



TRANSFORMATIONAL LEADERSHIP AND EMPLOYEE OUTCOMES: PSYCHOLOGICAL CAPITAL AS MODERATOR

Kadek Ardhika Widya Kresna*, Tatik Suryani

University of Hayam Wuruk Perbanas, Indonesia

E-mail : kadek.ardhika@gmail.com *

ABSTRACT

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This study aims to analyze the effect of transformational leadership on team member performance and work engagement, as well as psychological capital as a moderating variable, in the context of PT Petrokimia Gresik. Using a quantitative approach and PLS-SEM analysis method, the study findings reveal that transformational leadership positively affects team member performance, both directly and indirectly through increased work engagement. Employees led by transformational leaders show higher emotional and cognitive engagement in their work, which drives increased work performance. Furthermore, psychological capital significantly strengthens the relationship between work engagement and performance, indicating that hope, self-efficacy, optimism, and resilience are important in maintaining team member effectiveness amidst workplace challenges. These findings underscore the strategic importance of fostering transformational leadership styles and investing in team member psychological capital to enhance productivity and ensure sustainable performance in manufacturing organizations. This study contributes theoretically to the literature on organizational behavior and offers practical implications for management in designing interventions that enhance team member engagement and psychological resilience.

Keywords: Transformational Leadership, Team Member Performance, Work Engagement, Psychological Capital.

INTRODUCTION

In Indonesia's current labor market landscape, the millennial generation constitutes a dominant force, representing approximately 34.00% of the total productive-age population as of February 2024 (Indonesian Chamber of Commerce and Industry, 2024; Kubu.id, 2024). This cohort exhibits distinct characteristics, notably their demand for work-life balance, job flexibility, and sustainable career development. Millennials expect a work environment that fosters innovation, creativity, and a collaborative, inclusive organizational culture. These preferences significantly influence team member engagement and job performance within modern organizational contexts. When team member' needs are adequately addressed, their level of engagement tends to rise, which

in turn positively impacts job performance. This phenomenon underscores the necessity for organizations to strategically manage leadership and workplace climate in alignment with the expectations of the millennial workforce, which now represents a core organizational asset. From a scientific standpoint, this highlights the urgency to better understand the dynamics between leadership, engagement, and performance in millennial-dominated organizations. At the same time, practically, it signals the pressing need for firms to realign their human capital strategies with generational expectations to maintain competitiveness.

Job performance is a critical determinant of organizational success. Conceptually, it reflects how individuals effectively carry out their duties and responsibilities, encompassing efficiency, effectiveness, and quality (Alkaf et al., 2021; Khan et al., 2020). Research has identified multiple determinants of job performance, ranging from individual characteristics and work environment to organizational leadership (Abdullahi et al., 2025; Wulur & Mandagi, 2023). Intrinsic factors such as motivation, conscientiousness, and leadership style have significantly contributed to enhanced performance. In a dynamic industrial environment such as PT Petrokimia Gresik, team member performance is pivotal in achieving production targets and ensuring business sustainability. The company has implemented key performance indicators (KPIs) and human resource development programs to boost productivity. However, fertilizer production data from 2020 to 2023 reveal a downward trend, potentially indicating serious challenges related to work effectiveness and team member engagement amid strategic organizational changes (Petrokimia Gresik, 2024). This practical problem reflects an empirical gap between existing managerial efforts and actual performance outcomes, suggesting that conventional HR practices alone may not be sufficient to address declining productivity.

This situation necessitates a strategic approach to human resource management, particularly in strengthening the role of leadership. Transformational leadership is widely recognized as effective for enhancing team member engagement and performance. Transformational leaders do not merely articulate an inspiring vision, but also stimulate innovation, provide individualized support, and nurture employees' personal development (Jiatong et al., 2022; Kwarteng et al., 2024; Park et al., 2022). Empirical studies suggest that this leadership style can reinforce team member engagement through emotional connection, work meaningfulness, and decision-making empowerment (Abolnasser et al., 2023; Astuty & Udin, 2020). When emotionally and intellectually engaged, employees are likelier to demonstrate higher job performance (Fu et al., 2022; Shafi et al., 2020). Accordingly, transformational leadership presents a strategic approach to addressing performance-related challenges at PT Petrokimia Gresik, which is currently navigating structural shifts in production and business orientation. Nevertheless, while the theoretical relationship between transformational leadership and job outcomes has been widely explored globally, its practical validation within Indonesia's fertilizer industry remains underexplored, marking a clear research gap.

The influence of team member engagement on job performance is not always straightforward, especially without favorable psychological conditions. In this context, psychological capital (PsyCap) serves a pivotal moderating function. Comprising four essential components: hope, efficacy, optimism, and resilience, PsyCap equips individuals to effectively navigate work-related stressors and challenges (Ghodbane & Alwehabie, 2023). Prior research has demonstrated that employees with higher levels of PsyCap exhibit greater confidence, optimism, and adaptability in demanding situations, sustaining strong performance regardless of external pressures (Karimi et al., 2023; Yao

et al., 2022). When examining the linkage between engagement and performance, PsyCap enhances the strength of this relationship by acting as an accelerator of positive outcomes, particularly under dynamic or adverse organizational circumstances, such as those encountered by PT Petrokimia Gresik. The presence of PsyCap reinforces a constructive cycle that supports team member well-being and the organization's long-term competitiveness. However, limited research has simultaneously examined PsyCap's moderating role in the engagement–performance linkage within heavy industries in Indonesia, which restricts both theoretical development and practical application of PsyCap-oriented interventions.

With this in mind, the current study investigates the impact of transformational leadership on team member engagement and job performance at PT Petrokimia Gresik, while also assessing the moderating role of psychological capital in the engagement–performance relationship. This study offers urgency in scientific and practical domains: it addresses a notable research gap by situating transformational leadership and PsyCap within Indonesia's strategic fertilizer sector; practically, it provides actionable insights for organizations facing declining performance amid structural changes. Based on Scopus (2024) data, most existing studies on job performance originate from countries such as the United States, China, Malaysia, and India. Hence, this research aims to provide theoretical contributions to human resource literature and practical insights to inform talent management strategies in response to the increasing demand for efficiency, productivity, and sustainable operations within Indonesia's evolving fertilizer sector.

The Influence of Transformational Leadership on Job Performance

Job performance is a multidimensional construct that reflects the extent to which an individual effectively carries out tasks and responsibilities assigned in the workplace. It encompasses task performance, the technical execution of job duties, and contextual performance, which involves interpersonal behaviors and adaptability (Krijgsheld et al., 2022). High job performance is crucial for achieving organizational success, as it contributes to productivity, employee satisfaction, and the attainment of strategic goals. Existing literature underscores that job performance is shaped by various factors, including individual competence, intrinsic motivation, organizational support, and leadership style (Aljumah, 2023). Among the various leadership paradigms, transformational leadership has emerged as a particularly influential factor in enhancing individual performance outcomes.

Transformational leadership shapes team member performance by fostering a motivational and empowering work environment. Transformational leaders inspire employees to exceed performance expectations through idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Lai et al., 2020). Empirical studies consistently report a positive and significant association between transformational leadership and various dimensions of job performance, including task effectiveness, organizational citizenship behavior, and team productivity (Kumar Ghai & Dhiman, 2024; Rahman & Ferdousy, 2022). For instance, research in the banking sector in Pakistan found that transformational leadership significantly improved team member performance through intellectual stimulation and motivational engagement (Shah et al., 2023). Likewise, in small and medium enterprises, transformational leadership enhances job performance by increasing team member motivation and reducing stress (Manzoor et al., 2019). A comprehensive meta-analysis also revealed that this leadership style impacts job performance through mediators such as leader-member exchange, job satisfaction, and self-efficacy (Ng, 2017). Recent findings by Sudha et al. (2023) further confirm that

transformational leadership has a direct and significant positive influence on job performance (The conceptual framework can be seen in Figure 1). Thus,

Hypothesis 1: Transformational leadership positively and significantly affects job performance.

The Influence of Transformational Leadership on Employee Engagement

Transformational leadership significantly influences employee engagement by creating an inspiring, meaningful work environment that supports employees' psychological needs. Transformational leaders exhibit idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration, all of which foster a sense of security, trust, and appreciation in workplace relationships (Abdul-Azeez et al., 2024; Alamri, 2023). By fulfilling employees' intrinsic needs, this leadership style encourages greater emotional and cognitive engagement with their work and the organization. A study by Fernando & Jayawardana (2024) affirms that transformational leadership not only directly impacts employee engagement but also serves as an important mediator in the relationship between leadership and performance.

Furthermore, transformational leadership enhances employee engagement through meaningful communication of vision, recognition of individual contributions, and growth opportunities. Research by Jiatong et al. (2022) reveals that employee engagement is a crucial pathway through which transformational leadership influences affective commitment and job performance. In a work environment that supports employees and is free from fear of failure, individuals are more motivated to take initiative and innovate. Other empirical findings, such as those from Chuanxi & Salman (2024), demonstrate that transformational leadership can increase intrinsic motivation and engagement, which in turn supports the achievement of organizational goals (Chuanxi & Salman, 2024). Daily studies by Tims et al. (2011) also reinforce that the influence of transformational leadership on engagement is consistent in the dynamics of everyday work (The conceptual framework can be seen in Figure 1). Therefore,

Hypothesis 2: Transformational Leadership Positively and Significantly Affects Employee Engagement

The Influence of Employee Engagement on Job Performance

Employee engagement is critical in enhancing job performance, encompassing a deep emotional and psychological commitment to the organization and its goals. Empirical research has demonstrated that higher levels of employee engagement are directly associated with improved performance across various sectors. For instance, a study by Satata (2021) revealed that employee engagement significantly influences performance, making employees more likely to contribute positively to organizational objectives. It is attributed to heightened motivation, greater effort, and a strong sense of ownership over their work, collectively leading to superior performance outcomes (Aziez, 2022). These studies also highlight that engaged employees deliver higher-quality work and demonstrate a strong commitment to achieving optimal results.

Moreover, research by Wardiansyah et al. (2024) confirms that team member engagement directly affects job performance and enhances job satisfaction, contributing to improved performance. These findings indicate that organizations focusing on fostering and improving employee engagement will benefit from greater job satisfaction, ultimately leading to better performance. Ghafoor & Haar (2022) emphasize that a strong relationship between employees and the organization, facilitated through engagement

initiatives, drives higher commitment and results in enhanced job performance (The conceptual framework can be seen in Figure 1). Thus,

Hypothesis 3 : Employee Engagement Positively and Significantly Affects Job Performance

The Moderating Role of Psychological Capital in The Relationship between Employee Engagement and Job Performance

Psychological Capital (PsyCap) is a positive psychological state characterized by four key components: hope, self-efficacy, resilience, and optimism. These components are valuable psychological assets significantly contributing to individual effectiveness in managing job-related challenges. Research by Yao et al. (2022) demonstrates that individuals with high levels of PsyCap are more motivated and resistant to job burnout and more capable of learning and adapting to task demands, ultimately resulting in enhanced performance. Therefore, employees with strong PsyCap are likelier to engage deeply with their work and produce superior outcomes. PsyCap plays a critical role in amplifying the positive effects of employee engagement on job performance.

Furthermore, the Job Demands Resources (JD-R) model provides a theoretical framework explaining how PsyCap functions as a personal resource that strengthens the relationship between employee engagement and job performance. A study by Yang et al. (2024) confirms that PsyCap positively moderates this relationship: individuals with high PsyCap demonstrate increased performance as their engagement grows, whereas those with low PsyCap do not exhibit the same performance gains despite high engagement levels. These findings are supported by Chaffin et al. (2023), who emphasize that the confidence, resilience, hope, and optimism embedded in PsyCap enable employees to convert engagement into optimal work outcomes (The conceptual framework can be seen in Figure 1). Thus,

Hypothesis 4 : Psychological Capital Positively Moderates The Relationship between Employee Engagement and Job Performance, such that The Effect of Employee Engagement on Job Performance is More Potent When Psychological Capital is High

RESEARCH METHODS

This research employs a quantitative research design utilizing a survey-based methodology to systematically explore the interrelationships among key variables by analyzing numerical data gathered from permanent employees of PT Petrokimia Gresik. The adoption of this method is grounded in its efficacy for empirically validating hypothesis-driven models and providing measurable insights into the role of transformational leadership in shaping employee engagement and job performance, with psychological capital positioned as a moderating factor. The study encompasses personnel across both operational and administrative divisions, concentrating on four primary constructs: transformational leadership (as the independent variable), employee engagement and job performance (as the outcome variables), and psychological capital (as the moderating variable). Each construct was operationalized using validated measurement tools adapted from internationally recognized instruments developed by Stanescu et al. (2021), Kişi (2023), Shah et al. (2023), and Mangkunegara (2017).

The research population comprises 2,052 permanent employees, representing the entire workforce of PT Petrokimia Gresik. A simple random sampling strategy was implemented to ensure methodological rigor and minimize sampling bias, granting each individual an equal probability of selection. Based on Slovin's formula and a 10.00% allowable margin of error, the minimum sample requirement was calculated at 95 respondents.

The randomization process was done using a computerized random number generator applied to the company's official team member database. Each team member was assigned a unique identification number, and the system randomly selected individuals until the desired sample size was reached. From the initial random selection, 500 employees were contacted to participate, ensuring adequate coverage beyond the minimum requirement. Of these, 432 employees completed the questionnaires, yielding a high response rate of 86.40%. Notably, only employees randomly selected through this procedure were included in the final dataset, thereby preserving the integrity of the simple random sampling method. Non-random or voluntary responses were excluded to prevent sampling bias.

The evaluation of transformational leadership is contingent upon the employees' perceptions of the superior's leadership style. Providing individual attention, motivation, potential development, and inspiration to each team member characterizes this style. Stanescu et al. (2021) devised the dimensions on which the instrument is based, including idealized influence, intellectual stimulation, individualized consideration, and inspirational motivation. The idealized influence dimension comprises two subdimensions: idealized attributes and idealized behavior. Each subdimension reflects the extent to which the leader is willing to sacrifice personal interests for the team's benefit and functions as a role model. For instance, one item from idealized attributes is "My leader instills pride in team members," while one from idealized behavior is "My leader emphasizes the importance of having a shared goal."

Meanwhile, the employee engagement variable assesses employees' affective commitment and involvement in their work and organization, and their aspiration to make the most significant contribution to the company's success. Vigor, dedication, and assimilation are the three dimensions employed to quantify this. One item from the dedication dimension is "I take pride in the work I do," while an indicator of the vigor dimension is "At work, I feel full of energy." These two variables are highly pertinent to PT Petrokimia Gresik because the manufacturing environment necessitates a workforce optimally engaged in operational activities and leadership capable of motivating employees.

To ascertain the extent of positive psychological capital that PT Petrokimia Gresik employees possess as a support for their performance, the psychological capital (PsyCap) variable was assessed. According to Shah et al. (2023), PsyCap comprises four primary components: self-efficacy, resilience, optimism, and hope. Indicators such as "I can think of many ways to achieve my current goals" are used to evaluate the degree to which employees can think flexibly to achieve their objectives. In contrast, the resilience dimension indicates the capacity to endure and recuperate from work-related stressors. One such item is "I typically maintain a composed demeanor when confronted with stressful situations at work." Conversely, the job performance variable assesses the quality and quantity of employees' work. The indicators utilized were derived from Mangkunegara (2017) and encompass five primary components: work quality, work quantity, responsibility, initiative, and cooperation. An indicator from the work quality dimension is "I am capable of completing work with high quality standards," while an

indicator from the initiative dimension is "I actively pursue methods to enhance my work efficiency." In the context of PT Petrokimia Gresik, it is essential to conduct a comprehensive measurement of PsyCap and job performance, as it is directly related to the individual's ability to confront the challenges of the petrochemical industry, which necessitates high performance, accuracy, and resilience under intense work pressure. The organization can develop more precise HR development interventions by comprehending its employees' performance and PsyCap levels.

Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed to analyze the collected data. This technique is well-suited for assessing complex causal relationships among latent constructs, especially under smaller sample sizes or non-normal data distributions. By leveraging PLS-SEM, the study aims to generate robust, generalizable findings that contribute to theoretical development and practical applications in human resource management within Indonesia's strategically vital fertilizer industry.

RESULTS AND DISCUSSION

The study involved 406 employees of PT Petrokimia Gresik as respondents, with the majority being male (91.60%), reflecting a male-dominated organizational structure. Most respondents were in their productive age range of 31–40 years (61.10%) and were married (87.40%), indicating high social maturity and stability. Regarding educational background, the majority held secondary-level qualifications (high school/vocational school) at 50.50%, followed by university graduates (25.90%), suggesting that the workforce primarily engages in technical and operational roles. Structurally, respondents were distributed across various job grades, with the highest proportions in Grade V (28.30%), operational staff (26.10%), and Grade IV (24.60%), who play crucial roles in the company's operations. Regarding tenure, most respondents had over 10 years of service, with 44.30% in the 11–15 years range and 29.60% in the 6–10 years range, indicating high levels of experience and loyalty. The respondent profile reflects a stable, productive, and experienced workforce within PT Petrokimia Gresik.

The validity and reliability of the measurement instruments in this study were rigorously evaluated using the Partial Least Squares (PLS) approach, with a specific focus on the outer model assessment. It included tests for convergent validity, construct validity, discriminant validity, and composite reliability to ensure the precision and consistency of the instruments in capturing the intended constructs. The factor loading results indicated that all items demonstrated standardized loadings above 0.50, fulfilling the convergent validity criteria (Hair et al., 2022). In addition, each construct's Average Variance Extracted (AVE) values surpassed the recommended minimum threshold of 0.500, supporting the constructs' convergent and content validity (Henseler et al., 2016).

Discriminant validity was established by confirming that each indicator had a stronger loading on its associated construct than any other, highlighting clear construct separation and minimizing multicollinearity concerns (Voorhees et al., 2016). Reliability was further evaluated through both Cronbach's Alpha and Composite Reliability indices, with all constructs exceeding the benchmark values of 0.600 and 0.700, respectively, indicating high internal consistency and measurement stability (Sarstedt et al., 2017).

These results validate the robustness of the measurement model, ensuring that the instruments are not only psychometrically sound but also appropriate for application in

empirical settings, particularly within the strategic context of the industrial sector, such as PT Petrokimia Gresik. Recent literature reinforces the necessity of reliable measurement in human resource and organizational behavior research, as errors in construct validity can lead to flawed theoretical inferences and policy misjudgments (Latan & Noonan, 2023). Therefore, the findings affirm that the instruments employed in this study meet established standards of validity and reliability, making them suitable for advanced hypothesis testing and theoretical model evaluation. The results of the validity and reliability tests are presented in Table 1.

Table 1.1. Results of Validity and Reliability Tests

Items	Loading factor	Cronbach's Alpha	Composite Reliability	AVE
JP1	0,856	0,926	0,944	0,772
JP2	0,901			
JP3	0,881			
JP4	0,881			
JP5	0,873			
PC1	0,863	0,966	0,970	0,581
PC10	0,861			
PC11	0,916			
PC12	0,892			
PC13	0,829			
PC14	0,608			
PC15	0,860			
PC16	0,879			
PC17	0,685			
PC18	0,829			
PC2	0,900			
PC20	0,816			
PC21	0,711			
PC22	0,842			
PC23	0,859			
PC24	0,848			
PC3	0,884			
PC4	0,886			
PC5	0,771			
PC6	0,876			
PC7	0,880			
PC8	0,867			
PC9	0,892			
TL1	0,905	0,984	0,985	0,765
TL10	0,919			
TL11	0,911			
TL12	0,897			

Table 1.2. Results of Validity and Reliability Test (Continuation)

Items	Loading factor	Cronbach's Alpha	Composite Reliability	AVE
TL13	0,910			
TL14	0,898			
TL15	0,910			
TL16	0,943			
TL17	0,945			
TL18	0,929			
TL19	0,952			
TL2	0,838			
TL20	0,948			
TL3	0,903			
TL4	0,860			
TL5	0,912			
TL6	0,908			
TL7	0,887			
TL8	0,906			
TL9	0,905			
EE1	0,875	0,900	0,919	0,558
EE2	0,892			
EE3	0,842			
EE4	0,830			
EE5	0,901			
EE6	0,844			
EE7	0,837			
EE8	0,900			
EE9	0,821			

Source: Data processed

The results of this study demonstrate that the structural model developed possesses substantial explanatory and predictive power, as reflected in the values of the coefficient of determination (R^2), predictive relevance (Q^2), and goodness of fit (GoF). Specifically, the R^2 value indicates that transformational leadership and employee engagement collectively account for 65.100% of the variance in job performance, while transformational leadership alone explains 40.400% of the variance in employee engagement. It suggests a robust influence of leadership dynamics on engagement and performance outcomes. The Q^2 value 0.933 further confirms the model's high predictive relevance, indicating a strong capacity to forecast endogenous variable behaviors. Additionally, the GoF index value of 0.432 signifies an overall strong model fit, validating that the measurement and structural models are well-aligned with the observed data patterns.

Hypothesis testing through the analysis of path coefficients revealed that all hypothesized relationships among variables were statistically significant. Transformational leadership positively and significantly affects employee engagement

and job performance. Furthermore, employee engagement emerged as a significant predictor of job performance, reinforcing its mediating role in the leadership–performance linkage. Notably, psychological capital was confirmed as a significant moderating variable that strengthens the relationship between employee engagement and job performance. These findings highlight the pivotal role of transformational leadership in shaping desirable employee outcomes and emphasize the strategic value of psychological capital in maximizing the performance benefits of engaged employees. An overview of the structural model results is presented in Figure 1.

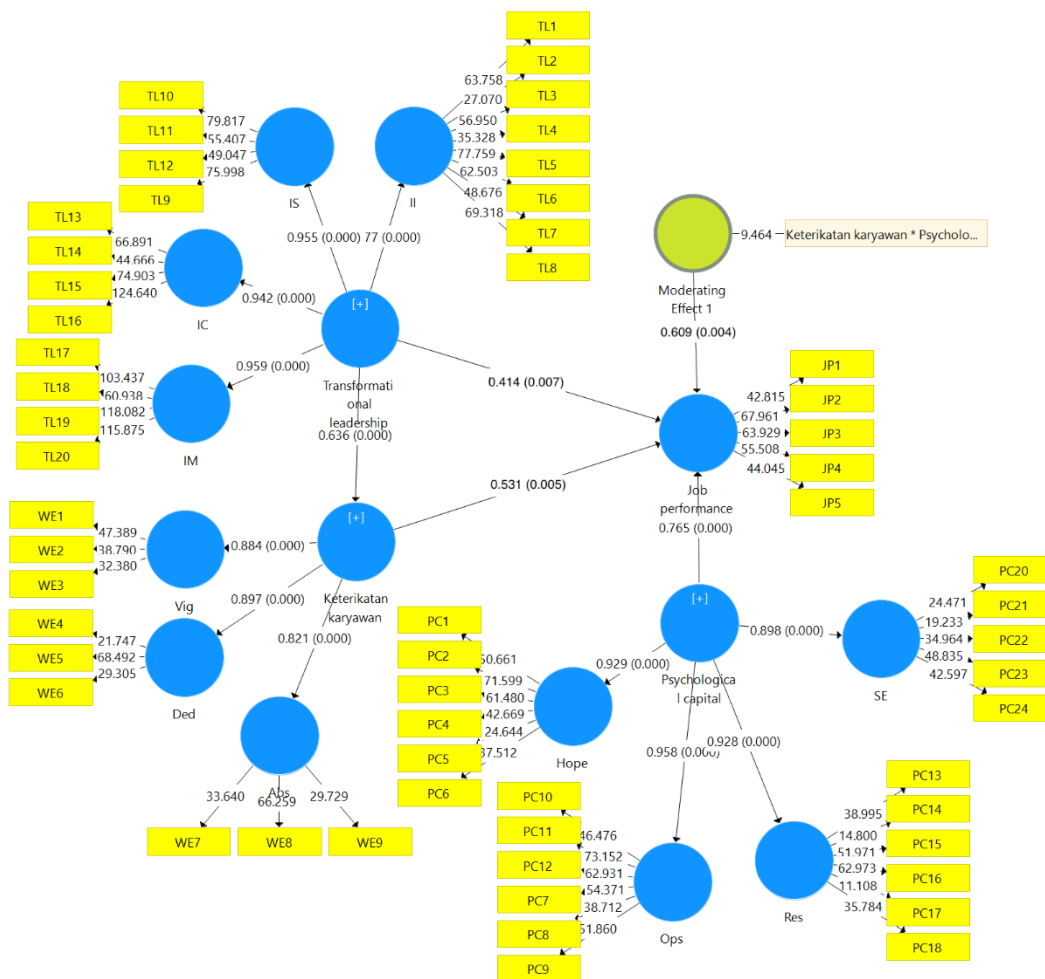


Figure 1. Hypothesis Testing
Source: Data processed

The Influence of Transformational Leadership on Job Performance

This research provides compelling evidence that transformational leadership significantly enhances job performance. Higher levels of transformational leadership within an organization are consistently associated with improved individual performance among employees. Comprising four essential dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration, transformational leadership cultivates a proactive, responsible, and performance-oriented work ethic. In this study, respondents rated indicators such as pride in team membership, strong motivation for self-improvement, and a focus on well-defined objectives exceptionally high. These outcomes underscore the effectiveness of transformational leaders in creating a motivating and empowering organizational climate.

A leader's capacity to inspire long-term vision, provide intrinsic motivation, cultivate creativity, and attend to the individual needs of employees is the hallmark of transformational leadership. Not only does this leadership style inspire employees to meet work standards, but it also fosters innovation and competency development, thereby enabling them to surpass expectations. Transformational leadership has the potential to establish a proactive and collaborative work environment in a manufacturing environment such as PT Petrokimia Gresik, where process efficiency, quality control, and regulatory compliance are critical components. Transformational leaders foster a culture in which employees are motivated to learn, take ownership of technical issues, and develop a strong commitment to the organization's objectives. Consequently, employees become more emotionally and cognitively invested in their work, which affects job performance in terms of the quantity, quality, and speed of task completion. Therefore, implementing a transformational leadership style at PT Petrokimia Gresik can be a viable approach to enhancing sustainable human resource performance, particularly in the context of Industry 4.0 and the ever-evolving market dynamics.

This conducive environment translates into tangible job performance improvements, with employees demonstrating accountability, efficiency, and a strong commitment to quality even when direct supervision is limited. Such patterns resonate with Bass and Avolio's transformational leadership framework, which emphasizes the role of leaders in fostering intrinsic motivation and a clear sense of direction among followers. The findings are corroborated by recent empirical research, including studies by Sudha et al. (2023) and Manzoor et al. (2019), confirming that transformational leadership contributes to enhanced team member effectiveness and the successful realization of organizational goals. As such, transformational leadership emerges as a vital enabler of high-performance work culture, particularly in the public sector, where professionalism, accountability, and efficiency are paramount.

The Influence of Transformational Leadership on Employee Engagement

The study further reveals that transformational leadership significantly positively affects employee engagement. This leadership style effectively enhances employees' emotional, cognitive, and behavioral involvement with their jobs and the organization. Transformational leaders articulate the organization's vision and mission and offer personal guidance through individualized attention, intellectual stimulation, and creating meaningful and inspiring work environments. In this study, indicators such as pride in one's work, inspiration from daily tasks, and motivating challenges received high mean scores, reflecting deep engagement with one's job. It supports the hypothesis that transformational leadership is foundational to building employee engagement.

This leadership style can enhance employees' emotional, cognitive, and behavioral engagement in a highly competitive and dynamic manufacturing environment, such as PT Petrokimia Gresik. Transformational leaders offer guidance and prioritize individual employees' requirements, foster creativity, and establish an inclusive and collaborative work environment. It is consistent with the manufacturing sector's requirements for operational efficiency, continuous innovation, and high productivity. Companies can enhance production quality, reduce attrition, and establish a work environment that is more adaptable to change by fostering high levels of employee engagement. Previous research has also demonstrated that employee engagement is considerably enhanced when employees perceive that their superiors are trustworthy, supportive, and valued (Khan et al., 2020). Therefore, implementing transformational leadership at PT Petrokimia Gresik is pertinent and strategic in developing highly competitive and superior human resources.

These findings are reinforced by recent literature, Jiatong et al. (2022) highlight that transformational leadership strengthens employees' affective commitment by fostering a safe and supportive work environment. Chuanxi & Salman (2024) also found that this leadership style nurtures intrinsic motivation, reinforcing task engagement. Furthermore, a longitudinal study by Tims et al. (2011) demonstrated that daily exposure to inspirational leaders can sustainably boost engagement. Thus, transformational leadership should not be seen merely as a managerial tool but as an emotional catalyst for loyalty, motivation, and team member dedication to organizational goals.

The Influence of Employee Engagement on Job Performance

This study provides strong empirical evidence that employee engagement significantly influences job performance. Highly engaged employees exhibit superior job performance as they approach their tasks with intrinsic motivation, enthusiasm, and a strong sense of responsibility. In this study, the high average scores for engagement (4.500) and job performance (4.620) reflect elevated levels of participation and output. Employees who feel energized, proud of their work, and inspired by their tasks demonstrate deep emotional and cognitive involvement. This state directly impacts the quality of work produced, including timeliness, accuracy, and independent task execution. Such engagement enhances internal motivation and increases the likelihood of discretionary effort, even without direct supervision.

These findings are particularly pertinent in a manufacturing company such as PT Petrokimia Gresik, as the industry emphasizes the importance of maintaining high operational standards, process efficiency, and consistent quality. Employee engagement includes a commitment to organizational objectives, a passion for work, and a propensity to engage in additional effort. Employees are more inclined to make optimal contributions to production objectives and output quality when they feel valued, have a sense of ownership, and have positive working relationships with their superiors and colleagues. In order to ensure the efficient continuity of production, reduce operational errors, and enhance innovation in work processes, employee engagement is a critical factor in the complex, high-tech operations of PT Petrokimia Gresik. Engaged employees are also more likely to be committed to completing duties on time and have low absenteeism rates. It directly affects the company's attainment of its Key Performance Indicators (KPIs) and the productivity of its production line.

These findings align with Ghafoor & Haar (2022), who emphasized that team member engagement is a key predictor of performance due to its affective commitment to the organization and its goals. Similarly, Satata (2021) found that engaged employees are likelier to display positive work behaviors that support organizational objectives. Aziez (2022) further noted that high engagement correlates with a sense of ownership of one's role, leading to persistence and improved productivity. Hence, team member engagement is an indicator of psychological well-being and a primary driver of performance quality and quantity in the public sector.

Employee Engagement and Job Performance: The Moderating Role of Psychological Capital

The study finds that psychological capital (PsyCap) significantly moderates the relationship between employee engagement and job performance, serving as a strategic variable in enhancing workforce productivity. PsyCap, which includes hope, self-efficacy, resilience, and optimism, provides a strong psychological foundation for employees to meet job demands and maintain high levels of engagement. In this study, high engagement scores (e.g., feeling energized at 4.520 and proud of one's work at

4.740) were complemented by high job performance scores (e.g., accuracy at 4.640 and responsibility without supervision at 4.660). The meaningfulness of these findings is further enhanced when considering the average PsyCap score of 4.370, indicating that most respondents possess substantial psychological resources to overcome work-related challenges. Employees with high PsyCap sustain performance even in adversity, driven by confidence in their abilities, optimism, and resilience.

The moderating function of psychological capital (PsyCap), which incorporates four primary dimensions: self-efficacy, optimism, hope, and resilience, can be used to reinforce the connection between employee engagement and job performance in the context of a manufacturing company such as PT Petrokimia Gresik. Although it has been demonstrated that high employee engagement can enhance work performance, the magnitude of this effect is significantly enhanced when employees also possess high PsyCap. Employees who are engaged but lack self-efficacy or are less optimistic about their future work will encounter psychological obstacles that diminish their productivity. Conversely, employees with a high PsyCap score are more adept at managing pressure during the production process, recovering from failure promptly (resilience), and maintaining a strong sense of optimism regarding completing their work with the highest possible quality. Work engagement and PsyCap foster a more resilient, adaptive, and productive workforce in a stressful manufacturing environment such as PT Petrokimia Gresik, necessitating adherence to quality standards, precision, and speed. Consequently, the relationship between employee engagement and job performance will be fortified by organizational interventions designed to enhance PsyCap through positive leadership training, coaching, and psychological well-being improvement programs. It will directly impact the company's competitiveness and operational excellence in the national fertilizer and petrochemical industry.

It supports previous literature, such as Rana et al. (2024) which identified PsyCap as critical for enhancing work efficiency and reducing burnout. Yao et al. (2022) emphasized PsyCap's buffering role against stress and its facilitation of sustained engagement. Furthermore, Yang et al. (2024) provided empirical evidence that PsyCap moderates the engagement–performance relationship, with high-PsyCap employees exhibiting performance surges alongside increased engagement. Thus, PsyCap strengthens the impact of engagement on performance and represents a strategic organizational investment in mental well-being and productivity. Developing PsyCap through positive leadership training, coaching, and psychological interventions is crucial for cultivating a resilient and competitive public workforce.

CONCLUSION

This study convincingly demonstrates that transformational leadership plays a crucial role in enhancing employee performance by increasing employee engagement, with strong support from psychological capital as a reinforcing factor in this relationship. Transformational leaders who can inspire, articulate a clear vision, and attend to individual employee needs are shown to effectively foster emotional, cognitive, and behavioral engagement in the workplace. Such engagement, in turn, motivates employees to work diligently, act responsibly, and demonstrate superior performance. Furthermore, psychological capital, comprising hope, self-efficacy, resilience, and optimism, amplifies the positive effect of engagement on performance by providing internal psychological resources that help employees remain focused and productive, even under challenging

work conditions. These results align with social exchange theory, which posits that employees reciprocate supportive leadership behaviors with higher engagement and performance. At the same time, the moderating role of psychological capital reinforces conservation of resources theory, indicating that internal psychological resources buffer stress and enhance employees' ability to sustain performance. These findings underscore the importance for organizations, particularly in the public sector, to cultivate a transformational leadership style and create a work climate that nurtures engagement and empowers employees' psychological capital. Together, these efforts are a sustainable strategy to elevate workforce performance and organizational effectiveness.

This study offers valuable contributions to the evolving discourse in human resource management and organizational leadership, particularly within the manufacturing sector. Theoretically, it substantiates and extends existing frameworks by confirming the critical role of transformational leadership in enhancing employee engagement and improving job performance. Notably, the research introduces psychological capital as a moderating factor, thereby enriching our understanding of how psychological resources such as self-efficacy, optimism, hope, and resilience can amplify the positive influence of engagement on performance outcomes. Notably, some variations in employee responses suggest that while transformational leadership strongly influences engagement, the engagement–performance linkage is not always linear, potentially due to contextual factors such as organizational change fatigue or workload pressures. This partial inconsistency highlights the need to consider situational moderators in future models. These findings suggest that emotional and cognitive dimensions of engagement are shaped by leadership behavior and significantly reinforced by internal psychological strengths. Thus, this research advances the literature by integrating leadership theory with psychological constructs, offering a more comprehensive and multidimensional explanation of performance-enhancing behaviors in the workplace.

From a managerial standpoint, the results provide actionable insights for organizations seeking to optimize human capital, especially in the manufacturing industry. Transformational leadership emerges as a strategic approach leaders should adopt to cultivate an engaged, high-performing workforce. By communicating a compelling vision, offering personalized support, and encouraging innovative thinking, leaders can foster a work environment that motivates employees to perform at their best. Furthermore, the study underscores the importance of developing psychological capital through targeted organizational interventions such as coaching, mentoring, and resilience-building workshops. For managers, leadership training should be combined with structured PsyCap development programs to maximize employee potential. Organizations could institutionalize resilience training, create recognition systems that build optimism, and offer peer mentoring to strengthen self-efficacy. These practices boost performance and safeguard employees' mental well-being in volatile environments. Strengthening these internal capacities enhances the effectiveness of engagement and prepares employees to thrive amid the pressures and volatility characteristic of manufacturing settings. As such, combining transformational leadership practices with psychological capital development initiatives can serve as a dual-leverage strategy to improve productivity and sustain long-term organizational competitiveness.

Despite its strengths, this study is not without limitations. Conceptually, the model adopts a linear, unidirectional perspective and does not examine potential reciprocal or time-dependent interactions between leadership, engagement, and performance. Future research would benefit from incorporating feedback loops or testing more dynamic theoretical models. Methodologically, the reliance on a cross-sectional survey design

restricts the ability to infer causal relationships or observe behavioral shifts over time. Additionally, the exclusive use of structured, closed-ended questionnaires may limit the depth of insights, as it fails to capture nuanced personal experiences or motivations behind employee responses. Technically, the study's generalizability is constrained by its focus on a single manufacturing organization, which may not reflect broader industry dynamics, especially in public or service-based institutions. Social desirability bias is another potential limitation, as participants may have provided overly favorable evaluations of their leaders.

Future studies are encouraged to adopt longitudinal or mixed-method research designs to address these limitations, enabling the observation of temporal patterns and deeper exploration of causal relationships. Integrating qualitative techniques, such as in-depth interviews or ethnographic case studies, can offer richer contextual understanding and uncover latent variables not accessible through quantitative means. Expanding the scope of inquiry across different organizational types (e.g., public institutions, service industries) and cultural contexts would enhance the generalizability and external validity of the findings. Furthermore, future research could investigate reciprocal relationships between variables or apply more complex modeling techniques, such as longitudinal SEM or multi-level modeling, to better capture organizational dynamics. These improvements would increase methodological rigor and provide richer theoretical explanations for why and how transformational leadership, employee engagement, and psychological capital influence performance in diverse settings.

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