



Research Paper

Mediating Role of Ethical climate on the link Between Promotion opportunity and Organizational performance in Nigerian Educational System

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Abstract

The study investigates the mediating effect of ethical climate (EC) on the relationship between promotion opportunity and organizational performance (OP). Based on Resource Based View (RBV), internal resources play a substantial role in improving OP, considering promotion opportunity as the dimension of human resource management practices can be viewed as best internal factor that can improve OP. Some prior studies used bundles of practices while other studies considered separate practices. Despite these studies, however, few studies have attempted investigating the influence of promotion opportunity on OP. However, the fundamental reasons through which promotion opportunity influence OP is not clearly explained in the literature, despite the fact that RBV highlighted that HRM practices can indirectly leads to competitive advantage in organization through resources that are within the organizational history like ethics, This study employed EC as mediating variable on the relationship between promotion opportunity and OP. A quantitative survey method was carried out, data were collected from some selected ministries of education, parastatals, boards, and agencies in Northern Nigeria. A total of 181 questionnaires were analysed using Smart PLS SEM 3.2.6v. Results revealed that EC mediates the relationship between promotion opportunity and OP. The study made recommendation and drew suggestion for future research.

Keywords: *Promotion opportunity, Ethical climate, Organisational performance, PLS SEM, Nigeria.*

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This paper presents an empirical investigation of the mediating effect of ethical climates on the relationship between promotion opportunity and organisational performance in Nigerian educational sector administration. OP can be critically described as a function of the organization capability to possess, improve, and use physical goals and objectives with an acceptable disbursement of a resource while ensuring sustainability over a long period, and good performance in an organization always means the work done efficiently and effectively and remains much relevant to the authorities (Ali, 2011; Moullin, 2007). Similarly, 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).

Although, to achieve OP, activities in administration are thought to be a standout among the most important factors and it is also sees as the most studied construct in the organizational field (Agami, Saleh, & Rasmy, 2012). For over two decades, performance improvement is the major concern of public sectors organisation and beyond globally (Al-Dhaafri, Al-Swidi, & Yusoff, 2016) In General, every governments consider to look for how to enhance its OP as well as sectors performance in ensuring integrity, transparency, citizen satisfaction, program outcomes, citizen participation, enhancing accountability, utilization of public resources, as well as fighting against bribery and corruptions (Ashour, 2004). Considering the fact that, public sector of different countries are shaped by many factors, but they share common challenges. For instance, lack of attaining performance makes public sector organizations more rigorous than it is in the private organizations. In this regards, in ability of public sector organization to perform and compete with global world, give

opportunity for researchers to intensify investigation on why public organizations are not performing more particularly educational sector administration. (Osborne, Radnor, and Nasi 2013). Even though, educational sector administration serve as the mechanism used for formulating and implementing educational system policies and programme, still it's faces some challenges both externally and internally.

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 interms 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 interms 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 identified some factors that influence OP, for example, organizational learning (Barba-Aragón, Jiménez-Jiménez, & Sanz-Valle, 2014; Garcia-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; Jaekwon 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 promotion opportunity 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 promotion opportunity 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 development, promotion opportunity 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 (promotion opportunity 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 (promotion opportunity) in influencing EC in order to predict OP, still studies on these relationship (PRO, 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 (promotion opportunity) 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

2.2 Promotion opportunity and OP

Promotion opportunity system affects nearly all aspects of organizational circle, mostly evident from studies of HRM (Katou & Budhwar, 2010; Phelan & Lin, 2001; Poole & Warner, 1998). Promotion opportunity simply been defined as the degree of professional upward flexibility within the organization. In the other hand, it is the kind of official appreciation or acknowledging of one's performance from the top (Tan, 2008). According

to social exchange theory Blau (1964) personnel that are promoted feel and considered valued by the organization is likely to pay back the organization through their commitment and involvement. Given the significance of promotion opportunity in an organizations, it is amazing that only few studies have make an effort to study the role of different environmental, job factors and organizational on the effectiveness of promotion opportunity systems (Allen, 1997; Ferris, 1992).

An imperative discussion on the promotion opportunity systems have been found in the literature for both theoretical and empirical perspective. Several empirical studies link promotion opportunity and OP, the study conducted by Katou and Budhwar (2010) HRM practices and OP in Greece manufacturing sectors, the result revealed that promotion opportunity is one of the strong determinant of performance. Again, the study of Bonavia and Marin-Garcia (2011) in European context Spain, 76 establishment used as sample in ceramic tiles, the regression result shows that promotion is positively related to OP. Moreover, Phelan and Lin (2001) conducted study in American context, with promotion opportunity and OP, the result revealed that promotion found positively significant to OP.

However, some studies used promotion opportunity to predict performance, but found contrary result. The study of Akhtar *et al.* (2014) in Asian context Pakistan, the result shows that promotion opportunity was not found significant to commitment and performance outcome. Similarly, the study of Fey, Morgulis-Yakushev, Park, and Björkman (2009) in Western context were the promotion used as one the determinant of performance, but the result explained contrary it shows indirect relationship with the performance. Again, another study carried out by Wright *et al.* (2003) in European context specifically in UK business firms using 50 sample, result revealed that promotion opportunity found insignificant to OP. The argument in the literature is how promotion opportunity improve OP as tested and reported by some previous studies like, Katou and Budhwar (2010) and Bonavia and Marin-Garcia (2011) this is clearly shows employee career opportunity motivate them to improve their performance and in return increase organization superior performance.

To summarize, prior studies conducted on the link between promotion opportunity and OP are mostly concentrated in business firms, private and manufacturing sector with few in public sector. Similarly, majority of these studies were found in Asian, European and American context there by neglecting sub-saharan African countries particularly Nigeria. Equally, majority of these studies failed to utilize the power of second generation analysis techniques like, PLS-SEM in testing the relationship among the variables with moderator or mediator concurrently. Again, literature discovered that the link between promotion opportunity and OP is inconclusive as there are inconsistencies findings. Despite the inconclusive result in the literature between the two variables, promotion opportunity and OP, still the relationship is more significant. In general, this study considered the deficiencies of the previous studies and address it, by using mediating variable to explore the relationship between the promotion practice and OP on why and how the link exists. Based on the evidences in the literature, this study considered promotion opportunity as imperative variable in predicting performance of Nigerian PESA using PLS-SEM analysis techniques

H1: There is significant relationship between Promotion opportunity and OP

2.3 Mediating effects of ethical climate on the relationship between Promotion opportunity and OP

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 promotion opportunity and OP has been tested empirically, the procedures through which promotion opportunity influence OP needs to be make clear. To clarify this, there is need to develop and test the mediating mechanism through which promotion opportunity 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; P. M 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 (promotion opportunity) 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, & Eiselen, 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 promotion opportunity, EC and OP. Hence, the following hypotheses were developed: -

H2: There is significant relationship between promotion opportunity and EC

H3: There is significant relationship between EC and OP

The prior hypotheses highlight the linkages among promotion opportunity, EC and OP. Indirectly, the discussion proposes that promotion opportunity affect OP through the of impact EC. That is, organizations can properly utilize human resource management system (promotion opportunity) 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 promotion opportunity and OP. More formally, the study tested the power of EC to mediate the link between promotion opportunity and OP, specifically in Nigerian PESA. Hence, the following hypothesis were proposed: -

H4: EC mediates the relationship between promotion opportunity and OP

3.1 Methodology

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.

4.1 Research Model

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

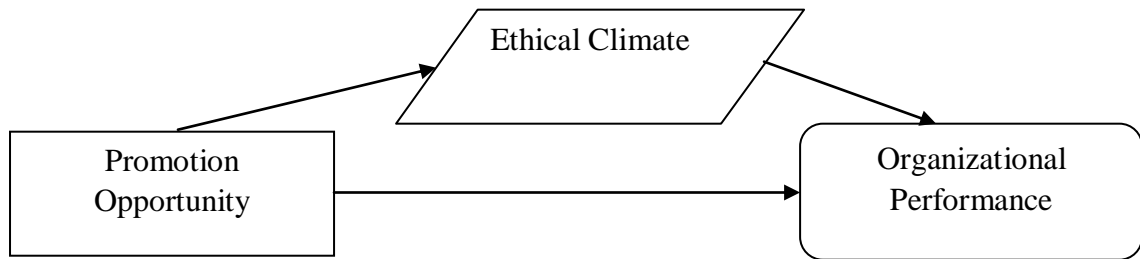


Figure 1:
Research Framework

4 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 (promotion opportunity, OP). For the formative constructs (EC) the collinearity and significance assessment were also carried out. The structural model assessment was undertaken by testing the path coefficient (hypotheses) among the variables under study where 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.

4.1 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 (PRO 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 1
Factor loading, Composite reliability and Convergent validity analysis

Constructs	Items	Loadings	Composite reliability	AVE
Organizational Performance	OP10	0.76	0.84	0.51
	OP3	0.68		
	OP5	0.69		
	OP6	0.64		
Promotion Opportunity	OP7	0.78	0.79	0.56
	PRO5	0.76		
	PRO6	0.70		
	PRO7	0.79		

The Table 1 above demonstrated the results of the factor loadings, composite reliability and AVE calculations of all the reflective constructs (PRO, OP) under study. As revealed in the Table 1, the AVE values that range from 0.51 to 0.56, with consistent composite reliability values also ranging from 0.79 to 0.84 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 2
Discriminant Validity (Fornell-lacker criterion)

Constructs	OP	TD
OP	0.712	
PRO	0.536	0.750

The above Table 2 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.

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 3
Assessment of the collinearity test and significance of formative construct

Formative Construct	Formative Indicators	VIF	Tolerance	Outer Weights	Outer Loadings	T Statistics
Ethical Climate	Benevolence	2.02	0.43	0.51	0.93	4.67***
	Egoism	2.17	0.34	0.43	0.92	3.47***
	Principled	2.11	0.37	0.17	0.79	1.47*

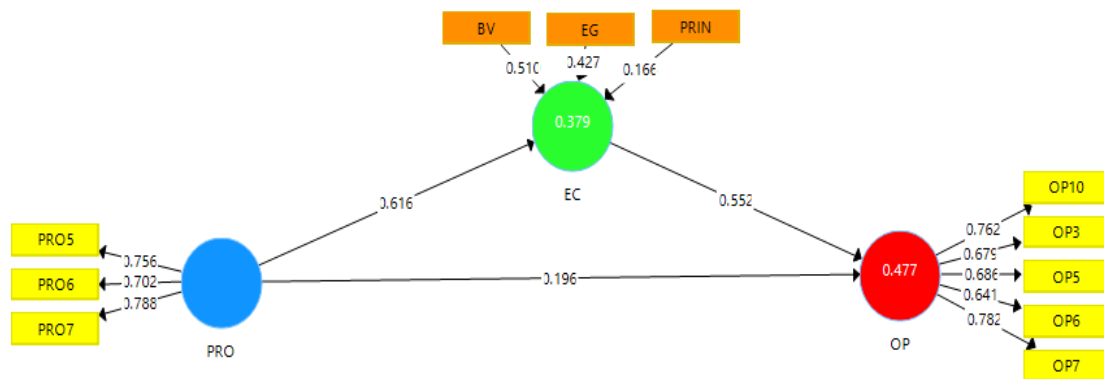


Figure 2
Measurement model (Algorithm)

4.2 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 3
Hypotheses for direct relationship and indirect relationship (EC->OP, PRO->EC and PRO and OP)

Constructs	Beta	STD-Error	T -values	Decision
PRO -> OP	0.19	0.07	2.94	Supported
PRO -> EC	0.62	0.05	12.04	Supported
EC -> OP	0.55	0.06	9.08	Supported

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

As shown in the Table 3 above, all the three direct relationships hypotheses look to be significant thus, promotion opportunity (PRO) and organizational performance (OP) proves significant relationship with a β value = 0.19 and a t-value of 2.94. Also, the link between promotion opportunity and ethical climate (EC) revealed significant relationship with a β value = 0.62 and a t-value of 12.04. Finally, the speculated relationship

between the ethical climate and organizational performance (OP) is also supported with β value = 0.55 and a t-value of 9.80 respectively.

Testing the Mediating effects of Ethical climate

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

Table 4
Mediation hypothesis

Hypotheses	Beta	Std Error	T-value	Decision
PRO -> EC->OP	0.34	0.05	7.33	Supported

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

Table 4 above presents the mediation of hypothesized relationship of ethical climate (EC) on promotion opportunity (PRO) and organizational performance (OP) is also supported with β value = 0.34 and a t-value of 7.33. 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 5
Confidence interval calculation for Mediation test

Hypotheses	Relationship	Path a	Path b	a*b (Beta)	5% LL	95% UL	Decision
H4	PRO->EC->OP	0.62	0.55	0.34	0.02	0.12	Supported

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

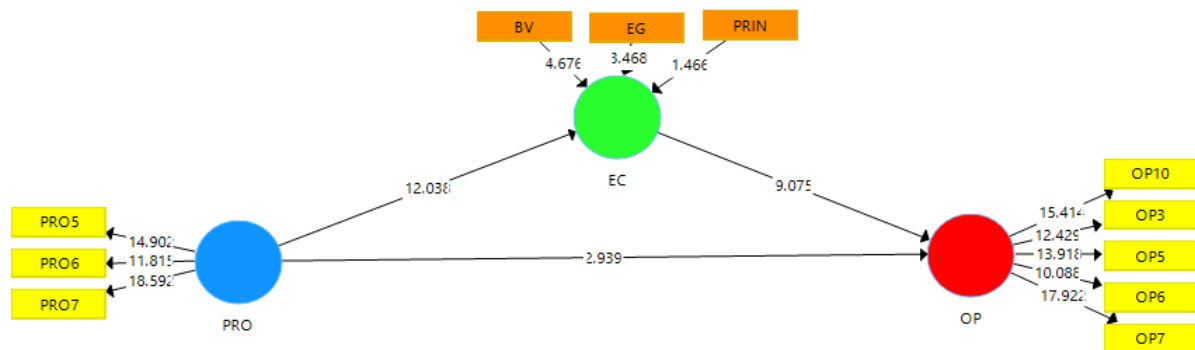


Figure 3
Structural Model for Mediation relationship

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 6
Variance Explained in the Endogenous Latent Constructs

Constructs	Variance Explained (R^2)
Organizational Performance	48%

From Table 6 above, R^2 value of all the endogenous constructs (EC and OP) are small with (0.38) and (0.48) values respectively.

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 Newted (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 7 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 7
Assessment of the Effect Size for Mediating Relationships: F-Square

Constructs	R^2 Included	R^2 Excluded	f -squared	Effect Size
PRO-OP		0.48	0.29	0.19 Medium
PRO-EC		0.38	0.00	0.60 Large
EC-OP	0.48	0.45	0.07	Small

Table 7 above revealed the effect size values of 0.07, 0.19 and 0.60 considered as small, medium and large having suitable effect size.

4.3 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 8
Predictive relevance Q2

Total	SSO	SSE	1-SSE/SSO
OP	905	704.81	0.22

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

Table 8 shown that in column 4, Q2 revealed an outstanding relevance of 0.22 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).

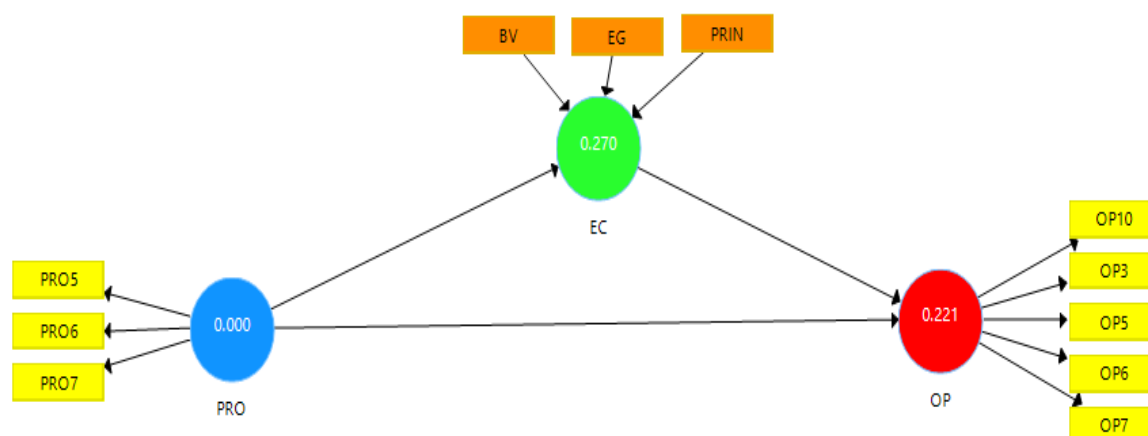


Figure 4
Predictive relevance for Mediation Model

5. Discussion of Findings

This study investigates the mediating effect of EC on the relationship between promotion opportunity and OP. Statistically, result revealed that all the study hypotheses were found significantly supported. The relationship between promotion opportunity and OP is found significant in this study. The finding is consistent with some previous studies (Bonavia & Marin-Garcia, 2011; Katou & Budhwar, 2010; Phelan & Lin, 2001) who in their studies individually discovered that lack of promotion of employees hinders OP. Though, promotion opportunity considered as internal resources where by prompt and timely promotion of employees may leads to OP, maximum level of OP depends on the higher level and timely promotion of employees in the organization. Relatively, organizations need to strategies their plans appropriately in utilizing the available internal resources (promotion opportunity) in particular. For that reason, it is indicating that if Nigerian PESA comprehensively focus on timely and prompt promotion to employees when due, in return, will massively contribute to effective OP. Similarly, the hypothesis on the link between promotion opportunity 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 and timely promote its employees can emotionally 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 promotion opportunity in nurturing EC as well as ethical behaviors in organizations considered imperatives (Caldwell *et al.*, 2011). Hence, Nigerian PESA needs to be more concern in given opportunity to employees in terms promotion to purposely nurture organizational ethical system, in return attain superior performance. Furthermore, the hypothesis on the relationship between ethical climate and OP also supported. The findings concur with some previous studies (Sabiou *et al.*, 2016b; Sabiu, *et al.*, 2018; Sabiu, Mei, Tang Swee, *et al.*, 2018) 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 relationship between promotion opportunity and organizational performance. In support of that, RBV theory highlighted that human resource system (promotion opportunity) 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 (promotion opportunity 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 (promotion opportunity) that can influence performance and competitive advantage more particularly through ethics.

6. Conclusion

This study was carried out to understand the mediation effect of ethical climate on the relationship between the one of essential human resource management practice (promotion opportunity) on OP. The findings demonstrated that ethical climate is capable of mediation the relationship between promotion opportunity and OP. The study contributes to the existing knowledge by examining the relationship between promotion opportunity and OP in Nigerian educational sector administration empirically. In related manner, a lot of studies established that there is a link between promotion opportunity and OP without proving why and how these relationships exist; this study contributes to knowledge by establishing empirical evidence that promotion opportunity 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 relationship between promotion opportunity 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 timely and prompt promotion opportunity were given to employees that can creates ethics among the personnel and the system in general to enhance 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 SEM latest version or any other second-generation analysis technique to re-confirm the model.

REFERENCES

- [1]. Agami, N., Saleh, M., & Rasmy, M. (2012). Supply Chain Performance Measurement Approaches: Review and Classification. *The Journal of Organizational Management Studies*, 2012(2012), 1–20. <http://doi.org/10.5171/2012.872753>
- [2]. Akhtar, N., Azeem, S. M., & Mustafa Mir, G. (2014). Impact of HRM practices on perceived organisational performance. *International Journal of Academic Research*, (6), 5.
- [3]. Al-Dhaafri, H. S., Al-Swidi, A. K., & Yusoff, R. Z. (2016). The mediating role of total quality management between the entrepreneurial orientation and the organizational performance. *The TQM Journal*, 28(1), 89–111. <http://doi.org/10.1177/02662426160391930>
- [4]. Ali, A. (2011). Measuring soccer skill performance: A review. *Scandinavian Journal of Medicine and Science in Sports*. <http://doi.org/10.1111/j.1600-0838.2010.01256.x>
- [5]. Ali, I., Rehman, K., & Ali, S. (2010). Corporate social responsibility influences, employee commitment and organizational performance. *African Journal of Business Management*, 4(12), 2796–2801. <http://doi.org/10.1007/s10551-010-0492-3>
- [6]. Allen, G. (1997). Antecedents and Outcomes of Promotion systems. *Human Resource Management*, 36(2), 251–259.
- [7]. Aluede, O., Idogho, P. O., & Imonikhe, J. S. (2012). Increasing Access To University Education in Nigeria: Present Challenges and Suggestions for the Future. *The African Symposium: An Online Journal of the African Educational Research Network*, 12(1), 3–13.
- [8]. Amit, R., & Schoemaker, P. J. H. (1993). Strategic Assets and Organizational Rent. *Strategic Management Journal*, 14(1), 33–46. <http://doi.org/10.2307/2486548>
- [9]. Antony, J. P., & Bhattacharyya, S. (2010). Measuring organizational performance and organizational excellence of SMEs – Part 2: An empirical study on SMEs in India. *Measuring Business Excellence*, 14(3), 42–52. <http://doi.org/10.1108/13683041011047812>
- [10]. Appiah Fening, F., Pesakovic, G., & Amaria, P. (2008). Relationship between quality management practices and the performance of small and medium size enterprises (SMEs) in Ghana. *International Journal of Quality & Reliability Management*, 25(7), 694–708. <http://doi.org/10.1108/02656710810890881>
- [11]. Arulrajah, A. A. (2015). Contribution of Human Resource Management in Creating and Sustaining Ethical Climate in the Organisations, 5(1), 31–44.
- [12]. Ashour, A. (2004). *Integrity, Transparency and Accountability in Public Sector Human Resources Management*. Alexandria University, Egypt.
- [13]. Bakiev, E. (2013). The Influence of Interpersonal Trust and Organizational Commitment on Perceived Organizational Performance. *Journal of Applied Economics and Business Research*, 3(3), 166–180.
- [14]. Barba Aragón, M. I., Jiménez Jiménez, D., & Sanz Valle, R. (2014). Training and performance: The mediating role of organizational learning. *BRQ Business Research Quarterly*, 17(3), 161–173. <http://doi.org/10.1016/j.cede.2013.05.003>
- [15]. Barney, J. B. (2001). Is the resource-based “view” a useful perspective for strategic management research? Yes. *Academy of Management Review*. <http://doi.org/10.5465/AMR.2001.4011928>
- [16]. Barrick, M. R., Mount, M. K., & Judge, T. A. (2001). Personality and performance at the beginning of the new millennium: What do we know and where do we go next? *International Journal of Selection and Assessment*, 9(1/2), 9–30. <http://doi.org/10.1111/1468-2389.00160>
- [17]. Blau, P. M. (1964). *Exchange and power in social life*. *Exchange Organizational Behavior Teaching Journal*. Retrieved from <http://www.amazon.com/dp/0887386288>
- [18]. Bonavia, T., & Marin-Garcia, J. A. (2011). Integrating human resource management into lean production and their impact on organizational performance. *International Journal of Manpower*, 32(8), 923–938. <http://doi.org/10.1108/01437721111181679>
- [19]. Bowman, J. S., & Knox, C. C. (2008). Ethics in government: No matter how long and dark the night. *Public Administration Review*. <http://doi.org/10.1111/j.1540-6210.2008.00903.x>
- [20]. Brown, M. F., Stilwell, J., & McKinney-Gonzales, M. (2005). The Ethical Foundation Of Performance Measurement and Management. *PM. Public Management*, 87(5), 22–25. Retrieved from <http://search.proquest.com/docview/204182522?accountid=14549%5Cnhttp://hl5yy6xn2p.search.serialssolutions.com/?genre=article&sid=ProQ:&title=The+Ethical+Foundation+Of+Performance+Measurement+and+Management&title=PM.+Public+Management&issn=00333611&date=200>
- [21]. Caldwell, C., Truong, D. X., Linh, P. T., & Tuan, A. (2011). Strategic Human Resource Management as Ethical Stewardship. *Journal of Business Ethics*, 98(1), 171–182. <http://doi.org/10.1007/s10551-010-0541-y>
- [22]. Chandrasekar, K. (2011). Workplace Environment and Its Impact on Organisational Performance in Public Sector. *International Journal of Enterprise Computing and Business Systems*, 1(1), 1–19.

- [23]. Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In *Modern Methods for Business Research* (Vol. 295, pp. 295–336). <http://doi.org/10.1016/j.aap.2008.12.010>
- [24]. Chin, W. W., Marcolin, B. L., & Newted, P. R. (2003). A Partial least Squares Latent Variable Modeling Approach For Measuring Interaction Effects: Results From a Monte Carlo Simulation Study and Voice Mail Emotion/Adoption Study. *Proceedings of the Seventeenth International Conference on Information Systems*, 21–41. <http://doi.org/10.1287/isre.14.2.189.16018>
- [25]. Cohen, J. (1988). Statistical power analysis for the behavioral sciences. *Statistical Power Analysis for the Behavioral Sciences*. <http://doi.org/10.1234/12345678>
- [26]. Cosh, A., Fu, X., & Hughes, A. (2012). Organisation structure and innovation performance in different environments. *Small Business Economics*, 39(2), 301–317. <http://doi.org/10.1007/s11187-010-9304-5>
- [27]. Falk, R. F., & Miller, N. B. (1992). *A primer for soft modeling*. Ohio: The University of Akron Press. The University of Akron Press.
- [28]. Fening, F. A. (2012). Impact of Quality Management Practices on the Performance and Growth of Small and Medium Sized Enterprises (Smes) in Ghana. *International Journal of Business and Social Science*, 3(13), 1–13.
- [29]. Ferris, G. R. B. (1992). Promotion Systems in Organizations. *Human Resource Planning*.
- [30]. Fey, C. F., Morgulis-Yakushev, S., Park, H. J., & Björkman, I. (2009). Opening the black box of the relationship between HRM practices and firm performance: A comparison of MNE subsidiaries in the USA, Finland, and Russia. *Journal of International Business Studies*, 40(4), 690–712. <http://doi.org/10.1057/jibs.2008.83>
- [31]. Foote, D. (2001). The question of ethical hypocrisy in human resource management in the U.K. and Irish charity sectors. *Journal of Business Ethics*, 34(1), 25–38. <http://doi.org/10.1023/A:1011909904150>
- [32]. Garcia-Morales, V. J., Jimenez-Barrionuevo, M. M., & Gutierrez-Gutierrez, L. (2012). Transformational leadership influence on organizational performance through organizational learning and innovation. *Journal of Business Research*, 65(7), 1040–1050. <http://doi.org/10.1016/j.jbusres.2011.03.005>
- [33]. Geisser, S. (1974). A predictive approach to the random effect model. *Biometrika*, 61, 101–107. <http://doi.org/10.1093/biomet/61.1.101>
- [34]. Gregory, B. T., Harris, S. G., Armenakis, A. A., & Shook, C. L. (2009). Organizational culture and effectiveness: A study of values, attitudes, and organizational outcomes. *Journal of Business Research*, 62(7), 673–679. <http://doi.org/10.1016/j.jbusres.2008.05.021>
- [35]. Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage Publications.
- [36]. Hair, J. F. J., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2014). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. *Long Range Planning* (Vol. 46). <http://doi.org/10.1016/j.lrp.2013.01.002>
- [37]. Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a Silver Bullet. *The Journal of Marketing Theory and Practice*, 19(2), 139–152. <http://doi.org/10.2753/MTP1069-6679190202>
- [38]. Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial Least Squares Structural Equation Modeling: Rigorous Applications, Better Results and Higher Acceptance. *Long Range Planning*, 46(1–2), 1–12. <http://doi.org/10.1016/j.lrp.2013.01.001>
- [39]. Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science*, 40(3), 414–433. <http://doi.org/10.1007/s11747-011-0261-6>
- [40]. Hau-siu Chow, I., Wing-chun Lo, T., Sha, Z., & Hong, J. (2006). The impact of developmental experience, empowerment, and organizational support on catering service staff performance. *International Journal of Hospitality Management*, 25(3), 478–495. <http://doi.org/10.1016/j.ijhm.2005.03.002>
- [41]. Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. *Advances in International Marketing*, 20(1), 277–319. [http://doi.org/10.1016/0167-8116\(92\)90003-4](http://doi.org/10.1016/0167-8116(92)90003-4)
- [42]. Hijal-Moghrabi, I., Sabharwal, M., & Berman, E. M. (2015). The Importance of Ethical Environment to Organizational Performance in Employment at Will States. *Journal of Business Venturing*, 9(1), 117–130. <http://doi.org/10.2478/orga-2013-0027>
- [43]. Jiménez-Jiménez, D., & Sanz-Valle, R. (2011). Innovation, organizational learning, and performance. *Journal of Business Research*, 64(4), 408–417. <http://doi.org/10.1016/j.jbusres.2010.09.010>
- [44]. Joiner, T. A. (2007). Total quality management and performance: The role of organization support and co-worker support. *International Journal of Quality & Reliability Management*, 24(6), 617–627. <http://doi.org/10.1108/02656710710757808>
- [45]. Katou, A. A., & Budhwar, P. S. (2010). Causal relationship between HRM policies and organisational performance: Evidence from the Greek manufacturing sector. *European Management Journal*, 28(1), 25–39. <http://doi.org/10.1016/j.emj.2009.06.001>
- [46]. Ko, J., Hur, S., & Smith-Walter, A. (2013). Family-Friendly Work Practices and Job Satisfaction and Organizational Performance: Moderating Effects of Managerial Support and Performance-Oriented Management. *Public Personnel Management*, 42(4), 545–565. <http://doi.org/10.1177/0091026013505503>
- [47]. Ko, J., & Smith-Walter, A. (2013). The relationship between hrm practices and organizational performance in the public sector: Focusing on mediating roles of work attitudes. *International Review of Public Administration*, 18(3), 209–231. <http://doi.org/10.1080/12294659.2013.10805270>
- [48]. López, S. P., Peón, J. M. M., & Ordás, C. J. V. (2005). Organizational learning as a determining factor in business performance. *The Learning Organization*, 12(3), 227–245. <http://doi.org/10.1108/09696470510592494>
- [49]. Lopez, Y. P., Rechner, P. L., & Olson-Buchanan, J. B. (2005). Shaping ethical perceptions: An empirical assessment of the influence of business education, culture, and demographic factors. *Journal of Business Ethics*, 60(4), 341–358. <http://doi.org/10.1007/s10551-005-1834-4>
- [50]. Manroop, L., Singh, P., & Ezzedeen, S. (2014). Human Resource Systems and Ethical Climates: A Resource-Based Perspective. *Human Resource Management*, 53(5), 795–816. <http://doi.org/10.1002/hrm.21593>
- [51]. Martin, K. D., & Cullen, J. B. (2006). Continuities and extensions of ethical climate theory: A meta-analytic review. *Journal of Business Ethics*, 69(2), 175–194. <http://doi.org/10.1007/s10551-006-9084-7>
- [52]. Moullin, M. (2007). Performance measurement definitions: linking performance measurement and organisational excellence. *International Journal of Health Care Quality Assurance*, 20(2–3), 181–3. <http://doi.org/10.1108/09526860710743327>
- [53]. Osborne, S. P., Radnor, Z., & Nasi, G. (2013). A new theory for public service management? Toward a (public) service-dominant approach. *The American Review of Public Administration*, 43(2), 135–158. <http://doi.org/10.1177/0275074012466935>
- [54]. Paauwe, J. (2009). HRM and performance: Achievements, methodological issues and prospects. *Journal of Management Studies*, 46(1), 129–142. <http://doi.org/10.1111/j.1467-6486.2008.00809.x>
- [55]. Paauwe, J., & Boselie, P. (2005). HRM and performance: What next? *Human Resource Management Journal*. <http://doi.org/10.1111/j.1748-8583.2005.tb00296.x>
- [56]. Parboteeah, K. P., Seriki, H. T., & Hoegl, M. (2013). Ethnic diversity, corruption and ethical climates in sub-Saharan Africa: recognizing the significance of human resource management. *The International Journal of Human Resource Management*, 25(7),

- 979–1001. <http://doi.org/10.1080/09585192.2013.815251>
- [57]. Paul, D. L., & Mcdaniel, R. R. (2004). A Field Study of the Effect of Interpersonal Trust on Virtual Collaborative Relationship Performance, 28(2), 183–227. Retrieved from <http://www.jstor.org/stable/25148633%5Cr>
- [58]. Phan, A. C., Abdallah, A. B., & Matsui, Y. (2011). Quality management practices and competitive performance: Empirical evidence from Japanese manufacturing companies. *International Journal of Production Economics*, 133(2), 518–529. <http://doi.org/10.1016/j.ijpe.2011.01.024>
- [59]. Phelan, S. E., & Lin, Z. (2001). Promotion Systems and Organizational Performance: A Contingency Model. *Computational & Mathematical Organization Theory*, 7, 207–232.
- [60]. Pinho, J. C., Rodrigues, A. P., & Dibb, S. (2014). The role of corporate culture, market orientation and organisational commitment in organisational performance: The case of non-profit organisations. *Journal of Management Development*, 33(4), 374–398. <http://doi.org/10.1108/JMD-03-2013-0036>
- [61]. Poole, M., & Warner, M. (1998). *The IEBM handbook of human resource management*. International Thomson Business Press, London.
- [62]. Prowse, P., & Prowse, J. (2010). The dilemma of performance appraisal. In *Business Performance Measurement and Management: New Contexts, Themes and Challenges* (pp. 195–206). http://doi.org/10.1007/978-3-642-04800-5_13
- [63]. Prowse, P., & Prowse, J. (2016). Whatever happened to human resource management performance? *International Journal of Productivity and Performance Management*, 23(2), 145–162. <http://doi.org/10.1108/17410401011014230>
- [64]. Ramayah, T., Lee, J. W. C., & In, J. B. C. (2011). Network collaboration and performance in the tourism sector. *Service Business*, 5(4), 411–428. <http://doi.org/10.1007/s11628-011-0120-z>
- [65]. Reed, R., & DeFillippi, R. J. (1990). Causal Ambiguity, Barriers to Imitation, and Sustainable Competitive Advantage. *Academy of Management Review*, 15(1), 88–102. <http://doi.org/10.5465/AMR.1990.4308277>
- [66]. Rodrigues, A. P., & Pinho, J. C. M. R. (2010). Market orientation, job satisfaction, commitment and organisational performance: The specific case of local public sector. *Transforming Government: People, Process and Policy*, 4(2), 172–192. <http://doi.org/10.1108/17506161011047398>
- [67]. Sabiu, M. S., Kura, K. M., Mei, T. S., Hasanur, M., Joarder, R., & Umrani, W. A. (2018). The Mediating Role of Ethical Climate in the Relationship Between Performance Appraisal and Organizational Performance. *International Journal of Public Administration*, 0(0), 1–12. <http://doi.org/10.1080/01900692.2018.1498105>
- [68]. Sabiu, M. S., Mei, Tang Swee, & M H R Joarder. (2018). Social & Behavioural Sciences AIMC 2017 Asia International Multidisciplinary Conference DIGITAL GAME DESIGN ACTIVITY : IMPLEMENTING. *The European Proceedings of Social & Behavioural Sciences*, VIII(2), 2357–1330.
- [69]. Sabiu, M. S., Mei, T. S., & Joarder, M. H. R. (2016a). An empirical analysis of Hrm practices and Organizational performance relationship in the context of developing nation: The moderating effect of ethical climates. *International Journal of Management Research & Review*, 6(10), 1463–1481. <http://doi.org/10.1002/14356007.a13>
- [70]. Sabiu, M. S., Mei, T. S., & Joarder, M. H. R. (2016b). Mediating Effect Of Ethical Climates On Hrm Practices And Organisational Performance: A Proposed Theoretical Frame Work. *Asian Journal of Multidisciplinary Studies*, 8819(7), 95–101.
- [71]. Schluter, J., Winch, S., Holzhauser, K., & Henderson, A. (2008). Nurses' moral sensitivity and hospital ethical climate: A literature review. *Nursing Ethics*, 15(3), 304–321. <http://doi.org/10.1177/0969733007088357>
- [72]. Selya, A. S., Rose, J. S., Dierker, L. C., Hedeker, D., & Mermelstein, R. J. (2012). A practical guide to calculating Cohen's f², a measure of local effect size, from PROC MIXED. *Frontiers in Psychology*, 3(APR). <http://doi.org/10.3389/fpsyg.2012.00111>
- [73]. Soane, E., Butler, C., & Stanton, E. (2015). Followers' personality, transformational leadership and performance. *Sport, Business and Management: An International Journal*, 5(1), 65–78. <http://doi.org/10.1108/SBM-09-2011-0074>
- [74]. Stone, M. (1974). Cross-Validatory Choice and Assessment of Statistical Predictions. *Journal of the Royal Statistical Society*, 36(2), 111–147. <http://doi.org/10.2307/2984809>
- [75]. Tan, F. ming. (2008). Organizational support as the mediator of career-related HRM practices and affective commitment: Evidence from knowledge workers in Malaysia. *Research and Practice in Human Resource Management*, 6(2), 8–24.
- [76]. Thite, M. (2013). Ethics and human resource management and development in a global context: case study of an Indian multinational. *Human Resource Development International*, 16(1), 106–115. <http://doi.org/10.1080/13678868.2012.737691>
- [77]. Tippins, M. J., & Sohi, R. S. (2003). IT competency and firm performance: Is organizational learning a missing link? *Strategic Management Journal*, 24(8), 745–761. <http://doi.org/10.1002/smj.337>
- [78]. Trust, D. (2015). Bello decries mass failure in NECO exams. *Daily Trust Newspaper*, pp. 1–5.
- [79]. Van Vuuren, L., & Eiselen, R. (2006). A role for HR in corporate ethics? South African practitioners' perspectives. *SA Journal of Human Resource Management*, 4, 4(3), 22–28.
- [80]. Victor, B., & Cullen, J. B. (1987). A theory and measure of ethical climate in organizations. *Research in Corporate Social Performance and Policy*, 9(1), 51–71.
- [81]. Victor, B., & Cullen, J. B. (1988). The Organizational Bases of Ethical Work Climates. *Source: Administrative Science Quarterly*, 33(1), 101–125. <http://doi.org/10.2307/2392857>
- [82]. Winstanley, D., & Hartog, M. (2002). Ethics and human resource management: Introduction. *Business Ethics. A European Review*, 11(3), 200–201.
- [83]. WorldBank. (2010). *Human Development Report 2010*. Retrieved from https://www.google.com/?gws_rd=ssl#q=human+development+report+2010
- [84]. WorldBank. (2013). *Human Development Report 2013 Retrieved 18th, Monday 2015*,.
- [85]. Wright, P. M., Gardner, T. M., & Moynihan, L. M. (2003). The impact of HR practices on the performance of business units. *Human Resource Management Journal*, 13(3), 21–36. <http://doi.org/10.1111/j.1748-8583.2003.tb00096.x>
- [86]. Wright, P. M., & McMahan, G. C. (1992). Theoretical perspectives for strategic human resource management. *Journal of Management*. <http://doi.org/10.1177/014920639201800205>