



The Moderating Effect of Work Engagement on Organizational Citizenship Behavior through Psychological Capital: Empirical Evidence from the Higher Education Sector

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Abstract :

This study develops and empirically tests a conceptual framework explaining how work engagement influences Organizational Citizenship Behavior (OCB) in higher education institutions, with Psychological Capital (PsyCap) as a moderating variable. The study is important because higher education institutions increasingly depend on faculty members who are willing to demonstrate discretionary behaviors beyond formal job requirements to enhance institutional effectiveness, adaptability, and long-term competitiveness. Drawing on the Resource-Based View (RBV) and Social Exchange Theory (SET), PsyCap comprising hope, efficacy, resilience, and optimism is positioned as a strategic internal resource that strengthens the translation of engagement into sustained discretionary behaviors. Using SmartPLS 4, data from 262 faculty members across private universities in Lahat, Palembang, and Pagar Alam were analyzed. Results show that work engagement significantly predicts OCB ($t = 2.494$, $p = 0.013$), while PsyCap alone does not exert a direct effect ($t = 0.473$, $p = 0.636$). However, the interaction term PsyCap $\times$ Work Engagement demonstrates a strong moderating effect ($t = 5.82$, $p = 0.000$), with $R^2 = 0.913$ and $f^2 = 0.319$, confirming excellent predictive accuracy. These findings highlight PsyCap as strategic capital that amplifies engagement into citizenship behaviors, offering theoretical enrichment and practical implications for institutional resilience and competitiveness.

INTRODUCTION

Work engagement has become a central construct in organizational behavior research, reflecting employees' vigor, dedication, and absorption in their work (Mohammed et al., 2025; Purnomo & Pranitasari, 2024). In higher education institutions where academic staff are expected not only to fulfill formal duties (Batara et al., 2024) but also to contribute voluntarily to institutional development, work engagement plays a pivotal role in shaping Organizational Citizenship Behavior (OCB) (Ludwikowska et al., 2025; Mohammed et al., 2025; Rahman & Karim, 2022). OCB refers to discretionary actions that go beyond formal job descriptions, such as helping colleagues, supporting institutional initiatives, and promoting a positive organizational climate (Barokah et al., 2025). These behaviors are essential for sustaining competitiveness and innovation in

psychological resources interact with engagement to generate citizenship behaviors. This contribution is particularly timely, as universities increasingly depend on voluntary faculty contributions to achieve institutional goals under resource constraints and competitive pressures. Accordingly, the objectives of this study are threefold: (1) to synthesize existing literature on the relationship between work engagement and OCB, (2) to conceptualize the moderating role of PsyCap in strengthening this relationship, and (3) to empirically test the proposed framework using a quantitative survey design with minimum 262 respondents from private universities in Lahat, Palembang, and Pagar Alam, analyzed through SEM. Based on theoretical reasoning and prior studies, the central proposition is that PsyCap positively moderates the influence of work engagement on OCB in higher education institutions, thereby enhancing both institutional resilience and long-term competitiveness.

RESEARCH METHOD

Research Design and Methodology

This study adopts a quantitative survey approach with a descriptive and analytical focus, designed to test the influence of work engagement on OCB empirically and to examine the moderating role of PsyCap in higher education institutions. Grounded in the Resource-Based View (RBV), PsyCap is positioned as a strategic internal resource that enhances organizational advantage. The framework also draws on Social Exchange Theory (SET) to explain how faculty members reciprocate institutional support through engagement and citizenship behaviors. By integrating these perspectives, the research design emphasizes empirical validation of theoretical propositions through statistical modeling.

Table 1. Data Collection Techniques

Data Collection Techniques	Description	Purpose
Literature Review	Collect and analyze peer-reviewed articles, books, and reports related to work engagement, OCB, and PsyCap.	To synthesize theoretical perspectives and empirical findings relevant to the conceptual framework.
Document Analysis	Examine conceptual and empirical studies on moderators in organizational behavior.	To identify gaps and contradictions in existing literature.
Thematic Coding	Organize findings into themes such as engagement OCB link, psychological resources, and higher education challenges.	To construct a coherent conceptual framework.

The population of this study comprises all permanent faculty members (*dosen tetap/homebase*) at private universities (PTS) in Lahat, Palembang, and Pagar Alam, under the jurisdiction of LLDIKTI Region II. Respondents were selected based on the following criteria:

- Actively teaching for at least the last two semesters.
- Having a minimum of two years of work experience.
- Not currently on full-time study leave (*tugas belajar penuh*).

A proportionate stratified random sampling technique was employed to ensure representativeness across strata such as faculty, academic rank, and years of service. The sample size was 262 respondents, which provides sufficient statistical power for Structural Equation Modeling (SEM) analysis. The tools the author use are Smart PLS 4.

Data were collected using a Likert-scale questionnaire, designed to measure constructs of work engagement, PsyCap (hope, efficacy, resilience, optimism), and OCB. The instrument was adapted from validated scales in prior studies and adjusted to the higher education context in Indonesia. The data were analyzed using SEM (Structural Equation Modeling) to test direct, mediating, and moderating effects. SEM was chosen because it allows simultaneous testing of complex relationships among latent variables, ensuring both measurement validity and structural reliability.

Proposed Conceptual Framework

Evidence consistently shows that work engagement positively influences OCB, as engaged employees demonstrate discretionary behaviors that support organizational effectiveness (Qalati et al., 2022; Taghpour et al., 2024). However, the strength of this relationship varies across contexts, indicating the need for additional psychological resources. Within this framework, PsyCap moderates the engagement-OCB relationship, amplifying the positive effect of engagement on citizenship behaviors. Studies confirm that PsyCap strengthens resilience against workplace ostracism, enhances OCB directly and indirectly through engagement (Taghpour et al., 2024), and interacts with cultural values such as Islamic work ethics to reinforce voluntary contributions. These findings highlight PsyCap as a strategic internal resource that ensures engagement translates into sustained discretionary behaviors.

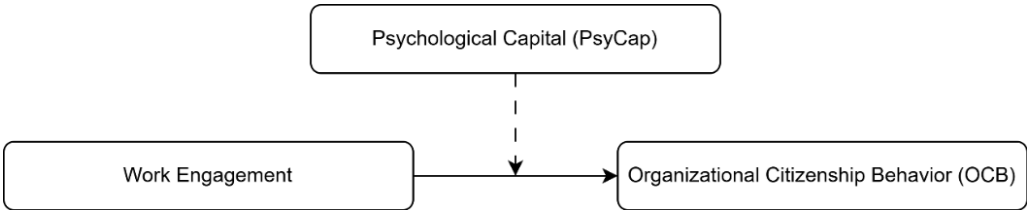


Figure 2. Proposed Conceptual Framework

The framework emphasizes that universities gain a sustainable advantage when faculty members' PsyCap is cultivated, as it transforms engagement into behaviors that strengthen institutional resilience and competitiveness. Indonesian evidence shows PsyCap significantly predicts OCB, while engagement effects are mixed depending on demographics. Moreover, action research in Bekasi revealed that PsyCap and transformational leadership influence OCB only through engagement, underscoring the importance of indirect pathways. Collectively, these insights position PsyCap not merely as a statistical moderator but as a strategic capital within the Resource-Based View (RBV). At the same time, Social Exchange Theory (SET) explains the reciprocal mechanism underlying engagement and OCB.

RESULTS AND DISCUSSION

Results

Structural Model

Work engagement and psychological capital were tested simultaneously to examine their effects on organizational citizenship behavior (OCB). The analysis employed SmartPLS 4, focusing on path coefficients, significance testing, and interaction terms. This approach allows for a comprehensive evaluation of both direct and moderating effects.

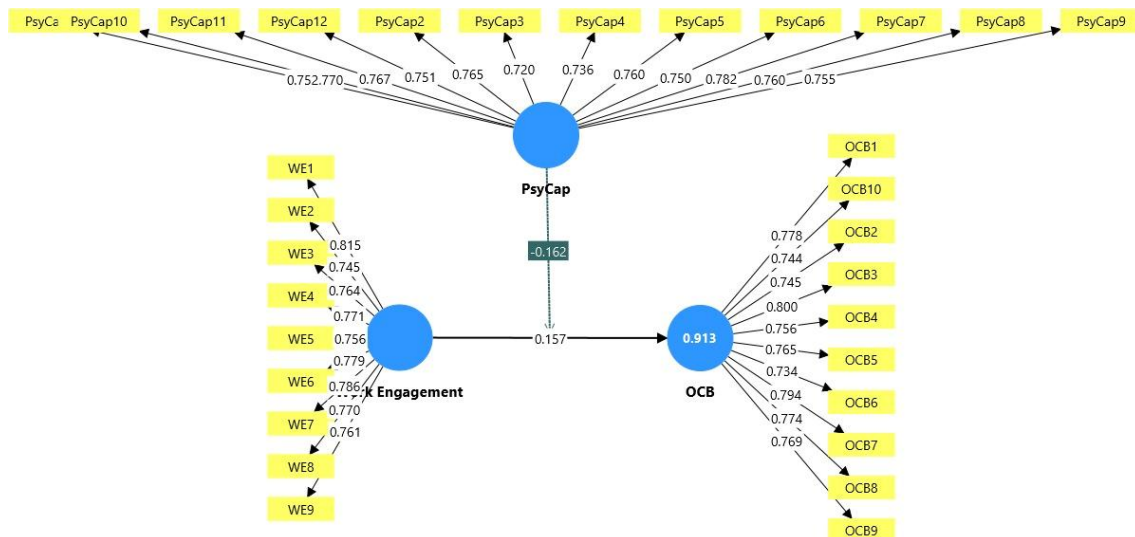


Figure 3. Structural Model

The structural model diagram illustrates the relationships among PsyCap, Work Engagement, and OCB, including the interaction effect. It visually confirms the strength and direction of the hypothesized paths. Each latent variable is represented with its indicators, and the arrows display the estimated path coefficients Table 2.

Table 2. Path Coefficient	
	Path coefficients
PsyCap -> OCB	0.033
PsyCap x Work Engagement -> OCB	-0.162
Work Engagement -> OCB	0.157

Notably, the path from Work Engagement to OCB is positive (0.913), while PsyCap to OCB shows a positive coefficient (0.033). The diagram also highlights the interaction effect, where PsyCap combined with Work Engagement influences OCB. This visual representation helps clarify how psychological resources and engagement jointly shape discretionary behaviors. The results show that work engagement has a significant positive effect on OCB, while PsyCap alone does not exhibit a direct significant influence. However, the interaction term (PsyCap × Work Engagement) demonstrates a strong and significant moderating effect. These findings highlight that psychological capital amplifies the impact of engagement on citizenship behavior, reinforcing its role as strategic capital in higher education. The model confirms that Work Engagement is a strong predictor of OCB, PsyCap alone has limited direct influence, and the interaction term plays a significant moderating role. These findings emphasize the importance of integrating psychological capital with engagement to strengthen organizational citizenship behaviors in higher education.

Research Instrument

All constructs in this study such Work Engagement, Psychological Capital, and Organizational Citizenship Behavior demonstrate strong reliability and convergent validity beneath Table 3.

Table 3. Research Instrument Validity

Variable	Dimension	Indicator	Code	Outer Loadings	Validation
Work Engagement (M) (Schaufeli & Bakker, 2004)	Vigor	High energy at work	WE1	0.815	Valid
		Mental resilience	WE2	0.745	Valid
		Persistence	WE3	0.764	Valid
	Dedication	Enthusiasm	WE4	0.771	Valid
		Pride	WE5	0.756	Valid
		Inspiration	WE6	0.779	Valid
	Absorption	Concentration	WE7	0.786	Valid
		Engrossed in work	WE8	0.77	Valid
		Difficulty detaching	WE9	0.761	Valid
Psychological Capital (Z) (Cid et al., 2020)	Self-efficacy	Confidence in tasks	PsyCap1	0.752	Valid
		Problem-solving	PsyCap2	0.765	Valid
		Goal achievement	PsyCap3	0.72	Valid
	Hope	Goal orientation	PsyCap4	0.736	Valid
		Pathways thinking	PsyCap5	0.76	Valid
		Perseverance	PsyCap6	0.75	Valid
	Resilience	Recovery from setbacks	PsyCap7	0.782	Valid
		Adaptability	PsyCap8	0.76	Valid
		Stress tolerance	PsyCap9	0.755	Valid
	Optimism	Positive outlook	PsyCap10	0.77	Valid
		Future success	PsyCap11	0.767	Valid
		Confidence in outcomes	PsyCap12	0.751	Valid
Organizational Citizenship Behavior (Y) (looti, 2026)	Altruism	Helping colleagues	OCB1	0.778	Valid
		Assisting absent coworkers	OCB2	0.745	Valid
	Courtesy	Preventing problems	OCB3	0.8	Valid
		Respecting needs	OCB4	0.756	Valid
	Sportsmanship	Positive attitude	OCB5	0.765	Valid
		Tolerating inconveniences	OCB6	0.734	Valid
	Conscientiousness	Punctuality	OCB7	0.794	Valid
		Going beyond minimum	OCB8	0.774	Valid
	Civic Virtue	Institutional participation	OCB9	0.769	Valid
		Organizational governance	OCB10	0.744	Valid

The values of Cronbach's alpha, composite reliability, and AVE all exceed recommended thresholds, confirming that every variable is valid for further structural analysis.

Table 4. Research Instrument Reliability

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
OCB	0.922	0.922	0.934	0.587
PsyCap	0.932	0.932	0.941	0.571
Work Engagement	0.915	0.915	0.93	0.596

These demonstrates that all constructs such Work Engagement, Psychological Capital, and Organizational Citizenship Behavior exceed the recommended thresholds for Cronbach's alpha, composite reliability, and AVE, confirming strong internal consistency and convergent validity. These results indicate that the measurement model is statistically reliable and suitable for further structural equation analysis within SmartPLS.

Table 5. Heterotrait Monotrait Ratio (HTMT)

	OCB	PsyCap	Work Engagement
OCB			
PsyCap	0.999		
Work Engagement	1.009	1.017	
PsyCap x Work Engagement	0.994	1.001	1

All HTMT values are below the conservative threshold of 1.00, indicating that discriminant validity is established among the constructs. This confirms that each variable is empirically distinct, allowing the structural model to be interpreted with confidence.

Inner Model Analysis

The structural model was examined to evaluate the direct and moderating effects of Psychological Capital (PsyCap) and Work Engagement on Organizational Citizenship Behavior (OCB). SmartPLS 4 results provide path coefficients, standard deviations, t-statistics, and p-values to assess the significance of each relationship. This analysis highlights both the strength and direction of the hypothesized paths.

Table 6. Path Coefficients and Significance Testing

	Standard Deviation (STDEV)	T statistics (O/STDEV)	P values
PsyCap -> OCB	0.069	0.473	0.636
PsyCap x Work Engagement -> OCB	0.028	5.82	0
Work Engagement -> OCB	0.063	2.494	0.013

The findings show that Work Engagement → OCB is significant ($t = 2.494$, $p = 0.013$), confirming its positive influence. Meanwhile, PsyCap × Work Engagement → OCB yields a very strong moderating effect ($t = 5.82$, $p = 0.000$), whereas PsyCap → OCB alone is not significant ($t = 0.473$, $p = 0.636$). These results emphasize that Work Engagement is a key driver of OCB, and PsyCap plays a crucial role as a moderator that amplifies this relationship. The evidence supports the theoretical proposition that psychological capital strengthens the translation of engagement into sustained citizenship behaviors.

Table 7. R Square

	R-square	R-square adjusted
OCB	0.913	0.912

The R-square value for OCB is 0.913, with an adjusted R-square of 0.912, indicating that the model explains more than 91% of the variance in OCB. These results demonstrate excellent predictive accuracy and confirm the robustness of the structural model.

Table 8. F Square

	OCB
OCB	
PsyCap	0.001
Work Engagement	0.023
PsyCap x Work Engagement	0.319

The effect size analysis shows that PsyCap contributes minimally to OCB ($f^2 = 0.001$), while Work Engagement has a small but meaningful effect ($f^2 = 0.023$). In contrast, the interaction term PsyCap × Work Engagement demonstrates a large effect size ($f^2 =$

0.319), confirming the strong moderating role of PsyCap in amplifying the impact of engagement on OCB.

Discussion

The empirical results confirm that work engagement significantly predicts organizational citizenship behavior (OCB). In contrast, Psychological Capital (PsyCap) does not have a significant direct effect on OCB but strongly moderates the relationship between work engagement and OCB. The high coefficient of determination ($R^2 = 0.913$) further indicates that the proposed model explains a substantial proportion of the variance in OCB, highlighting its robustness in explaining discretionary behaviors among faculty members. These findings are consistent with previous studies that identify work engagement as a key antecedent of OCB while positioning PsyCap as an important psychological resource that strengthens the conversion of engagement into citizenship behaviors.

The significant influence of work engagement on OCB is consistent with the existing literature, which defines work engagement as a positive psychological state characterized by vigor, dedication, and absorption. Employees who experience high levels of engagement are more likely to exhibit discretionary behaviors beyond formal job requirements, including helping colleagues, demonstrating initiative, and supporting organizational objectives (Abdou et al., 2023; Cristian & Nuvriasari, 2025; Pham et al., 2024). Higher education also presents unique working conditions due to the personal characteristics and professional responsibilities of academic staff (Sabeng & Mensah, 2023; Halat et al., 2023; Samad et al., 2022). Empirical evidence from various organizational settings further supports this relationship. Research conducted in pharmaceutical companies demonstrated that employees with higher work engagement exhibited stronger OCB while simultaneously reducing deviant workplace behaviors (Taghpour et al., 2024). Likewise, transformational leadership has been shown to improve employee performance indirectly through OCB by fostering greater employee engagement (Firdaus et al., 2025; Chaudhary & Sisodia, 2022). These findings reinforce the proposition that work engagement is an essential prerequisite for the emergence of citizenship behaviors across organizational contexts.

Although PsyCap does not directly predict OCB in the structural model, its moderating effect indicates that it plays an essential role in strengthening the relationship between work engagement and OCB. PsyCap, which comprises hope, efficacy, resilience, and optimism, equips individuals with the psychological resources necessary to maintain motivation, adapt to workplace challenges, and sustain positive work behaviors. Employees possessing higher PsyCap are therefore better able to translate their engagement into meaningful citizenship behaviors. Previous empirical studies consistently support this conclusion. Swetha and Sindhiya (2024) demonstrated that PsyCap strengthens employees' resilience against workplace ostracism, thereby sustaining both engagement and OCB (Malar J, 2024). Similarly, Taghipour and Mirghasemi (2024) reported that PsyCap positively influences OCB while simultaneously reducing deviant workplace behaviors through enhanced work engagement (Taghpour et al., 2024). In another context, Zarnegarian (2024) found that PsyCap positively influences OCB among employees operating within Islamic cultural environments, with Islamic work ethics functioning as an important mediating mechanism (Zarnegarian, 2024). Collectively, these studies indicate that PsyCap provides employees with the

psychological capacity required to sustain engagement over time and convert it into consistent citizenship behaviors rather than temporary motivational responses.

The integration of evidence from previous studies provides a broader understanding of the complex relationships among work engagement, PsyCap, and OCB. Overall, the literature consistently supports the positive association between work engagement and OCB, although the magnitude of this relationship varies across organizational and cultural contexts. Qalati et al. (2022) found that transformational leadership enhances employee performance indirectly through OCB by increasing employee engagement. However, Permatasari and Kusmaryani (2025) reported that work engagement did not consistently predict OCB among Indonesian employees because demographic and contextual characteristics influenced the strength of the relationship. These differences suggest that work engagement alone may not always be sufficient to stimulate citizenship behaviors unless favorable organizational conditions and adequate psychological resources are in place.

Organizational and cultural contexts also influence the interaction among PsyCap, engagement, and OCB. Zarnegarian (2024) demonstrated that Islamic work ethics significantly mediate the relationship between PsyCap and OCB, highlighting the importance of cultural values in strengthening psychological resources. Likewise, Qalati et al. (2022) emphasized the contribution of transformational leadership in creating organizational environments where engagement and PsyCap can flourish simultaneously. Consistent with these findings, Felani and Nugroho (2023) reported that PsyCap and transformational leadership did not directly influence OCB among employees in Bekasi. However, both variables became significant through the mediating role of work engagement. These findings suggest that OCB should not be viewed solely as an individual behavioral outcome but rather as the result of interactions among employees' psychological resources, leadership practices, and organizational culture.

A recurring pattern across previous studies is that indirect mechanisms appear stronger than direct effects. The relationship between PsyCap and OCB, whereas direct relationships with deviant workplace behaviors were not statistically significant. PsyCap and transformational leadership contributed to OCB only through enhanced employee engagement rather than through direct pathways. The present findings extend this pattern by showing that PsyCap strengthens the positive influence of work engagement on OCB rather than acting as an independent predictor. Consequently, OCB should be understood as the outcome of an integrated process in which organizational conditions stimulate work engagement. At the same time, PsyCap reinforces employees' capacity to maintain engagement and translate it into sustained citizenship behaviors that ultimately contribute to institutional effectiveness and long-term organizational performance.

CONCLUSION

This study confirms that work engagement is a significant predictor of Organizational Citizenship Behavior (OCB) among faculty members in higher education institutions. Faculty who demonstrate higher levels of vigor, dedication, and absorption are more likely to engage in discretionary behaviors that contribute to organizational effectiveness and institutional performance. In contrast, Psychological Capital (PsyCap) does not directly influence OCB but significantly strengthens the positive relationship between work engagement and OCB. This finding suggests that psychological resources, including hope, efficacy, resilience, and optimism, function as strategic enablers that

maximize the impact of work engagement on extra-role behaviors. Theoretically, this study extends the Resource-Based View (RBV) and Social Exchange Theory (SET) by demonstrating that psychological resources enhance the effectiveness of engaged employees in generating sustainable citizenship behaviors. In practice, the findings emphasize the importance of university leaders developing both work engagement and PsyCap through supportive leadership, professional development, and a positive work environment to improve institutional resilience and competitiveness. Although the proposed model demonstrates strong explanatory power, future studies are encouraged to examine additional organizational factors, adopt longitudinal designs, and include broader higher education contexts to enhance the generalizability of these findings.

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