Moderating Effect of Employee Participation on Factors that Determine Effective Performance Appraisal (EPA): Data Screening and Preliminary Analysis

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Abstract

This paper reports the collected data concerning the moderating effect of employee participation on factors that determine effective performance appraisal (EPA). A survey technique was used to administer 518 surveys to academics in public Polytechnics and Colleges of Education (COEs) in North-East and North-West Nigeria. Preliminary screening and cleaning of data were performed in an effort to observe the expectations of multivariate analysis. Thus, Statistical analyses of missing data as well as an evaluation of univariate and multivariate outliers was done using SSPSS version 23. Result indicates that further analysis can be carried out as the data fulfill the basic requirements for that purpose.

Keywords: Statistical Analysis, Data, Effective Performance Appraisal (EPA), Human Resource Management (HRM)

Introduction

Contextually, prior studies concentrated on different predictors as determinants of EPA. The present study aims to fill this gap by examining organizational fairness which is measured based on four dimensions, organizational politics and, transactional leadership as predictors of EPA to be moderated by employee participation. This is in line with the suggestions made in prior studies on the need for further exploration of the area to contribute to the body of knowledge and its understanding (Ikramullah, et al., 2016; Iqbal et al., 2015). Similarly, the current study attempts to extend EPA research by utilizing the equity (Adams, 1963) and goal-setting (Locke & Latham, 1990) theories in explaining the relationship between the study variables so as to provide a better

understanding of the predictors. However, this paper mainly focuses on preliminary analysis of data collected for the present study.

The validity of conclusions drawn from statistical analysis outcomes accuracy is dependent on screening data at the initial stage in multivariate analysis which is generally hinged on confirming if there is any breach of the fundamental postulations of the multivariate analysis (AlAnazi, Shamsudin & Johari, 2016; Hoekstra, Kiers, & Johnson, 2012). This is because a preliminary procedure associated with collected data screening and treatment is indispensable as it aids in identifying whichever possible contraventions of core assumptions concerning the employment of multivariate methods in analyzing data (Hair, Black, Babin, & Anderson, 2010; McQuitty, 2018). Therefore, it becomes necessary to recognize the importance of the first process as a feat that provides the foundation for an expressive result of any quantitative research analysis (Umar, Shamsudin & Johar, 2015). Unfortunately, a reasonable number of scholars mostly ignore to embark on this important aspect in the research process possibly because of the inconvenience associated with it (Hair et al., 2010). However, disregarding this stage would produce a poor quality output (Umar, Shamsudin & Johar, 2015).

Researchers must bear in mind that the essence of screening data at the initial stage in multivariate analysis is meant to detect and rectify certain methodological mistakes, or at any rate, reduce their effect on the whole research outcomes (McQuitty, 2018).

The rationale behind conducting this research was to confirm that the key assumptions of multivariate analysis have been violated before conducting the main analyses for the study. This is in furtherance to a pilot study conducted to establish the reliability and the validity of the study constructs which the results confirmed (Babagana, Mat & Ibrahim, 2019). Therefore, the aim of this paper was to explore the data collected regarding the moderating effect of employee participation on organizational fairness (distributive, procedural, interpersonal and informational), organizational politics, and transactional leadership styles towards effect EPA. Accordingly, the paper examined the data gathered concerning the predictors of EPA, as well as related issues on data screening and preliminary analysis so as to ensure the suitability of data (Hair et al., 2010). Precisely, it strives to verify that there was no violation of the fundamental suppositions of multivariate analysis prior performing the main analyses for the study. This is important because overlooking this part of preliminary data analysis would certainly have an impact on the result worthiness as well as the appropriateness of the kind of analysis needed (Gorondutse & Hilman, 2014). Hence, the rest of the paper is thus structured as follows; the section that follows is section two (2), and it presents literature review. Then section three (3) highlights on the research method engaged for this study. Moving on, the results of the preliminary analysis are presented in section four (4). Finally, the last section presents conclusion on the basis of the analysis results

Literature Review

Following requests for universal contributions towards ensuring the practice of an effective performance appraisal (EPA) system (Ikramullah, Van Prooijen, Iqbal & Ul-Hassan, 2016), as well as addressing issues that have been observed as militating against EPA systems, attention is now focused on exploring issues in this area (Idowu, 2017; Ikramullah, et al., 2016; Iqbal, Akbar & Budhwar, 2015; Joseph, 2015). So far, aside from developing frameworks, previous studies

focused on some variables or factors as predictors of EPA (e.g. Abbas, 2014; Christopher, Gregory, Alice, & Elizabeth, 2017; Phin, 2015). Moreover numerous studies have been undertaken on certain predictors such as organizational (appraisal) fairness (Abbas, 2014; Phin, 2015), organizational politics (Rosen, Kacmar, Harris, Gavin & Hochwarter, 2017), leadership (Tredrea, 2018), and employee participation (Roberts, 2003; Saad, 2014).

However, regardless of the abovementioned empirical studies that focused on either one or a combination of these predictors in shaping EPA, existing literatures show that less focus may have been given to how these predictors might collectively contribute to better understanding and comprehending EPA. Even if any, they are limited. Hence, there is scantiness of studies in this area especially among academics in HEIs. Thus, this study will be substantially unlike the ones that may be in existence because as earlier stated, their work generally focused on either one or a combination of some of the predictors aforementioned. Specifically, this study contributes by developing a framework which embodied the aforesaid predictors among academics in Nigerian HEIs to determine if they will lead to EPA. Thus, for the present study, except for organizational fairness which equity theory provides some theoretical underpinnings to support the relationship between it and EPA, for the remaining predictors, goal setting theory is used to provide explanations as to their relationships with EPA.

Drawing from literature, organizational fairness in PA signifies employee acceptance of the process, suggesting that they decide to partake in the appraisal with the perception or believe in the fairness, validity and benefits of the process (Kim & Holzer, 2016). Hence, fairness of the appraisal decision is a crucial issue in the practice of PA (Rusli & Sopian, 2013). This is because, according to Warokka, Gallato, Thamendren and Moorth (2012) perceptions of fairness arise from consideration of the outcomes achieved, the procedures used, and the way the decision-making processes were achieved and clarified. Based on literature, scholars argued that organizational fairness is founded on equity theory (Adams 1963) consisting of distributive fairness, procedural fairness and interactional fairness (interpersonal and informational) (Cheng, 2014; Collins & Mossholder, 2017; Karkoulian, Assaker & Hallak, 2016; Sharma, Sharma & Agarwal, 2016). Thus, it has been reported that employees' perceived fairness influences effectiveness of PA (Salleh, Amin, Muda & Halim, 2013).

Besides organizational fairness, another important construct observed to influence EPA is organizational politics (OP). The concept has for some time been explained as the perceptions of individual's self-serving behavior which is connected to social conducts in organizational or group rims (Rosen, Kacmar, Harris, Gavin & Hochwarter, 2017). It is a unique sphere of interpersonal relations in an organization (Vigoda, 2003). Its major uniqueness are individuals' readiness to use power in their determinations to inspire others and grasp personal or group interests to avoid negative effect in the organization (Bozeman, Perrewe, Kacmar, Hochwarter, & Brymer, 1996). However, Saad and Elshaer (2017) explains the concept as being related to the sense of fairness in an organization.

According to Naseer and Ahmad (2016), OP is a reality that organizations must contend with, particularly regarding PA. Extant literatures have emphasized the prominence of politics regarding PA (Shah & Hamid, 2016). According to Ahmad (2007), PA embraces the use of a number of political influences and power where the link among raters and ratees is likely to

nurture an internal political relationship. The significance of influence politics play on employee PA has been narrated in Tziner, Latham, Price and Haccoun's (1996) study (Shah &Hamid, 2016). Moreover, studies have demonstrated that politics have a significant influence on PA processes and outcomes (Ahmad & Lemba, 2010; Dhiman & Maheshwari, 2013; Murphy & Cleveland, 1991; Swanepoel, Botha & Mangonyane, 2014). Similarly, Arshad, Masood and Amin (2013); Poon (2004) established that employees' perceptions of political motives influenced their intention to quit, however, by declined job satisfaction.

However, in spite of the above mentioned predictors on their impacts in determining EPA, Gozukara (2017) also acknowledged the existence of a substantial amount of research on leadership, but its impact on PA satisfaction is scant. In addition, a review of obtainable literature indicates that less attention has been focused on how transactional leadership style influences EPA. Thus, it is rational to assume that EPA could be influenced by transactional leadership. It is a leadership style that exhibits leadership behaviors, which are considered as "contingent reward" and "management by exception" regarding its active and passive characteristics (Bass, 1985). Generally, it is assumed that individuals are inspired by reward and punishment (Torlak & Kuzey, 2019). This type of leadership style involves vigilantly spotting deviances and inaccuracies in order to pursue corrective actions (Bass, Avolio, Jung & Berson, 2003). Transactional - oriented leader just relates with employees when expectations are not fulfilled as well as benchmarks and procedures not adhered to (Bass, 1990). Findings of studies reported relationships between transactional leadership and some predictors or factors. For instance, Bycio, Hackett and Allen (1995) reported its positive relationship followers' commitment, satisfaction, and performance. However, Gozukara (2017) found that leadership style is positively linked to organizational diagnosis and PA satisfaction. Thus, Torlaka and Kuzey (2019) suggest that leaders should support employees' welfare and full employee participation be encouraged in teamwork. They further argue that these tactics on the leaders' part will guarantee employees' positive feelings, perceptions in the efficient and EPA processes.

Besides, notwithstanding the existence of empirical evidences to support better understanding and knowledge on the influences of organizational fairness, organizational politics and leadership, previous studies have also recognized the role of employee participation towards several aspects of PA. Employee participation is a process where employees assume influence of their work and its conditions by integrating their participation in decisions concerning their work (Khalid, & Nawab, 2018). Research suggests that encouraging and permitting employees to participate in the appraisal process is correlated with positive employee reactions to the PA system (Rubin & Edwards, 2018). Also, employee participation in performance management system (PMS) development is reported as linked to perceptions held on the appraisal system fairness (Cawley, Keeping & Levy, 1998). Likewise, Dewettinck and Dijk (2013) reported a significant relationship concerning the level of employee participation and PMS effectiveness. The findings specifically revealed that PA and employee participation significantly correlate to perceptions of appraisal fairness and PMS effectiveness. Furthermore, Mulvaney (2017) in a study found that employee participation were significant predictors of satisfaction with the PA. As earlier mentioned, despite the theoretical role of employee participation in influencing some aspects of PA, to date, empirical studies exploring EPA is scarce.
Moving on, the next section highlights on the methodology engaged in this study

Methodology
Sampling and Procedure
Academics in public Polytechnics and Colleges of Education (COEs) sited in North-East and North-West regions in Nigeria were used to generate the required sample for this study. Sample was generated from thirty one (31) institutions situated in the 10 states of the two regions zones. A quota sampling procedure was employed to select the determined sample size. On the basis of the established sample size of 518, this study distributed 518 surveys to academics of the HEIs mentioned above. To prompt higher response rate, in addition to frequent phone calls made (Traina, MacLean, Park, & Kahn, 2005), SMS were also sent (Sekaran, 2003). Owing to the follow up procedure engaged the outcome produced impressive response as these efforts yielded 413 surveys were returned from 518 distributed. This represents a response rate of 79.73%. Of the returned surveys, 395 which account for 76.25% of the returned surveys were found usable, and therefore, the valid and usable survey set were 395.

Measures
In measuring the items of the instrument, the combination of seven-point and five-point Likert scales were used as this helps in averting common method bias (Crampton & Wagner, 1994), as well as generating good quality results (Sauro, 2010).

PAS Effectiveness
Three (3) items were adapted from the works of (Chang (2005). In order to achieve this study's objectives, seven-point Likert scale ranging from was used to measure EPA. An example of adapted items is "in my institution, performance appraisals are based on objective and quantifiable results". This instrument has been successfully used in previous studies (e.g. Chan, Lee, Lee, Loh, & Low, 2013; Long & Perumal, 2014).

Organizational Fairness
Organizational fairness was measured with twenty (20) items by Colquitts's (2001). They are also known as Justice Measures Items (JMI). These items were used previously (see Collins & Mossholder, 2017; Ford, Wang, Jin & Eisenberger, 2018; Judge & Colquitt, 2004; Karriker & Williams, 2009; Li, Sarathy, Zhang & Luo, 2014; Phin, 2015; as well as Sharma and Dhar, 2016. Accordingly, this study adapts the JMI, which reflects the four elements of organizational fairness distributive, procedural, interpersonal, and informational. The measurement has satisfactory internal reliabilities, ranging from 0.812 to 0.885 (Phin, 2015). Organizational fairness was measured on a five (5) Likert scale ranging from '1' "strongly disagree" to 5 "strongly agree".

Perceptions of Organizational Politics Scale Items (POPS)
In this study, Labrague, McEnroe-Petitte, Gloe, Tsaras, Arteche and Maldia's (2017) measurement was adapted to measure Perceptions of Organizational Politics Scale (POPS) which has three (3) dimensions with nine (9) items. The first dimension which is "general political behaviour" has two (2) items, while the second and third dimensions are "go along to get ahead", and "pay and promotion policies" which has three (3) and four (4) items respectively. Some of the items adapted are "some lecturers in this institution attempt to build them up by tearing

others down", "lecturers here usually don't speak up for fear of reaction/retaliation by others" and "favouritism rather than merit determine who gets ahead among lecturers around here". All the items were also measured on five (5) Likert scale.

Transactional Leadership

To measure transactional leadership, four (4) items were used by Dai, Dai, Chen and Wu (2013) adapted from Bass and Avolio's (1990) multifactor leadership questionnaire (MLQ) for their study. The MLQ has been extensively used on numerous studies (e.g, Bass, et al., 2003; Charbonneau, Barling & Kelloway, 2001; González-Cruz, Botella-Carrubi & Martínez-Fuentes, 2019; Yahaya, Taib, Ismail, Shariff, Yahaya, Boon & Hashim, 2011). This study adapted item utilized by Dai, et.al (2013). The internal consistency coefficients is 0.76, implying good reliability (Dai, et.al. 2013). Accordingly, self-ratings was employed to get responses on every item of the transactional leadership scale using five-point Likert scale Example of the items was; "my HOD gives me what I want to exchange for my hard work".

Employee Participation

Giles and Mossholder (1990) items for measuring level of employee participation in PA process were adapted from Saad (2014). The instrument has five (5) items. Five (5) Likert scale questioning respondents to rate the level of their agreement or disagreement to the items was used. However, the items in the original measurement are adapted to suit the needs of this study. For instance, one of items is "my HOD asked me to share my views about my performance".

Result
Missing Value Analysis

Missing data in most research activity is a normal occurrence and for this reason, it is imperative to pay attention and observe if there was any missing data before analysis (Hair et al., 2010). Missing values implies answers or items observed not to have been completed by respondents in a survey (Umar, Shamsudin & Johar, 2015). In a study, the magnitude of missing data is observed to occur as well as the extent of its effects varies (Hair et al., 2010). For instance, if a rate is less than 1%, that is okay and acceptable, and if it descends lower than 5% it is tolerable and manageable, but, if it extends to 15%, that warrants a strong action which requires employing advanced approach to address it (Acuna & Rodriguez, 2004). However, there is no any conventional range of missing value in a dataset, thus less than 5% is deemed as insignificant (Schafer, 1999; Tabachnick & Fidell, 2007).

Considering the effect of missing data in analysis, for this study, preventive measures were taken at the point of data collection in the field so as to reduce the rate of missing data. For instance, where the surveys were completed in the researcher's presence, the attention of the participant/respondent is instantly drawn when it is realized that a number of boxes were not marked by the respondent to instantly and carefully complete the survey appropriately (Gorondutse & Hilman, 2014; Maiyaki & Moktar, 2011). Subsequently, upon retrieval of completed surveys, rapid checks were conducted on the instrument to ensure they were properly completed, especially all questions answered. This assisted considerably in reducing the number of missing data (Gorondutse & Hilman, 2014; Hussaini, Abubakar, & Yusuf, 2018). Consequently,

the data was run using SPSS V23 for analysis to determine if missing data exist or not. The result of the analysis disclosed in the SPSS dataset, of a total of 22,515 data points, 8 were randomly missed and this represents 0.036% of the total data points. Specifically, Effectiveness of PA (EPA2-1; EPA6-1), Distributive Fairness (DF3-1), Procedural Fairness (PF6-1), Informational Fairness (INF4-1; INF5-1), Organizational Politics (OP9-1) and Employee Participation (EP3-1), were found to be missing but no missing values were found in Interactional Fairness and Transactional Leadership. Accordingly, the issue of missing data was addressed by way of substituting the values exploiting expectation maximization (EM) procedure due to its distinctive capacity to replace randomly values that are missing (Karanja, Zaveri, & Ahmed 2013). Table 4.1 below displays the aggregate and percent of values that are randomly missing in this study**.**

Table 4.1:
Total and percentage of missing values

Variable	Number of Missing Values
Effective Performance Appraisal	2
Distributive Fairness	1
Procedural Fairness	1
Interpersonal Fairness	0
Informational Fairness	2
Organizational Politics	1
Transactional Leadership	0
Employee Participation	1
Total Number of Missing Values	8 out of 22,119 data points
Percentage	0.036%

Assessment of Outliers

Having replaced missing values, the next stage after cleaning and screening the data is detecting outliers. Veradi and Crux (2008) explained outliers as data which seem to be considerably detached from another data in a set, that are substantially likely to negatively affect results (Maiyaki & Moktar, 2011). Therefore, preventing result which appears biased, there is the need for data set to be checked for outliers before further analysis (Liu Shah, & Jiang, 2004). This is because it is worthless conducting analysis when dataset is tainted with outliers (Umar, Shamsudin & Johar, 2015). For this study, univariate and multivariate outliers were analyzed with standardized values of ±3.29 z-scores (p < .001) (Tabachnick & Fidell, 2007), as well as, by utilizing Mahalanobis D2 determinant as suggested in both instances (Tabachnick & Fidell, 2013). The rationale behind engaging Mahalanobis'distance as proposed by Van Bruggen, Spann, Lilien and

Skiera (2010); Chambers (1986) is centered on its ability of identifying observations that are set aside from the center of the data, with minor impact on variables that are tremendously interrelated variables. Mahalanobis values which are above that level are to be deleted. However, pursuing this principle, there was no multivariate outliers detected for deletion in the dataset that may possibly impinge on the worthiness of the procedure for data analysis. Hence, with regards to the five (5) constructs in the present study, the threshold chi-square is 74.75 at p = 0.001 and the Mahalanobis distance value should not exceed SPSS value of 74.75. Therefore, the final valid dataset in this study stand to be 395.

Demographic Profile of Respondents
Statistical analyses show greater percentage of the research the respondents numbering 352 (89.1%) were male while 43 (10.9 %) were female. Similar distribution has been observed in prior studies (Sukirno & Siengthai, 2011). However, the analysis further revealed that 102 (25.8%) of the respondents whose ages range between 36-40 years are in the majority and 3 (0.8%) whose ages fall between 61-65 years are the least number among the respondents. Also, 66.6% or 263 respondents are in the majority in terms of highest educational attainment but relating to years of working experiencing or length in service, those that are in the category of 11-15 years are 108 (27.3%) and closely followed by 107 (27.1%.) as those that served between 16 years and above. Lastly, in to relation rank/position, out of the total sample, 33.7% of the respondents were on the rank of Lecturers II - Lecturers I, and are followed by Senior Lecturers – Principal Lecturers (29.3%). Therefore, based on the demographic analysis of the respondents, conclusion is drawn that the respondents have the vital information required for achieving the objectives of this study. This is evident as the details are presented in table 4.2.

Table 4.2

Respondents Demographic Characteristics

Variable	Frequency	Percentage
Gender		
Male	352	89.1
Female	43	10.9
Age		
25-30	10	2.5
31-35	67	17.0
36-40	102	25.8
41-45	78	19.7
46-50	81	20.5
51-55	43	10.9
56-60	11	2.8
61-65	03	0.8
Education		
HND	21	5.3
Bachelor	79	20.0
Masters	263	66.6
PhD	32	8.1
Experience		
0-1	03	0.8
2-5	77	19.5
6-10	100	25.3
11-15	108	27.3
16 and Above	107	27.1
Rank		

AL-LIII	60	15.2
LII-LI	133	33.7
SL-PL	116	29.3
CL	47	11.9
INS-PI	28	7.1
CI	03	0.8
TT-PT	07	1.8
CT	01	0.2

Response Rate

It took three months (3) to collect data for this study. Frequent phone calls were made (Traina, MacLean, Park, & Kahn, 2005) as well as SMS sent (Sekaran, 2003) to those unable to fill and return the surveys after three (3) weeks (Dillman, 2000; Porter, 2004) in order to elicit high response rates from the respondents. As a result of these efforts, 413 surveys were returned accounting for 79.73% of the 518 surveys administered. Moving on, following the data cleaning process, 395 surveys were found to be unusable for further analysis. Thus, only 395 set of surveys representing 76.25% were valid and used for further analysis.

Table 4.3
Response rate of the Survey Questionnaire

Response	Frequency	% Rate
No. of Distributed Questionnaires	518	100
Returned Questionnaires	413	79.73
Returned and Usable Questionnaires	395	76.25
Returned and Excluded Questionnaire	18	4.56
Questionnaires not Returned	105	20.27

Conclusion is drawn that a 79.73% rate of response is deemed adequate for data analysis because a 30% response rate is acceptable for surveys (Sekaran & Bougie, 2010). Besides, this is further supported by the result of power analysis, which is also a way to statistically determining a suitable study sample size (Faul, Erdfelder, Buchner & Lang, 2009). Moreover, from the result of the analysis, it is clear that the aggregate of surveys retrieved goes beyond the least sample size of 370 respondents based on Krejcie and Morgan's (1970) table. For that reason, drawing from

Al-Marri, Ahmed and Zairi (2007) the valid response rate of 79.73% fulfilled the numerical requisites and very appropriate to test postulated relations of the study variables.

Non- Response Bias

Non-response bias occurs when a substantial variation between responses and non-responses to survey exist (Lambert & Harrington, 1990). It is contended that respondents' late response to items implies unwillingness to respond without being prompted by the researcher's follow-up (Churchill & Brown, 2004). Accordingly, an independent samples t-test was carried out as suggested by in keeping with Armstrong and Overton (1977). Pursuance to that, the respondents were split into two categories: early respondents (i.e., responses received within 30 days) and late respondents (i.e., responses received after 30 days) with regards to five (5) main survey constructs (Effectiveness of Performance Appraisal (EPA), Organizational Fairness (OF), Organizational Politics (OP), Transactional Leadership (TL), and Employee Participation (EP) (Vink & Boomsma, 2008). The result of the T-test is displayed in Table 4.4.

Table 4.4
Non-Response Bias Independent-Samples T-test Results

Variables	Group	N	Mean	SD	Levene's Test for Equality of Variances	
					F	Sig
EPA	Early	356	5.5131	1.00125	.243	.623
	Late	39	5.8632	.94503		
DF	Early	356	3.7622	.88315	.162	.687
	Late	39	4.1282	.94045		
PF	Early	356	2.9992	.76327	.117	.733
	Late	39	3.2967	.80037		
INF	Early	356	4.0393	.39876	.737	.391
	Late	39	4.4615	.32209		
IF	Early	356	3.3671	.75641	2.102	.148
	Late	39	3.7846	.85518		
OP	Early	356	3.3113	.58113	4.763	.030
	Late	39	3.1966	.69644		

TL	Early	356	3.1601	.65488	2.368	.125
	Late	39	3.2244	.71817		
EP	Early	356	2.7527	.88802	.097	.756
	Late	39	2.9026	.89780		

From the table above, it is evident that generally, the range mean and standard deviation for early and late responses clearly varied. It can be seen that the 2 tailed t test result (Table 4.4) demonstrates no significant difference with regard to the early and late responses based on EPA (t 0.243, p < 0.623), DF (t 0.162, p < 0.687), PF (t 0.117, p< 0.733), INF (t 0.737, p < 0.391), IF (t 2.102, p < 0.148), OP (t 4.763, p < 0.030), TL (t 2.368, p< 0.125), and EP (t 0.097, p< 0.756). Consequently, drawing from the Levene's test results conclusion can be made that to a large extent there is no existence a very significant difference between the early and late respondents, and, accordingly, no problem of non-response bias (see Table 4.4).

Common Method Variance Test
Common Method Variance (CMV) has been defined as the "variance that is attributable to the measurement method rather than to the construct of interest" (Podsakoff, MacKenzie Lee & Podsakoff, 2003, p. 879). It is has also been defined as the "systematic error variance shared among variables measured with and introduced as a function of the same method and/or source" (Richardson, Simmering & Sturman, 2009, p. 763). Scholars concur that CMV is an important matter for researchers by self-reporting surveys (Podsakoff et al., 2003). Moreover, Conway and Lance (2010) maintained that "common method bias inflates relationships between variables measured by self-reports" p. 325). Self-reported information from academics of Nigerian Polytechnics and COEs was used in this study. Since self-reports were used to collect data on the exogenous as well as endogenous constructs, issues connected to common methods may misrepresent the real quality of the data gathered. Accordingly, Harman's (1960) single factor test was performed in confirming non-existence of variance in scores examined as well as the correlations between the constructs are not overblown owing to the CMV effect. However, notwithstanding some debates on the extent of relevance of CMV on data (Bagozzi, 2011), CMV is basically considered essential issue in analysing data (Umar, Shamsudin & Johar, 2015). Consequently, some procedural remedies were considered in this study aimed at reducing CMV effect of (MacKenzie & Podsakoff, 2012; Podsakoff,MacKenzie, & Podsakoff, 2012; Viswanathan & Kayande, 2012). Initially, to ensure confidentiality, study respondents were assured that their responses were confidential. Also, refining scale items was also done to reduce method biases. Finally, straightforward English was written so that all questions in the survey were understood in order to enhance scale items. Afterwards, as earlier stated, Harman's (1960) single factor test was statistically applied.

Consequently, the result of the analysis shows that five factors are explaining cumulative sum of 54.34% of the variance, with the largest factor explaining 30.70% of the total variability, which is below the approved 50% (Kumar, 2012). Besides, the outcome show no factor accounted

for majority of covariance for predictor constructs (Podsakoff et al., 2012), therefore, CMV is likely not to be an issue in the present research data.

In the present study, basic components factor analysis was conducted on the entire indicators or constructs. Thus, results indicated absence of any factor beyond 50% of the variance but just 30.70% of the total variance was explained by the single factor, implying the non-existence of common method bias in the study. This is consistent with position of some scholars (Lowry & Gaskin, 2014; Podsakoff et al., 2003; Umar, Shamsudin & Johar, 2015) who submitted that CMV's effect is established when a single factor report beyond 50% of the variance.

Implication to Research and Practice

Literature review in this paper establishes that organizational fairness, organizational politics, transactional leadership and employee participation are predictors that could support EPA. Therefore, it is imperative to reflect on how these elements could jointly influence EPA among academics at the onset prior designing a study project. The aim of this study is to make an effort to examine the aforementioned variables to determine how they could impact on EPA among academics in HEIs. Ultimately, the findings could assist HEIs policy makers and administrators in making policies that could make PA effective.

Conclusion

This paper reviewed some extant literature on the various issues under investigation and also, presented preliminary analysis of the data collected by means of a sequence of statistical procedures towards making sure that the data collected fulfils the multivariate postulations. Having followed the various processes diligently, the data was found to have met the requirements and thus, it was used for further multivariate analysis that included the evaluation of measurement and structural models.

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