



## Mediating role of employee engagement on the relationship between psychological capital and employee job performance in the Ethiopian public sector context

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**Abstract.** Public sector organizations are government-owned and government-funded entities that are primarily focused on serving the interests of the general public and there is no profit-maximizing focus as well as little potential for income generation. Today, employee job performance is a major priority for all organizations seeking to realize its objectives and it is widely regarded as the most effective indicator of an organization's strength and commitment to achieving its objectives. *Purpose.* The objective of this study was to investigate the effects of psychological capital on job performance in the Ethiopian public sector, with employee engagement as a mediating factor. *Methodology.* Using a quantitative approach, data were collected through surveys from 342 employees across four zonal-level public sector organizations in Ethiopia. Structural equation modeling was employed to test the hypotheses. *Findings.* Findings from regression analysis results indicate that psychological capital has positive effect on both job performance and employee engagement. Employee engagement affects job performance positively and significantly. Moreover, employee engagement fully mediates the relationship between psychological capital and job performance. These findings will contribute to the literature by demonstrating the importance of psychological capital and employee engagement in enhancing job performance in public sector organizations in emerging economies. *Value of results.* The study provides practical implications for public sector managers and policymakers in fostering employee psychological capital and engagement to improve organizational performance.

**Keywords:** psychological capital; employee engagement; job performance; job demand-resource theory; public sector organization.

### Introduction

Organizations are categorized as public when they are government-owned and government-funded, and political authorities are the primary stakeholders (Rainey, 2009). Public sector organizations are

different from the commercial and private sectors because; there is no profit-maximizing focus, little potential for income generation and, generally speaking, no bottom line against which performance can be measured (Hanif et al., 2016; Stríteská, Sein, 2021; Knies et al., 2022). According to L. O. Orogbu with colleagues, public sector organizations are types of institutions that use state resources or are supported by the state and municipal budget and they provide public goods, that are not under any competition and which accessible to any individuals (Orogbu et al., 2021).

Public sector service-providing organizations in Ethiopia are government entities that supply and play an essential role in providing fundamental services to Ethiopian inhabitants, such as education, health, transportation, telecommunications, power, and water (Tensay, Singh, 2020). Since such services are delivered by human beings, it is necessary to build a strong human resource management system to improve customer satisfaction through enhanced employee job performance in terms of productivity, quality, efficiency, and agility (Knies et al., 2022). The public sector is seen as an important sector for the provision of the basic needs of the society especially local governments which are mandated to provide service at the grassroots level (Tensay, Singh, 2020). That is why the performance of public sector employees is considered as a key to delivering accelerated services for the customer.

In line with the above reality, the Ethiopian government has implemented various reform programs; such as the civil service reform program, result-oriented performance appraisal system, business process reengineering, balanced scored card, change army, and deliverology to accelerate service delivery system and enhance customer satisfaction level; research findings on the public sector indicates it couldn't be addressed the problem of good governance and service delivery performance up to the expected level (Engdaw, 2019; ECSS, 2016; Kacho et al., 2016; Mulugeta, 2018; Gobena, 2019).

Ethiopia public sector organizations are characterized by time consuming to respond customer request, costly in its operation, incompetent when compared with private sector, non-responsive and non-dynamic. Other existing empirical findings also reveals the presence employee job performance problems in Ethiopia public sector organizations in terms of absenteeism, pilfering materials, and corruption, and task performance also (Balaraman et al., 2018; Lindelow et al., 2005; Sisay, 2016)).

Employee job performance refers to scalable actions and outcomes that employees show during their job assignment and are directed towards meeting the expected organizational goals (Viswesvaran, Ones, 2000). Employee job performance assesses whether an employee performs his/her job well, and it is an indicator of individual employees' efficiency and productivity as well as organizational operational efficiency and long-term success (Na-Nan et al., 2018). According to Y. Badrianto and M. Ekhsan, cultivating employee performance is one of the key factors in realizing an organization's goal and it is one way to measure the quality of human resources in one organization (Badrianto, Ekhsan, 2020). In existing literature, scholars cited different types of job performance dimensions; however, the majority of previous work focused on three broad and generic dimensions such as; task performance, adaptive performance, and contextual performance (Pradhan, Jena, 2017).

Existing studies also reveal employee job performance is strongly correlated with and significantly affected by PsyCap and employee engagement. PsyCap refers to people's perceptions of their capacity to effectively influence and control their environment and it is the result of favorable self-evaluations that are associated with psychological endurance (Demerouti, Bakker, 2011). PsyCap is one of the important and emerging concepts of positive psychology and positive organizational behavior (Ngwenya, Pelsler, 2020). In the existing literature, the conceptualization of PsyCap is in parallel to the concept of personal resources which consists of four sub-scales (i.e. efficacy, optimism, hope, and resiliency).

According to W. Kahn, engaged employees employ and express themselves physically, cognitively, and emotionally during role performance (Kahn, 1990). Employee engagement is a positive and work-related state of mind that is characterized by vigor, dedication, and absorption (Schaufeli et al., 2002). Accordingly, vigor consists of energy level and mental resilience, determination, and consistency in the job; dedication consists of inspiration, enthusiasm, and high involvement in the job (Guo, Hou, 2022); and absorption involves the sense of detachment from surroundings, concentration on job, and awareness about the time spent on the job (Schaufeli et al., 2002).

In the case of Ethiopia, empirical studies related to PsyCap, employee engagement, and job performance are not common (Sisay, 2016; Kassahun, Raman, 2021). In terms of PsyCap, it is difficult to get empirical studies that emphasize the link between PsyCap and job performance except a few studies which are focused on assessing the level of employee PsyCap (Tsegaye et al., 2019; Zewude, Hercz, 2022). Likewise, related to employee engagement, though some studies have been undertaken by previous studies for example, L. Mesfin and H. Adhana (2018) investigated the effects of employee engagement on employees' turnover intention at the Ethiopian Management Institute; A. T. Tensay and M. Singh (2020), conducted their study in to investigate the link between HRM practices, employee engagement and organizational performance in case of federal public service organizations in Ethiopia; Z. W. Kassahun and M. S. Raman (2021) assessed antecedents of employees work engagement in case of public higher education institutions, and S. Markos and B. Gossaye (2021) assessed the effect of internal communication on employee engagement empirical evidence from Commercial Bank of Ethiopia. As far as the knowledge of the researchers is concerned, studies which are focused on effects of PsCap on employee job performance with mediating role of employee engagement are scarce especially in case Ethiopian public sector context.

Based on the review of existing theoretical and empirical literature on the identified study variables, the authors identified the following major research gaps or limitations to be filled by the current study. First, in terms of scope (study area), existing literatures are emphasized in developed Europe and other Western countries plus it is primarily focused on manufacturing and business organizations rather than service rendering public sector (Mesfin, Adhana, 2018). Thus, in the current study, we are focused on non-western and non-developed country plus public sector service-rendering organizations instead of manufacturing and business firms.

The second limitation of the existing literature is related to the way of measuring employee job performance. Some of the literature is focused on measuring task performance only, while others emphasized on measuring contextual performance alone, and very few studies focused on measuring adaptive performance (Akram et al., 2019; Ekingen, 2021; Peterson et al., 2011; Rhee et al., 2017; Tang, Tsaur, 2016; Swalhi et al., 2017). Furthermore, some of the reviewed literature doesn't indicate what type of performance dimension it was measured (Ndungu, 2017; Rabenu et al., 2017; Diamantidis, Chatzoglou, 2019; Choi et al., 2020). But, to get a clear picture of job performance, measuring all three job performance dimensions is recommendable. Thus, in the current study job performance was measured by three sub-scale dimensions.

The main objective of the current study was to examine the effects of PsyCap on employee job performance via the mediating role of employee engagement in emerging economies' public sectors, with a focus on Ethiopia's civil service organization. Furthermore, the current study provided important insight to extend studies related to the conservation of resource theory and job demand-resource model to PsyCap. Thus, based on the aforementioned problem statement and the body of published literature; the current study focused on addressing the following fundamental research questions: (i) How does PsyCap affect the level of employee engagement and job performance?; (ii) To what extent does employee engagement affect employee job performance?; (iii) Does employee engagement play a mediating role in the link between PsyCap and job performance?

## Literature review and hypotheses

### Relationship between psychological capital and job performance

PsyCap originated from the positive organizational behavior paradigm, which is the study and use of positive human strengths and psychological capacities that can be established and managed for improved employee performance (Baykal, Zehir, 2018). Existing prior studies focused on examining PsyCap from four sub-dimensions, such as; self-efficacy, optimism, hope, and resiliency. Thus, in the current study, we emphasized these four sub-dimensions to investigate PsyCap.

Existing prior studies conducted by different scholars indicate the presence of a positive and strong correlation between PsyCap and job performance. PsyCap is strongly related to changes in two types of performance outcomes (supervisor-rated performance of employees and financial performance, i.e., individual sales revenue) (Peterson et al., 2011). As per the findings of E. Baykal and C. Zehir, individuals with high levels of PsyCap are prone to having higher levels of performance, because they can put forward multidimensional solutions for any problems and they possess the necessary hope and optimism reservoir for combatting problems and adversity or burdens of stressful events (Baykal, Zehir, 2018). PsyCap is significantly related to supervisor-rated employee job performance level (Choi et al., 2020).

Furthermore, the findings of T. Thang Ngo also revealed the presence of a statistically significant and positive impact of PsyCap on employees' performance (Thanh Ngo, 2021). Studies conducted by other scholars also confirm the existence of a positive and strong association between PsyCap and employee job performance (Abbas, Raja, 2015; Alessandri et al., 2018; Luthans et al., 2005; Rabenu et al., 2017). Given the above empirical claims of previous studies, it is hypothesized:

*Hypothesis 1: Psychological capital affects employee job performance positively.*

### Relationship between PsyCap and employee engagement

Employees in the organization need job resources to accomplish tasks and achieve organizational goals (Alessandri et al., 2018). The JDR model states that when job demands are high and job resources are scarce, workers may become exhausted and burnout (Hakanen et al., 2006). Conversely, when job demands and job resources are aligned, employee engagement is more likely to increase (Truss et al., 2013). The four dimensions of PsyCap are all positive psychological states that provide workers with resources to deal with difficult situations and aid in completing difficult tasks by fostering a higher level of employee engagement (Laschinger et al., 2012).

Prevailing research results confirm that PsyCap significantly influences employee engagement in their job specifically and in the organization in general. H. K. S. Laschinger resulting in high levels of burnout and job turnover in their first year of practice. Purpose: This study tested a theoretical model of new graduate nurses' worklife derived from the job demands-resources model to better understand how job demands (workload and bullying with colleagues) conducted their study to investigate the JDR model on new graduate nurses to investigate how job demands, job resources, and PsyCap combine to influence new graduate experiences of exhaustion and work engagement (Laschinger et al., 2012). The results suggest that greater PsyCap is associated with lower emotional exhaustion and greater engagement.

Similarly, the findings also indicate that PsyCap was a significant predictor of work engagement among new graduate nurses (Boamah, Laschinger, 2014). According to the JD-R theory, a sufficient amount of personal resources is fundamental for employees' work engagement and job performance

(Bakker, Demerouti, 2014). PsyCap also plays a vital role in employee goal attainment, because individuals with positive PsyCap can better cope with the demands they face at work (Siu et al., 2014).

The employee who is high in PsyCap will more likely be engaged in the work, show greater attachment to their workplace, and have a lower tendency to leave their organization (Robyn, Mitonga-monga 2017). Other existing empirical findings also confirm the presence of a strong correlation between PsyCap and employee engagement as well as the effects of PsyCap on employee engagement (Costantini et al., 2017; Joo et al., 2017; Grover et al., 2018; Luthans et al., 2007; Paeka et al., 2015). Given the above theoretical claims and evidence of the previous studies, the authors suggested the following hypothesis:

*Hypothesis 2: Psychological capital positively affects employee engagement.*

### **The link between employee engagement and employee job performance**

At both the individual and organizational levels, employee engagement has been related to a variety of positive outcomes. This is because, engaged employees are enthusiastic, work hard, and are more willing to put extra effort into their job (Christian et al., 2011). According to theories on employee engagement, when employees are engaged at work, they perform better since doing so increases their motivation to accomplish their duties and tasks (Yongxing et al., 2017). Existing empirical investigations have disclosed that employee engagement improves the level of job performance significantly. For instance, it was conducted an exploratory study on 245 bank employees from several private and public banks operating in Cairo-Egypt to identify the key drivers of employee engagement and the effects of employee engagement on job performance and organizational commitment within the Egyptian context (Dajan, 2015). Findings show that work success was significantly impacted by the level of engagement.

G. Yongxing with colleagues examined the nexus between work engagement and objective task performance of 1,094 customer service employees in the case of a telecom company located in South China (Yongxing et al., 2017). Findings indicate that work engagement is strongly associated with and significantly affects task performance. H. N. Ismail with colleagues explored the association between employee engagement and level of job performance among 186 respondents working in Lebanese firms (Ismail et al., 2019). Findings indicate employee engagement affects the level of job performance significantly and positively.

C. H. Wang and H. T. Chen also conducted their study on 312 frontline employees from tourist hotels in Taiwan to explore the effects of coworker incivility and customer incivility on work engagement and job performance (Wang, Chen, 2020). Findings reveal that work engagement affects job performance significantly. Additionally, other prior empirical research findings, also indicate the existence of a strong correlation between employees' engagement with different dimensions of job performance (Aftab et al., 2022; Bouckenooghe et al., 2022; Bakker, Bal, 2010; Rich et al., 2010). Therefore considering the existing empirical literature as evidence, the authors hypothesized as follows:

*Hypothesis 3: Employee engagement has a positive effect on job performance level.*

### **The mediation role of employee engagement**

As disclosed under Hypotheses 1 through 3, previous research revealed the direct relationship between PsyCap and job performance, PsyCap and employee engagement, and employee engagement and job performance. Given the aforementioned correlation and discussion, it is hypothesized that:

*Hypothesis 4: Employee engagement mediates the effects of psychological capital on employee job performance.*

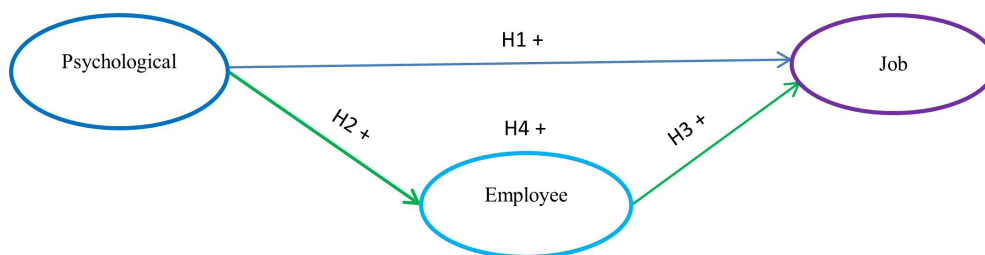


Figure 1. Proposed hypothetical model of study

## Materials and methods

### The study area description

As presented in Figure 2 below, the current study was conducted in four Zones (Gamo, Wolaita, Kembata, and Halaba) which are located in two regional states; Gamo and Wolaita Zones are from South Ethiopia Regional State, and Kembata and Halaba Zones are located in Central Ethiopia Regional State. Arbaminch, Wolaita Sodo, Durame, and Kulito towns are the administrative center of Gamo, Wolaita, Kembata, and Halaba Zone and are located 505 km, 378 Km, 343 Km, and 203 Km south of Addis Ababa, the capital city of Ethiopia respectively.

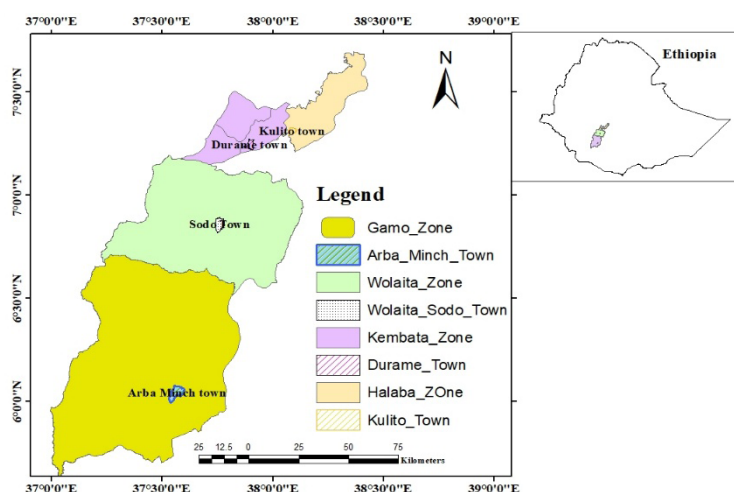


Figure 2. The study area map

### Population and sample size

A population is a group of individuals who possess the same characteristics that the researcher can identify and study (Kothari, 2004). In this regard, the target population for the current study was employees in service-rendering public sector organizations which are located in four zones.

According to the baseline data obtained from four zones of public service and human resource development office, the total number of employees is 5116.

To determine sample size, sample size determination formula was used (Cochran, 1977). The Cochran sample size determination formula for unknown total population size is:

$$n_0 = (Z^2 pq)/e^2 \quad (1)$$

Where:

$n_0$  = number of sample size with a 95% confidence level which is recommendable in social science.

$Z^2$  = table value of the confidence level from the normal distribution table.

$e$  = the tolerable error level by the desired level of precision.

$P$  = the probability of success (the portion of the study unit that may give required information).

$q$  = the probability of failure

$$n_0 = ((1.96)^2 (0.5)(0.5))/(0.05)^2 = \underline{384}$$

Furthermore, Cochran suggested an adjusted formula to determine the final sample size, which is given below if the population is finite.

$$n = \frac{n_0}{1 + (n_0 - 1) / N} \quad (2)$$

Where:

$n$  = sample size for finite population size

$n_0$  = is the sample size derived from equation (1)

$N$  = population size

$$n = \frac{384}{1 + (384 - 1) / 5116} = \underline{\underline{357}}$$

Accordingly, 357 plus 10% to compensate probability of low response and missed filled data, a total of 393 questionnaires were distributed to respondents selected proportionally from 60 zonal-level public sector service-providing organizations. Since 393 is greater than 200 which is suggested as an acceptable minimum sample size for the SEM by different scholars, the authors believe that the sample size determined through the Cochran formula is logical as well as sufficient enough to conduct the current study (Anderson, Gerbing, 1988; Anderson, Tatham, 2006; Hair et al., 2019; Garson, 2009; Kline, 2016; Loehlin Beaujean, 2017).

### Measurement scale

For this study, the authors adopted a measurement tool (questionnaire) which is validated by different previous studies to measure all the study variables. Particularly, PsCap was measured by a 16-item scale (four items per subscale) instrument adopted from (Sapyaprapa et al., 2013; Jung, Yoon, 2015). College of Hotel and Tourism Management, Kyung Hee University, Seoul, Republic of Korea  
Employees' positive psychological capital 1135 Received 13 January 2014 Revised 30 March 2014  
1 July 2014 4 September 2014 Accepted 28 September 2014  
Abstract Purpose – This paper aims to explain the relationships among employees' positive psychological capital (PPC; Paeka et al., 2015). Employee engagement was measured by a three-factor 12-item scale adopted from (Schaufeli, Bakker, 2004) sharing between 10 per cent and 25 per cent of their variances; (2. Employee job performance was measured by a three-factor 15-item scale adopted from (Pulakos et al., 2002; Sackett, 2002; Griffin et al., 2007; Charbonnier-Voirin, Roussel, 2012; Pradhan, Jena, 2017).

All measurement scale was based on a five-point Likert scale: 1 — “strongly disagree”, 2 — “disagree”, 3 — “neutral”, 4 — “agree”, and 5 — “strongly agree”. In this study the researchers followed the translation–back-translation procedure which is used to translate the original English language questionnaire into Amaharic then, it was back-translated into English (Lan, 2019).

### Data collection

By using a structured questionnaire, data on employee perception towards PsyCap, level engagement, and employee job performance was obtained for the current study. The questionnaire was pretested by distributing 10% of the total sample to check the reliability of the instrument. Based on the pilot study results, the questionnaire was revised and refined. The final survey was conducted on 393 public sector employees. From a total of 393 distributed questionnaires, the authors obtained 342 usable questionnaires (87% rate of return), and based on this data this analysis was made.

### Methods of data analysis

For the current study, the authors used the covariance-based structural equation model (CB-SEM) to analyze the data by using IBM SPSS and AMOS 23 as the statistical analysis tools. CB-SEM was chosen over PLS-SEM due to its ability to test complex theoretical models and its emphasis

on overall model fit, which aligns with our research objectives (Hair et al., 2019). To establish the nature and magnitude of the relationships between the study variables and to test the hypothesized relationships, an inferential analysis with the help of SEM was applied.

### **Control variables**

It has been suggested that certain demographic variables should be controlled when conducting research on employee perception and work outcomes like work engagement and job performance. Control variables are the variables that researchers seek to keep constant when conducting research to prevent them from influencing the outcome of a study. To properly measure the relationship between dependent and independent variables, other extraneous or confounding variables must be controlled (i.e. neutralized or eliminated) (Hassen et al., 2024). Moreover, including control variables in the model will provide alternative explanations for the possible results (Ferreras-Méndez et al., 2019). Thus, the current study included four control variables: age, gender, education level, and experience, which may provide possible alternative explanations for our result. There is evidence for engagement level, and job performance difference regarding age, gender, educational level, and work experience difference (González et al., 2016; Muntazeri, Indrayanto, 2018; Casu et al., 2021; Swanson et al., 2020).

### **Common method bias**

Common method bias occurs when both the independent and dependent variables are measured by using the same response technique in one survey (Kock et al., 2021). To assess the presence of a common method bias problem for cross-sectional survey data, the authors used Harman's single-factor test. In existing previous works scholars used Harman's single-factor test to investigate common method bias problem (Fuller et al., 2016; Rashmi, Kataria, 2021). Harman's single-factor test score in which all items that measure latent variables are loaded into one common factor to produce a single factor without rotation. If the total variance for a single factor is less than 50%, it suggests that a common method bias problem does not exist in survey data (Fuller et al., 2016). The result of the current study indicates un-rotated single factor accounted for only 21.2 % of the variance. Thus, in the current study, there is no common method bias problem.

## **Results and discussion**

### **Result of the measurement model**

#### ***Reliability tests of a construct***

The instrument reliability indicates the stability or consistency of scores over time or across raters (Malhotra et al., 2017). According to (Hair et al., 2019), reliability means the extent to which measures are free from error and therefore yield consistent results. Cronbach's alpha as a good tool to test instrument reliability, and Cronbach's alpha coefficient value which is greater than 0.70 is considered a baseline to assess the construct reliability of the instrument (Hair et al., 2019; Field, 2013).

Thus, we utilized Cronbach's alpha value in this study to examine the constructs' reliability. The analysis result in Table 1 below indicates, in the current study the Cronbach alpha coefficient of all constructs is greater than 0.70 and this shows all constructs of the current study possess a strong internal reliability.

By using SPSS we have also generated two statistical tests which indicate the data's factorability. For factor analysis to be regarded as suitable, Bartlett's test of Sphericity must be significant ( $p < 0.05$ ), and the KMO measure of sampling adequacy must be more than 0.5 (Shrestha, 2021). When Table 1 below was examined, it was found that the KMO value ranged from 0.665 to 0.828 and the

Bartlett Sphericity value was found to be significant ( $p < 0.05$ ). If the KMO value is greater than 0.5 and the Bartlett Sphericity test result is significant ( $p < 0.05$ ), this indicates that there is a sufficient sample size for factor analysis (Aslan et al., 2020).

Table 1. Reliability test result of the variables

Predicted constructs	Indicators	CR	AVE	KMO & Bartlett's Test ( $p$ -value)	Chronbach Alpha ( $\alpha$ )	Mean
Psychological capital	Efficacy	.881	.651	.834 ( $p = .000$ )	.885	3.070
	Optimism	.805	.511	.754 ( $p = .000$ )	.824	
	Hope	.848	.583	.804 ( $p = .000$ )	.845	
	Resiliency	.887	.725	.702 ( $p = .000$ )	.882	
Employee engagement	Vigor	.743	.493	.665 ( $p = .000$ )	.739	3.360
	Dedication	.790	.557	.698 ( $p = .000$ )	.787	
	Absorption	.754	.507	.673 ( $p = .000$ )	.747	
Job performance	Task performance	.862	.623	.712 ( $p = .000$ )	.857	3.517
	Adaptive performance	.748	.501	.676 ( $p = .000$ )	.744	
	Contextual performance	.801	.573	.703 ( $p = .000$ )	.799	

### ***Convergent validity***

Convergent validity evaluates the degree to which indicators of a specific construct converge or share a high amount of variance in common (Hair et al., 2019). According to, convergent validity for a construct is good if the average variance extracted (AVE) and composite reliability (CR) are above 0.5 and 0.6 respectively (Shrestha, 2021). In the AMOS approach, the AVE is employed as a convergent validity metric. According to the results depicted in Table 1, CR and AVE for almost all constructs are above the recommended threshold, with the exception of vigor, for which AVE is 0.494. Thus, in the current study, all constructs meet N. Shrestha's (2021) convergent validity requirements, except vigor AVE.

Thus in the current study, all constructs meet convergent validity requirements (Shrestha, 2021) except resiliency and vigor AVE. However, these constructs also meet the relaxed convergent validity criteria (if its CR is above 0.6. and AVE greater than 0.4) as suggested by (Fornell, Larcker, 1981). This indicates that convergent validity is good or this data does not violate convergent validity. Furthermore, the factor loadings for each of the items is greater than 0.45 as is suggested, hence, the data was deemed acceptable to be used for the structural educational model (Kothari, 2004; Hair et al., 2019).

### ***Discriminant validity***

According to (Hair et al., 2019), discriminant validity is the extent to which a construct or variable is truly distinct from other unrelated constructs or variables. Table 2 presents the discriminant validity of the current study. In this work, the authors employed the Fornell — Larcker criterion to determine discriminant validity. According to (Fornell, Larcker, 1981), to say constructs are different from each other, the respective square root value of AVE for each construct should exceed all correlations between constructs. In the current study, we assessed discriminant validity by using AMOS software, and the detail is presented in Table 2 below. Table 2 discloses the presence of discriminant validity among constructs because the elements in diagonals (square root of AVE) are greater than the off-diagonal elements or correlations. As a result, the study's scale was discriminately valid.

In aggregate, since the measurement model confirmed the existence of sufficient convergent and discriminant validity, it allowed us to move on to the second stage, structural equation model analysis. The path analysis result for SEM is depicted in Figure 3.

Table 2. Discriminant validity criteria (Fornell, Larcker, 1981)

Variables	Efi	Opt	Hop	Ree	Vig	Ded	Abs	TP	AP	CP
Efficacy (Efi)	.807									
Optimism (Opt)	.290	.715								
Hope (Hop)	.355	.237	.764							
Resiliency (Ree)	.321	.419	.287	.851						
Vigor (Vig)	.371	.269	.321	.377	.702					
Dedication (Ded)	.172	.276	.217	.261	.578	.746				
Absorption (Abs)	.190	.158	.301	.189	.479	.366	.712			
Task performance (TP)	.268	.202	.250	.243	.358	.388	.298	.789		
Adaptive performance (AP)	.222	.010	.090	.102	.079	.110	.171	.235	.707	
Contextual performance (CP)	.200	.078	.135	.156	.181	.236	.230	.382	.496	.757

**The model fit summary**

The model fit indices were as follows: CMIN/DF ( $\chi^2/df$ ) = 2.014, CFI = 0.908, IFI = 0.908, RMSEA = 0.055, SRMR = 0.071, and PClose = 0.051. According to J. Gaskin and J. Lim, and also J. F. Hair with colleagues, all the model fit metrics are under good and excellent thresholds (Gaskin, Lim, 2016; Hair et al., 2019).

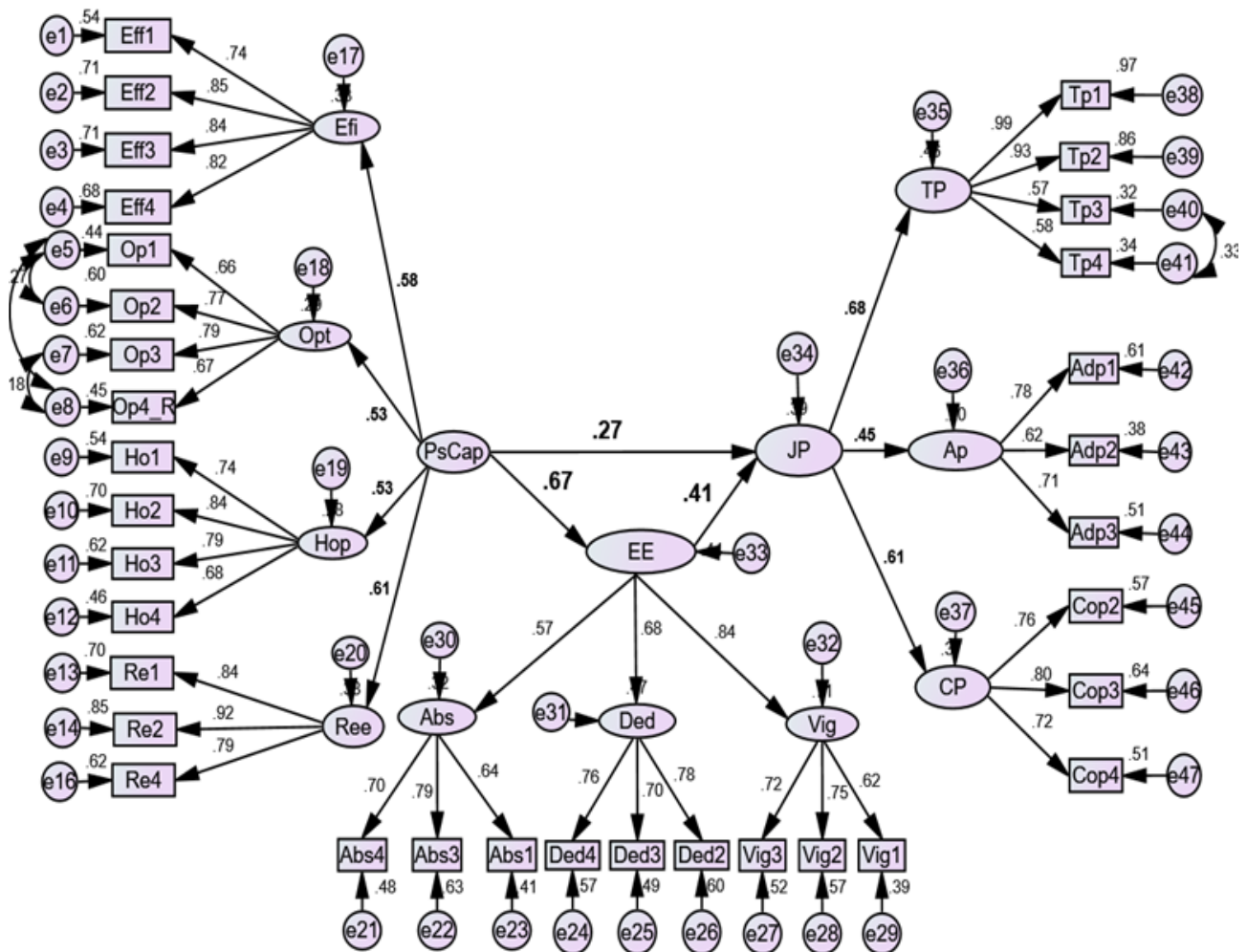


Figure 3. Path analysis

### Result of SEM and hypotheses testing

We employed SEM to address the study's objective and to test hypotheses. In this study, it was hypothesized that PsyCap has a positive effect on job performance and employee engagement. Furthermore, employee engagement has a positive effect on job performance. Based on these associations; additionally, we hypothesized employee engagement mediates the nexus of PsyCap and job performance. By using SEM, it was empirically proved that PsyCap has positive and statistically significant effects on job performance and employee engagement. Furthermore, employee engagement affects employee job performance positively and significantly. Table 3 below summarizes the result of SEM.

Table 3. Summary of path analysis result and hypotheses test

Hypothesized relationship	St. $\beta$	<i>t</i> -test	<i>p</i> -value	Hypothesis supported
PsyCap ----> Job performance ( <i>H1</i> )	.21	2.221	.026	No
PsyCap ----> Employee engagement ( <i>H2</i> )	.37	3.341	.000	Yes
Employee engagement ----> Job performance ( <i>H3</i> )	.47	3.886	.000	Yes

### The mediation role of employee engagement

According to (Hair et al., 2019), to say there is a mediation role of a variable between the dependent and outcome variable, the following three conditions must be satisfied: first, the independent variable must affect the mediator; second, the independent variable must be shown to affect the dependent variable and third, the mediator must affect the dependent variable.

For the current study findings of standardized regression weights (in Table 3) show that the independent variable (PsyCap) has a positive and statistically significant direct effect on the dependent variable (job performance). Similarly, PsyCap has significant direct effects on a mediating variable (employee engagement). Furthermore, employee engagement predicts the level of job performance positively and significantly. Based on these findings, it is possible to conclude that employee engagement mediates the nexus between PsyCap and employee job performance.

Additional analysis was performed by AMOS and SEM to determine the significance level of the indirect effect through the mediating variable. In social science research, commonly three approaches are used to examine the presence of the mediation effect: the causal step method proposed by (Baron, Kenny, 1986), the normal theory method introduced by (Sobel, 1986), and the regression-based bootstrapping approach proposed by (Preacher, Hayes, 2008).

The first two approaches are often considered as the traditional way of testing mediation. Different scholars criticized the first two approaches due to different limitations and recommended using the bootstrapping technique (Hair et al., 2019; Dinc et al., 2018; Demming et al., 2017). Thus, in this study, the authors used the bias-corrected bootstrapping method with 5,000 bootstrapping resamples to test the effects of the mediating variable. A summary of the mediation analysis result is depicted in Table 4 below.

Table 4. A mediation analysis summary

Hypothesized relationship	Direct effect	Indirect effect	Confidence interval		<i>p</i> -value	Conclusion
			Lower bound	Upper bound		
PsyCap ----> EE ----> JP	.27 ( <i>p</i> = 0.062)	.275 ( <i>p</i> = .038)	.018	1.154	.002	EE fully mediates the nexus between PsyCap and JP

## Discussion

Hypothesis 1 states that PsCap positively and significantly affects employee job performance. AMOS-SEM results presented in Fig. 3 and Table 3 indicate that the effect of PsCap on employee job performance is positive but not statistically significant ( $\beta = 0.27$ , C.R./t = 1.866, and  $p = 0.062$ ). Thus, hypothesis 1 is not supported by the current study. The existing empirical literature, also demonstrated that PsCap has positive and significant effects on job performance (Kundi et al., 2020; Ngwenya, Pelser, 2020; Daswati et al., 2022). Thus, the results of the current study are consistent with previous empirical findings.

*Hypothesis 2* states that PsCap affects employee engagement positively. According to the test results and its summary presented in Table 3 and Figure 3, PsCap has positive and statistically significant effects on employee engagement. This can be proven by the statistical value of ( $\beta = 0.76$ , C.R./t = 5.259, and  $p = 0.000$ ). This means that hypothesis 2 is supported by the empirical result of the current study. The result of this study is supported by previous empirical research findings of (Grover et al., 2018; Ngwenya, Pelser, 2020; Daswati et al., 2022) who stated that PsCap affects employee engagement significantly.

*Hypothesis 3* states that employee engagement has positive effects on employee job performance. SEM results presented in Table 3 and Figure 3 imply that the effect of employee engagement on employee job performance is positive and significant ( $\beta = 0.41$ , C.R./t = 2.776, and  $p = 0.006$ ). Hence, hypothesis 3 was supported. Consistent with this result, previous studies reveal employee engagement is one of the strong predictors of employee job performance (Yongxing et al., 2017; Ismail et al., 2019; Aftab et al., 2022; Bouckenoghe et al., 2022).

The mediation analysis result depicted in Table 4 revealed the presence of a significant indirect effect of PsCap on job performance through employee engagement ( $\beta = 0.275$ ,  $p = 0.038$ ). Furthermore, the direct effect of PsCap on job performance was insignificant, as presented in Table 3. Hence, employee engagement fully mediates the link between PsCap and employee job performance. Thus, *hypothesis 4* is supported.

## Conclusion

The public sector organizations are considered a lifeblood of public service provision in Ethiopia but remain beyond expectations due to different reasons even if the Ethiopian government implemented various tools and strategies. Thus, the authors are interested in examining different variables that determine employee job performance. This study provides empirical evidence on the relationship between PsCap, employee engagement, and job performance in the context of Ethiopian public sector organizations.

The study used quantitative primary data collected from employees through a structured questionnaire. The proposed hypotheses were empirically tested by using CB-SEM on a cross-sectional survey data collected from 342 sample respondents out of 5116 target population working in four zonal level public sector organizations in Gamo, Wolaita, Kembata, and Halaba Zone in South and central Ethiopia Regional State.

Our findings demonstrate that psychological capital positively and significantly influences job performance both directly and indirectly through employee engagement. These results extend the existing literature by highlighting the crucial role of PsCap and employee engagement in enhancing job performance in public sector organizations in emerging economies.

### **Theoretical implications**

The findings of the present study disclosed that PsyCap affects employee engagement and job performance levels positively and significantly. Furthermore, employee engagement affects the level of job performance and partially mediates the relationship between PsyCap and job performance. Although different studies conducted on determinants of job performance, there is still no consensus on the relationship between PsyCap and job performance, especially in the Ethiopian public sector context.

The current study was based conservation of resource theory and the JD–R model. The findings of the current study support existing theories and empirical findings in other contexts. Thus, this study contributes theoretically to extending existing theories and literature on PsyCap and job performance by examining their relationship in the unique context of an emerging economy's public sector to developing countries and the public sector.

Our findings contribute to the theory by demonstrating extending the JD–R model on employee job performance by incorporating the concept of PsyCap. This lays the stepping stone for further studies to continue exploring the PsyCap-job performance interaction in public sector organizations.

### **Practical implications**

Human resources should be treated as one of the vital resources to attain specific organizational-level objectives as well as overall national-level goals. Given the significant relationship between PsCap and job performance, public sector organizations can boost their employee, engagement, and job performance by improving different PsCap dimensions through training, coaching, counseling, and experience sharing. Because, PsCap is malleable and adaptable to change and growth, in contrast to personality characteristics (such as core self-evaluations), which are steady and largely fixed (Malhotra et al., 2017). This would possibly allow for improving organizational performance and competitiveness.

The current study provided managers in Ethiopia's public sector with a clear viewpoint of the association between PsCap, employee engagement, and job performance. Findings revealed the presence of positive and significant effects of independent variables on mediating as well as dependent variable. Therefore, we suggest public sector organizations and the public officials concerned with this sector should focus on two important issues to avail employees of good PsyCap in one organization:

First, during employee recruitment and selection time, organizations should critically evaluate the candidates' PsyCap and select those who embraced PsyCap dimensions. Second, public sector organizations can boost their employee, engagement, and job performance by improving different PsyCap dimensions through training, coaching, counseling, and experience sharing because PsyCap is adaptable to change and growth.

In addition to this, the human resource and human resource management departments in public sector organizations need more attention based on the roles they play toward organizational success. Furthermore, the Ethiopian government should revisit civil services and human resource development strategies to accommodate the dynamism in the economic, political, and competitive environment from time to time.

### **Limitations and future research directions**

This study is limited in addressing some important issues due to its cross-sectional nature and reliance on self-reported data. Thus, we recommend future research could employ a longitudinal design to establish causality, incorporate both self-reported data and other secondary data, explore potential moderating factors such as organizational culture, and investigate these relationships in different public as well as private contexts. Despite these limitations, this study provides valuable insights into the dynamics of PsyCap, employee engagement, and employee job performance in the

Ethiopian public sector organization offering a foundation for future research and practice in this important area.

### Abbreviations

PsyCap: Psychological resource, EE: Employee engagement, JP: Job Performance, Eff: Efficacy, Op: Optimism, Ho: Hope, Re: Resilience, Vig: Vigor, Ded: Dedication, Abs: Absorption, TP: Task performance, AdP: Adaptive performance, and CoP: Contextual performance.

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**Author contribution:** Temesgen, T.: Conceptualization, investigation, methodology, software, data analysis, writing the original draft. Chalchisa, A.: Conceptualization, visualization, supervision, software, validation. Gemechu, N.: Conceptualization, reviewing and editing, supervision, validation.

### Ethical approval

The authors obtained approval from PhD proposal review committee regarding instrument validity before distributing the survey questionnaire. In addition to instrument validity approval, we also obtained permission from the management body of each public sector office to conduct the study. Finally, all respondents were informed about the nature and aim of the study and then requested consent to participate in the current study. The oral consent has been obtained from all participants.

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# Опосредующая роль вовлечённости во взаимосвязи между психологическим капиталом и производительностью труда у сотрудников государственного сектора Эфиопии

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**Аннотация.** Государственные организации — это предприятия, принадлежащие и финансируемые государством, которые в первую очередь ориентированы на обслуживание интересов широкой общественности и не ориентированы на максимизацию прибыли, а также имеют небольшой потенциал для получения дохода. Сегодня эффективность работы сотрудников является важнейшим приоритетом для всех организаций, стремящихся к достижению своих целей, и широко рассматривается как наиболее эффективный показатель силы организации и её приверженности достижению этих целей. *Цель.* Целью данного исследования было изучение влияния психологического капитала на эффективность работы в государственном секторе Эфиопии, при этом вовлечённость сотрудников выступала в качестве опосредующего фактора. *Методология.* На основе количественного подхода данные были собраны посредством опроса 342 сотрудников из четырёх зональных государственных организаций Эфиопии. Для проверки гипотез использовалось моделирование структурных уравнений (SEM). *Результаты.* Результаты регрессионного анализа показывают, что психологический капитал (PsyCap) оказывает значительное положительное влияние как на вовлечённость сотрудников, так и на эффективность работы. Вовлечённость сотрудников также положительно связана с эффективностью работы и частично опосредует связь между психологическим капиталом и эффективностью работы. Эти результаты внесут вклад в литературу, продемонстрировав важность психологического капитала и вовлечённости сотрудников в повышении эффективности работы на государственных предприятиях в развивающихся странах. *Ценность результатов.* Данное исследование имеет практическое значение для государственных руководителей и политиков в сфере развития психологического капитала и вовлечённости сотрудников с целью повышения эффективности работы организации.

**Ключевые слова:** психологический капитал; вовлечённость сотрудников; производительность труда; теория рабочих требований и ресурсов; организация государственного сектора.