive aggressiveness was not demonstrated by SMEs in Abuja. Innovativeness was the only entrepreneurial orientation dimension out of the five that exerted a positive and

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statistically significant relationship with the performance of SMEs. However, the other three dimensions of entrepreneurial orientation: proactiveness, risk-taking, and autonomy exerted a positive and insignificant relationship with the performance of SMEs. Therefore, the study, recommends that to add values to their firms, SMEs operators in Abuja need to be innovative in their entrepreneurial activities with emphasis on process and radical innovations. In addition, considering the enabling environment provided by the government for business, SMEs operators should strive and build capacities on the four entrepreneurial orientation dimensions demonstrated by them in this study. Furthermore, the government should organize training for SMEs operators in collaboration with development partners to ensure the adoption and effective implementation of innovativeness in FCT, Abuja.

Keywords: Entrepreneurial orientation; performance; small and medium enterprises; Abuja.

1. INTRODUCTION

Small and Medium Enterprises (SMEs) play a pivotal role in the economic growth and development of emerging, developing and developed economies of the world. The development of the SMEs sector is one approach that could help the government to attain the objective of promoting entrepreneurship as a vehicle for driving rapid industrialization, solving the problem of unemployment and overall economic growth. The contribution of the SMEs sector to the Nigerian economy shows that it is a strategic engine for economic growth and development. The Micro, Small and Medium Enterprises (MSMEs) provide employment for about 84.02% of the total labour force, represent 96% of the businesses in Nigeria and contribute 48.47% to the nation's Gross Domestic Product (GDP) [1].

The catalytic role of SMEs in wealth creation, poverty alleviation, employment generation and fostering economic growth have been acknowledged in the literature [2,1,3,4]. SMEs can be positioned to play a strategic role in the economic transformation and development process of the country in line with the change mantra, Green Alternative and economic diversification objective of the Federal Government of Nigeria.

The major obstacles threatening the performance of MSMEs in Nigeria are obsolete technology, multiple taxations, access to the market, poor support (business development services), inconsistency in government policies, poor infrastructure and access to finance [1]. [5] opined that the business environment in Nigeria is bedeviled by market failures and this has led to the under-provision of financing for the SMEs sector which is crucial to employment and economic diversification and this underlines the necessity for provision of financial assistance to SMEs through reputable local banks.

There is a consensus among some scholars that EO leads to firms' success and profitability [6,7, 8,9,10,11,12,]. EO is the decision-making practices and processes employed to act in an entrepreneurial way at the organizational level [13,9]. EO as a concept in the domain of entrepreneurship is viewed as a vehicle for driving SMEs success, profitability, and growth. [13] posited that EO has three dimensions namely; innovativeness, risk-taking, and proactiveness. [14,15], and [9] have supported the much earlier writing of [13] who had dealt at length with the three-dimensional entrepreneurial construct. The upgrading of the dimensions of EO to five, namely; autonomy, competitive aggressiveness, risk-taking, pro-activeness and innovativeness and improvement on the original ideas envisaged by [13] is credited to [14,9].

The birth, growth, and sustainability of SMEs are critical to the attainment of economic growth and development of countries. Despite this, the truth is that the activities of SMEs are bedeviled by problems such as access to finance, poor infrastructure, inconsistency in government policies, poor support (business development services), access to the market, multiple taxation and obsolete technology, leading to high failure rate. The epileptic growth of SMEs in FCT cannot just be attributed to the problems already stated only but to mainly inadequate EO. Given the scenarios painted above, there have been many efforts in the last twelve years to boost the MSMEs sector of the Nigerian economy. First, the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) was created as the agency solely responsible for the promotion and development of this sector. In addition, the National Enterprise Development Programme (NEDEP) was implemented. Others were the

creation of the MSME National and State Councils, Youth Enterprise with Innovation in Nigeria (YouWiN), the revised National MSMEs Policy and other funding access of the Central bank of Nigeria and other development banks [1].

Unfortunately, all these efforts failed to yield optimal performance for the SMEs sector. [16] and [17] opined that the managerial capacity of private Nigeria entrepreneurs has often been questioned and [18] reechoed his suggestion of the existence of a managerial logjam among African entrepreneurs in the manufacturing industry; corroborated by low value-added shares of African SMEs and the dearth of firms in the 20-49 employees and 50 or more categories. In the face of failure, SMEs must formulate and implement strategies in order to survive and thrive in a dynamic business environment. EO is one prominent concept in strategy-making in the parlance of entrepreneurship and strategic management, which have been identified in previous studies as affecting SMEs performance. Consequently, it is expected that adopting EO may boost the performance of SMEs, evidenced by their resource limitations. While several factors may affect SMEs performance, the role of EO has not been fully exploited.

Most of the studies conducted on the effect of EO on SMEs performance have focused on the developed countries. While a number of studies have investigated the EO–performance relationship in Africa, there exists a paucity of research which investigated the EO–performance relationship within the context of SMEs in Nigeria, except for few studies [19, 20]. This study extends the EO-performance relationship literature by focusing on the effects of EO on the performance of SMEs in FCT, Abuja. Given these scenarios, the questions that come to mind is: does EO influence SMEs performance in FCT, Abuja? Which EO dimensions have been demonstrated by SMEs in FCT, Abuja? It is against this backdrop that the main objective of this paper is to examine the role of EO on the performance of SMEs in FCT, Abuja. In addition, the study will identify the EO dimensions exhibited by SMEs in FCT, Abuja. The remainder of this paper is organized as follows: the next section dwells on the literature review on EO and performance of SMEs. Section three focuses on the methodology. Data presentation, analysis, and discussions are in section four while section five looks at the recommendations and concludes the paper.

2. LITERATURE REVIEW

2.1 Entrepreneurial Orientation and Performance of SMEs

A number of studies have investigated the role of entrepreneurial orientation on the performance of SMEs with mixed results [21,22,23,19,24,25,26, 27,20,28,29,30,31,32,33].

For instance, employing descriptive research design, [23] examined the effect of EO on firm performance in Malang. Data were sought through quantitative and qualitative approaches. Quantitative techniques were employed to collect data from 140 SMEs cluster. Quantitative and qualitative data were analyzed using Analysis of Moment Structures 16 (AMOS 16) and Statistical Package for Social Sciences (SPSS) respectively. The results showed that EO is positively related to firm performance and strategic flexibility plays a mediating role in this association. [21] employed a Confirmatory Factorial Analysis (CFA) through a Structural Equation Modeling (SEM) to test the relationship between EO and Organizational Performance in small Brazilian enterprises. The results confirmed that that EO has a very strong relationship with organizational performance.

As our study, the research carried out by [19] was executed in Nigeria. They investigated the impact of EO and competitive advantage on SMEs performance in Nigeria. In addition, the study determined whether competitive advantage mediates the relation between EO and performance of SMEs. The study employed Partial Least Squares Structural Equation Modeling for data analysis and hypothesis testing on a sample of 283 SMEs respondents from Kano State, North Western Nigeria. Employing principally existing literature and data relevant to the subject matter of the study, through self-administered questionnaires, they discovered a positive and significant relationship between EO and SMEs performance. Similarly, the result revealed a positive and significant relationship between competitive advantage and SMEs performance. Furthermore, the study confirmed that competitive advantage mediates the relationship between EO and the performance of SMEs in Nigeria.

Similarly, just like our study, the research conducted by [20] was carried out in Nigeria. They investigated the impact of the dimensions of EO on the performance of Micro, Small and

Medium Enterprises (MSMEs) in Ebonyi State. The study employed survey research design and Pearson Product Moment Correlation was utilized for data analysis. The results revealed that the three dimensions of EO were relevant to one measure of the performance of MSMEs. Furthermore, the study confirmed that competitive aggressiveness had a significant relationship with both customer and product performance. In addition, Innovativeness and pro-activeness had a significant correlation with customer performance. Risk-taking and autonomy had no significant correlation with any of the performance measures, implying that they are not relevant to the performance of MSMEs.

[24] examined the association between EO and growth of SMEs in Sri Lanka through descriptive research design and Analysis of Variance (ANOVA) methodologies. It also investigated the relationship between the three dimensions of EO – innovativeness, risk-taking, and pro-activeness on the growth of SMEs. Data were sought through questionnaires and analyzed through the help of descriptive statistical techniques to test the formulated hypotheses. The results showed that EO has an impact on the growth of SMEs. In addition, the results revealed that innovativeness and risk-taking have a positive impact on the growth of SMEs. Nevertheless, the findings showed that pro-activeness has no significant impact on the growth of SMEs.

[25] employed survey research design and Partial Least Square (PLS) methodologies on a sample of 500 SMEs owners/managers that were randomly selected from registered SMEs to examine the relationship between EO, strategic improvisation and performance of SMEs in Malaysia. Data were collected through mail questionnaires and the results showed that there is a significant relationship between EO and the performance of SMEs.

Employing principally existing literature relevant to the subject matter of the study, [26] investigated the relationship between EO, business development services, business environment and firm's performance. They concluded after reviewing previous researches in this area that "past studies conceptualized entrepreneurial orientation as a three-factor single-dimensional model and a five-factor multidimensional model. Studies using the three-factor model have reported different results to those adopting the five-factor approach. This has led to inconsistencies in the empirical results of entrepreneurial orientation on firm's performance" (p.188). The results also showed that business development services play a mediating role in the EO and performance relationship and that external environment moderates this relationship. Nevertheless, the results showed no role of internal environment in the EO-firm's performance relationship.

[27] investigated the impact of EO and learning orientation on SMEs performance in Malaysia employing Partial Least Squares Structural Equation Modeling (PLS-SEM) and descriptive research design on a sample of 200 SMEs and 250 SMEs selected randomly from the electronic and electrical sector and beverage industries respectively. The results revealed that EO dimensions (innovativeness, pro-activeness, and risk-taking) and learning orientation have a significant relationship with the performance of SMEs.

[28] employed survey research design to examine the impact of EO on the performance of SMEs in the Netherland during the global economic and financial crisis. The study employed an Exploratory Factor Analysis (EFA) and descriptive statistical techniques for data analysis and hypothesis testing on a sample of 164 SMEs. It was evident from the result that during the economic and financial crisis, proactive firm behaviour contributed positively to the performance of SMEs. The results also revealed that innovative SMEs performed better in turbulent environments. They concluded that innovative SMEs should reduce their level of risk and should take action to eschew projects that are uncertain.

Employing descriptive research design on a sample of 1141 SMEs out of which 740 were micro enterprises, [32] identified and investigated the differences of gender, education level of entrepreneurs and enterprises' age as it concerned EO in the segment of microenterprises in the Czech Republic. Data were sought through structured questionnaires and analyzed through the help of descriptive statistical techniques while chi-square test was used to test the formulated hypotheses. The analysis involved all the dimensions of EO such as competitive aggressiveness, autonomy, pro-activeness, innovativeness, and risk-taking. The results showed that university educated micro-entrepreneurs were more innovative and autonomous compared with lower educated micro-entrepreneurs. The results further revealed

that younger micro firms are more proactive, innovative and willing to take risks than the older micro firms. Nevertheless, the results did not reveal any significant differences between men and women in relation to all components of EO.

[29] employed multiple regression methodology and survey research design on a sample of 1420 MSEs to investigate the effect of the dimensions of EO on the growth of Micro and Small Enterprises (MSEs) in Kerugoya, Kenya. Data were sought through questionnaires and secondary sources and analyzed through the help of descriptive statistical techniques such as graphs, pie charts, and percentages, while chi-square test was used to test the formulated hypotheses. The results showed that the dimensions of EO (risk-taking, innovativeness, proactiveness, and entrepreneurial managerial competence had a significant positive influence on the growth of MSEs.

[30] examined the principal drivers and performance effects of EO for SMEs in time of economic crisis. In addition, the study tried to expand the existing knowledge of determinants of EO by investigating the relationship between firm's financial resources, demographic characteristics, attitudes, owner's work-related values and EO. The results revealed that the dimensions of EO had a significant positive impact on a firm's long-run growth suggesting that EO has positive implications for firm performance. Nonetheless, during a time of economic crisis, the different dimensions of EO had both positive and negative effects on performance of SMEs. The performance implications were diverse across different stages of the crisis and were also reliant on what measure was employed for measuring the performance. In addition, the results showed that the main drivers of EO in SMEs were the personal work-related values of the entrepreneur and his/her prior experience as an entrepreneur. Furthermore, the intrinsic work values related to interest, responsibility, challenge, self-development or intellectual stimulation and values related to status, power, achievement, and recognition had a positive influence on the level of EO. Alternatively, extrinsic values related to benefits, material possessions, high income such as generous job security, holidays, and comfort through good working conditions decreased the level of EO.

[31] employed the multiple regression methodology and an EFA to confirm the level of EO of small businesses in the retail sector in the Eastern Cape Province of South Africa and to investigate the effect of EO on their business performance. A quantitative research approach was utilized and convenience sampling was used to gather 153 usable questionnaires from small retail businesses in the Eastern Cape Province. The results of this study revealed that the dimensions of EO such as competitive aggressiveness, Innovativeness, and pro-activeness had a significant positive influence on the success of the business, whereas autonomy and risk-taking do not.

[33] investigated the factors that affect SMEs success in Ilala and Temeke districts of Dares Salaam. The study also examined the extent to which entrepreneurial competence influenced business success in SMEs by employing descriptive statistics on a sample of 60 SMEs from Ilala and Temeke districts of Dares Salaam obtained through a random sampling process. Evidence from this study showed that business or entrepreneurial failures were caused by inadequacy of financial resources. The results further showed that appropriate management decisions such as flexibility and ability to adapt quickly to changes, strategic planning, ability to seize opportunities (e.g. in new markets or products) and a proactive approach to driving the business forward led to business success.

Employing a mixed-methods research design, [34] examined the role of EO in the performance of Indonesian SMEs in the furniture industry in Central Java. The study was executed in two phases. In phase one, data were sought through a face to face questionnaire administered to 150 SMEs. An EFA, CFA, and SEM were utilized to analyze the quantitative data. In phase two, content analysis was employed to analyze the qualitative data from an in-depth, face to face interviews with thirteen of the respondents who participated in phase one interviews. The results showed that pro-activeness was the only dimension of EO that showed a relationship with SMEs performance.

It is evident from the literature review above that while an avalanche of empirical studies has been undertaken to examine the relationship between EO and performance of SMEs, the findings have been mixed and inconclusive. [see 19,23,33,31,30]. Studies on the relationship between EO and performance of SMEs in Nigeria is sparse [see 19,20], has received limited attention and calls for further studies.

These confer the justification for this study as the below optimal performance of SMEs in Nigeria has been a disturbing issue. This study contributes to the existing literature by exploring this relationship in the context of FCT, Abuja, Nigeria.

Based on the literature review, the following hypotheses were formulated:

- H_1: There is no significant relationship between risk taking and performance of SMEs
- H_2: There is no significant relationship between autonomy and performance of SMEs
- H_3: There is no significant relationship between pro-activeness and performance of SMEs
- H_4: There is no significant relationship between innovativeness and performance of SMEs

2.2 Theoretical Framework

This study is anchored on the Schumpeter's theory of innovation. This theory has a significant effect on research in EO and performance of SMEs. As vigorously propounded by [35], entrepreneurship and economic growth are positively related. As comprehensively documented by [36], entrepreneurship is about innovation as new combinations of inputs of production are introduced by the entrepreneur resulting in increased economic growth. The increased economic growth was brought about by their skills and their ability to innovate. Schumpeter's notion of entrepreneurship is grounded in the exploitation of profit opportunities. Furthermore, it stresses the crucial role of entrepreneurship in the economic process as it indicated that the economy will move from an economically and/or technologically inefficient point towards more economically and/or technologically efficient production point once the entrepreneur discovers previously unexploited profit opportunities [37].

The production possibility frontier will be shifted outwards by the entrepreneurial process once the improved technology is discovered resulting in increased productivity and economic growth. When considering entrepreneurship and economic development, Schumpeter sees the entrepreneur as an innovator. In addition, he views an entrepreneur as a leader that channels the factors of production into previously unexploited areas and other producers follow him into these new areas. As stated by [38], innovation involves opening a new market, new sources of raw materials or new forms of industry organization, the introduction of a new good(s), and the introduction of new production or technical method(s). In his view, entrepreneurship is innovative as it involves the ability to break away from routine, overhaul existing structures, move the system away from the even, circular flow of equilibrium [37]. [39] stated that the Schumpeterian entrepreneur, through his innovative activity, seeks to create new profit opportunities, which can result from productivity increases, thereby impacting positively on business performance. Moreover, the disequilibrium created by the entrepreneur can be propitious for additional innovations and profit opportunities [39].

Finally, when there is no enabling institutional environment or a conducive framework in which the Schumpeterian entrepreneur can pursue the activities of innovation and leadership, such as the necessity of private property in providing financial motives for entrepreneurial action and hence, economic development, he will not be able to carry out his functions.

3. METHODOLOGY

The descriptive research design was utilized for this study. This study employed both primary and secondary sources of information. Data used in the study were sought through structured questionnaires. The SMEs in the 6 Local Councils of Federal Capital Territory (FCT), Abuja, constitute the population of the study. The questionnaires were designed for the SMEs. The purposive and random sampling techniques were employed for this research. Six Local Councils in FCT, comprising the city of Abuja and 5 Local Government Areas, namely: Abaji, Gwagwalada, Kuje, Bwari, and Kwali were purposively selected for this research. There are 2690 SMEs in FCT [1].

Based on the data, we used the [40] formula for sample size determination with 95% confidence level to determine the sample size.

$$n = \frac{N}{1 + N(e)^2}$$

$Where$:

$n = sample\ size$
$N = population$
$e = allowable\ error\ (\%)$

Table 1. Sources of items used in measuring the EO dimensions

EO dimensions	Items/Variables	Source of items
Autonomy	7	[9], [41], [34]
Proactiveness	5	[9], [41], [43], [14], [34]
Innovativeness	6	[9], [41]
Competitive Aggressiveness	5	[9], [41], [43], [14]
Risk-taking	5	[43], [14], [41], [34]

Source: Authors Compilation

Substituting into the formula:

$$n = \frac{2690}{1 + 2690(0.05)^2}$$
$$n = 348$$

From the formula, we obtained a total sample of 348 SMEs. Based on the sample size, 58 SMEs from each Local Council were selected proportionally and randomly and administered with the questionnaires. Fifty SMEs from Abaji, Gwagwalada, and Abuja Municipal Area Councils filled and returned the questionnaire respectively, 51 SMEs returned the questionnaire from Kwali Area Council, 52 SMEs from Bwari Area Council and 47 SMEs from Kuje Area Council. A total number of 300 questionnaires were returned by the respondents. The study utilized descriptive statistics, Principal Components Analysis (PCA) and Linear Regression Model in analyzing the collected data. The SPSS was employed for the analysis. Twenty-eight items or variables were employed from the literature to measure the five dimensions of EO proposed by [9]. The items were adapted from [9,41,42,43,14] and [34] (see Table 1).

The validity and reliability of the measuring instruments and the presence of unique factors in the data were determined through a PCA and Cronbach-alpha coefficients. The correlation coefficient was utilized to check the association of the factors under investigation. Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity was employed to investigate the validity and reliability of the data. As indicated by [44], the KMO has to be more than 0.50 and Bartlett's Test of Sphericity has to be significant. In addition, the individual factor loadings and the percentage of variance explained were the bases for extraction of factors for the model. The items with factor loadings of 0.5 onto one factor were considered significant. This is in line with [45] suggestion that in factor analysis, items that had loadings lower than 0.5 should be eliminated. Three items expected to measure autonomy, proactiveness, innovativeness, competitive aggressiveness and risking taking respectively did not load as expected and were eliminated and excluded from further investigation. Therefore, 15 items were eliminated from the 28 items utilized for descriptive analysis. In addition, items with factor loadings of 0.5 and above were returned for further analysis. As comprehensively documented by [46], Cronbach's alpha coefficients of less than 0.50 are unacceptable, those in the range of 0.50-0.69 are adequate and those above 0.70 are acceptable. Cronbach's alpha coefficient of 0.571 was obtained for all constructs. This indicates that the scales measuring autonomy, proactiveness, innovativeness, competitive aggressiveness, risk-taking, and SMEs performance, was reliable and the variables consistent. A low value for communality (less than 0.3) in the view of [47] is undesirable, as it could show that the variable does not fit well with the other variables in its component.

4. DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Descriptive Statistics of the Five Dimensions of EO Measures

The descriptive statistics in terms of the mean and standard deviation for each EO measure are shown in Table 2.

The results in Table 2 showed the outcomes of autonomy as a dimension of EO to the performance of SMEs in Abuja. As a result, seven autonomy variables were identified and built into the questionnaire and the respondents were asked to indicate the option that suits their opinion. A 4-point Likert type scale from "1= not important" to "4=most important" was used to measure how important certain variables mentioned in the questionnaire were. The result showed that employees as a team decide business opportunities to pursue was the greatest autonomy variable affecting the performance of SMEs in Abuja. It has the highest

frequency of 1077 with a mean score of 3.59, this is followed by opportunity seeker with a mean score of 3.46, then approval sought from Manager before decision making with a mean score of 3.44, freedom in work with a mean score of 3.31, independent action with a mean score of 3.29, authority for employees to act alone in the best interest of business with a mean score of 3.11 and employees decide their work target with a mean score of 2.97. All these variables were rated above a mean score of 2.50 and 60%.

In Table 3, a scale was developed to examine the outcomes of proactiveness as a dimension of EO to the performance of SMEs in Abuja. The scale ranges from 1 to 4 where "1= not important" and "4= most important". The effects of proactiveness on the performance of SMEs in the study area were through competitive posture with a mean score of 3.45, initiates new product with a mean score of 3.54, being first to market with a mean score of 3.20, initiates new opportunity and exploits it with a mean score of 3.64 and awareness of market signals with a mean score of 3.52 respectively. The result showed that initiates new opportunity and exploits it as a proactiveness variable had the greatest effect on SMEs performance in the study area.

The results in Table 4 showed the outcomes of innovativeness as a dimension of EO to the performance of SMEs in FCT. As a result, six innovativeness variables were identified and built into the questionnaire and the respondents were asked to indicate the option that suits their opinion. A 4-point Likert type scale from "1= not important" to "4=most important" was used to measure how important certain variables mentioned in the questionnaire were. The results showed that support creative ideas were the greatest innovativeness variable affecting the performance of SMEs in Abuja. It has the highest frequency of 1109 with a mean score of 3.70, this is followed by process innovation with a mean score of 3.57, then product innovation with a mean score of 3.41, radical innovation with a mean score of 3.38, market innovation with a mean score of 3.34 and incremental innovation with a mean score of 3.22.

In Table 5, a scale was developed to examine the outcomes of competitive aggressiveness as a dimension of entrepreneurial orientation to the performance of SMEs in FCT. The scale ranges from 1 to 4, where "1= not important" and "4= most important". The effects of competitive aggressiveness on the performance of SMEs in the study area were through reactive and aggressively competitive with a mean score of 3.33, cautious competitive orientation with a mean score of 3.40, combative posture towards rivals with a mean score of 3.37, undo and out-manoeuvre competitors with a mean score of 3.18 and bold approach with a mean score of 3.56 respectively. The results showed that bold approach as a competitive aggressiveness variable had the greatest effect on SMEs performance in the study area.

Table 2. What in your opinion are the outcomes of the seven autonomy variables to the performance of SMEs in FCT, Abuja

Variables	Most important (X4)	Important (X3)	Less important (X2)	Not important (X1)	Sum	Mean	Std. dev.
Independent action	444	495	48	0	987	3.29	0.61
Approval sought from Manager before decision making	608	384	40	0	1032	3.44	0.62
Employees decide their work target	356	414	98	24	892	2.97	0.88
Opportunity-seeker	676	321	36	6	1039	3.46	0.70
Employees as a team decide business opportunities to pursue	732	333	12	0	1077	3.59	0.53
Freedom in work	596	300	90	6	992	3.31	0.80
Authority for employees to act alone in the best interest of business	384	441	102	6	933	3.11	0.75

Source: Field Survey, 2017

Table 3. What in your opinion are the outcomes of the five proactiveness variables to the performance of SMEs in FCT, Abuja

Variables	Most important (X4)	Important (X3)	Less important (X2)	Not important (X1)	Sum	Mean	Std. dev.
Competitive posture	588	420	26	0	1034	3.45	0.58
Initiates new product	700	333	28	0	1061	3.54	0.59
Being first to market	488	345	126	0	959	3.20	0.76
Initiates new opportunity and exploits it	840	213	38	0	1091	3.64	0.60
Awareness of market signals	728	297	24	7	1056	3.52	0.686

Source: Field Survey, 2017

Table 4. What in your opinion are the outcomes of the six innovativeness variables to the performance of SMEs in FCT, Abuja

Variables	Most important (X4)	Important (X3)	Less important (X2)	Not important (X1)	Sum	Mean	Std. dev.
Support creative ideas	860	237	12	0	1109	3.70	0.50
Process innovation	716	342	14	0	1072	3.57	0.54
Product innovation	572	414	38	0	1024	3.41	0.61
Radical innovation	592	357	66	0	1015	3.38	0.68
Incremental innovation	528	309	130	0	967	3.22	0.78
Market innovation	520	429	54	0	1003	3.34	0.64

Source: Field Survey, 2017

Table 5. What in your opinion are the outcomes of the five competitive aggressiveness variables to the performance of SMEs in FCT, Abuja

Variables	Most important (X4)	Important (X3)	Less important (X2)	Not important (X1)	Sum	Mean	Std. dev.
Reactive and aggressively competitive	464	498	36	0	998	3.33	0.58
Cautious competitive orientation	584	405	24	7	1020	3.40	0.68
Combative posture towards rivals	536	426	48	0	1010	3.37	0.63
Undo and out-manoeuvre competitors	492	324	138	0	954	3.18	0.78
Bold Approach	752	273	42	0	1067	3.56	0.62

Source: Field Survey, 2017

The results in Table 6 showed the outcomes of risk-taking as a dimension of entrepreneurial orientation to the performance of SMEs in FCT. As a result, five risk-taking variables were identified and built into the questionnaire and the respondents were asked to indicate the option that suits their opinion. A 4-point Likert type scale from "1= not important" to "4=most important" was used to measure how important certain variables mentioned in the questionnaire were. The result showed that employees take calculated risks with new ideas was the greatest risk-taking variable affecting the performance of SMEs in FCT. It has the highest frequency of 1023 with a mean score of 3.41, this is followed by strong risk-taking propensity with a mean score of 3.35, then risk-taking support with a mean score of 3.33, and risk-aversion or weak risk-taking propensity with a mean score of 3.26.

4.2 Factor Analysis

Fifteen items representing the five dimensions of EO were subjected to further analysis using

PCA. The PCA was conducted more than once because the rotated component matrix of the earlier processes revealed that seven items were cross-loading. In line with [48] suggestion that cross-loading variables with 0.50 or greater loading for each factor should be dropped from the analysis, seven items were eliminated leaving us with eight items for final analysis. Therefore, PCA with varimax rotation was conducted to examine the underlying structure for the 8 items of the EO questionnaire. We checked to ensure that the variables were correlated at a moderate level and that minimum conditions were satisfied regarding the assumptions of independent sampling, normality and linear relationships between pairs of variables. We requested four factors after dropping the items representing competitive aggressiveness. This is based on the premise that the items were now designed to index four constructs of EO: proactiveness, innovativeness, risk-taking, and autonomy.

After rotation, the first factor accounted for 25.6% of the variance, the second factor accounted for 16.6%, the third factor accounted for 15.7% and the fourth factor accounted for 13.7% (see appendix 6). The four factors generated was able to explain 71.635 of the total variance in the data. The assumption of the KMO measure was met. The KMO value was 0.543 and it indicated that enough items were predicted by each factor. The Bartlett test of sphericity was significant (Chi-Square with degrees of freedom 28=318.883, p=0.000) (see Table 7). This was revealed through a significance value of less than 0.05 (see appendix 4). This provides a reasonable platform for factor analysis since variables are highly correlated. The initial communalities representing the relation between the variables and all other variables (i.e., the squared multiple correlations between the item and all other items) before rotation was 1(see appendix 5). This was adequate since it was greater than 0.30. The assumption that the determinant (located under the correlation matrix) should be more than 0.0001 was met. This is because we obtained 0.340 (see Table 7).

The results in Table 7 displayed the items and factor loadings for the rotated factors. Loadings less than 0.40 were suppressed to improve clarity. This is because factor loadings lower than 0.30 are considered low while loadings of 0.40 or greater are considered high. In addition, the result showed that the first factor, which indexed proactiveness, had strong loadings on the two items representing it. The second factor, which indexed innovativeness, had high loadings on the two items representing it. The third factor, which indexed risk-taking loaded highly on the two items representing it. Freedom in work had its highest loading from the innovativeness factor but had a cross loading of 0.479 on the autonomy factor which is also a strong loading (see appendix 7). However, the highest loading from the innovativeness factor was -0.614. The perception of proactiveness was reflected by proacte and proactd. The strong loadings from the same factor is an evidence for their perception as an index of the same construct. This conclusion is applicable to innovativeness, risk-taking, and autonomy as EO dimensions measuring SMEs performance. The factor loadings of the items ranged from 0.479 (autof) to 0.876 (riske).

Autonomy with an eigenvalue of 3.380 contributed 42.25% of the total variance, which is the highest variance in explaining the dataset. In addition, proactiveness measure with an eigenvalue of 2.351 accounted for 29.386% of the total variance. Furthermore, innovativeness with an eigenvalue of 1.366 contributed 17.066 of the total variance while risk-taking measure with an eigenvalue of 0.904 accounted for only 11.299 of the total variance. This means that autonomy, proactiveness, innovativeness, and risk-taking accounted for 42.25%, 29.386%, 17.066% and 11.299% variabilities in all eight variables respectively. The four factors derived from PCA in this study are not consistent with those suggested in the EO literature. Three EO dimensions: proactiveness, innovativeness, and risk-taking were introduced by [13]. Two additional dimensions: autonomy and competitive aggressiveness were later proposed by [9] for investigating EO.

According to the submissions of this study, all five EO dimensions as identified in the literature were not exhibited by SMEs in the study area. In order of importance with reference to the percentage of total variance, the study revealed that the EO dimensions in the literature exhibited by SMEs in Abuja were: autonomy, proactiveness, innovativeness, and risk-taking. These four combinations of the five EO dimensions are the most valuable to SMEs in the study sample. This indicates that autonomy, proactiveness, innovativeness, and risk-taking are ingredients of SMEs activities in the study area. The EO dimension of competitive aggressiveness was not demonstrated by SMEs

in Abuja. This is an indication that the variables measuring it might not be suitable in the context of SMEs in Abuja. Put differently, the variables were not able to capture the type of competitive aggressiveness adopted by SMEs in Abuja. The suggested plausible reason for this observation is because institutional development is not well established in most developing countries and Abuja, Nigeria, in particular. To expand the argument further, some scholars [see 13,14,9] opined that EO owes its origin to the United States with well-established institutional development. This was the premise for conducting the EO original tests in the USA context. Furthermore, in the view of some scholars, [see 49,50,51], most studies investigating EO have used samples from the USA and other developed countries with strong institutions.

This argument finds an advocate in [52], who asserted on the basis of research published in the fields of entrepreneurship and strategic management that the concept of EO is well-known in the context of large companies than SMEs and that the outcome of studies using large firms as a sample is not generalizable to SMEs. As vigorously propounded by [53], EO was conceived for the introduction of entrepreneurship into large firms. However, this is contrary to the submissions of [54,55,56], who advocated that the EO constructs are

Table 6. What in your opinion are the outcomes of the five risk-taking variables to the performance of SMEs in FCT, Abuja

Variables	Most important (X4)	Important (X3)	Less important (X2)	Not important (X1)	Sum	Mean	Std. dev.
Strong risk-taking propensity	440	552	12	0	1004	3.35	0.52
Strong proclivity for high-risk projects	456	387	114	0	957	3.19	0.73
Risk-taking support	516	420	62	0	998	3.33	0.65
Risk-aversion or weak risk-taking propensity	584	294	86	13	977	3.26	0.86
Employees take calculated risks with new ideas	612	387	12	12	1023	3.41	0.72

Source: Field Survey, 2017

Table 7. Principal component analysis of EO dimensions

Code	Factors and observed variables	Loadings	Eigenvalues	Percentage of variance
	Factor 1: Proactiveness			
proacte	Awareness of market signals	0.867	1.097	13.715
proactd	Initiates new opportunity and exploits it	0.853	1.254	15.671
	Factor 2: Innovativeness			
innob	Process innovation	0.815	0.826	10.319
innod	Radical innovation	0.650	0.540	6.747
	Factor 3: Risk-Taking			
riske	Employees take calculated risks with new ideas	0.876	0.422	5.271
riskd	Risk-aversion or weak risk-taking propensity	0.738	0.482	6.028
	Factor 4: Autonomy			
autog	Authority for employees to act alone in the best interest of business	0.823	1.331	16.639
autof	Freedom in work	0.479	2.049	25.611
	Total variance explained			**71.635**

Principal Component Analysis with varimax rotation. KMO Measure of Sampling Adequacy = 0.543, Bartlett's Chi-Square 318.883 with 28 d.f., $p < 0.05$, Determinant is 0.340, and Bartlett's Test of Sphericity = 0.000. For the full sets of results obtained from this analysis, please refer to the appendix.
Source: Extract from SPSS Output

applicable across organizations irrespective of type, size or age. In addition, the results from this study indicate that the five dimensions of EO is only valid and relevant to large firms' survival and growth and not applicable in the organizational context of SMEs in developing countries. This result showed that there are other items that could represent new dimensions of EO in the study area. The submissions of this study are in consensus with the views of entrepreneurship scholars' that EO scale defies application in SMEs and non-western countries.

4.3 Hypotheses Testing

To ascertain whether the dimensions of EO: autonomy, proactiveness, innovativeness, and risk-taking exerted a significant influence on SMEs performance, a multiple linear regression analysis was performed and the result can be seen in Table 8. The results revealed that 2.9% of the variability in SMEs performance was explained by the explanatory variables. The result in Table 8 revealed a significant positive relationship between innovativeness (2.298; $p<0.05$) and SMEs performance. However, a positive and insignificant relationship with SMEs performance were revealed for the other dimensions of EO: autonomy (1.155; $p>0.05$), proactiveness (1.200; $p>0.05$) and risk-taking (1.021; $p>0.05$), all had a positive and insignificant relationship with SMEs performance. The hypotheses postulated for this study were:

H_1: There is no significant relationship between risk-taking and performance of SMEs

H_2: There is no significant relationship between autonomy and performance of SMEs

H_3: There is no significant relationship between proactiveness and performance of SMEs

H_4: There is no significant relationship between innovativeness and performance of SMEs

Based on the outcome of this hypotheses, H_1, H_2, and H_3 were sustained. However, support was not found for H_4 and the null hypothesis was rejected and the alternative hypothesis that indicates a significant relationship between innovativeness and performance of SMEs performance was accepted. This result finds an advocate in [20] but contrary to the submissions of [34]. Furthermore, the results are in line with the submissions of some scholars [see 57,58], who argued based on empirical results from previous studies that firm performance are improved by some dimensions of EO while the other dimensions may exert little or no effect at all. The view was expanded further by [9], who posited that at different stages of firm development, that each dimension of EO may not necessarily be equally important or suitable to boost firm performance. This shows that innovativeness influences the performance of SMEs in the study area. This supports the literature on the positive impact of innovativeness on SMEs performance among SMEs in Abuja.

4.4 Implications of Results

The findings of this study have implications for SMEs operators and researchers. The results revealed that the three dimensions of EO: autonomy, proactiveness, and autonomy had a positive and insignificant relationship with SMEs performance. This suggests that there was no improvement in performance despite the freedom

Table 8. The association between EO dimensions and SMEs performance

Factors	Beta	Std. error	t	Sig.
Constant	1.598	0.564	2.833	0.005
Autonomy	0.068	0.065	1.155	0.249
Proactiveness	0.071	0.087	1.200	0.231
Innovativeness	0.135	0.095	2.298	0.022
Risk-Taking	0.060	0.060	1.021	0.308
Model parameters				
R^2	0.029			
Adjusted R^2	0.016			
F-Value (Sig.)	2.197 (0.069)			
Dependent Variable: SMEs Performance				

Source: Extract from SPSS Output

in work and authority for employees to act alone in the best interests of business. Considering proactiveness, awareness of market signals and initiation and exploitation of new opportunities among SMEs in Abuja do not impact on their performance. Again, whether employees of SMEs take calculated risks with new ideas, it does not influence the performance of the business. Similarly, risk-aversion or weak risk-taking propensity exhibited by SMEs in the study area showed no influence on the success of the business. However, innovativeness exerted a positive and significant relationship with SMEs performance. This implies that the creative ideas and market innovations supported and embraced by SMEs in the study sample were yielding the desired result in terms of performance. This implies that innovativeness was the only EO dimension out of the five that exerted a positive and statistically significant relationship with the performance of SMEs. This shows that innovativeness is an important feature of the EO dimensions that contribute to the performance of SMEs in the study sample. Furthermore, for SMEs in the study area to be successful, they must pay serious attention to process and radical innovations. Since innovativeness was the only dimension of EO that exerted a positive and significant relationship with SMEs performance while the other three EO dimensions showed a contrary result, it suggests that the multi-dimensional nature of EO was supported by this study [see 57,58]. With this view, each EO dimension can differ independently as was observed in this study. Therefore, the EO dimensions do not have parallel universal relevance.

5. CONCLUSION AND RECOMMENDA-TIONS

This paper investigated the relationship between EO and performance of SMEs in FCT, Abuja. The following conclusions were reached: the five dimensions of EO were not exhibited by SMEs in Abuja. The EO dimensions demonstrated by SMEs in the study sample in order of importance were: autonomy, proactiveness, innovativeness, and risk-taking. These four combinations of the five EO dimensions are the most valuable to SMEs in the study area. This indicates that autonomy, proactiveness, innovativeness, and risk-taking were ingredients of SMEs activities in the study sample. The EO dimension of competitive aggressiveness was not demonstrated by SMEs in Abuja. This is an indication that competitive aggressiveness is not an essential ingredient of entrepreneurial activities among SMEs in Abuja. Innovativeness was the only dimension of EO that exerted a positive and significant relationship with the performance of SMEs in Abuja. This implies that innovativeness is an important feature of the EO dimension that contributes to the performance of SMEs in Abuja. The other dimensions of EO: proactiveness, risk-taking, and autonomy had a positive and insignificant relationship with the performance of SMEs in Abuja. The multi-dimensional nature of EO was supported by this study. This allows each EO dimension to vary independently in terms of their influence on SMEs performance as was observed in this study. The result showed that there are other items that could represent new dimensions of EO in the study sample. Based on the findings of this study, the following were recommended: to add values to their firms, SMEs operators in Abuja need to be innovative in their entrepreneurial activities with emphasis on process and radical innovations. In addition, considering the enabling environment provided by the government for business, SMEs operators should strive and build capacities on the four EO dimensions of autonomy, proactiveness, innovativeness, and risk-taking demonstrated by them in this study. Furthermore, the government should organize training for SMEs operators in collaboration with development partners to ensure the adoption and effective implementation of innovativeness in FCT, Abuja.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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APPENDICES

Appendix 1. Small and Medium Enterprises by State in Nigeria

STATE	SMALL	MEDIUM
ABIA	1,769	40
AKWA-IBOM	898	195
ANAMBRA	1,620	117
BAUCHI	2,039	27
BAYELSA	354	72
BENUE	1,146	22
CROSS RIVER	1,126	168
DELTA	1,444	-
EBONYI	1,206	4
EDO	1,879	118
EKITI	903	126
ENUGU	812	99
GOMBE	1,043	65
IMO	1,259	135
JIGAWA	1,022	75
KADUNA	2,712	170
KANO	7,790	496
KATSINA	1,256	99
KEBBI	898	91
KOGI	827	17
KWARA	164	62
LAGOS	11,044	619
NASARAWA	1,098	22
NIGER	1,258	100
OGUN	1,690	104
ONDO	1,805	194
OSUN	2,247	25
OYO	7,468	519
PLATEAU	2,070	110
RIVERS	2,981	41
SOKOTO	631	210
TARABA	891	69
ZAMFARA	577	16
FCT	2,244	446
Total	**68,168**	**4,670**

Source: SMEDAN, 2013

Appendix 2. Descriptive statistics

	Mean	Std. deviation	Analysis N
freedom in work	3.31	.797	300
authority for employees	3.11	.748	300
initiates new opportunity	3.64	.599	300
awareness of market signals	3.52	.686	300
process innovation	3.57	.541	300
radical innovation	3.38	.677	300
risk-aversion or weak	3.26	.860	300
employees take calculated	3.41	.724	300

Appendix 3. Correlation Matrix[a]

		freedom of work	authority for employees	initiates new opportunity	awareness of market signals	process innovation	radical innovation	risk-aversion or weak	employees take calculated
Correlation	freedom in work	1.000	.027	-.137	-.048	-.208	-.107	-.062	-.033
	authority for employees	.027	1.000	-.037	.103	.158	.227	.257	-.077
	initiates new opportunity	-.137	-.037	1.000	.518	.046	.130	.227	.098
	awareness of market signals	-.048	.103	.518	1.000	.140	.203	.209	-.074
	process innovation	-.208	.158	.046	.140	1.000	.403	.013	-.039
	radical innovation	-.107	.227	.130	.203	.403	1.000	.227	.115
	risk-aversion or weak	-.062	.257	.227	.209	.013	.227	1.000	.368
	employees take calculated	-.033	-.077	.098	-.074	-.039	.115	.368	1.000

a. Determinant = .340

Appendix 4. KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.543
Bartlett's Test of Sphericity	Approx. Chi-Square	318.883
	df	28
	Sig.	.000

Appendix 5. Communalities

	Initial
freedom in work	1.000
authority for employees	1.000
initiates new opportunity	1.000
awareness of market signals	1.000
process innovation	1.000
radical innovation	1.000
risk-aversion or weak	1.000
employees take calculated	1.000

Extraction Method: Principal Component Analysis.

Appendix 6. Total variance explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.049	25.611	25.611	1.582	19.773	19.773
2	1.331	16.639	42.250	1.513	18.914	38.687
3	1.254	15.671	57.921	1.409	17.611	56.298
4	1.097	13.715	71.635	1.227	15.338	71.635
5	.826	10.319	81.954			
6	.540	6.747	88.701			
7	.482	6.028	94.729			
8	.422	5.271	100.000			

Extraction Method: Principal Component Analysis.

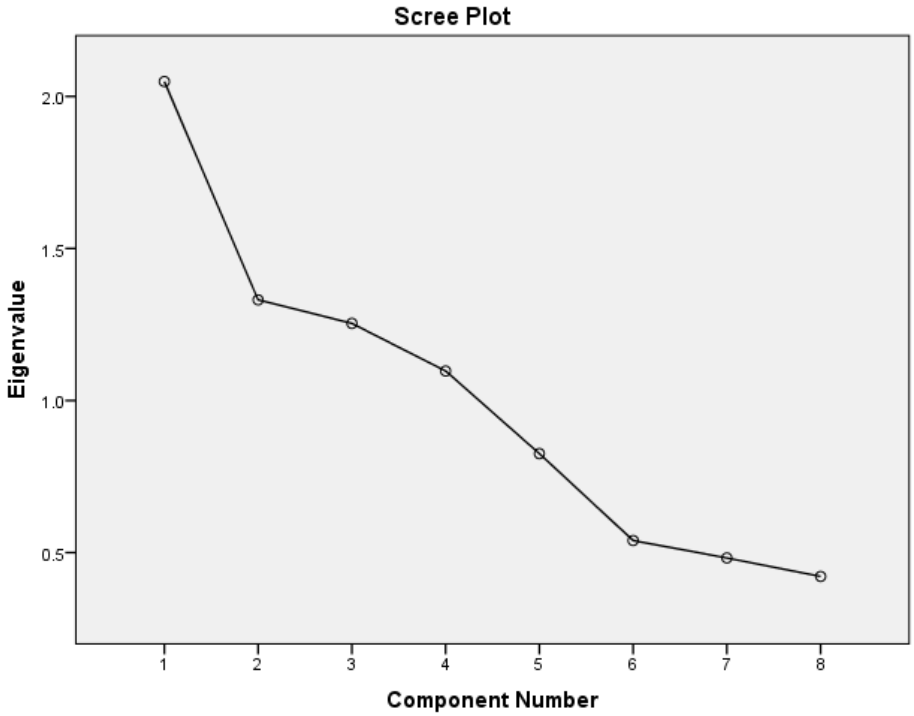

Fig. 1. Scree Plot

Component Matrix

a. 4 components extracted.

Appendix 7. Rotated component matrix

	Component			
	1	**2**	**3**	**4**
awareness of market signals	.867			
initiates new opportunity	.853			
process innovation		.815		
radical innovation		.650		
freedom in work		-.614		.479
employees take calculated			.876	
risk-aversion or weak			.738	
authority for employees				.823

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations

Appendix 8. Component transformation matrix

Component	1	2	3	4
1	.640	.577	.410	.299
2	.334	-.647	.613	-.306
3	-.662	.083	.639	.382
4	.200	-.491	-.218	.819

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization

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