



# New Accountant Performance: Artificial Intelligence Moderate Psychological Capital, Employee Engagement And Organizational Citizenship Behavior

Listya Sugiyarti <sup>1\*</sup>, Etty Murwaningsari <sup>2</sup>, Yvonne Augustine <sup>3</sup>

<sup>1\*</sup> Faculty of Business and Economics, Universitas Trisakti, Indonesia  
<https://orcid.org/0000>

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## ABSTRACT

The purpose of this study is to investigate how organizational citizenship behavior, psychological capital, and employee engagement affect accountant performance. Additionally, it looks at how Artificial Intelligence (AI) influences this relationship and acts as a moderating element. In this investigation, primary data was gathered through the distribution of questionnaires and the research sample consisted of 323 accountants, including individuals from CPA firms and company accounting departments. Furthermore, Smart PLS was utilized to examine the collected data. The obtained results established that (1) The performance of accountants was significantly improved by psychological capital. (2) On accountant performance, employee engagement had no discernible beneficial impact. (3) Organizational Citizenship Behavior significantly positively influenced accountant performance. (4) AI significantly improved the performance of accountants. (5) AI was unable to effectively moderate, the effect of psychological capital on the performance of accountants. (6) AI successfully mediated the link between accountant performance and employee engagement. (7) AI weakens the positive influence of Organizational Citizenship Behavior on accountant performance. This research contributes to the advancement of measuring Organizational Citizenship Behavior (OCB) by introducing two additional dimensions namely ethical leadership and workload. Psychological Capital, Employee Engagement, Organizational Citizenship Behavior (OCB), and AI were found to have the potential to improve accountant performance. Specifically, these factors had a direct, positive, having a statistically meaningful impact on the version for accountants. Based on this understanding, companies aiming to improve accountant performance can consider strategies such as enhancing Organizational Citizenship Behavior, maximizing Psychological Capital, leveraging AI, and fostering collaboration between AI and Employee Engagement. The results obtained from this research are based on a survey conducted among millennial generation accountants from CPA firms and company accounting departments in Indonesia. Consequently, the outcomes should not be broadly applied to other company types. In accordance, the present investigation lacks specific data concerning the extent of the use of AI in the day-to-day responsibilities of individual accountants. Considering this limitation, future research could conduct an in-depth exploration of the varied uses of AI within the context of the subject matter.

**Keywords:** Psychological Capital, Employee Engagement, Organizational Citizenship Behavior, Artificial Intelligence, Workability, Accountant Performance.

## Introduction:

The increase in employee performance within a company is a key indicator of the effectiveness of implementing information systems and technology. According to prior investigations, this increase fosters a corresponding enhancement in the entire performance of companies (Andika & Sumadi, 2021). In accordance, another previous research stated that an information system is considered to have failed if it adversely affects employee

performance (Nuriadini & Hadiprajitno, 2022).

The lasting implications of the continuing situation of working from home, which began during the epidemic, have introduced various influences on employee performance. Compared to the conventional office setup, these influences have been observed to be caused by the availability of various factors such as differing communication media among employees, internet connectivity, and workload. Typically, in the office environment, employees leverage company-provided facilities, which are specifically designed to adequately support and facilitate work performance. Employee performance is a goal-oriented process and it is crucial to ensuring that production is maximized at the individual level, team, and organizational levels. Considering this fact, it becomes essential that companies strive to achieve maximum performance from employees even amidst Work From Home arrangements. Presently, the millennial generation is swiftly adopting technological advancements, and this has necessitated proficiency in information technology skills, expeditious task completion, provision of increased value to clients, comprehension of non-financial data, and continual updating of expertise. According to Luthans (2005), performance can be defined as a collection of actions either carried out or neglected by employees.

Luthans et al. (2010) also stated that individuals with elevated psychological capital tend to possess positive self-concepts, which typically leads to the attainment of increased performance levels. Positive self-concepts, in this regard, simply refer to the attributes of an individual that facilitate the effective navigation towards defined objectives. Psychological capital has been observed to not only foster personal development but also facilitate the cultivation of positive attitudes and behaviors among employees, thereby contributing to favorable organizational outcomes. Therefore, a proper comprehension of the psychological capital of employees holds significance for organizations as these behaviors can aid the development of strategies specifically aimed at improving performance. Based on this understanding, conclusions can be drawn that the adeptness of an organization to harness psychological capital would significantly impact employee performance.

Employee engagement has been observed to hold an important position within the sphere. It reflects a sustained evaluation of the work environment of an individual characterized by enthusiasm. According to various previous research, there exists a positive correlation between employee engagement, several beneficial works, and life outcomes. The combination of these factors brings about productivity and enhanced well-being, as evidenced by consistent research showing that engaged employees proactively strive to mitigate work-related stress, thereby yielding superior output (Abraham, 2012). Based on this understanding, the idea of Employee Engagement serves as both an indicator of how contented employees are with assigned roles and an effective framework for ensuring a proficient level of employee performance.

Fundamentally, the multifaceted positive outcomes linked with employee engagement show its crucial role in cultivating a flourishing work environment. This aspect was found to not only mirror individual job satisfaction but also operate as a strategic instrument for maximizing employee performance in its entirety. Accordingly, a correlation was observed between engaged employees and diminished work-related stress, which subsequently resulted in increased productivity and emphasized the significance of employee engagement in modern workplaces. It is important to clarify that despite the existing body of investigations on the present subject matter, not enough studies have been done on how millennial employees participate in employee engagement programs in companies. Therefore, the purpose of this study is to examine the relationship between psychological capital (PC) and employee engagement (EE), and Organizational Citizenship Behavior on Accountant Performance. It also desires to assess the position of Artificial Intelligence (AI) as a moderating factor in this relationship.

Organizational Citizenship Behavior (OCB) has been observed to play crucial roles within organizational frameworks. Networks developed through OCB serve as invaluable resources, offering competitive benefits for both parties individuals and institutions. Accordingly, during a study conducted by Eeman Basu et al. (2017), the correlation between OCB as well as job performance was investigated, and the obtained results showed that social capital served as a significant mediator in healthcare organizations. This finding emphasized the importance of these behaviors in shaping organizational dynamics and performance outcomes. Following OCB, the role of Information Technology (IT) within professional spheres has experienced a transformative evolution over time, and this has significantly impacted the fundamental processes and operations. Particularly, in the field of IT, AI stands out as a remarkable manifestation, which has experienced unprecedented advancements over the past decade. As emphasized by Acemoglu and Restrepo (2017), the proliferation of AI and robotic systems bears substantial implications across economic, social, and labor domains. Furthermore, Huang and Rust, (2018) characterized AI as an important origin of innovation that could slowly supplant human employment. The research anticipated a trajectory from mechanized intelligence to analytical capabilities and envisioned the eventual integration of intuitive intelligence and empathy. Considering the implication, Han and Yang (2018) emphasized the importance for companies to facilitate and improve the awareness level of employees on the use of AI and IT in general. This approach is considered very important because a greater awareness level among employees in a company would undoubtedly give the company a competitive edge in the midst of ongoing market transformations. Following the outlined observation, the process of embracing and adapting to the evolving landscape shaped by AI innovations is crucial for organizations to thrive in the shifting paradigm.

This necessity extends beyond mere adaptation to short and medium-term market shifts. Rather, it includes

the goal of gaining, over time, a competitive advantage. The integration of AI necessitates careful consideration of the associated effects on both customers and employees. Accordingly, as organizations traverse the dynamic terrain of technological innovation, empirical data starts to assume significance in offering pragmatic insights for the effective integration of AI services. This data-driven approach is very important, considering its capability to effectively guide organizations toward a successful incorporation of AI while considering the associated impact on various stakeholders. In line with the subject matter, Serge-Lopez Wamba-Taguimdje et al. (2020) performed a comprehensive analysis regarding the effect of AI on company performance, particularly by elucidating the business value derived from AI-based project transformation.

Despite the availability of various existing research on the influence of AI on company performance, there has been limited discussion concerning its use among accountants in Indonesia, regardless of the fact that the technology poses a significant challenge within the accounting domain. Therefore, the current research intends to explore the influence of AI on the performance of millennial-generation accountants. It is essential to comprehend that the era of remote work, which became increasingly prevalent due to pandemic era, has substantially amplified the use of technology. Given that the millennial generation possesses inherent technological literacy, the research samples comprised accountants from this demographic. Lastly, the present investigation is considered very relevant because it facilitates a deeper exploration into the manner in which this tech-savvy generation uses and adapts to AI within professional landscapes.

### **Literature Review and Hypothesis Development:**

#### ***Psychological Capital Influences Accountant Performance***

Psychological Capital, as defined by Luthans in 2002, comprises the mobilization of motivation, cognitive resources, and actions to excel in specific task activities. Hope, in this regard, focuses on employee goals in task execution and the means used to achieve these goals, as articulated by Snyder et al. in 1991. On the other hand, optimism includes maintaining a positive explanatory style for both favorable and unfavorable events (Carver and Scheier, 2002). Lastly, resilience defines the ability of employees to rebound from a tumultuous work environment, as outlined by Luthans (2002).

In this research, psychological capital was discovered to have a positive correlation with a reduction in turnover or resignation intentions (Avey, Reichard, Luthans, and Mhatre, 2011). In line with previous research by Lusiyani, Helmy, and Triccia (2020), where empirical evidence was presented showing that in terms of employee performance, the psychological capital variable was beneficial. Additionally, the outcomes obtained from the research revealed that within psychological capital, the Hope aspect was the most dominant. This finding was in line with the factors influencing performance as outlined by Togar Simajuntak & Tri Wahyuni (2021). Based on this observation, the subsequent hypothesis was offered:

H1: Psychological Capital positively impacts the performance of accountants.

#### ***Employee Engagement Influences Accountant Performance***

The performance of accountants is important in both financial and non-financial dimensions primarily because of its direct influences on both organizational success and performance (Anitha, 2014). Various research (Garg and Dhar, 2017; Rich et al., 2010; Kim and Gatling, 2017) have examined the importance of Employee Engagement as a crucial factor in enhancing both employee as well as accountant performance. Extensively, this research suggested that elevated levels of Employee Engagement contribute positively to job's performance, employee's commitment, Organizational Citizenship Behavior (OCB), and the alleviation of turnover or resignation purposes. Accordingly, Employee Engagement is perceived as a composite of collaborative efforts directed at continual improvement. Based on this view, the factor is considered a motivating condition that harmonizes employees with satisfaction, compensation, and the entire success of companies (Hariyadi, 2019).

The intricate interplay between Employee Engagement and performance shows its crucial role in organizational dynamics. In this regard, it is essential to comprehend that various research has collectively recognized the nurturing of Employee Engagement as a strategic avenue for elevating task performance, commitment, and entire organizational effectiveness. When employees invest emotionally in assigned work with a sense of self-sufficiency, the ripple effect would be observed via increased job performance, which positively impacts various aspects of organizational functioning. The connection between engagement as well as individual performance has not only been acknowledged but also emphasized as a critical driver of employee satisfaction and organizational success. Therefore, conclusions can be drawn that employee engagement is crucial in aiding companies to achieve outlined goals in the midst of competition. According to Hariyadi (2019), employees who feel engaged with an organization tend to have increased awareness, and this leads to the attainment of optimal performance for the organization (Hariyadi, 2019). In accordance with these observations, hypothesis 2 was formulated as follows:

H2: Employee Engagement has positively impacts the performance of accountants.

#### ***Organizational Citizenship Behavior Influences Accountant Performance***

The success of a company relies not only on employees adhering to assigned job descriptions (in-role behavior)

but also on behaviors extending beyond those descriptions (extra-role behavior). Organizational Citizenship Behavior, as previously stated, comprises discretionary individual actions that are not explicitly acknowledged by formal reward systems, but all of which collectively donate to efficient organizational functioning (Organ et al., 2006). Due to its significance, various research has been conducted both at employee and organizational levels, with the aim of examining the antecedents and consequences (Podsakoff et al., 2000).

Whiting et al. (2008) elucidated the substantial impact of Corporate Citizenship How they act during employee performance reviews. The analysis showed that Key predictors of employee retention, including sportsmanship, citizenship, and aiding others, emphasized the importance of Organizational Citizenship Behavior within organizations. Furthermore, the continued emphasis on this behavior in empirical research shows its useful implications for individual job performance as well as organizational success, including factors such as productivity and competitive benefit, i.e., firm performance.

In this research, employee performance was conceptualized as behaviors and personality theory was used as the grand theory that explained the influence of Employee Engagement on employee performance. Based on the explanation, the subsequent hypothesis was offered.

H3: Organizational Citizenship Behavior has positively impacts the performance of accountants.

### ***AI on Accountant Performance***

According to Gartner (2020), 17% of organizations with HR functions used AI-based solutions. However, a projected increase of 30% is anticipated in 2022, corresponding with the expanding understanding of the significance of the technology among HR leaders. This acknowledgment was driven by various factors, ranging from cost savings to the enhancement of data-driven decision-making processes and employee experiences. AI is defined as any technology designed with the specific aim of replicating human cognitive abilities to achieve goals, while also considering potential obstacles (Serge-Lopez et al., 2020). In the current era of global information systems, organizations consistently seek avenues to refine decision-making processes, business predictions, and overall organizational performance (Krogh, 2018). In this regard, it becomes important to comprehend that at the forefront of advancements in decision-making lies the integration of AI (Wright, 2018). The effective use of this technology for HR purposes mandates organizations to accurately comprehend the manner in which technology and statistical insights can augment the decision-making process (Johnson et al., 2020). In research guided by Dewie Tri Wijayati et al. (2022), it was observed that AI had a substantial positive impact on accountant performance as well as work engagement. As a result, the following theory was developed:

H4: AI has a positive effect on accountant performance.

### ***AI Moderate the Relationship between Psychological Capital and Accountant Performance***

The proliferation of AI and robot-based techniques across various industries is poised to reshape the economic, social, and labor landscapes, as stated by Acemoglu and Restrepo (2017). In the same vein, Huang and Rust (2018) presented a theoretical perspective, portraying AI as a significant origin of innovation set to slowly replace human jobs. The research projections envisioned a progression from mechanical intelligence to analytical capacity (AI) and, the attainment of intuitive intelligence and empathy. This transformative journey is expected to prompt employees to specialize in tasks resistant to straightforward automation (Huang and Rust, 2018). Furthermore, AI is expected to strengthen Psychological Capital, a behavior comprising positive attributes such as efficacy, hope, optimism, and resilience (Luthans, 2002), all of which play a function in influencing employee performance. The ensuing hypothesis is presented as follows:

H5: AI improves the connection between accountant performance and psychological capital.

### ***AI Moderate the Relationship between Employee Engagement and Accountant Performance***

As stated by Ali et al. (2014), effective planning contributes to the generation of employee engagement, and this subsequently contributes to enhancing employee performance. This observation is plausible, considering the fact that engaged employees have been observed to show diverse creative behaviors aimed at achieving organizational objectives (Halbesleben, 2010). In light of, Bakker and Schaufeli (2008), employee engagement is simply defined as a collaborative effort that synergistically improves performance. This collective endeavor and resultant performance arise from the ability of employees to share sentiments. In accordance, Ali et al. (2019) emphasized that employee performance is influenced by factors related to employee development. In the current technological era, the technologically literate millennial generation plays a crucial role in helping companies achieve goals efficiently and effectively. The result is supported by the theoretical view of, Huang and Rust, (2018), where AI was characterized as the primary source of creation which will progressively return human labor in the end. This transformation will necessitate employees to specialize in tasks that resist straightforward automation, hence the need for technology literature. In the technologically advanced era, the millennial generation, adept in technology, plays a crucial role in assisting companies in achieving goals efficiently and effectively. Based on the discussion above, hypothesis 6 was formulated as follows:

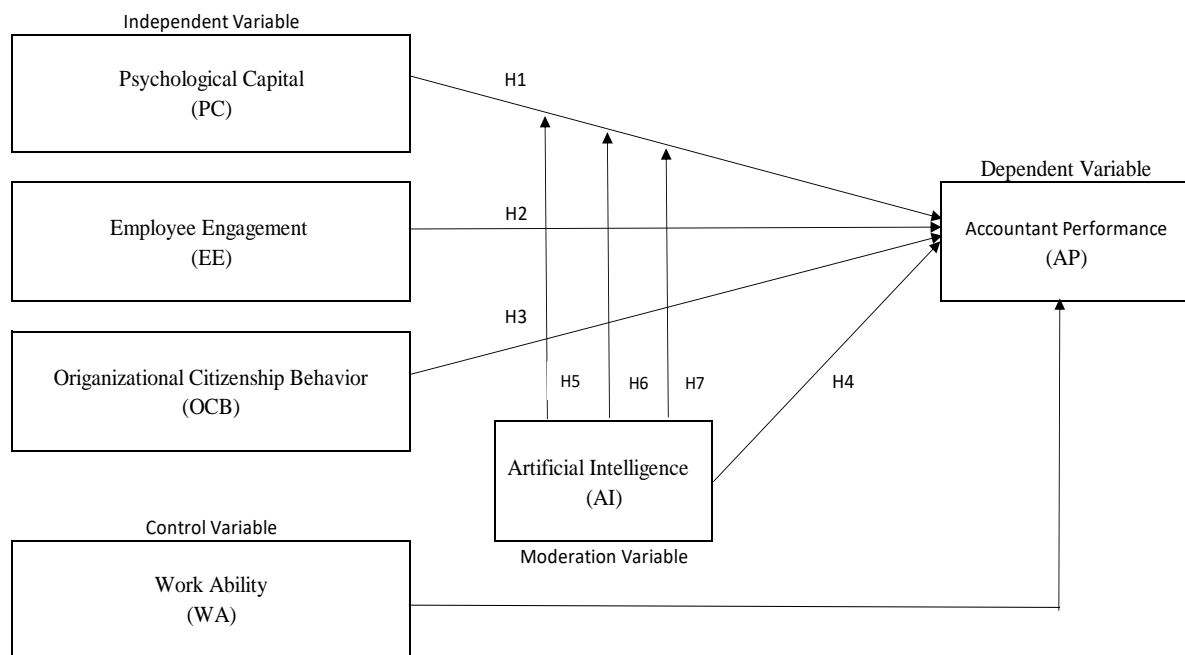
H6: AI strengthens Employee Engagement and accountant performance.

### ***AI Strengthens the Relationship between Organizational Citizenship Behavior and Employee/Accountant Performance***

Various components have been observed to have an impact on Organizational Citizenship Behavior, all of which have been extensively explored. Within this context, Ehrhart et al. (2006) identified a correlation between unit efficacy in addition to organizational citizenship behavior at the unit level. Meanwhile, Whiting et al., (2008) emphasized the significant impact of Organizational Citizenship Behavior on performance evaluation decisions. Crucial indicators of employee retention, such as sportsmanship, citizenship, and aiding others, were discussed in the research, and it was stated that if employee attitudes, satisfaction, and trust, were strengthened by proficiency in using AI within companies, employee performance could be effectively realized. Therefore, the following hypothesis was proposed:

H7: AI improves the correlation between the performance of accountants and organizational citizenship behavior.

This research measures the influence of Psychological's Capital, Employee Engagement (EE), and Organizational Citizenship Behavior on accountant arrangement using AI as a moderator. Figure 1 below displays the research model.



**Figure 1: Conceptual Framework**

### **Methodology:**

#### ***Instrument***

The research adopted a questionnaire-based approach using Forms and/or personal questionnaires administered directly to the respondents. The survey method was selected primarily because of its ability to gather firsthand information from trusted sources, as stated by Nazari et al. (2006). Following this, the measurement scales for the research variables include Psychological Capital (PC), which uses measurements from Luthan (2007), Employee Engagement uses the Utrecht Work Engagement Scale, (UWES, 2014), Organizational Citizenship Behavior, which adopts measurements from Podsakoff & MacKenzie et al. (2000), AI using measurements from Catherine Prentice et al. (2019), Accountant Performance (AP) leveraging measurements from Koopmans et al. (2014), and the control variable, Work Ability (WA), which adopted measurements from Gipson et al. (2009). Furthermore, the Likert scale with an interval of 1-6 was used for measurement. This interval scale was selected for its classification, sequential structure, and consistent numerical range. The questions are structured based on a five-point Likert scale ranging from 1 to 6 (1: strongly disagree, 6: strongly agree).

**Table 1: Instrument**

Variable	Dimensions	Indicators	Reference
Psychological Capital	4	24	Luthan, 2007
Employee Engagement	3	14	UWES, 2014



Organizational Citizenship Behavior	9	49	Podsakoff & MacKenzie et al, 2000
AI	9	17	Catherine Prentice et al, 2019
Work Ability	2	4	Gipson et al, 2009
Accountant Performance	3	18	Koopmans et al, 2014

Source: Data processed

### Sample

The sample for this research comprises millennial generation employees, specifically accountants working at CPA Firms and accounting departments of companies. The selection criteria were based on the following considerations, (1) Inclusion of accountants in CPA Firms and Company accounting departments with positions ranging from junior to senior, assistants, and managers, (2) Focus on millennial accountants born between 1980 and 2000, (3) Target of individuals working in CPA Firms and Company accounting departments due to the challenging nature of the accounting field and the desire to retain technologically literate employees with positive attitudes, enthusiasm for work, and the ability to collaborate with colleagues and superiors. In this research, questionnaires were distributed electronically through Google Forms to 490 active Public Accounting Firms registered in the database of the Ministry of Finance. Questionnaires were distributed via email, WhatsApp application, and through direct visits to Public Accounting Firms. The total number of successfully obtained respondents was 323.

For further clarity and effective comprehension, the profiles of the 323 respondents were categorized based on gender, age, education, work experience, and position. Table 2 provides details of the respondent profile.

**Table 2: Respondents-profile**

Descriptions	Respondents	Percentage
<b>Gender</b>		
Male	183	57%
Female	140	43%
<b>Age</b>		
30 - 35 years	170	53%
> 35 - 40 years	107	33%
> 40 years	46	14%
<b>Education</b>		
Undergraduate (S1)	257	80%
Magister (S2)	59	18%
Doctoral/PhD (S3)	7	2%
<b>work experience</b>		
5-10 years	228	70.6%
11-15 years'	57	17.6%
16-20 years'	37	11.5%
> 20 years'	1	0.3%
<b>Position</b>		
Junior	92	28%
Senior	94	29%
Assistant/Manager	67	21%
Others	70	22%

Source: Data processed

As presented in Table 2, the demographic profile of survey participants showed a noticeable gender imbalance, with 183 males (57%) and 140 females (43%). In accordance with this, the data on age distribution shows a significant concentration, with 170 respondents falling within the 30-35 age group, constituting 53% of the total respondents. Furthermore, approximately 80% (257) of the respondents indicated to had passed through undergraduate education, and the most extended service period was observed to be between 5-10 years, as stated by 70.6% of the research participants. Meanwhile, the prevalence of respondents in this research had attained senior positions, totaling 94 people (29%).

## Data Analysis

### Validity and reliability test

Discriminant validity was evaluated following the recommended method by Hair et al. (2018), based on cross-loading of the indicators. Using this method, the power of thumb for an adequate outlier loading value is  $\geq 0.7$ , as this allows the hidden variable to account for a minimum of 50% of each indicator's volatility ( $0.72 = 0.5$ ). It is also important to state that Average Variance Extracted (AVE) value for all variables met the criteria, as the scores were greater than 0.5.

Reliability was pushed through Cronbach's alpha, rho, and compound reliability scores, all of which showed scores  $> 0.7$ . As a result, conclusions can be drawn that the research respondents were consistent in answering the research questionnaire. This affirmed the appropriateness and reliability of the respondents.

The AVE and reliability results for all variables are presented in Table 3 below:

**Table 3: Average Variance Extracted and Reliability Test**

Research variables	Cronbach-Alpha	Rho-	Composite-Reliability	AVE
Psychological-Capital	0.929	0.930	0.938	0.521
Employee-Engagement	0.907	0.910	0.922	0.521
Organizational Citizenship Behavior	0.975	0.976	0.976	0.512
AI	0.967	0.969	0.970	0.673
Work Ability	0.881	0.891	0.907	0.554
Accountant Performance	0.973	0.974	0.976	0.691

Source: Data processed

### Goodness of Fit Test

Specifically, the goodness-of-fit test was carried out. to assess whether the overall model is in a satisfactory condition and The model fit in this study was measured using the Standardized Root Mean Square Residual (SRMR). As established from previous research, an SRMR value, below 0.08 shows a well-fitted model, while an SRMR value between 0.08 to 0.10 is still considered acceptable, (Ghozali & Latan, 2015). Following this, the Normed Fit Index (NFI) was used to reach the suggested model with the null model, with values varying from 0 (no fit) to 1.0 (perfect fit) (Zheng & Valente, 2023). The results for SRMR and NFI are shown in Table 4 below.

**Table 4: Goodness of Fit Test**

Model Fit	Result	Prediction
SRMR	0,067	Model Fit
NFI	0,718	Model Fit

Source: Data processed

The results obtained from these tests confirmed the fitness of the research model. Furthermore, the influences of variables such as psychological capital, employee engagement, and Organizational Citizenship Behavior, AI, and the control variable of workability, on employee performance were thoroughly examined within a unified research model. This shows the robustness of the research model, and the results can be generalized as valid.

### Factor Analysis Results

The research model used structural equation modeling, which comprises variables, respective factors, and moderation path analysis. Factor analysis was also carried out for each research variable and the measurements used Measure of Sampling Adequacy: Kaiser-Meyer-Olkin (KMO): as well as Bartlett's test. In this regard, criteria for KMO's Model and Bartlett's test was a minimum score of 0.6, with an improved adequacy shown by a minimum of 0.7 (Shrestha, 2021). Table 5 presents the KMO and Bartlett's test scores for each variable:

**Table 5: Factor Analysis Results**

Research Variable	KMO and Bartlett's test	Prediction
Psychological Capital	0,928	Supported
Employee Engagement	0,927	Supported
Organizational Citizenship Behavior	0,948	Supported

AI	0,953	Supported
Work Ability	0,872	Supported
Accountant Performance	0,955	Supported

Source: Data processed

The test results displayed that there was a powerful correlation between the variables as well as the research indicators. This shows that all research indicators possess robust and relevant connections with each corresponding variable. Furthermore, each factor or indicator within the examined variables proved to be pertinent and influential in representing respective dimensions.

### Model testing

In this research, Smart PLS 3.0 was selected as the sample size is so small as well as minimal demands on measurement's scales, as recommended by Hair et al. (2017). Hypotheses were considered accepted if T Statistic values surpassed 1.96, and P Values were smaller than 0.05, following the criteria established by Bougie and Sekaran (2019). The test results for specific hypotheses consistently met these criteria, hence, showing statistically significant relationships between the observed variables. For instance, hypothesis 1 had a T Statistic of 2.2 as well as a P-value of 0.028, both meeting the acceptance thresholds. This pattern persisted across the majority of the hypotheses, affirming the overall validity and significance of the research model (Bougie & Sekaran, 2019). The summary score is presented in Table 6.

**Table 6: Hypothesis Test Results**

Relationships	Coefficient	T Statistics	P Values	Predictions
PC → AP	0,251	2,200	0,028**	Supported
EE → AP	0,044	0,593	0,553	Not Supported
OCB → AP	0,293	2,007	0,045**	Supported
AI → AP	0,229	3,432	0,001***	Supported
AI*PC → AP	-0,018	0,193	0,847	Not Supported
AI*EE → AP	0,164	2,048	0,041**	Supported
AI*CB → AP	-0,178	2,407	0,016**	Not Supported
Adjusted R <sup>2</sup>		0,760		

Note: PC – Psychological Capital; EE – Employee Engagement; OCB – Organizational Citizenship Behavior; AI – AI; WA – Work Ability; AP – Accountant Performance; sign level 5 %

$$AP = 0,251 PC + 0,044 EE + 0,293 OCB + 0,229 AI - 0,018 AI*PC + 0,164 AI*EE - 0,178 AI*OCB$$

Table 6 provides a crucial insight into the statistical significance of the research model. Accordingly, the coefficient of determination, denoted as R-squared, was 76.6%. This metric showed the balance of the deviation in the dependent variable, Accountant Performance (AP), which can be presented by the autonomous variables incorporated into the model. In simpler terms, approximately 76.6% of the variability observed in AP was accounted for by the variables under consideration. This high R-squared value suggested a strong explanatory power of the research model, showing that the selected independent variables had a substantial influence on Accountant Performance. However, it is important to acknowledge that 23.4% of the variability in AP remained unexplained by the variables included in the present investigation. The unexplained portion could be attributed to factors not considered or measured in the research.

### Discussion:

From the results presented in Table 6 regarding 1H1, psychological capital was substantiated to have a positive effect on the accountant version. The obtained P-value was 0.00, which is less than 0.05, showing the approval of the hypothesis. This implied that enhanced psychological capital correlates with improved accountant performance. Psychological capital, including dimensions such as self-efficacy, hope, optimism, and resilience, was found to significantly influence task performance. Furthermore, accountant performance, measured through task performance, contextual performance, and productive work behavior, showed a positive



association with psychological capital. These consequences are in line with the idea of designed behavior, where it was asserted that intentions usually arise from knowledge and experience. Experience and knowledge play a crucial role in shaping psychological capital, which, in turn, holds substantial potential to contribute to planned behavior. The research results are consistent with prior research affirming the positive effect of psychological capital, on the performance of accountants. According to various prior investigations, psychological capital functions to enhance the work climate, thereby fostering increased employee performance (Luthans et al: 2008; McMurray: 2010; Walumbwa et al: 2011; Lusiyani & Helmy: 2020; Triccia: 2020; Simajuntak & Wahyuni: 2021).

The result of H2 shows that employee engagement did not significantly affect accountant performance, as presented in Table 6, which showed a P-value of (0.553) greater than (0.05), directing to the rejection of H2. Within this context, employee engagement, measured through vigor, dedication, and absorption dimensions, did not substantially impact accountant performance. This outcome contradicted the theory of intended behavior, which emphasizes the crucial role of intentions in determining employee actions. The results from this research deviate from previous investigations positing employee engagement as a coaching process that enhances employee commitment and performance (Garg and Dhar: 2017; Rich et al: 2010; Kim and Gatling: 2017; Anitha: 2014; Macey and Schneider: 2008; Saks: 2006; Bakker and Schaufeli: 2008). Moreover, the results do not support prior research showing a positive connection between employee engagement in various factors and individual employee performance, which is believed to have a positive impact on company performance (Demerouti and Cropanzano, 2010; Halbesleben, 2010; Ali et al., 2014; Christian et al., 2011; Gupta and Sharma, 2018).

The result obtained for H3 showed that an organization's citizenship practices improve accountancy performance, with a P-value of (0.045). This signified, the hypothesis's acceptance. Considering this hypothesis, improved Organizational Citizenship Behavior was found to correlate with an increase in employee performance. Organizational Citizenship Behavior comprises nine dimensions, encompassing civic virtue, sportsmanship, helping behavior, organizational loyalty, and self-development, individual initiative, organizational compliance, ethical leadership, and workload. The application of these nine indicators has been proven to positively influence employee performance, which includes task performance, contextual performance, and productive work behavior. The hypothesis of planned behavior is consistent with these findings., where it was asserted that individual behavior can stem from prior experiences and knowledge. Accordingly, the outcomes correspond with previous research affirming that favorable Organizational Citizenship Behavior contributes to effective organizational functioning and is crucial for enhancing productivity and gaining a competitive benefit (Ehrhart et al: 2006; Whiting et al., 2008).

The result of evaluating H4 showed that AI positively influenced accountant performance. This observation implied that an increased use of AI correlates with improved accountant performance. The assessment of AI in the present research comprised a thorough examination of nine dimensions namely comprehensiveness, format, accuracy, accessibility, integrity, reliability, currency, flexibility, and timeliness. These results are in line with prior research, which supported notion that technology infused with AI capabilities contributed positively to the decision-making process of organizations. Moreover, technological advancements, specifically those incorporating AI, are expected to enhance Human Resources (HR) performance in the future, consistent with investigations carried out by Serge-Lopez et al. (2020), Johnson et al. (2020), Krogh (2018), Wright (2018), and Wijayati et al. (2022). In accordance with this, Wright (2018) and Wijayati et al. (2022) emphasized the role of technology, particularly AI, in shaping the prospective landscape of HR performance. The research admonished that as organizations increasingly adopt AI technologies, it becomes crucial to understand and learn to harness the diverse associated dimensions in order to leverage its full potential.

The results of H6, as presented in Table 6 showed that AI did not moderate Psychological capital's impact on accountants' performance. AI's moderating influence was ineffective to strengthen the positive influence of psychological capital on accountants' performance. This can be attributed to the fact that AI does not consider crucial concepts such as social psychology and behavioral decision theories. Social psychology theory posits that the actions of others can influence the thoughts and behavior of individuals, including social cognition, attributions, and impressions. In contrast, behavioral decision theory explains that human judgment psychology influences human behavior, particularly economic behavior. These theories are generally applied to the research of psychological capital. AI, on the other hand, operates as a technological machine with a predefined format and accuracy. Typically, the technology functions without psychological aspects but relies on format, comprehensiveness, integrity, accuracy, accessibility, currency, reliability, flexibility, and timeliness. As a consequence, AI technology could not be effectively intertwined with psychological capital as psychology comprises elements of emotions, attributions, and impressions of other individuals.

The results obtained for H6 showed that AI demonstrated efficacy in mediating the relationship between employee engagement and accountancy performance. From the outcomes, the synergistic collaboration of AI with employee engagement was observed to significantly influence accountant performance. However, in order to implement this collaboration, it is strongly recommended to incorporate the respective dimensions of these two variables as part of the strategic approach to enhance accountant performance. This observation is in sequence with previous research (Huang and Rust, 2018; Hughes et al., 2019), asserting that AI can assist employees in improving work efficiency and performance.

The effects of the current research, regarding H7, established that AI could not effectively moderate

performance of accountants as impacted by organizational citizenship behavior. Within this context, the moderation by AI did not enhance the positive impact of Organizational Citizenship Behavior (OCB) on accountant's performance. This observation was evidenced by the fact that when technology was integrated with Organizational Citizenship Behavior, using AI, the results showed a weakening effect on performance. Meanwhile, regardless of the observed weakened moderation, it is important to state that AI is proficient in executing routine accounting tasks, such as data collection, transaction processing, analysis, and financial report preparation. Furthermore, through algorithms and machine learning, AI can identify patterns and trends that are challenging for humans to discern.

## CONCLUSION

In conclusion, a comprehensive examination of the relationship between organizational citizenship behavior, psychological capital, and employee engagement and accountancy performance, within the contemporary millennial demographic, specifically amidst the technologically advanced era, was carried out in this research. The data collection technique adopted in this analysis included the administration of an online questionnaire and direct engagement with 323 accountants from CPA Firms and Company accounting departments in Indonesia. It is crucial to state that the theoretical support of this study extends to introduction of new dimensions, namely ethical leaderships, and workload, within the Organizational Citizenship Behavior variable. Accordingly, the obtained results showed the significance of psychological capital and, Organizational Citizenship Behavior, and AI as pertinent variables influencing accountant performance. AI was found to assume the role of a catalyst in influencing the impact of worker engagement on accountant performance. Subsequently, psychological capital was observed to be a strategic choice for optimizing accountant performance, while the impact of employee engagement was deemed statistically insignificant. On the other hand, Organizational Citizenship Behavior showed an explicit and statistically important favorably influencing accountant performance. The immediate effect of AI on accountant's performance was significant and substantial, suggesting that AI served as an effective strategy for enhancing employee performance. However, regardless of its direct influence, AI proved incapable of moderating the relationship between psychological capital on accountant performance.

## Implications

This research holds both theoretical and practical implications. The theoretical implications include the fact that the newly discovered evidence emphasized only the function of Organizational Citizenship Behavior, employee engagement, psychological capital, as well as AI in shaping accountant performance. Meanwhile, the practical implications comprised the research outcomes where three variables namely psychological capital, Organizational Citizenship Behavior, and AI were seen to have a direct, positive, as well as significant influence on accountant performance. These results hold practical implications for companies seeking to enhance accountancy performance.

## Limitations, and Future Research Direction

The recent studies have certain limits that provide routes of prospective investigations. Firstly, the survey focused on millennial generation accountants from CPA firms and company accounting departments in Indonesia, limiting the generalizability of the results to only one company type. Additionally, the investigation lacks sufficient data regarding the varying intensity of AI usage among accountants, suggesting a need for further exploration in this area. Secondly, the research did not thoroughly examine the intensity of AI usage in the broader spectrum of employee duties. Thirdly, the research ignored data related to the intensity of training experienced by the employees, including aspects linked to the use of psychological capital and efforts to enhance Organizational Citizenship Behavior. These aspects present opportunities for more in-depth investigations in future research.

## References:

1. Acemoglu, D. and Restrepo, P. (2017), "Robots and jobs: evidence from US labor markets", available at: <https://voxeu.org/article/robots-and-jobs-evidence-us> (accessed July 29, 2018).
2. Ali, Z., Mahmood, B. and Mehreen, A. (2019), "Linking succession planning to employee performance: the mediating role of career development and performance appraisal", *Australian Journal of Career Development*, Vol. 28 No. 2, pp. 112-121, doi: 10.1177/1038416219830419.
3. Andika, I. G. W., & Sumadi, N. K. (2021). Pengaruh Pemanfaatan Teknologi Informasi, Pelatihan, dan Efektivitas Sistem Informasi Akuntansi Terhadap Kinerja Individu Pada Lembaga Perkreditan Desa (LPD) Di Kabupaten Badung. *Hita Akuntansi Dan Keuangan*, 2(3), 423-436. <https://doi.org/10.32795/hak.v2i3.1825>.
4. Anitha, J. (2014), "Determinants of employee engagement and their impact on employee performance", *International Journal of Productivity and Performance Management*, Vol. 63 No. 3, pp. 308-323.

5. Bakker, A.B. and Schaufeli, W.B. (2008), "Positive organizational behavior: engaged employees in flourishing organizations", *Journal of Organizational Behavior*, Vol. 29 No. 2, pp. 147-154.
6. Basu, E., Pradhan, R. K., & Tewari, H. R. (2017). Impact of organizational citizenship behavior on job performance in Indian healthcare industries. *International Journal of Productivity and Performance Management*.
7. Bougie, R., & Sekaran, U. (2019). *Research methods for business: A skill building approach*. John Wiley & Sons.
8. Devaraj, S., & Kohli, R. J. M. s. (2003). Performance impacts of information technology: Is actual usage the missing link? , 49(3), 273-289.
9. Demerouti, E. and Cropanzano, R. (2010), "From thought to action: employee work engagement and job performance", in Bakker, A.B. and Leiter, M.P. (Eds), *Work Engagement: A Handbook of Essential Theory and Research*, Vol. 65, Psychology Press, Hove, pp. 147-163.
10. Ehrhart, M.G., Bliese, P.D. and Thomas, L.J. (2006), "Unit-level OCB and unit effectiveness: examining the incremental effect of helping behaviour", *Human Performance*, Vol. 19 No. 2, pp. 159-173.
11. Garg, S. and Dhar, R. (2017), "Employee service innovative behavior: the roles of leader-member exchange (LMX), work engagement, and job autonomy", *International Journal of Manpower*, Vol. 38 No. 2, pp. 242-258.
12. Generation Y and their use of Social Media: A review and research agenda," *Journal of Service Management*, Vol. 24 No.3, pp. 245-267.
13. Ghozali, I., & Latan, H. (2015). Partial least squares konsep, teknik dan aplikasi menggunakan program smartpls 3.0 untuk penelitian empiris. *Semarang: Badan Penerbit UNDIP*.
14. Gupta, N. and Sharma, V. (2018), "Relationship between leader member exchange (LMX), high involvement HRP and employee resilience on extra-role performance: mediating role of employee engagement", *Journal of Indian Business Research*, Vol. 10 No. 2, pp. 126-150, available at: <https://doi.org/10.1108/JIBR-09-2017-0147>.
15. Halbesleben, J.R.B. (2010), "A meta-analysis of work engagement: relationships with burnout, demands, resources, and consequences", in Bakker, A.B. and Leiter, M.P. (Eds), *Work Engagement: A Handbook of Essential Theory and Research*, Vol. 8 No. 1, Psychology Press, Hove, pp. 102-117.
16. Han, S. and Yang, H. (2018), "Understanding adoption of intelligent personal assistants: a parasocial relationship perspective", *Industrial Management & Data Systems*, Vol. 118 No. 3, pp. 618-636.
17. Hair, J., & Alamer, A. (2022). Partial Least Squares Structural Equation Modeling (PLS-SEM) in second language and education research: Guidelines using an applied example. *Research Methods in Applied Linguistics*, 1(3), 100027.
18. Hair, Joseph, Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2017). Advanced Issues in Partial Least Squares Structural Equation Modeling. *Research Gate*.
19. Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). *Partial least squares structural equation modeling (PLS-SEM) using R: A workbook*. Springer Nature.
20. Huang, M.H. and Rust, R.T. (2018), "Artificial intelligence in service", *Journal of Service Research*, Vol. 21 No. 2, pp. 155-172.
21. Kim, J. and Gatling, A. (2017), "The impact of using a virtual employee engagement platform (VEEP) on employee engagement and intention to stay", *International Journal of Contemporary Hospitality Management*, Vol. 30 No. 1, pp. 242-259.
22. Lee, J., Davari, H., Singh, J., & Pandhare, V. J. M. I. (2018). Industrial Artificial Intelligence for industry 4.0-based manufacturing systems. 18, 20-23.
23. Luthans, F., Norman, S. M., Avolio, B. J., & Avey, J. B. (2008). The mediating role of psychological capital in the supportive organizational climate—employee performance relationship. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 29(2), 219-238.
24. Macey, W.H. and Schneider, B. (2008), "The meaning of employee engagement", *Industrial and Organizational Psychology*, Vol. 1 No. 1, pp. 3-30.
25. Moorman, R.H. and Blakely, G.L. (1995), "Individualism-collectivism as an individual difference predictor of organizational citizenship behaviour", *Journal of Organizational Behaviour*, Vol. 16 No. 2, pp. 127-142.
26. Nuriadini, A., & Hadiprajitno, P. T. B. (2022). Manfaat Penerapan Sistem Informasi Akuntansi terhadap Kinerja Karyawan dengan Pendekatan TAM (Studi Fenomenologi terhadap Penggunaan Sistem Informasi Akuntansi di PT PLN UP3 Demak). *Diponegoro Journal of Accounting*, 11(1), 1-11. <http://ejournals1.undip.ac.id/index.php/accounting>.
27. Organ, D.W. 1998. *Organizational Citizenship Behavior; The Good Soldier Syndrome*. Lexington, MA; Lexington Book.
28. Organ, D.W., Podsakoff, P.M. and MacKenzie, S.B. (2006), *Organizational Citizenship Behaviour: Its Nature, Antecedents, and Consequences*, Sage, Thousand Oaks, CA.
29. Podsakoff, P.M., MacKenzie, S.B., Moorman, R.H. and Fetter, R. (1990), "Transforming leader behaviour and their effects on followers' trust in leader, satisfaction, and organizational citizenship

- behaviour", *Leadership Quarterly*, Vol. 1 No. 2, pp. 107-142.
30. Podsakoff, P.M. and MacKenzie, S.B. (1994), "Organizational citizenship behaviour and sales unit effectiveness", *Journal of Marketing Research*, Vol. 31 No. 3, pp. 351-363
  31. Podsakoff, P. M., & MacKenzie, S. B. 1997. The impact of organizational citizenship behavior on organizational performance: A review and suggestions for future research. *Human Performance*, 10: 133-15.
  32. Prentice, C., Dominique Lopes, S., & Wang, X. (2020). Emotional intelligence or artificial intelligence—an employee perspective. *Journal of Hospitality Marketing & Management*, 29(4), 377-403.
  33. Podsakoff, P.M., MacKenzie, S.B., Paine, J.B. and Bachrach, D.G. (2000), "Organizational citizenship behaviour: a critical review of the theoretical and empirical literature and suggestion for future research", *Journal of Management*, Vol. 26 No. 3, pp. 513-563.
  34. Rich, B.L., Lepine, J.A. and Crawford, E.R. (2010), "Job engagement: antecedents and effects on job performance", *Academy of Management Journal*, Vol. 53 No. 3, pp. 617-635.
  35. Saks, A.M. (2006), "Antecedents and consequences of employee engagement", *Journal of Managerial Psychology*, Vol. 21 No. 7, pp. 600-619.
  36. Sinambela, E. A., & Arifin, S. (2021). Studi Tentang Kinerja Karyawan Ditinjau Dari Keberadaan Sistem Informasi Akuntansi Dan Pengendalian Internal. *Realible Accounting Journal*, 1(1), 58–70.
  37. Schaufeli, W. and Bakker, A. (2004), "Job demands, job resources, and their relationship with engagement", *SA Journal of Industrial Psychology*, Vol. 36 No. 1, pp. 45-53.
  38. Sedarmayanti. (2016). Human Resource Management Bureaucratic Reform and Civil Servant Management. Bandung: PT Refika Aditama.
  39. Shuck, B., Adelson, J.L. and Reio, T.G. (2017), "The employee engagement scale: initial evidence for construct validity and implications for theory and practice", *Human Resource Management*, Vol. 56 No. 6, pp. 953-977.
  40. Shrestha, N. (2021). Factor analysis as a tool for survey analysis. *American Journal of Applied Mathematics and Statistics*, 9(1), 4–11.