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TRAINING & DEVELOPMENT AND PERFORMANCE OF NIGERIAN EDUCATIONAL SECTOR

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Abstract

The purpose of this study is to investigate the mediating effect of ethical climate (EC) on the link between training and development and organizational performance (OP). Resource Based View (RBV) stress that, internal resources play a vital role on OP, considering training and development as one of the dimension of HRM practices can be regarded as best internal resources influencing performance in organization. Some previous studies used group practices while others considered individual practice. Despite these studies, however, few studies have attempted investigating effect of training and development on OP. However, the mechanism through which training and development influence performance is not clearly explained in the literature, even though RBV highlighted that HRM system can indirectly leads to competitive advantage in organization through resource like ethics. This paper used EC as mediating variable on the link between training and development and OP to explain the original relationship. A quantitative survey approach was used; the data were collected from some selected ministries of education in Nigeria. A total of 181questionnaires were analyse using Smart PLS SEM 3.2.6. The statistical findings shown that EC mediates the relationship between training and development and OP. The study also suggested for future research.

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Keywords: Training and development, Ethical climate, Organizational performance.
1. Introduction

The paper is an empirical in nature, investigate the mediating influence of EC on the link between training and development and OP in public educational sector administration in Nigeria. Previous scholars (Ali, 2011; Moullin, 2007) defined OP critically as a function of the organization ability to possess, advance, use available resources while ensuring sustainability over a long period in order to achieve design goals and objectives. OP also regarded as work done efficiently and effectively as well as considered important to related authorities. In related development, OP can be described as the process in which organizational success is measured with respects to the significance it creates and deliver to internal and external forces (Antony & Bhattacharyya, 2010).

Eventhough, OP regarded as organisational success through better productivity as well as growth (Singh, Darwish, & Potočnik, 2016). In addition, OP can be seen as ability to undertake an activity with efficency at the minimum cost possible. It also involve effectiveness whether the objectives designed are adequately achieved by the organisation (Ali, Ali, & Raza, 2011). In other words, OP sees as the popular studied construct in the organizational literature (Agami, Saleh, & Rasmy, 2012). For over two decades, performance improvement is the major concern of public sectors organisation around the globe (Al-Dhaafri, Al-Swidi, & Yusoff, 2016). Generally, governments consider to search for ways to improve its OP as well as sectors performance in ensuring transparency, integrity, utilization of public resources, citizen participation, citizen satisfaction, enhancing accountability, program outcomes, fighting against bribery and corruptions (Ashour, 2004).

2. Problem Statement

In the competitive world, public organisation from different set up sorrounded with several factors and challenges. For example, under performance makes public sector organizations more crucial than it is in the private sectors. Considering, the lapses from the sector, (i.e, in ability of public sector organization to perform and compete with the global world, give opportunity for researchers to intensify investigation on why public sectors organization are performing below expectation compared to other non-governmental sectors, more especially, public educational sector administration (PESA) (Osborne, Radnor, and Nasi 2013). Even though, PESA can serve as the mechanism used for formulating and implementing educational system policies and programme, still it’s faces challenges of non-performance. However in Nigeria, performance of PESA is not satisfactory, in which the sector performance became very unfortunate compared its counterpart (countries from the same continent) for instance, countries like Algeria, Egypt, S/Africa, Tunisia moved a head of Nigeria based on the statistics and ranking by United Nation Development report (e.g., Algeria ranked 93, Egypt 112, S/Africa 121, Tunisia 94, with 64%, 66%, 67%, 49% out of 186 respectively while Nigeria remained in the bottom line holding 153 position with 47% in the global ranking. This shows these African countries are all a head of Nigeria in terms of performance and satisfaction with the quality of education in their respective nation (WorldBank, 2010). Despite the fact that Nigeria serve as the most populous country in the continent and the third country interns economic growth after S/Africa and Egypt respectively (WorldBank., 2010), While this sector remained the back born of any country economy as well as development (Aluede, Idogho, & Imonikhe, 2012; WorldBank., 2013;
WorldBank, 2010), but in Nigeria, performance in PESA is very unfortunate, hence, there is need for more investigation.

Previous studies were conducted to identify some factors that influence OP, for example, organizational learning (Barba-Aragón, Jiménez-Jiménez, & Sanz-Valle, 2014; García-Morales et al., 2012; Jiménez-Jiménez & Sanz-Valle, 2011; López, Peón, & Ordás, 2005; Tippins & Sohi, 2003), commitment (Ali, Rehman, & Ali, 2010; Pinho et al., 2014; Rodrigues & Pinho, 2010), quality management practices (Appiah-Fening, Pesakovic, & Amaria, 2008; Fening, 2012; Phan, Abdallah, & Matsui, 2011), organizational support (Hau-siu, Lo, Sha, & Hong, 2006; Joiner, 2007), environment (Chandrasekar, 2011; Cosh, Fu, & Hughes, 2012). Others investigated the influence of interpersonal trust (Bakiev, 2013; Paul & Mcdaniel, 2004), personality (Barrick, Mount, & Judge, 2001; Soane, Butler, & Stanton, 2015), attitudes (Gregory et al., 2009; Ko & Smith-Walter, 2013; Ko et al., 2013) among others.

Generally, all the above-highlighted earlier studies guide us to understand factors that influence OP, however, literature confirmed that studies on the connection between training and development and OP are few more particularly in public sector organisation (Paauwe, 2009; Paauwe & Boselie, 2005; Prowse & Prowse, 2010, 2016). The little ones on public sector are not focusing on educational sector. Even if there are many, the fundamental reasons why and how training and development influence performance which has a long argument in the literature and still not clearly discussed. Importantly, Theory of Resource Based View (RBV) stress that, internal resources considered to be one of the best factors that can improve competitive advantage among the competing organisation. In related argument, training and development can be regarded as internal factor that can create competitive advantage and improve performance. In this regards, this study empirically investigate the effects of ethical climate (EC) as mediating factor among the two variables (training and development and OP) as suggested by previous studies (Arulrajah, 2015; Manroop, Singh, & Ezzedeen, 2014) and also confirmed the argument of RBV, which stated that human resource system can leads to competitive advantage through resources that are indirectly within the organizational circle like ethics (Barney, 2001; Reed & DeFillippi, 1990; Wright & McMahan, 1992). The variable EC had been discussed earlier in the literature by Victor and Cullen (1987; 1988). EC can be defined as “prevailing perceptions of typical procedures as well organizational practices that have ethical content” It is also regarded as set of norms, procedures, policies and practices walled in organizational lifecycle that usually guided an employees to conducts their behavior with high level of ethics for organizational development (Martin & Cullen, 2006; Schluter, Winch, Holzhauser, & Henderson, 2008).

In related argument, Parboteeah, Seriki and Hoegl (2013), stress that, human resource management system can influence EC so as to voice an imperative space to realize the ethical orientation in organization. However, previous studies reported EC as strong predictor of OP (Arulrajah, 2015; Hijal-Moghrabi, Sabharwal, & Berman, 2015). Considering the importance of human resource management system (training and development) in influencing EC in order to predict OP, still studies on these relationship (training and development, EC and OP) are scanty in the literature, there is need for further investigation to re-confirm the significant effect of EC on the link between human resource management system (training and development) and OP as well as success (Parboteeah et al., 2013; Thite, 2013). Hence, considering EC as mediating variable would have significant policy implications on performance improvement more particular in Nigerian PESA.
2.1. Literature Review and Hypotheses Development

2.1.1 Training and Development and OP

Training and development practice is an essential element of human resource management (Vlachos, 2008). Training can simply refers to some activities which equip personnel with needed skills to perform better in discharging their responsibilities (Li et al., 2008). In the other hand, the overall focus of training and development in an organization is improving the organizational, team, groups and individual effectiveness and efficiency (Kraiger & Ford, 2007). Proper training and development improve employees abilities, knowledge and skills of the talented labor force proved to be a main source of competitive advantage in the global market (Sahinidis & Bouris, 2008). In related development, Resource Based View (RBV) stress that proper utilization of internal resources may leads to competitive advantage as well as performance improvement, considering training and development the essential internal factor will be best way of utilizing internal resources (employees) (Sabiu, Mei, & Joarder, 2016c). Several empirical studies established the link between training and development and performance, for instance, study conducted by Akhtar et al. (2014) Asian context study in higher education institution in Pakistan, 50 sample used in collecting data, the result shows significantly related between the training and development and firm performance. Based on the empirical evidences, the statistical result revealed that training and development is the determinant of OP. Similarly, study conducted by Saleem and Khurshid (2014) in their empirical investigation on the relationship between training and development to performance in three banks located in Pakistan, result revealed that training and development positively related to individual performance which in turn can enhance OP. Additionally, one study conducted by Úbeda-García, Marco-Lajara, Sabater-Sempere, and García-Lillo (2013) using one practice that is training to OP in spanish hotel industry with 110 sample hotels, the result explained training is positively related to OP. Again, study from Bangladesh industries in DEPZ area with 216 respondents, conducted by Islam and Siengthai (2010) the result of the study revealed that training and development is significantly related to performance. Further, study conducted by Abdullah et al. (2009). Asian context research in Malaysia using private firms, 153 respondents were used in the analysis, the regression result explained training and development as one the highest predictor of performance.

Moreover, Qureshi et al. (2010) carried out study on HRM practices and firm performance in Pakistan banking sector, training considered as one of the practice using 38 sample in quantitative data analysis, result indicate that training and development positively associated to firm performance. In summary, most the literature reviewed are concentrated in private industries, manufacturing and banking sector, their by not considering the importance of public sector organisation. Again, majority of the studies are conducted in European and Asian context in which the findings of such context can not be generalize in the other context like Africa due to different set up, culture and other factors, similarly such previous studies neglected the use of second generation analysis techniques like PLS-SEM. Despite the literature reviewed in Asian and European context, however studies of this nature are still lacking in African context more particularly Nigerian PESA. Hence, the following hypothesis were developed: 

H1: There is significant relationship between Training and development and OP
2.2. Mediating role of ethical climate on the training and development-OP link

Ethical climate viewed as sharing opinions of what correct behavior is on ethical ground and how ethical matters should efficiently and effectively manage (Victor & Cullen 1987, 1988) EC explained how an organization responds to ethical matters. Literature argued that EC determines right or wrong of what people trust and shapes their ethical decision making and conduct (Lopez, Rechner, & Olson-Buchanan, 2005). Relatively, Schluter et al. (2008) stress that EC implies the organization’s policies, practices and procedures on ethical matters, and it influences employees attitude and behavior and serves as an orientation for employee behavior. In this regards, EC play an imperative role in improving OP. It consider essential, organizations set ethical values for its employees alongside providing an enable atmosphere that encourages ethical behavior, capable leadership, trust, commitment and creates workforce value to improve OP (Hijal-Moghrabi, Sabharwal, & Berman, 2015).

However, literature established that challenges facing educational sector are surrounded with unethical values between the employees and the organization which is an impressive issue that need to be encounter for the organizational performance improvement as well as employee’s behavior.

Therefore, disregarding of ethical values that within the organizational system may lead to unfortunate performance as well as inadequate productivity. For that reason, ethical values are regarded as essential component for sustaining superior performance and encourage competitive advantage (Trust, 2015). Equally, its revealed about the growing concern and the existence of unethical behaviors within the educational sector organization, in this respect, several issues that create some lots of unethical challenges such as poor service delivery, abuses, scandals, mismanagement, lack of performance as well as bribery and corruption. In the same manner, changing the unethical conduct of employees within the organizations, through the effects of EC may result to huge significant of performance improvement and entire system (Arulrajah, 2015). In line with the above discussion, EC boosts and enforces the employees to acquire suitable ethical behaviour in discharging their responsibilities within the organization. In this regards, ethical behaviour of an employees viewed as essential in realizing organizational success and performance (Brown, Stilwell, & McKinney-Gonzales, 2005; Winstanley & Hartog, 2002).

Although the link between training and development and OP has been tested empirically, the procedures through which training and development influence OP needs to be make clear. To clarify this, there is need to develop and test the mediating mechanism through which training and development utilization can leads to improved OP. Previous studies revealed that EC link to OP. For instance, the study carried out by Sabiu, Mei and Joarder (2016) in African context Nigeria in particular, investigated the influence of EC on OP using 181 sample from some selected public educational sector from North-western region. It was found that EC significant associated to OP. Similarly, Hijal-Moghrabi et al. (2015) conducted study in Western Context United State of America (USA) in particular with 1,695 sample in quantitative analysis, the result shows that, there is positive relationship between EC and OP. Similarly, one study also by Bowman and Knox (2008) investigate the influence of ethics on public managers in American public sector, it was found that ethics significantly predict OP. Furthermore, RBV highlighted that human resource systems can directly influence OP through resources that are impressively
woven in organization’s history ethics and culture (Barney, 2001; Reed & DeFillippi, 1990; Sabiu, Mei, & Joarder, 2016b; Wright & McMahan, 1992).

Additionally, human resource management perspective stress that EC shows an imperative window to understand the ethical positioning in organization. Understanding the existence of EC in organization can also be very much suitable as an origin for emerging human resource system (training and development) to foster an ethical climate (Parboteeah et al., 2013). In related manner, human resource management system promote ethical behaviors among employees within the organizations, in this regards, human resource experts simply believe that they surely have an ethics management ability to incorporates ethics management (Caldwell, Truong, Linh, & Tuan, 2011; Van Vuuren, & Eiseleen, 2006). Based on the stated argument, human resource management leadership hierarchy are basically respected for integrity, as they are capable of solving complex ethical predicaments (Arulrajah, 2015). Despite the literature argument, still there is needs for more empirical investigation on link between training and development, EC and OP. Hence, the following hypotheses were developed: -

H2: There is significant relationship between training and development and EC

H3: There is significant relationship between EC and OP

The prior hypotheses highlight the linkages among training and development, EC and OP. Indirectly, the discussion proposes that training and development affect OP through the of impact EC. That is, organizations can properly utilize human resource management system (training and development) to promote ethical climate as well as improve employee’s behavior, which in return will improve OP. Thus, this study argues that EC may plays a mediating role on the link between training and development and OP. More formally, the study tested the power of EC to mediate the link between training and development and OP, specifically in Nigerian PESA. Hence, the following hypothesis were proposed: -

H4: EC mediates the relationship between training and development and OP

3. Research Questions
   i. Does training and development relates to OP? ii Does training and development relates to EC?; iii EC relates to OP?; iv Does EC mediates the relationship between training and development and O?

4. Purpose of the Study
   The purpose of this study is to investigates the mediation effect of ethical climate on the relationship between training and development and organisational performance in Nigerian educational sector

5. Research Methods
   This study is a survey research and cross sectional in nature and data used for this study were collected between April to July 2016 using a questionnaire instrument that was self-administered to 216 ministries of education, parastatals, boards and agencies in seven (7) of Northern Nigeria. From the 216
questionnaires administered 181 questionnaires were usable, duly filled and returned, a response rate close to 81% percent. To be able to determine the consistency of the study instrument, a content validity was also conducted. All the instruments (items) used in the questionnaire were adapted from various sources with suitable internal consistency reliability and validity were confirmed in the literature. The internal consistency reliability of the construct was evaluated using composite reliability and computed Cronbach’s alphas values. Additional, discriminant validity was also assessed to consolidate the authenticity of the study instrument scales.

5.1. Research Model

The model including training and development, ethical climate and organizational performance was assessed using two-step approach such as measurement model and structural model (Hair, Hult, Ringle, & Sarstedt, 2014).

Figure 01. Research Framework

5.2. Analyses of Findings

This section discussed how the data collected in the course of the study analyzed using SmartPLS 3.2.6 (Hair, Hult, Ringle, & Sarstedt, 2016). Measurement model assessment was commenced where the composite reliability, Average variance extracted (AVE) and item loadings of the study constructs were evaluated as well as discriminant validity were also examined for all the reflective constructs (training and development, OP). For the formative constructs (EC) the collinearity and significance assessment was also carried out. The structural model assessment was undertaken by testing the path coefficient (hypotheses) among the variables under study were decisions on the supported or rejected of the hypotheses was also indicated, assessment of $R^2$ square, effect size $f^2$ and predictive relevance of the whole model.

5.3. Measurement Model Evaluation

As discussed earlier in the methodology, the study used SmartPLS 3.2.6 (Hair et al., 2016) as the instrument for analysis. This instrument analyses data for measurement models which is filtering the model for all the reflective constructs (TD and OP). The measurement model basically determines the reliability of the measurement scales used in the study and it also treats the goodness of fit of the model to be able to determine the global applicability (Ramayah, Lee, & In, 2011).
Table 01. Factor loading, Composite reliability and Convergent validity analysis

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Items</th>
<th>Loadings</th>
<th>Composite reliability</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Performance</td>
<td>OP10</td>
<td>0.76</td>
<td>0.84</td>
<td>0.51</td>
</tr>
<tr>
<td></td>
<td>OP3</td>
<td>0.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OP5</td>
<td>0.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OP6</td>
<td>0.65</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OP7</td>
<td>0.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training and Development</td>
<td>TD1</td>
<td>0.66</td>
<td>0.89</td>
<td>0.52</td>
</tr>
<tr>
<td></td>
<td>TD2</td>
<td>0.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TD3</td>
<td>0.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TD4</td>
<td>0.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TD5</td>
<td>0.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TD6</td>
<td>0.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TD7</td>
<td>0.73</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Table 01. above demonstrated the results of the factor loadings, composite reliability and AVE calculations of all the reflective constructs (TD, OP) under study. As revealed in the Table 1, the AVE values that range from 0.51 to 0.52, with consistent composite reliability values also ranging from 0.84 to 0.89 interprets that the items employed in the study measure the constructs and as well show an attainment of convergent validity. Therefore, CR, Factor loadings and AVE in this study are suitable and achieved as recommended by Hair et al. (2014). The following Table (2) presents the result of discriminant validity evaluation.

Table 02. Discriminant Validity (Fornell-lacker criterion)

<table>
<thead>
<tr>
<th>Constructs</th>
<th>OP</th>
<th>TD</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP</td>
<td>0.712</td>
<td></td>
</tr>
<tr>
<td>TD</td>
<td>0.565</td>
<td>0.724</td>
</tr>
</tbody>
</table>

The above Table 02 displays the assessment of discriminant validity was conducted to assess the degree to which measures of constructs are related. To achieved that, the square root of the AVE of each construct was taken into consideration. As revealed in Table 2, along the crosswise are the values of the square root of the AVE which are higher than all those values that are off the crosswise and that confirm suitable discriminant validity. In this respect, this means that loadings above are greater than the loadings and cross loadings.

5.3.1. Assessment of the collinearity and significance of formative construct

The assessment of the collinearity test of the formative construct (EC) was also undertaken to ascertain the relative and absolute contribution of the dimensions to the main construct (EC). Table 3 displays the analysis.
Table 03. Assessment of the collinearity test and significance of formative construct

<table>
<thead>
<tr>
<th>Formative Construct</th>
<th>Formative Indicators</th>
<th>VIF</th>
<th>Tolerance</th>
<th>Outer Weights</th>
<th>Outer Loadings</th>
<th>T Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethical Climate</td>
<td>Benevolence</td>
<td>2.02</td>
<td>0.43</td>
<td>0.41</td>
<td>0.91</td>
<td>3.38***</td>
</tr>
<tr>
<td></td>
<td>Egoism</td>
<td>2.17</td>
<td>0.34</td>
<td>0.48</td>
<td>0.94</td>
<td>4.40***</td>
</tr>
<tr>
<td></td>
<td>Principled</td>
<td>2.11</td>
<td>0.37</td>
<td>0.22</td>
<td>0.82</td>
<td>2.02**</td>
</tr>
</tbody>
</table>

![Figure 02. Measurement model (Algorithm)](image)

5.4. Structural Model Evaluation

This section discussed the testing of hypotheses, R-square R², effect size f², and predictive relevance. In this study, it was carried out using bootstrapping output and the decision on the supported or not supported of the hypotheses was based on t-values at 5% level of significance.

Table 04. Hypotheses for direct relationship and indirect relationship (EC -> OP, TD -> EC and TD and OP)

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Beta</th>
<th>STD-Error</th>
<th>T-values</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>TD -&gt; OP</td>
<td>0.25</td>
<td>0.07</td>
<td>3.61</td>
<td>Supported</td>
</tr>
<tr>
<td>TD -&gt; EC</td>
<td>0.61</td>
<td>0.04</td>
<td>14.26</td>
<td>Supported</td>
</tr>
<tr>
<td>EC -&gt; OP</td>
<td>0.52</td>
<td>0.07</td>
<td>7.50</td>
<td>Supported</td>
</tr>
</tbody>
</table>

***P<0.001, **P<0.01, *P<0.05

As shown in the Table 4 above, all the three direct relationships hypotheses look to be significant thus, training and development (TD) and organizational performance (OP) proves significant relationship with a β value = 0.25 and a t-value of 3.61. Also, the link between training and development (TD) and ethical climate (EC) revealed significant relationship with a β value = 0.61 and a t-value of 14.26. Finally, the speculated relationship between the ethical climate and organizational performance (OP) is also supported with β value = 0.52 and a t-value of 7.50.

5.4.1. Testing the Mediating effects of Ethical climate
In testing the mediating effects of ethical climate on the link between training and development and OP, the result used in PLS 3.2.6 in estimating the indirect effects among the variables (training and development, EC and OP) at 0.00 level of significance. Table 4 presents the mediation hypothesis of the study.

Table 05. Mediation hypothesis

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Beta</th>
<th>Std Error</th>
<th>T-value</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>TD -&gt; EC -&gt; OP</td>
<td>0.32</td>
<td>0.05</td>
<td>6.48</td>
<td>Supported</td>
</tr>
</tbody>
</table>

***P<0.001, **P<0.01, *P<0.05

Table 5 above presents the mediation of hypothesized relationship of ethical climate (EC) on training and development (TD) and organizational performance (OP) is also supported with β value = 0.32 and a t-value of 6.48. The study model is presented in Figure 3 below. However, Hair et al. (2016) suggested for confidence interval calculation and Smart PLS 3.2.6 automatically generated the confidence interval estimation at 5 percent lower level (LL) and 95 percent upper level (UL). Table 4 indicates confidence interval calculation.

Table 06. Confidence interval calculation for Mediation test

<table>
<thead>
<tr>
<th>Hypotheses Relationship</th>
<th>Path</th>
<th>Path a*b (Beta)</th>
<th>5% Ul</th>
<th>95% Ul</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>TD-&gt;EC-&gt;OP</td>
<td>0.61</td>
<td>0.52</td>
<td>0.32</td>
<td>0.02</td>
<td>0.12</td>
</tr>
</tbody>
</table>

Note: Hypothesis is supported when there is no zero (i.e. when LL has negative sign and UL has positive sign) between LL and UL.

Figure 03. Structural Model for Mediation relationship

5.4.2. Coefficient of Determination for Mediating Relationships ($R^2$)

Another criteria used for assessing structural model is coefficient of determination ($R^2$) of endogenous construct (Hair et al., 2014; Hair et al., 2011, 2012; Henseler et al., 2009). According to Chin (1998); Hair et al. (2011); Hair et al. (2014) and Hair et al. (2016) $R^2$ values of 0.75, 0.50 and 0.25 shows
substantial, medium and small $R^2$ values respectively. Similarly, Falk and Miller (1992) suggests 10% as a minimum acceptable level of $R^2$ value.

Table 07. Variance Explained in the Endogenous Latent Constructs

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Variance Explained ($R^2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Performance</td>
<td>49%</td>
</tr>
<tr>
<td>Ethical Climate</td>
<td>37%</td>
</tr>
</tbody>
</table>

From Table 7 above, $R^2$ value of all the endogenous constructs (EC and OP) are small with (0.37) and (0.49) values respectively.

**5.4.3. Assessment of Effect Size ($f^2$)**

Having achieving the coefficient of determination $R^2$ (EC and OP), the next assessment is effect size ($f^2$) as recommended by Hair, Ringle, and Sarstedt (2013). Cohen (1988) describes $f^2$ values of 0.02, 0.15 and 0.35 as having small, medium, substantial effects respectively. However, Chin, Marcolin, and Newed (2003), stress that, smallest strength of $f^2$ of exogenous constructs on endogenous variables should be considered with an effect. Henceforth, the effect size for exogenous constructs could be assess using the formula below (Cohen, 1988; Selya, Rose, Dierker, Hedeker, & Mermelstein, 2012). Table 8 displays the effect size value of mediation model.

\[
\text{Effect size: } f^2 = \frac{R^2 \text{ included} - R^2 \text{ Excluded}}{1-R^2 \text{ Included}}
\]

Table 08. Assessment of the Effect Size for Mediating Relationships: F-Square

<table>
<thead>
<tr>
<th>Constructs</th>
<th>$R^2$ Included</th>
<th>$R^2$ Excluded</th>
<th>$f$-squared</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>TD-OP</td>
<td>0.49</td>
<td>0.32</td>
<td>0.33</td>
<td>Medium</td>
</tr>
<tr>
<td>TD-EC</td>
<td>0.37</td>
<td>0.00</td>
<td>0.60</td>
<td>Large</td>
</tr>
<tr>
<td>EC-OP</td>
<td>0.49</td>
<td>0.45</td>
<td>0.07</td>
<td>Small</td>
</tr>
</tbody>
</table>

Table 8 above revealed the effect size values of 0.13, 0.18 and 0.50 considered as small, medium and large having suitable effect size.

**5.4.4. Assessment of Predictive Relevance**

This study further assesses the predictive capacity of the whole model. It was carried out through blindfolding procedure to determine how the values are assembled around the model. The result of cross validated redundancy was used because it explains how capable the model is to predict the endogenous constructs. It is believed that any model above “0” has predictive relevance, it has the ability to predict relationship and if the value is “0” and below means the model has no any predictive power (Geisser, 1974; Stone, 1974).
Table 09. Predictive relevance Q2

<table>
<thead>
<tr>
<th>Total</th>
<th>SSO</th>
<th>SSE</th>
<th>1-SSE/SSO</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP</td>
<td>905</td>
<td>699.43</td>
<td>0.23</td>
</tr>
</tbody>
</table>

Note: SSO (sum of square root observations) SSE (sum of square root predictive errors)

Table 9 shown that in column 4, Q2 revealed an outstanding relevance of 0.23 for the endogenous construct (organizational performance). Therefore, based on Chin (1998), Geisser (1974), and Stone (1974) the model of this study has medium predictive relevance. However, predictive relevance cannot be carried out on formative construct (ethical climate) (Hair et al., 2014).

6. Findings

This study investigates the mediating effect of EC on the link between training and development and OP. Statistically, result revealed that all the study hypotheses were found significantly supported. The relationship between training and development and OP is found significant in this study. The finding is consistent with some previous studies (Abdullah et al., 2009; Akhtar et al., 2014; Islam & Siengthai, 2010; Úbeda-García et al., 2013) who in their studies individually discovered that inadequate training and development of employees hinders OP. Though, training and development considered as internal resources where by adequate training and development of employees may leads to OP, maximum level of OP depends on the higher level of employee training. In this regards, organizations need to strategies their plans appropriately in utilizing the available internal resources (training and development) in particular. For that reason, it is indicating that if Nigerian PESA comprehensively focus on adequate training of employees in return, will massively contribute to effective OP. Similarly, the hypothesis on the link between training and development and ethical climate is found significant and supported in this study. The finding was backed up the argument of some previous literature (Arulrajah, 2015; Manroop et al., 2014), the ability of organization to properly trained employees can effect ethical behaviour of personnel within the organization, such ethical behaviour usually depends on the effective functions of the system itself (Foote, 2001) In related development, the role of training and development in promoting EC as well as ethical
behaviors in organizations considered imperatives (Caldwell et al., 2011). Hence, Nigerian PESA needs to be more concern in training of employees to promote organizational ethical system, in return achieve organizational performance. Moreover, the hypothesis on the relationship between ethical climate and OP also supported. The findings concur with some previous studies (Hijal-Moghrabi et al., 2015; Sabiu et al., 2016a) it’s clearly revealed that, EC as an important factor help in organizational performance improvement. Therefore, Nigerian PESA needs to emphasize on tackling issues related to unethical conducts to improve the sector performance.

Lastly, the mediation hypothesis (ethical climate) on the link between training and development and organizational performance. In support of that, RBV theory highlighted that human resource system (training and development) can create and sustain competitive advantage in organization through resources that are within the organizational capacity for instance; ethics and culture (Manroop et al., 2014). In related argument, theory stress that success is determined by the organization’s resources controls and the uniqueness of these resources (training and development and EC) (Amit & Schoemaker, 1993). Considering the stated argument, Nigerian PESA can appropriately utilize the postulation of the RBV theory in respect of internal resources that can leads to competitive advantage in organization as well as the validation of this assumption in implementation and confirming the resources (training and development) that can influence performance and competitive advantage more particularly through ethics.

7. Conclusion

This study was carried out to understand the mediation effect of ethical climate on the link between the one of essential human resource management practice (training and development) on OP. The findings demonstrated that ethical climate is capable of mediation the relationship between training and development and OP. The study contributes to the existing knowledge by examining the relationship between training and development and OP in Nigerian educational sector administration empirically. In related manner, a lot of studies established that there is a relationship between training and development and OP without proving why and how these relationships exist; this study contributes to knowledge by establishing empirical evidence that training and development can influence OP through a mediating factor (EC) which yet to be explored in the academic literature. Additionally, this study is among the few studies that examine the mediating effect of EC on the link between training and development and OP. Basically, the results of this study will help the administrators, managers, policy makers/stakeholders and policy implementation committee in Nigerian PESA ministries, boards, agencies as well as the parastatals to be encourage and ensure good and adequate training of employees that can creates ethics among the personnel and the system in general to promote superior performance. In conclusion, the study recommends the use of large sample, other country educational sector administration can also conduct a similar study using other individual practices or bundles to replicate the result of this study. Future research can use smart PLS or any other second generation analysis technique to re-confirm the model.

References


