

Effects of Psychological Antecedents of Engagement on Organizational Performance: Mediating Role of Employee Engagement.

Abdullah Adewumi Sulaiman*, Azura Abdullah Effendi, Saif Isam Aladwan

School of Management, Universiti Sains Malaysia, 11800, Minden, Gelugor, Penang, Malaysia

*Corresponding Author: abdullah.as@student.usm.my

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Abstract: This study aims to assess the influence of psychological antecedents of engagement on the performance of public sector organizations in a developing nation within the context of human resources management and public sector management. The study proposed a conceptual model comprising 7 hypotheses tested with employment of the structural equation modelling-partial least squares. Data was gathered using structured questionnaire from 303 public employees from 10 public sector organizations in Nigeria. The results revealed that of the three main psychological antecedents of engagement, psychological meaningfulness antecedents of engagement and psychological safety antecedents of engagement directly influenced employee engagement. However, no effect was found for psychological availability antecedents of engagement. The finding also showed that employee engagement mediates the relationship between psychological antecedents of engagement and organizational performance. The most significant effect was established in the relationship between psychological meaningfulness antecedents of engagement and employee engagement. The limitation of this study relates to its generalizability because it focuses on only the public sector organization. Additionally, it is cross-sectional research, and the lack of time which a longitudinal study will have could make the findings broader than it is.

Keywords: Psychological antecedents of engagement, employee engagement, Nigerian public sector performance, organizational performance, social exchange theory, self-efficacy, Structural Equation Modelling.

1. Introduction

Organizational performance is an important perception used in describing the progress and trend that an agency has been able to achieve within its operational context in relation to the resources at its disposal and how the resources has been used effectively and efficiently [1]. Consequently, organizational performance has attracted much attention from both practitioners and academicians. Due to this reason, organizations both public and private sector, expended several efforts which sometime attracted high financial implications in trying to make sure their performance is consistent and not diminishing, while remaining competitive within the business landscape where they operate [2], [3].

Unfortunately, performance in public organization is often not at par with that of the private sector organizations due to the non-profit generation motives with which the public sector organizations have been established [4]. Meanwhile, the motive of this present study is not to compare between the private and public sector performance, however the objective is to investigate factors that could bring a significant positive influence on the performance of the public sector organization, particularly one of those operating within the sub-Saharan Africa region. Although, there have been several bodies of literature that examines the performance of public sector [4]–[8] evidence of wholistic evaluative studies is still scarce in the third world countries like Nigeria [9], [10]

Corresponding Author: Abdullah Adewumi Sulaiman, School of Management, Universiti Sains Malaysia, 11800, Minden, Gelugor, Penang, Malaysia. Email: abdullah.as@student.usm.my

In the early 1960s, the Nigerian public sector was restructured for the better provision of essential services to the Nigerian public just few months after the country's attainment of independence from the colonial rulership [11]. From that period till present, the Nigerian public sector has undergone more than nine restructuring activities (i.e., the Morgan Commission of 1963, the Adebo Commission of 1971, the Udoji Commission of 1972-74, the Dotun Philips Panel of 1985, the 1988 Civil Service Reorganization Decree of Public sector Reform, 2005, the Okonjo-Iweala Public sector Reform, (2014) [12] and has expended over 30 billion USD (National Bureau of Statistics, 2018). However, these restructuring activities have had little or no impact on the performance of the Nigerian public sector. Although several indigenous authors have investigated the issues of poor performance of the public sector in Nigeria [4], [7], [13], [14], however, there is no evidence of a study that has investigated the issues through in-depth analysis of employee engagement and particularly combining psychological antecedents of engagement in finding solutions to the problem of the Nigerian public sector. Aside from the non-profit generating idiosyncrasy of the public sector, another peculiarity that can be associated with the sector is the fact that its employees are mainly intrinsically motivated through their perception of serving their nation [4]. Hence,

hinging investigation on the humane elements of the employees which would provide returns that is emotionally and economically satisfying through employee engagement is pertinent for the improvement of the public sector performance in Nigeria.

Therefore, this study examines how the psychological antecedents of engagement through employee engagement influenced the Nigerian public sector performance positively while employing the Social Exchange Theory (SET) in amplifying the understanding of the relationships. More precisely, the study aims to explore the influence through the three psychological antecedents of engagement (i.e., psychological meaningfulness, safety, and availability) while also bringing in self-efficacy as a new antecedent construct under the psychological availability antecedents for a more robust impact. The remaining part of the article is structured in the following manner: the next section presents the literature review and hypothesis. This is followed by the discussion of the methodology adopted for the sampling technique and data collection. After this, the data analysis and results are presented. Lastly, the paper presented the discussions on findings, implications, limitations and future research, and the concluding remarks.

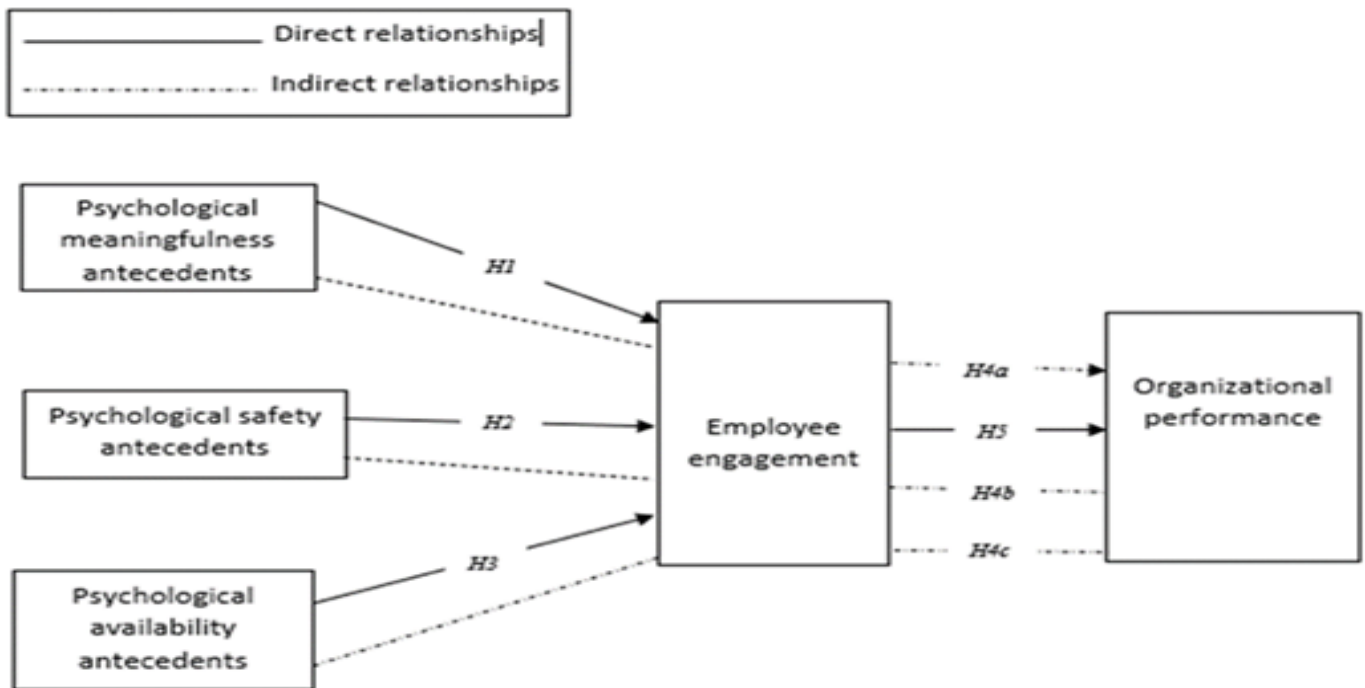


Figure 1. Research Model. Source: Researcher's field work (2022).

2. Theoretical background, literature review, and hypothesis development

2.1 Social Exchange Theory (SET)

SET offered the pedestal to describe the attitude and behaviour of individuals in the workplace. Social exchange

describes an exchange occurring between two parties with a proposed condition of returns [15]. SET involves an exchange situation where a party proffers a behaviour which is mutually reinforced by the reciprocating behaviour of the other party [15]. SET in a plain terminology can be said to express the 'give and take' condition of a relationship. A social exchange is formed when a party returns the goodwill extended to them by another party, therefore creating a social relationship [16]. SET contends that commitments are usually spawned through

a series of exchanges between individuals who are in a relationship of reciprocal mutuality [17]. If the parties continue to abide by the tenets of exchange, the relationship will metamorphosise into loyalty, trust, and mutual obligations [18]. Tenet of exchange encompasses all repayment or reciprocity rules such as the response or actions of a party is motivated by the actions of the other party. For example, when employees are provided with the required socioemotional and economic resources by their employers, they will be happy to respond with a commensurate action by bringing themselves totally towards achieving the organizational goals and objectives [18]. In the context of this study, employee engagement and its antecedents are the expected values that employees needed to be provided by their organization to enable them to bring their best to the service of the organization. This claim is consistent with Robinson et al, (2004) assertion that employee engagement is a two-way communion between employee and organization. One way is that organizations are rewarded by employees through their level of engagement (i.e., individuals will settle in being engaged to different degrees in response to the resources they are given by their organization) [19].

2.2 Public Sector Performance

Performance is an essential element which drives the organization towards its objectified success and competitiveness within the industry it operates [5]. It is however important for organizations that exist within the public sector to consistently operate at a level of performance that could be modelled across other sectors, particularly due to the role and position the public sector occupy in a nation's economic and social context [20]. Public sector organization's objectives are to create values for citizens because they are the ultimate consumers of public values [20]. Importantly, the impact of a country's low performing public sector on the citizen's social wellbeing as well as the nation's economic wellbeing can be detrimental to the growth and development of such country. Therefore, it is important to constantly bring to play factors that will motivate positive high performance rather than activities that do not drive the performance of the public sector [7]. One of the most widely studied factor for driving the performance of organizations is employee engagement [21], however, it is pertinent to understand that employee engagement does not just happen without the right and necessary antecedents present in an organization to bring the needed consequences to the performance of such organization [17]. Unfortunately, most of the studies on public sector employee engagement are majorly domiciled in the west with a very insignificant few found in Sub-Sahara Africa, particularly in Nigeria [14].

2.3. Psychological antecedents of engagement

The realisation of engagement involves a set of identified drivers or antecedents that must be always made available before employee engagement can be harnessed in the organization [22]. According to Kahn's (1990) observations, individual's perception of themselves and their workplaces encourages some temporary psychological conditions which

influence their readiness to personally engage in job assignments. Usually, individuals often unconsciously ask themselves three questions before they personally consider being engaged. For instance, employees may try to ask about the meaningfulness of bringing themselves into performing a particular task, or whether it is safe to engage in such task, and also if they are really available to engage in carrying out the particular tasks [22]. These three conditions also perfectly mirror the simple sense of contracts. Broadly, individuals go along with a contract when they are certain that they have what it takes to accomplish obligations, provided that the contract encompasses clear and desired outcomes, and if the contract also provides protective guarantees [23].

2.3.1. Relationship between psychology Meaningfulness Antecedents and employee engagement

Employees experience psychological meaningfulness when they have a sense of return on investment of their self in performing a task at work [24]. When employees perceived meaningfulness at their work, they often feel useful, worthwhile, and appreciated with a feeling that their efforts have made a difference and are not taken for granted [24]. Psychological meaningfulness encompasses antecedent factors such as job challenge, autonomy, reward and recognition, and opportunity for training and development. These factors have been reported in prior studies to be related to increased employee engagement because of their tendencies to provide chances and incentives employees need to bring in more of their selves into work role and carrying out tasks [17], [22], [24]–[27]. This is also consistent with Akingbola and van den Berg's (2019) argument that employee perceives these antecedent factors provide them the needed clarity and desired benefits for them to invest personally and increase their willingness to become completely engaged in their work performance. Based on the following discussions, we proposed the following hypotheses:

H1. Psychological meaningfulness antecedents of engagement have a positive influence on employee engagement.

2.3.2. Relationship between psychological Safety Antecedents and employee engagement

When employees perceived they have a sense of the ability to invest their capacities completely into role performances without feeling afraid of negative backlashes to their status, image, or career, they are termed to be experiencing psychological safety [23]. A work situation that possesses clarity in terms of behavioural consequences, and is trusting, secured, and predictable will provide employees with the feeling of psychological safety [22]. On the other hand, employees will experience an unsafe feeling where the work situation is full of inconsistencies, are unpredictable and are threatening, such that investing themselves in job role performance will be perceived as too risky. Major factors that foster psychological safety includes social support and transformational leadership [23]. This is consistent with the findings of Saks (2006) which reported that social support and transformational leadership both have significant positive

relationship with employee engagement. Based on the above discussion, this study hypothesised that:

H2. Psychological safety antecedents of engagement have a positive influence on employee engagement.

2.3.3. Relationship between psychological Availability Antecedents and employee engagement

Individuals' perceptions of capacity in attending to or completing a job role is directly influenced by the availability of the required resources. The feeling of psychological availability relates to employees' acceptance to being ready to engage personally at a particular moment [23]. Employees who show availability express their capability and preparation in investing their physical, cognitive, and emotional resources to completing job roles. On the other hand, a lack of these energies or distraction from bringing them into work performances will indicate an individual is psychologically unavailable. Consistent with previous studies, factors found to particularly influence psychological availability are role overload, work-role conflict, and resource inadequacy [22]–[25], [28], [29]. These factors bring distractions and issues from individual's external lives that can distract them psychologically from performing their roles and maintaining a balanced physical, cognitive, and emotional energy needed for investing themselves in role performance. Meanwhile, self-efficacy is introduced into the psychological availability antecedents' factors because of its capacity to encourage positive energies that individual requires to be engaged [30]. Therefore, the negative effect of other constructs on psychological availability will be expected to reduce with the positive effect that self-efficacy is bringing in to play. Based on these discussions, the study hypothesised that:

H3. Psychological availability antecedents of engagement will negatively influence employee engagement.

2.3.4. Mediating role of employee engagement

As earlier discussed, employee engagement is widely accepted by practitioners and academic to be an important work improvement factor that requires employer's notice. Meanwhile, to gain the benefit of employee engagement, employers need to nurture psychological perceptions of their employees and provide room in the organization for the other factors needed to always influence engagement level of their employees [25]. Antecedents can influence performance more effectively indirectly through employee engagement [17]. Different studies have identified a significant relationship between antecedents of engagement and organizational performance through employee engagement mediating role [17], [22], [25], [28], [29]. Therefore, from the foregoing, this study hypothesizes that:

H4a. Employee engagement mediates the relationship between psychological meaningfulness antecedents of engagement and organizational performance.

H4b. Employee engagement mediates the relationship between psychological safety antecedents of engagement and organizational performance.

H4c. Employee engagement mediates the relationship between psychological availability antecedents of engagement and organizational performance.

2.3.5 Relationship between employee engagement and organizational performance

Kahn's (1990) seminal report on individual's ability to bring themselves wholly into task performance first introduced the concept of engagement into work studies. Khan (1990) argued that individuals will normally employ and express their physical, cognitive, and emotional characteristics while carrying out job tasks. Since Kahn's (1990) report, several researchers have gained interest in the concept of engagement, majority of which stemmed from practitioners rather than academics [17]. Akingbola and van den Berg (2019) related employee engagement to directing of employees physical and cognitive efforts into achievement of work assignments and performance of work role in the organization. Employee engagement has become a popular work construct whose influence have been overtime reported to positively raise organizational performance [17]. This is consistent with Rich et al.'s (2010) assertion that organizations who can manage their employee engagement positively gained more competitiveness above those who couldn't increase their employee engagement level [31]. Therefore, it has become pertinent for organizations, specifically those operating in the public sector to strive towards raising employee engagement levels in their workplaces for the benefit of gaining the required positive consequences on their bottom-line [17]. Moreover, when employees are engaged, the limits to how far they would go in raising performance of the organization can be infinite [22].

Several research have identified a significant positive relationship between employee engagement and organizational performance [17], [25], [29], [32]–[35]. Unfortunately, most of these studies are concentrated only in the West, and very few have investigated its relationship with public sector's performance especially in the developing countries [28]. Although, there is also the negative side to intense employee engagement which is burn-out [36], nonetheless, the benefits of having engaged employees outweighs the negatives. Based on all the above discussions, this study hypothesised that:

H5. Employee engagement has a positive influence on organizational performance.

3. Methodology

The data used in testing the hypothesised relationship was gathered from a survey of public sector employees from ten Nigerian federal ministries, departments, and agency (MDAs). The respondents' demographic details such as age, gender, marital status, level of education, and tenure of service were also collected. Data was randomly distributed through the online survey among the employees of the ten selected Nigerian federal public sectors which have been grouped into the six geo-political zones of the country. The projected minimum size of 129 was determined through the 'G-power' statistical tool using a 0.15 effect size, 0.95 statistical power,

and the p-value of 0.5. The total distributed online questionnaire was 465 and 303 responses were recorded before the expiry date set for the online survey. The collected data were analysed using SmartPLS 3.3.3 for the structural equation modelling partial least squares confirmatory factor analysis [37]. The main exogenous construct for this study's model is a second-order reflective-formative construct (type II). Therefore, the study adopted the hierarchical component modelling technique (HCM). The adoption of the two-stage technique was due to the imbalance within the construct data and items [38].

3.1. Questionnaire Design

The study's questionnaire was adapted from the questionnaires from existing studies. A pre-test was carried out to check the quality and validity of the measurement items before the main data collection commenced. 10 employees from 10 Nigerian public sector organizations were selected to complete the pre-test. The respondents were asked to attempt the survey and highlight any of the item that showed any ambiguity in phrase or too difficult to comprehend and answer. Aside from this exercise, 4 specialists were also consulted for the content validity of the questionnaire. Minor adjustments and refinement were done to the questionnaire and data collection was conducted afterwards. The first section related to respondents' demographic information, the second section related to organizational performance, the second section evaluated employee engagement, and the third and final section evaluated the perception on the three psychological antecedents of engagement in the public sector organizations.

Organizational performance was assessed using a six-item measure adapted from Brewer et al. (2000). A seven-point Likert scale ranging from "1 = Strongly Disagree to 7 = Strongly agree" was used to assess the organizational performance of the public sector organization [39].

Employee engagement is the mediating variable for this study. Nine items adapted from Schaufeli et al. (2006) to measure the employee engagement. A seven-point Likert scale ranging from "1 = Strongly Disagree to 7 = Strongly agree" was used to assess employee engagement in the public sector organization.

The psychological meaningfulness antecedents of engagement were assessed using previously existing measurement items. For psychological meaningfulness antecedents, four items were adapted from Morgeson and Humphrey (2006) to measure job challenge and three items adapted for the measurement of autonomy [40]. Opportunities for training and development was measured using three items adapted from Carayon et al. (2006) [41] and reward and recognition was measured with three items adapted from Saks (2006) all measurements scale were assessed using a 7-point Likert scale ranging from "1 = Strongly Disagree to 7 = Strongly Agree."

Psychological safety antecedents of engagement were also measured using pre-existing measurements. Social support was measured with 5-items adopted from Morgeson and Humphrey

(2006), while transformational leadership was measured using 4-item adopted from Carless et al. (2000) [42]. All measurement items were assessed on a 7-point Likert scale ranging from "1 = Strongly Disagree to 7 = Strongly Agree."

Psychological availability antecedents of engagement were assessed same as the preceding two antecedents using previous measurements. Role overload was assessed using three items adopted from Bacharach et al. (1990) [43]. work-role conflict was also assessed using three items adopted from Rizzo et al. (1970) [44], similarly, resources inadequacy was assessed using three items adopted from Rousseau and Aubé (2010) [45], while self-efficacy was measured with 4 items adopted from Jones (1986) [46]. All items were assessed on a 7-point Likert scale ranging from "1 = Strongly Disagree to 7 = Strongly Agree."

4. Data Analysis

A full collinearity test was conducted to identify common method bias (CMB) [47]. The Herman single factor testing was done with all constructs regressing against a common variable. Table 4.1 presents the VIF values which all falls below 5. Therefore, there is no CMB issue in this study. This study gathered responses from 194, males and 109 females. Overall, 13 of the respondents had a PhD, 85 had Masters, 134 had Bachelor's, 35 had Higher National Diploma, and 36 had Ordinary National Diploma. Among the respondents, 214 were married while 6 were divorced. Most of the respondents (136) were between the ages 25-35, 133 were between 36-45, 27 were between 46-55, and 7 were between the ages of 56 and above.

4.1. Measurement model

The measurement model for the reflective lower-order constructs (LOC) was assessed through the evaluation of the loadings, average variance extracted (AVE), and composite reliability (CR). Meanwhile, collinearity and significance, as well as the relevance of indicator weightings were assessed for the formative higher-order constructs (HOC) [37]. A disjoint two-stage approach was applied for the exogenous construct (Psychological antecedents of engagement) [37]. As presented in Table 4.2 the respective loadings and CRs are all greater than 0.5 and 0.7. Additionally, the AVE was also higher than 0.5, ensuring that all three criteria for convergent validity and reliability for the measures were duly achieved. In relations to achievement of collinearity, the VIF values for the higher order construct HOC, were all below .5 minimum cut-off. For the discriminant validity, the more recently preferred condition called Heterotrait-Monotrait ration (HTMT) recommended by Henseler et al. (2015) [48] was utilised in place of the usual Fornell and Larcker (1981) [49] criterion. In the HTMT criterion, construct must be less than 0.9 before discriminant validity can be achieved. Table show that all constructs are not above the cut off value of 0.9.

Table 4.1 Full Collinearity Assessment

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	0.478	0.017		28.444	0.000		
	Aut	0.043	0.024	0.147	1.799	0.073	0.496	2.015
	EE	-0.044	0.030	-0.152	-1.479	0.140	0.313	3.193
	JobChal	-0.008	0.027	-0.029	-0.318	0.751	0.396	2.528
	OP	-0.018	0.028	-0.062	-0.655	0.513	0.373	2.683
	OTD	-0.015	0.025	-0.051	-0.609	0.543	0.465	2.150
	Resinad	0.019	0.021	0.064	0.866	0.387	0.617	1.620
	Rew&Rec	-0.004	0.025	-0.014	-0.156	0.876	0.439	2.279
	Rolo	-0.017	0.023	-0.058	-0.733	0.464	0.535	1.868
	Selfeff	0.029	0.023	0.100	1.245	0.214	0.519	1.926
	SocSupp	-0.005	0.032	-0.018	-0.167	0.868	0.279	3.585
	Transled	-0.005	0.031	-0.016	-0.146	0.884	0.290	3.446
	Worcon	0.002	0.021	0.008	0.109	0.913	0.614	1.629

a. Dependent Variable: Random

Table 4.2 Summary of Indicators Loadings, AVE, and Internal Consistency Reliability

Constructs	Items	Loadings	CA	Rho_A	CR	AVE
Organizational Performance	OP1	0.885	0.850	0.865	0.899	0.692
	OP2	0.868				
	OP4	0.839				
	OP5	0.727				
Employee Engagement	EE1	0.810	0.928	0.930	0.941	0.643
	EE2	0.825				
	EE3	0.847				
	EE4	0.855				
	EE5	0.838				
	EE6	0.845				
	EE7	0.586				
	EE8	0.856				
	EE9	0.714				
Job Challenge	JC1	0.700	0.837	0.874	0.890	0.671
	JC2	0.905				
	JC3	0.795				
	JC4	0.863				
Autonomy	AUT1	0.894	0.773	0.832	0.868	0.690
	AUT2	0.904				
	AUT3	0.672				
Opportunity for Training & Dev.	OTD1	0.841	0.801	0.806	0.883	0.715
	OTD2	0.899				
	OTD3	0.795				
Reward & Recognition	R&R1	0.785	0.855	0.862	0.896	0.634
	R&R2	0.715				
	R&R3	0.806				
	R&R4	0.864				
	R&R5	0.804				
Social Support	SOCSUP1	0.692	0.882	0.891	0.914	0.682
	SOCSUP2	0.831				
	SOCSUP3	0.865				
	SOCSUP4	0.881				
	SOCSUP5	0.846				
Transformational Leadership	TL1	0.903	0.937	0.937	0.955	0.840
	TL2	0.913				
	TL3	0.926				
	TL4	0.924				
Role Overload	RO1	0.813	0.790	0.897	0.872	0.696
	RO2	0.919				
	RO3	0.764				
Work-Role Conflict	WRC1	0.939	0.833	1.118	0.890	0.732
	WRC2	0.837				
	WRC3	0.782				
Resource Inadequacy Self-Efficacy	RESINAD1	0.938	0.883	0.897	0.945	0.895
	RESINAD2	0.954				
	SELFEFF1	0.900				
	SELFEFF2	0.806				
	SELFEFF3	0.900				
	SELFEFF4	0.841				

Note: OP3 and RESINAD3 were deleted due to low loadings

4.2. Structural model

Prior to the assessment of the structural model for this study, the validation of the HOC was carried out. Since the HOC comprised of the combination of all antecedents' factors under the three main psychological antecedents of engagement constructs, thus making them become the mother constructs (i.e., psychological meaningfulness, psychological safety, and

psychological availability antecedents of engagement). The HOC was validated by assessing the outer weights, outer loadings, and the VIFs [50]. The HOC's outer weight were found to be significant, also, the outer loadings were greater than .50. The assessment of the VIF values showed that all VIF values fall below the threshold of 5 [51], therefore, the issue of collinearity was not found in this study. Table 4.3 presents the result of the HOC validity.

Table 4.3 Validating the HOC

HOCs	LOCs	Outer weights	T Statistics	P Values	Outer Loadings	VIF
JobChal -> PsychMeaningfulness	JobChal	0.181	2.105	0.018	0.745	1.890
Aut -> PsychMeaningfulness	Aut	0.479	5.718	0.000	0.832	1.860
OTD -> PsychMeaningfulness	OTD	0.193	2.020	0.022	0.754	1.903
Rew&Rec ->PsychMeaningfulness	Rew & Rec	0.413	4.219	0.000	0.778	1.729
SocSupp -> PsychSafety	SocSupp	0.380	2.032	0.021	0.799	2.960
Transled -> PsychSafety	Transled	0.666	3.729	0.000	0.975	2.960
Rolo -> PsychAvailability	Rolo	0.242	1.980	0.024	0.424	1.685
Worcon -> PsychAvailability	Worcon	-0.110	0.998	0.159	0.155	1.604
Resinad -> PsychAvailability	Resinad	0.549	6.007	0.000	0.698	1.075
Selfeff -> PsychAvailability	Selfeff	0.664	8.041	0.000	0.799	1.067

Table 4.4 Discriminant Validity HTMT

Constructs	1	2	3	4	5	6	7	8	9	10	11	12
Autonomy												
Employee Engagement	0.579											
Job Challenge	0.783	0.551										
Organizational Performance	0.666	0.829	0.626									
Opportunity for Training and Dev.	0.548	0.629	0.531	0.610								
Resource Inadequacy	0.321	0.453	0.352	0.341	0.539							
Reward & Recognition	0.409	0.635	0.446	0.540	0.772	0.549						
Role overload	0.344	0.248	0.500	0.272	0.289	0.284	0.345					
Self-efficacy	0.528	0.490	0.659	0.541	0.561	0.192	0.541	0.208				
Social Support	0.485	0.685	0.520	0.532	0.689	0.597	0.711	0.311	0.540			
Transformational leadership	0.523	0.675	0.549	0.516	0.667	0.537	0.657	0.268	0.528	0.889		
Work-role conflict	0.183	0.081	0.287	0.109	0.109	0.210	0.182	0.778	0.089	0.100	0.072	

The assessment of the structural model for this study was done by reporting the path-coefficient intervals, effect sizes, and the t-statistics for all the path achieved with a subsample of 5,000 bootstrapping. Table 4.5 and figure 4.1 presents the

results from the bootstrapping analysis. The main HOC for this study are the three psychological antecedents of engagement. The validation of the HOC was done by assessing each of the constructs under each mother constructs. Table 4.3 show the of validating of the HOC.

Table 4.5 Hypothesis testing

Hypotheses	Relationships	Std Beta	Std Error	T-Value	P-Values	BCILL	BCIUL	f ²	Decision
H1	PsychMeaningf-> EE	0.568	0.073	7.817	0.000	0.452	0.687	0.266	Supported
H2	PsychSafety -> EE	0.218	0.070	3.117	0.001	0.208	0.437	0.346	Supported
H3	PsychAvailab -> EE	-0.018	0.082	0.216	0.414	-0.177	0.092	0.000	Not supported
H5	EE -> OP	0.707	0.041	17.230	0.000	0.628	0.766	0.998	Supported

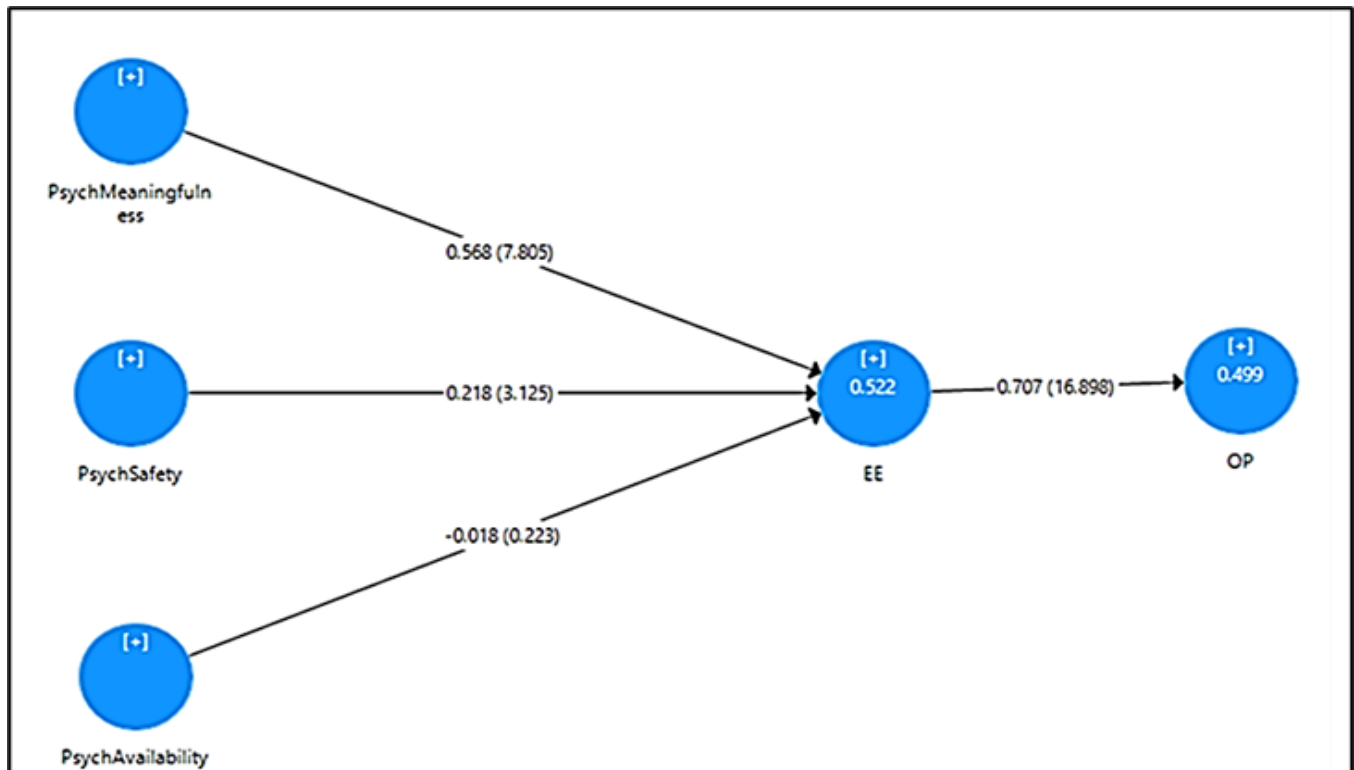


Figure 4.1. Bootstrapping Result of Structural Model HOC. Source: Researcher's field work (2022)

The results of the analysis in Figure 4.1 shows that the psychological meaningfulness antecedents of engagement ($\beta = 0.568$ $t = 7.805$) and psychological safety antecedents of engagement ($\beta = 0.218$ $t = 3.127$) have a significant and positive relationship with employee engagement. Therefore, hypotheses H1 and H2 are supported. However, psychological availability antecedents of engagement have an insignificant relationship with employee engagement ($\beta = -0.018$ $t = 0.223$). Therefore, hypotheses H3 was not supported in this study. Although, the negative outcome for psychological availability antecedent of engagement was not unexpected since most of the LOC combined antecedents' factors (i.e., role overload, work-role conflict, and resource inadequacy) were initially negatively related to employee engagement. Meanwhile, one of the LOC which is the new antecedent construct introduced under the psychological availability antecedent (self-efficacy) was revealed to have a positive relationship with employee engagement as shown in the path coefficient chart presented in Figure 4.2. Furthermore, the results from the analysis also

revealed that employee engagement is significantly positively related to organizational performance ($\beta = 0.707$, $t = 16.898$), therefore, hypotheses H5 was also supported. For the mediation results, employee engagement significantly mediates the relationship between psychological meaningfulness antecedents of engagement ($\beta = 0.401$ $p\text{-value} < 0.001$), psychological safety antecedents of engagement ($\beta = 0.154$ $p\text{-value} < 0.001$) and organizational performance. Therefore, hypotheses H4a and H4b are supported. However, employee engagement did not show any mediation between psychological availability antecedents of engagement and organizational performance, hence hypotheses H4c was not supported. The model in-sample prediction was assessed with the result of the R^2 values for both employee engagement ($= 0.522$) and organizational performance ($= 0.499$). The R^2 value for the main endogenous construct showed a sizeable value, allowing for the acceptance of the model's in-sample prediction.

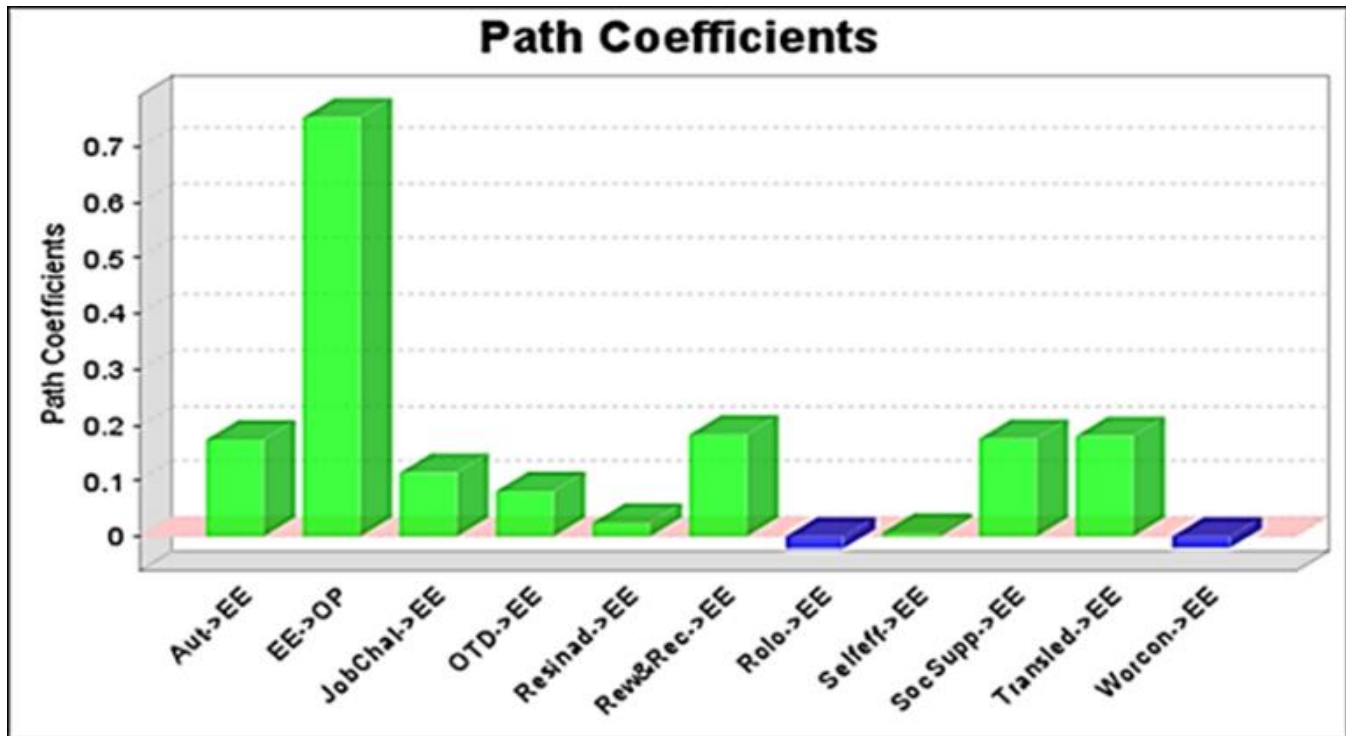


Figure 4.2. Path Coefficient Chart for LOC’s Individual Antecedent Factors

Table 4.6 Structural Model Results for Indirect Effects

Hypotheses	Relationship	Std Beta	Std Error	t-Value	p-Values	Decision	Mediation type
H4a	PsychMeaningful -> OP	0.401	0.062	6.513	0.000	Supported	Indirect
H4b	PsychSafety -> OP	0.154	0.051	3.036	0.001	Supported	Indirect
H4c	PsychAvailability -> OP	-0.013	0.057	0.220	0.413	Not Supported	Indirect

5. Discussion

The overarching objective of this study is to examine the influence of psychological antecedents of engagement on employee engagement and how this relationship can influence the performance of the Nigerian public sector organization using SET. This study has been able to combine all the suggested factors under the antecedents of engagement into three main psychological antecedents which are then assessed towards engagement and organizational performance. This study’s results validate the findings from past studies. Meanwhile, results from this study had mixed finding for the hypothesis relating to the three main psychological antecedents. Only two out of the three psychological antecedents (i.e., psychological meaningfulness and psychological safety antecedents) have significantly positively influence on employee engagement and organizational performance. However, the third main psychological antecedent (i.e., psychological availability antecedent) has no substantial effect on both employee engagement and organizational performance. This is a surprising finding considering the results reported by Rich et al. (2010). Nonetheless, this study’s result is still consistent with prior studies assertion on the fact that negative factors that constitute the psychological availability antecedents’ construct will

generate negative outcomes due to their encumbrance on individual’s ability to become engaged or bring their complete energies to role performance at work [22], [25], [28]. Furthermore, the effect found with the introduction of self-efficacy into the psychological availability antecedents factors creates a new path to argue the lack of positive effect of psychological availability on engagement. Although the influence of self-efficacy in this study is mild, the significance should not be underrated given the promised effect it can bring on organization’s bottom-line on a larger scale in the long run.

Based on the findings thus far, most of the individual factors that comprised psychological meaningfulness antecedents: job challenges, autonomy, opportunity for training and development and reward and recognition all have positive effects on engagement bringing the total positive effect of the main construct, psychological meaningfulness antecedents of engagement to also have positive relationship with employee engagement. This result is pertinent because individual’s perception of meaningfulness always precede their readiness to bring themselves physically, cognitively, and emotionally to engage while performing their roles at work. Similarly, factors selected to form the psychological safety antecedent of engagement: social support and transformational leadership both have significant effect on employee engagement which also translated to a positive relationship between the main psychological safety antecedent construct

and employee engagement. The support system that an organization practice goes a long way in given employees a positive perception of safety and security at the workplace. Furthermore, knowing that the leadership's acumen to allow creativity and discretionary efforts by employees without the fear of reprimand or punishment where mistakes occur will also give a positive perception of safety to employees allowing them to bring in their selves completely to engage during role performance [22], [28]. Findings from prior studies confirmed that role overload, work-role conflict, and inadequate or lack of resources inhibits employees towards bringing themselves completely to engage [17], [22], [25], [52]. It is not farfetched for this study's finding to discover that the lack of influence of the factors on employee engagement also affected the influence that is expected for the main psychological availability antecedent. A lack of resources, or regular interference of work-role and role overload brings a negative effect on individuals' perception of availability. They will form the impression of unavailability when threatened with negative work factors [22] which will negatively affect performance.

The mediating role of employee engagement in this study also validate what previous study have reported concerning the employee engagement's role in mediating the relationship between antecedents and performance. The mediating impact revealed that antecedents of engagement have an indirect influence on organizational performance. In this study, rather than measuring the indirect influence of the antecedents or engagement on organizational performance using individual antecedent factors, the combination of all the factors into three main psychological antecedents was used making the effect more enhanced. With this practice, organizations will have more opportunities of gaining higher benefits of having an engaged workforce and these benefits can be maximised to increase their performance and competitiveness within the sector they operate. Consistent on past research's findings, employee engagement mediates the relationship between antecedents and performance because individuals that are fully engaged due to having required antecedents will bring themselves fully to role performance leading positive impact on overall organizational performance.

5.1. Theoretical implication

Evidence of the impact of engagement have been reported by prior studies, however, many of these studies are from the practitioner literatures with few found within the academics. Furthermore, the popularity of employee engagement study is still among the developed West where the world of work has a more advanced structure than most of the ones found in less developed and developing nations, particularly Sub-Saharan African countries. One of the theoretical implications of this study is by bringing together all factors of the antecedents under three main psychological antecedents to examine their influence on employee engagement and organizational performance in the public sector organizations. Furthermore, the relationship between all the antecedents and other constructs used in this study were assessed using social exchange theory (SET), to further substantiate the findings from past literature which have only assessed this relationship using individual factors or antecedents [17], [25], [29], [32]

and not the combined psychological antecedents as used by this study. Using SET has enabled this study to validate combining of the three psychological antecedents as key constructs to enable employee engagement level to improve within public organizations. The outcome suggested that when individuals are given what they require to engage in fully in role performance, they will feel indebted to reciprocate with being engaged and thus increase performance at work. Employers need to constantly assess the antecedents' factors within their organizations to enable their employees freely bring themselves physically, cognitively, and emotionally to work.

5.2. Practical implications

Antecedents of engagement are drivers for employee engagement and organizational performance. The finding is particularly important in a developing nation like Nigeria, where public sector organizations performance is at the lowest ebb and their attractiveness to intelligent fresh graduates is fast disappearing [4]. Causing a high level of brain drain among the human capital. The administrators of the Nigerian public sector should leverage antecedents of engagement to increase the level of employee engagement in their various organizations. Where antecedent factors such as combined within the psychological antecedents of engagement are missing, public employees will not be willing to bring themselves into role performance which in turn would bring a negative consequence on the organization's bottom line. This study will enlighten the policy makers and administrators in public sector organizations in Nigeria to making clear delineation of antecedent factors that is required for employee engagement to thrive within their organizations. Aside from this, the administrators of public sector organizations will also be guided to the benefits and advantages of having employees that are engaged particularly in the work context such as the public sector where individuals' perception of motivation is basically intrinsic and not usually extrinsic.

Additionally, when employees are fully engaged, they become a positive beacon to spread engagement among themselves and this will transcend to how they perform their day-to-day engagement with the public who sought the public organization's services. Thus, public services users will report a positive experience with the kind of treatment they received from engaged employees of the public sector organizations. Moreover, the huge financial cost of reforms will be limited or reduced with the discovery of what employee engagement can offer the Nigerian public sector in the way of performance enhancement.

5.3. Limitations and future studies

The main limitation of this present research is that it focuses on the Nigerian public sector and its organizations solely, so the questions about generalisability of the findings to other nations could arise. To enable the theory to be more generally adaptive, more data should be sourced from other developing nations within or outside the Sub-Saharan Africa. Aside from the above, longitudinal research could also assist in testing the influence of the psychological antecedents of engagement on both employee engagement and public sector performance.

Therefore, future studies could be channelled towards mitigating the above limitations and might also enrich the analysis by studying, for instance more individual antecedents of engagement that could be more effective in enhancing engagement within the public sector organizations. Another factor that could be given more in-depth study by future research is the self-efficacy construct which this current study introduced as an antecedent factor of the availability construct. Although, self-efficacy emanated from the social cognitive theory [46], this study argued its pertinence as an antecedent suitable for expressing availability because it spells out individual confidence and capability to attend or perform a role at a given time. Therefore, its effect should be further explored as an antecedent to employee engagement by future research.

5.4. Conclusion

In summary, this paper develops and test an integrative research model which examined the influence of psychological antecedents of engagement on employee engagement and organizational performance in a developing nation work context particularly the Nigerian public sector organization. This study's main aim is to find an alternative to the costly and less effective public sector reforms that has done more damage to the nation's purse and less to the performance improvement of the public sector. In this study, psychological meaningfulness and safety antecedents of engagement were both found to influence employee engagement significantly positively and indirectly influence organizational performance through employee engagement. Meanwhile, the third psychological antecedent which is deals with individual's notion of availability was found in this study to have no significance on employee engagement and organizational performance. However, one of the individual antecedents (self-efficacy) had a minor positive impact on the studied relationships. Above all, the conceptualised relationships tested in this study advanced our understanding of how psychological antecedents of engagement can improve the employee engagement levels of the Nigerian public sector organization's employees and thus improve the organizational performance of the sector.

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