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ABSTRACT

Purpose: The study empirically analyzes the moderating role of government support policy on the relationship between entrepreneurial orientation, technology orientation and performance of small and medium enterprises (SMEs) in northeast Nigeria.

Design/Methodology/Approach: The paper adopts quantitative survey method using structured questionnaires; data was collected from 240 SME owner-managers in northeast Nigeria. The data collected was analyzed using Partial Least Squares PLS-SEM.

Findings: The findings of the study indicates a significant positive relationship between EO, TO and Performance of SMEs. Additionally, the outcomes of the study authenticate that government support policy moderates the relationship between EO, TO and performance of SMEs in Nigeria.

Implications/Originality/Value: The study have practical implication for government, policy makers, regulators, SMEs owner-managers and other stakeholders to recognize government support as it affects SMEs performance. The study further add to the frontier of knowledge on the importance of GSPs in strengthen the relationship between the variables and SMEs performance. This is the first study that focuses on testing the moderating role of government support policy on the relationship between entrepreneurial orientation, technology orientation and SMEs performance in Nigeria.

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1. Introduction
Small and Medium Enterprises (SMEs) formed the majority of the industrial base and contribute significantly to the societal as well as economic growth of both developed and developing countries (Ogunsiji & Ladanu, 2010). SMEs constitute 99 percent of the total established businesses and provides gainful employment for about 90 percent of workforce in Nigeria (Okeke, Onuorah, & Jakpa, 2016). SME sector have immensely contributed to growth of the nations’ economy, wealth creation, industrial development and employment generation (Osotimehin, Jegede, Akinlabi, Olajide, 2012; World Bank,
The potentials of SMEs are exhibited in their labour-intensive nature, especially in the areas of regional income generation, poverty eradication, capital saving capacities, wealth creation, innovativeness, supply of local raw material, supporting larger industries, actualising women and youth potentials and linkage with other sectors of the economy (Iweka, Babajide, & Olokoyo, 2016). This essentially expound the reason why SMEs are priority of government and policy makers around the world (Fashoyin, 2012; Jerven, Kale, Duncan, & Nyoni, 2015; Osunde, 2014).

The catalytic roles of SMEs have been exhibited in advanced nations such as USA, UK and emerging nation of India Malaysia, South Africa, and Nigeria among others. SMEs in those countries have contributed considerably to the total business formation and GDP (ACCA, 2016; NBS & SMEDAN, 2013). Therefore, regardless of the nation’s status, SMEs play a significant part in contributing to the economy, particularly in the areas of innovation, social cohesion and regional development (Bouri et al., 2011).

In Nigeria, various successive administrations of government at different times have geared their efforts towards boosting the performance of SMEs. Several policy measures and financial assistance instruments were introduced (Eniola, Entebang, & Sakariyau, 2015; Eze, Eberechi, Chibueze, Osondu, & Ayegba, 2016). Consequently, the government of Nigeria in collaboration with international agencies had formulated and implemented policies and programs that center on financing, training and the provision of infrastructure for SMEs to improve their performance (Ogunsiji & Ladanu, 2010).

2. Literature Review and Hypotheses Development
Small and medium enterprises development is globally considered as one of the most essential issues in recent years. SMEs are important not only in advance countries but also in an emerging economies as they play a greater role in the areas of employment generation, poverty reduction, promotion of innovation, competitiveness and social cohesion (Kraja, Osmani, & Molla, 2014; Osotimehin, Jegede, Akinlabi, & Olajide, 2012). SMEs help strengthen large enterprises by providing raw materials, services, ideas and processes, as the survival of large enterprises depends on the growth of SMEs (Shariff, Peou, & Ali, 2010). As an emerging nation, the development of SMEs are very vital for the Nigerian economy, especially with the current dwindling of petroleum product price in the global market (Berg & Fuchs, 2013; Taiwo, Falohun, & Agwu, 2016).

Furthermore, in emerging nations at the same level of development with Nigeria, SMEs contributes immensely to their GDP than what is currently observed in Nigeria. This can be attributed to lack of commitment in building a strong SME sector, difficulty in sourcing finance and financial incentives, near absence of basic and technological infrastructure, inadequate legal and regulatory framework, and a commitment to building domestic expertise and knowledge (Olayiwola & Okodua, 2013; Oyelaran-oyeyinka, 2010). Therefore, in Nigeria, the development of the SME sector is not only a key issue for industrial development, but also for the socio-economic advancement of the nation and in light of recent events in the Nigerian macroeconomic environment and the central government commitment, SMEs have compelling growth potential and like other emerging economies are likely to constitute a significant portion of GDP in the near future.

The concept entrepreneurship and its influence on the growth of nation’s economy is increasingly attracting the attention of researchers over the past decades. Entrepreneurship comprises activities of organizational formation and rejuvenation occurring within and outside an existing organization (Ho, Plewa, & Nhat, 2015; Shan, Song, & Ju, 2015; Solomon, 2017). However, in the last three decades, management researchers have mainly focused on the area of entrepreneurial orientation (EO) and firm performance (Cadogan, Boso, Story, & Adeola, 2016; Magaji et al., 2017). Rauch, Wiklund, Lumpkin and Frese (2009) emphasized that EO signifies a promising area for building a cumulative body of relevant knowledge in the field of entrepreneurship, especially, EO has attracted a momentous attention and become an essential construct within strategic management literature.
EO can be described as a managerial decision-making process, practice, style and behaviors that provide organizations with a basis for entrepreneurial decisions and actions which leads to “entry” into new or established markets with new or existing products (Shan et al., 2015; Yoon & Solomon, 2017). EO constructs emerge from the early work of Miller (1983) have three characteristics of innovativeness, proactiveness and risk-taking presented as composite dimension approach by Covin and Slevin (1989). Additionally, Lumpkin and Dess (1996) conceptualized EO as multi-dimensional approach characterized by innovativeness, proactiveness, risk-taking autonomy and competitive aggressiveness, which vary independently depending on the external and internal context. Most of prior researches on EO uses the three dimensions of EO. But such an approach does not adequately represent the various factors involved in entrepreneurial processes and their varying impact on performance outcomes (Shan et al., 2015; Song & Jing, 2017). Hence, in this study we employ the five dimensions to examine EO-performance relationships.

The possible role of EO as a vector of performance has been extensively examined by previous scholars and a number of studies have found an inconsistent relationship between EO and performance (Al-Dhaafri, Al-Swidi, & Yusoff, 2016). Some of the prior studies established a positive relationship between EO and firm performance (Magaji et al., 2017; Ogunsiji & Ladanu, 2010; Shan et al., 2015; Song & Jing, 2017). Others found EO as having a negative bearing on firm performance (Hartsfield, Johansen, & Knight, 2008; Kreiser, Marino, Kuratko, & Weaver, 2013; Stam & Elfring, 2008). While some others advanced a curvilinear relationship between EO and firm performance (Cadogan et al., 2016; Tang, Tang, Marino, Zhang, & Li, 2008; Yoon & Solomon, 2017). Thus, this study contend that there is a relationship between EO and firm performance.

H1. A significant relationship exist between entrepreneurial orientation and performance of SMEs.

As one of the most important strategic orientations used by firms to achieve a long-term business success, technology orientation (TO) is a managerial approach that stresses the application of technologies in both products and operational procedures (Kapoor & Lee, 2010; Pratono, 2016; Song & Jing, 2017). TO can be described as the extent to which firms emphasize on acquiring and applying sophisticated technologies in new product development and improving on existing products that often linked with entrepreneurial firm performance that encourages openness to new ideas, creative thinking and proactive in initiating appropriate actions (Deshpande, Grinstein, Snow, & Elie, 2013; Kasim & Altinay, 2016; Odondo, Okibo, & Odhiambo, 2017). TO predominantly focus on technology by pursuing state-of-the-art technologies to improve and develop new products, openness to new ideas and prefer such ideas that employ the most advance technologies (Zhou & Li, 2010).

Previous studies have advanced a significant relationship between TO and firm performance which shows TO positively impacting on performance and profitability of SMEs (Amirkhani & Reza, 2015; Di Benedetto, 2011; Pratono, 2016a; Zhou & Li, 2010). In a similar studies, Spanjol, Qualls and Rosa (2011) found TO as having a significantly positive effect on product performance especially in terms of branding, quality and newness of product to customers. On the contrary, Deshpande et al. (2013) in their studies on strategic orientations and firm performance, found no significant effect of TO on both subjective and objective performance of a firm. Gao et al. (2007) study the effect of customer orientation, competitor orientation and TO in a transitional economy. Their study discloses the fact that TO positively affect firm profitability and product performance with an average technological changes, while it has no significant effect on sales growth. Though, the study indicated that with little technological instability, TO will have a negative effect on firm performance.

Furthermore, Halaka and Kohtamaki (2010) examined the interplay between EO, TO, customer orientation and company performance of 164 software companies, the results show that TO has no direct significant relationship with performance. Nevertheless, Halaka and Kohtamaki (2011) supported the evidence that
firms converging several strategic orientations perform better than those focusing solely on a single strategic orientation. Though, TO is not linked with environmental hostility and dynamism to the same extent as EO, nevertheless, a lot of potential exists in emerging countries to import and adapt technologies developed in the advanced countries. A cavernous and thorough understanding of EO, TO, and environmental conditions is essential not only for academic purposes but also because the subject has salience for practitioners and policy-makers (Urban & Barreria, 2010). According to Urban and Barreria (2010) and Zhou and Li (2010), businesses that adopt TO can accumulate rich technological awareness that can improve their adaptive capability. Based on inconsistent findings from previous studies, the following hypothesis is postulated:

H2. A significant relationship exist between technology orientation and performance of SMEs

Government support on SMEs are policies designed by government and their regulatory agencies to regulate and guide decisions making process that foster economic development by creating environment that is adequately protected for business operations, especially, SMEs (Wakili, 2016). Osinbajo (2015) highlighted that Nigerian economy is faced by serious challenges due to negligence in SMEs sector for over four decades. Hence, the problem is a matter of grave concern to the Nigerian government and other stakeholders. The central government of Nigeria introduced new policies aims at encouraging the indigenous SMEs to strengthen their market potentials and subsequently improve their productivity and performance (Omonobi & Bivbere, 2016). Consequently, the government of Nigeria resolves to engage more with SMEs and entrepreneurial activities towards ensuring viable economic development and wealth creation by supporting the sector (Osinbajo, 2015). In view of the current government’s commitment therefore, this study examines the moderating effect of government support in strengthening the relationship between EO and TO on SMEs performance in Nigeria hence, postulated the following hypotheses.

H3: Government support moderates the relationship between EO and performance of small and medium enterprises

H4: Government support moderates the relationship between TO and performance of small and medium enterprises.

3. Methodology
This section discoursed the method of data collection and the technique adopted in analyzing the data. A survey method with structured questionnaire was utilized to collect data from SME owner-managers in northeast Nigeria. Zahra and Covin (1995) asserted that in a study related to SMEs, usually the owner-managers are the target respondents given that they have more knowledge regarding their companies’ strategies and overall business situations. This is in conformity with previous studies (see Lechner & Gudmundsson, 2012).

The sample for the study was selected by using stratified random sampling were the population embraces a number of distinct categories. The sample was then organized by these categories into separate strata and each stratum was sampled as an independent sub-population, out of which individual elements were randomly selected. Similarly, constructs of the study were measured using questionnaires adapted from previous studied and modified to suit Nigerian context. The items on EO was adapted from Covin and Wales (2011), TO items adapted from Halaka and Kohtomaki (2011), government support items adapted from Chea (2009) while SME performance items were adapted from Suliyonto and Rehab (2012) all measured with 7 point likert scale. According to NBS and SMEDAN (2013) annual report, the northeast region of Nigeria has 8,662 registered SMEs. This formed the target population of this study, hence, the sample size for the target population according to Dillman (2007) formula is 368. From the sample size, two hundred and forty (240) usable questionnaires went for final analysis, yielding a 56% response rate. SPSS 22v and PLS-SEM 2.0 were used to test the validity and reliability of the items and to test the hypotheses of the study.
4. Data analysis and Findings.
An initial test of validity and reliability using smart PLS 2.0 was conducted. The framework for the study has two independent variables namely entrepreneurial orientation (EO) and technology orientation (TO) which represent a firm valuable, rare, inimitable and non-substitutable (VRIN) resources and capabilities as signified by the RBV theory. The dependent variable is firm performance (SME) and government support is the moderating variable.

To assess the measurement model for the study, constructs validity and reliability of specific items measuring each latent construct were carried out, discriminant validity, as well as convergent validity for each of reflective constructs (SME performance and government support) were also evaluated in order to determine the accurateness of the measurement (Hair, Hult, Ringle, & Sarstedt, 2014). After calculating PLS algorithm, the next action was to assess the indicators reliability to see if there is any item indicator with loading less than 0.4 so as to delete them from the model. As all the items indicators met the requirement as presented in Tables 1 and 2, there is no case for deletion. Additionally, as recommended by Hair, Ringle and Sarstedt (2011), the composite reliability for internal consistency reliability of all constructs meet the condition ranging from 0.7 and 0.8 respectively. Equally, the average variance extracted (AVE) for convergent validity of all the constructs are considered accepted as all the AVE meet the minimum threshold of 0.5 as recommended by (Hair jr, Sarstedt, Hopkins, & Kuppelwieser, 2014). In conclusion, to justify the discriminant validity the square root of AVE is compared to correlation square of the interrelated variables of concern constructs which indicates adequate discriminant validity.

Table 1: Factor Loadings, CR and AVE

<table>
<thead>
<tr>
<th>Items</th>
<th>Loadings</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSP1</td>
<td>0.8909</td>
<td></td>
<td>0.7049</td>
</tr>
<tr>
<td>GSP10</td>
<td>0.9034</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSP11</td>
<td>0.8236</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSP12</td>
<td>0.8352</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSP13</td>
<td>0.8652</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSP2</td>
<td>0.8422</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSP3</td>
<td>0.7949</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSP4</td>
<td>0.8386</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSP5</td>
<td>0.8636</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSP6</td>
<td>0.8392</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSP7</td>
<td>0.8082</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSP8</td>
<td>0.7841</td>
<td>0.9721</td>
<td>0.7773</td>
</tr>
<tr>
<td>GSP9</td>
<td>0.8168</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PER1</td>
<td>0.8773</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PER10</td>
<td>0.8901</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PER2</td>
<td>0.9083</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PER3</td>
<td>0.9034</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PER4</td>
<td>0.8918</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PER5</td>
<td>0.9008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PER6</td>
<td>0.794</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PER7</td>
<td>0.8303</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PER8</td>
<td>0.9128</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PER9</td>
<td>0.8999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TO1</td>
<td>0.8923</td>
<td>0.9727</td>
<td>0.7811</td>
</tr>
<tr>
<td>TO10</td>
<td>0.9011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TO2</td>
<td>0.8917</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TO3</td>
<td>0.8645</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TO4</td>
<td>0.8749</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TO5</td>
<td>0.8771</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TO6</td>
<td>0.8973</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TO7</td>
<td>0.8831</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TO8</td>
<td>0.8904</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Similarly, to ascertain the formative construct (EO), the researchers have examined two conditions upon each indicator to determine whether they are significant in or not. As shown in Table 3, first was to assess the collinearity among the indicators using variance inflation factor (VIF) values, the threshold of which should not be more than 5. The second condition is to assess the significance of the statistical contribution of each formative indicator to the main construct.

Table 3: Assessment of Collinearity and significance relevance of formative construct

<table>
<thead>
<tr>
<th>Construct</th>
<th>Dimensions</th>
<th>VIF</th>
<th>Outer Weight</th>
<th>Outer Loadings</th>
<th>T-statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUT</td>
<td></td>
<td>4.08</td>
<td>0.09</td>
<td>0.91</td>
<td>0.35</td>
</tr>
<tr>
<td>EO</td>
<td>CA</td>
<td>3.82</td>
<td>0.36</td>
<td>0.93</td>
<td>1.5</td>
</tr>
<tr>
<td>EO</td>
<td>INNO</td>
<td>4.83</td>
<td>0.5</td>
<td>0.96</td>
<td>1.48</td>
</tr>
<tr>
<td>EO</td>
<td>PRA</td>
<td>4.52</td>
<td>0.26</td>
<td>0.93</td>
<td>0.88</td>
</tr>
<tr>
<td>EO</td>
<td>RT</td>
<td>4.55</td>
<td>0.17</td>
<td>0.85</td>
<td>0.74</td>
</tr>
</tbody>
</table>

After satisfying all the requirements for the measurement model, the next section presents the structural model of the analysis through the standard bootstrapping method using 5,000 bootstrap sample for 240 dataset to ascertain the significance levels of the direct and moderating relationships (Hair et al., 2014). These include the hypotheses testing, evaluation of R-square, effect size and predictive relevance.

Table 4: Hypotheses for direct relationship

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Beta</th>
<th>Std Error</th>
<th>T value</th>
<th>P-value</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>EO -&gt; SME PER</td>
<td>0.23</td>
<td>0.11</td>
<td>2.18</td>
<td>0.03</td>
<td>Supported</td>
</tr>
<tr>
<td>TO -&gt; SME PER</td>
<td>0.34</td>
<td>0.10</td>
<td>3.30</td>
<td>0.00</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Table 4 presents direct relationship between independent variables and the dependent variable. The findings for the relationship between EO and SME-PER reveals a positive relationship ($\beta = 0.23$, $SE = 0.11$, $TV = 2.18$). This result is consistent with (Kreiser, Marino, Kuratko, & Weaver, 2013; Naranjo-Valencia et al., 2016), which are all positively significant. Therefore, hypothesis one is supported. Similarly, TO and SEM-PER is positively significant ($\beta = 0.34$, $SE = 0.10$, $TS = 3.30$). This also confirmed with prior studies ((Amirkhani & Reza, 2015; Di Benedetto, 2011; Pratono, 2016a; Zhou & Li, 2010), they found TO as positively related to PER. In this case, EO and TO practices of SMEs have significant influence on PER. Therefore hypothesis two cannot be rejected.

Table 5: Moderation Hypotheses

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Beta</th>
<th>Std Error</th>
<th>T values</th>
<th>P-value</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>EO * GSP -&gt; SME PER</td>
<td>0.34</td>
<td>0.15</td>
<td>2.25</td>
<td>0.03</td>
<td>Supported</td>
</tr>
<tr>
<td>TO * GSP -&gt; SME PER</td>
<td>0.29</td>
<td>0.13</td>
<td>2.17</td>
<td>0.03</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Table 5, provides the moderating effect of GSP on the relationship between EO and SME PER. The results indicates a positive moderating effect by providing ($\beta = 0.34$, $SE = 0.15$, $TS = 2.25$). While, GSP positively moderates the relationship between TO and SME PER at ($\beta = 0.29$, $SE = 0.13$, $TS = 2.25$). this result is consistent with (Shariff et al., 2010). Consequently, hypotheses three and four are supported.
The essence of evaluating the predictive relevance in PLS-SEM is to accurately predict the data points of indicators in reflective measurement model of endogenous construct and endogenous single-item. In view with this argument, the predictive relevance of the model shows 0.24 which is above the threshold. A $Q^2$ value higher than zero for a certain reflective endogenous latent variable indicates the path model’s predictive relevance for a particular constructs as significant (Hernández-erlines, Moreno-García, &Yañez-Araque, 2016). According to Sarstedt, Ringle, Henseler, and Hair (2014), a predictive relevance of 0.35, 0.15 and 0.02 are large, medium and small respectively. Consequently, in line with these submissions, the model of this study has a medium predictive relevance.

Likewise, the $R^2$ included is 0.321 as well as $R^2$ excluded is 0.311 for the two independent variable (EO and TO), thus, contributed 32% to the model. Similarly, $f^2$ value is 0.018 which predicts none effect size for the constructs. However, according to Chin, Marcolin, and Newsted (2003) an $f^2$ above zero can be meaningful under extreme moderation condition. The results of the study validate that government support policy act as a moderator to strengthen the relationship between EO, TO and SMEs performance in Nigeria.

6. Conclusion
The objective of this study is mainly to examine the relationship between EO and TO on the performance of SMEs in Nigeria and to determine the extent to which government support can strengthen the relationship for a greater performance. Government support was espoused as a moderating variable in line with suggestions by previous studies (Egena et al., 2014; Eze et al., 2016; Shariff et al., 2010).This study confirmed that GSPs as a dynamic moderating factor have a potential influence on the relationship between EO, TO and performance of SMEs in Nigeria.In this regards, SMEs in Nigeria are inspired to combine their intangible internal resources such as EO and TO with intangible external resource (GSPs) in order to realize a competitive advantage that translate into firm performance and profitability. The study further tested empirically, the relationship between EO and TO on SMEs performance. The conclusion drawn from the results of this study should consider the limitation of regional bias, as the sample consists 8,662 SMEs in northeast Nigeria from which the sample is drawn, which may not necessarily represent the entire population.

Likewise, there is a baffling but vital factors that should be integrated to ascertain the causal relationship among variables and their relative explanatory power. Directions for further studies should consider the SMEs characteristics for further exploration; this may provide meaningful perspectives for understanding how individual similarities and differences affect SMEs performance. Equally, the future studies should consider a longitudinal approach to describe the changes and the directions, and extent of underlying relationships between variables.

References


