

The Effect of Career Path on Employee Performance through Sustainable Leadership and Work Engagement as Mediating Variables among Employees of Contact Center PLN 123 Site Jakarta

Desi Prihastutik*, Parwoto

Universitas Mercu Buana, Indonesia

Email: dessyprihas@gmail.com*, parwoto.parwoto@mercubuana.ac.id

Keywords:	Abstract
Career Path; Sustainable Leadership; Work Engagement; Employee Performance; PLS-SEM.	Declining employee performance in demanding contact center environments underscores the importance of structured career development and supportive leadership practices. This study examined the relationship between career paths and employee performance, with sustainable leadership and work engagement serving as individual and serial mediators among employees at Contact Center PLN 123 Site Jakarta. A quantitative explanatory research design employing a cross-sectional survey was adopted. A total of 160 customer service officers were selected from a population of 194 employees using purposive sampling. Data were collected through a 37-item questionnaire using a five-point Likert scale and analyzed using partial least squares structural equation modeling (PLS-SEM) with SmartPLS 4 and 5,000 bootstrap resamples. All 11 hypotheses were supported, demonstrating positive and statistically significant direct and indirect relationships. Career paths exhibited a positive and significant direct relationship with employee performance ($\beta = 0.242$, $p = 0.002$), while work engagement demonstrated the strongest direct relationship with employee performance ($\beta = 0.370$, $p < 0.001$). The serial mediating effect of sustainable leadership and work engagement was statistically significant ($\beta = 0.112$, $p < 0.001$), indicating complementary partial mediation. The model explained 66.1% of the variance in employee performance. These findings were consistent with the motivational process proposed by the Job Demands–Resources (JD-R) model, highlighting the importance of career development, sustainable leadership, and work engagement in enhancing employee performance. Integrating transparent career advancement pathways, sustainable leadership practices, and employee engagement initiatives may provide an effective strategy for improving employee performance and service quality in contact center environments.

INTRODUCTION

The energy sector plays a crucial role in national economic development. Within the framework of the United Nations Sustainable Development Goals (SDGs), ensuring access to reliable, affordable, and sustainable energy is a key priority reflected in SDG 7 (Affordable and Clean Energy), SDG 8 (Decent Work and Economic Growth), and SDG 9 (Industry, Innovation and Infrastructure). As a state-owned electricity company responsible for supporting Indonesia's national electricity supply, PT PLN (Persero) is expected to provide reliable energy services

supported by a highly competent and productive workforce. One of its primary customer service channels is Contact Center PLN 123, which operates 24 hours a day, seven days a week, and handles millions of customer interactions annually. Contact center operations are characterized by high work pressure, substantial emotional demands, and stringent service performance standards. Contact Center PLN 123 employs 1,051 customer service officers (CSOs) across Indonesia who are directly responsible for handling customer inquiries, complaints, and service requests. According to the human resource management literature, such demanding work environments are frequently associated with high employee turnover, reduced work engagement, and declining employee performance (Alim & Rahmawati, 2023; Bakker et al., 2023).

Internal performance data from Contact Center PLN 123 Site Jakarta for the 2021–2025 period indicated an overall decline in employee performance, highlighting the need for organizational attention. Employee performance achievement decreased from 95.99% in 2021 to its lowest recorded level of 91.33% in 2024, before increasing slightly to 91.56% in 2025, as presented in Table 1. Although the trend exhibited fluctuations, the overall decline suggested persistent challenges in maintaining employee performance standards.

Table 1. Employee Performance Achievement of Contact Center PLN 123 Site Jakarta, 2021–2025

Year	Performance Achievement (%)	Company Standard (%)	Category
2021	95.99	92.00	High performance
2022	93.08	92.00	High performance
2023	93.54	92.00	High performance
2024	91.33	92.00	Low performance
2025	91.56	92.00	Low performance

Source: Internal data of Contact Center PLN 123, 2025 (converted from the original chart).

Table 1 shows that although employee performance improved slightly to 93.54% in 2023, the overall trend declined, with performance achievement in 2024 and 2025 falling below the company's performance standard of 92%, a situation that had not occurred during the 2021–2023 period. This decline was accompanied by an increase in employee turnover from 3.8% in 2023 to 4.12% in 2025. Employee performance refers to the work outcomes achieved by individuals in accordance with their organizational roles and responsibilities (Liana & Indrawati, 2025; Mangkunegara, 2017). In the contact center environment, employee performance is assessed using key performance indicators (KPIs), including response time, complaint resolution accuracy, and customer satisfaction. A sustained decline in performance may indicate insufficient job resources to support employee motivation and engagement, as explained by the motivational process of the Job Demands–Resources (JD-R) model (Bakker & Demerouti, 2007, 2023). Rather than examining the entire JD-R framework, this study focused on job resources, specifically career paths as structural resources and sustainable leadership as a social resource, which were hypothesized to influence employee performance through the motivational process involving work engagement. Job demands and the health-impairment process were not incorporated into the

proposed model, while work pressure was considered contextual background highlighting the importance of job resources.

One organizational resource that may influence employee performance is a clearly defined career path. Structured career development helps align organizational operational requirements with employees' career aspirations, thereby enhancing competencies and work productivity (Hosen et al., 2023; Lestari & Emi, 2021). Clear and structured career pathways can strengthen employee motivation, work engagement, and retention (Faisal, 2024; Tentama & Ermawati, 2021), whereas unclear or inequitable career advancement opportunities may undermine employee motivation, morale, and ultimately, performance (Liana & Indrawati, 2025). However, the relationship between career paths and employee performance may extend beyond a direct association. Within the JD-R framework, job resources influence performance through a motivational process involving work engagement (Bakker et al., 2023), which is characterized by vigor, dedication, and absorption (Schaufeli & Bakker, 2008). Highly engaged employees tend to demonstrate greater effort, creativity, and consistency in their performance (Faisal, 2024; Riyanto et al., 2021; Saks et al., 2022; Stor, 2024). Furthermore, supervisors' leadership practices play an important role in shaping the organizational resources available to employees (Grzesiak & Ulrych, 2025; Zielinska et al., 2025). Sustainable leadership has been associated with employees' innovative behavior and performance by promoting competency development, providing meaningful direction, and fostering an organizational environment conducive to long-term employee growth (Iqbal & Piwovar-Sulej, 2022, 2023; Iqbal et al., 2024; Liao, 2022; Piwovar-Sulej & Iqbal, 2026). De Vera and Martir (2025) reported a strong positive correlation between leadership development, career progression, and operational effectiveness ($r = 0.867$), suggesting that these organizational factors are closely interconnected and relevant to organizational performance.

To strengthen the empirical foundation for selecting the study variables, previous studies published in Scopus- and SINTA-indexed journals between 2023 and 2025, with employee performance as the dependent variable, were reviewed and compared across four dimensions: research context and methodology, principal variables, key findings, and research limitations. The findings of this comparative review, together with the positioning of the present study, are summarized in Table 2.

Table 2. State of the Art

No.	Reference	Context and Method	Main Variables	Main Findings	Limitations
1	Ali et al. (2023)	Survey; PLS-SEM; n = 249 SME employees in Bahrain	Career path planning, strategic planning, job performance	Career path planning significantly affects job performance, strengthened by strategic planning as a moderator	Limited to Bahraini SMEs; psychological mediators such as work engagement or sustainable leadership not tested
2	Sari & Kasmir (2025)	Survey; SEM-PLS; n = 120 employees of an insurance company	Career development, work motivation, employee performance	Career development has no significant direct effect on performance but is significant through work motivation	Mediator limited to work motivation; sustainable leadership not examined
3	Lukito et al. (2025)	Survey; PLS-SEM; n = 250 employees of family businesses	Compensation, job satisfaction, employee performance	Job satisfaction has the largest effect on performance; compensation is positive and significant ($\beta = 0.133$; $p = 0.003$)	No serial mediation mechanism; public service contact centers not covered
4	Suharto & Suprpto (2023)	Survey; SEM-PLS; n = 334 civil servants	Employee engagement, perceived organizational support, employee performance	Employee engagement directly affects performance and partially mediates the effect of organizational support	Government agency context; career path and sustainable leadership not tested simultaneously
5	This study	Cross-sectional survey; PLS-SEM (SmartPLS 4); n = 160 CSOs of Contact Center PLN 123 Site Jakarta	Career path, sustainable leadership, work engagement, employee performance	Expected novelty: an integrated JD-R model with sustainable leadership and work engagement as serial mediators between career path and performance	Cross-sectional data at one site; not yet tested longitudinally or across sites

Source: Various Scopus/SINTA-indexed journals, 2023–2025.

The comparative analysis presented in Table 2 revealed a consistent pattern: the direct relationships between the examined variables and employee performance varied across organizational contexts, with career development showing a statistically insignificant direct relationship in one study (Sari & Kasmir, 2025). However, studies incorporating mediating variables, such as work motivation or employee engagement, generally reported statistically significant indirect relationships. These findings suggest that job resources may influence

employee performance through motivational mechanisms, consistent with the motivational process proposed by the Job Demands–Resources (JD-R) model. None of the reviewed studies simultaneously examined sustainable leadership and work engagement as sequential mediators in the relationship between career paths and employee performance within a contact center environment. Accordingly, career paths were selected as the exogenous variable not because they represented the strongest individual predictor of employee performance, but because of their relevance as organizational job resources operating through motivational mechanisms (Bakker et al., 2023; De Vera & Martir, 2025). Furthermore, the limited research examining career paths in Indonesian public service organizations and state-owned enterprises, particularly through sequential mediation mechanisms, provided a clear research gap that constituted the primary contribution of this study.

To further examine the organizational phenomenon, a preliminary survey comprising eight dichotomous (yes/no) questions, with two questions representing each study variable, was administered voluntarily and anonymously to 30 customer service officers (CSOs) at Contact Center PLN 123 Site Jakarta in March 2026. The results were used exclusively for descriptive purposes and were not included in the inferential statistical analysis. The preliminary survey findings are presented in Table 3.

Table 3. Pre-Survey Results among 30 CSOs of Contact Center PLN 123

No	Variable	Question	Yes (%)	No (%)
1	Career Path	Do you understand the promotion/career flow in your current work unit?	14 (46.7)	16 (53.3)
2	Career Path	Are promotion opportunities at PLN 123 open fairly?	15 (50.0)	15 (50.0)
3	Sustainable Leadership	Does your leader often give direction on maintaining work quality for the company's future sustainability?	15 (50.0)	15 (50.0)
4	Sustainable Leadership	Do you feel your leader cares about long-term employee competence development?	13 (43.3)	17 (56.7)
5	Work Engagement	Do you feel very enthusiastic when doing daily tasks at the Contact Center?	14 (46.7)	16 (53.3)
6	Work Engagement	Do you feel fully involved when serving customers?	15 (50.0)	15 (50.0)
7	Employee Performance	Do you always achieve the monthly KPI targets?	19 (63.3)	11 (36.7)
8	Employee Performance	Are you able to handle customer complaints effectively?	14 (46.7)	16 (53.3)

Source: Pre-survey data, March 2026

Table 3 shows that only 46.7%–50.0% of respondents understood the promotion process and perceived promotion opportunities as fair, while 43.3%–50.0% perceived their supervisors as providing sustainability-oriented guidance and supporting long-term competency development. Furthermore, only 46.7%–50.0% of respondents reported feeling enthusiastic and fully engaged in their work. Although 63.3% reported achieving their key performance indicator (KPI) targets, 36.7% indicated that they did not consistently meet these targets, and 53.3% reported difficulties

in consistently handling customer complaints effectively. These findings highlighted potential challenges related to career development, sustainable leadership, work engagement, and employee performance. Accordingly, this study aimed to examine the effects of career paths on sustainable leadership, work engagement, and employee performance; the effects of sustainable leadership on work engagement and employee performance; and the effect of work engagement on employee performance. Additionally, the study investigated the individual mediating roles of sustainable leadership and work engagement, as well as their serial mediating effects on the relationship between career paths and employee performance. Theoretically, this study sought to extend the human resource management literature by examining multiple and serial mediation mechanisms within the Job Demands–Resources (JD-R) framework in a high-pressure Indonesian public service environment. Practically, the findings were expected to provide recommendations for developing transparent career advancement pathways, strengthening sustainable leadership practices, and implementing work engagement initiatives to enhance employee performance at Contact Center PLN 123 Site Jakarta.

METHOD

This study employed a quantitative approach with an explanatory-associative research design and cross-sectional data collection (Aguinis, 2024; Creswell & Creswell, 2023). The research model comprised 11 hypotheses, including six direct relationships, four individual mediation effects, and one serial mediation effect. The study was conducted at Contact Center PLN 123 Site Jakarta from March to August 2026. The study population consisted of 194 active customer service officers (CSOs), of whom 160 were selected through purposive sampling based on their employment status and a minimum tenure of more than one year (Aguinis, 2024). The sample size exceeded the minimum requirement of 155 respondents established using the inverse square root method and satisfied the ten-times rule for partial least squares structural equation modeling (PLS-SEM) (Hair et al., 2022). Given the cross-sectional design, the analysis focused on structural associations rather than establishing temporal causality.

Primary data were collected using a structured questionnaire comprising 37 items, administered in person and online through Google Forms over seven working days. Participation was voluntary, and respondents were informed of the study's objectives and assured of confidentiality. All items were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) (Sekaran & Bougie, 2020). Career paths were assessed using nine items adapted from Hosen et al. (2023) and Ali et al. (2023), while sustainable leadership was measured using nine items based on McCann and Holt (2010). Work engagement was assessed using nine items adapted from the Utrecht Work Engagement Scale (Ferreira et al., 2025; Schaufeli et al., 2006), and employee performance was measured using ten items based on Bernardin and Russell (1993) and Arifin and Narmaditya (2024). The instruments were translated into Indonesian, adapted to the contact center context, and back-translated to ensure conceptual equivalence with the original versions (Sekaran & Bougie, 2020). Internal employee performance

records from 2021 to 2025 were used as secondary data to provide organizational context. The operationalization of the study variables is presented in Table 4.

Table 4. Operationalization of Research Variables

Variable	Code	Indicator	Source
Career Path (X)	X1.1	I have a clear career plan in this organization.	Hosen et al. (2023); Ali et al. (2023)
	X1.2	The organization provides open information on promotion stages.	
	X1.3	Performance appraisal is directly linked to career advancement opportunities.	
	X1.4	Training and competence development programs are available in a structured manner.	
	X1.5	Training opportunities are open fairly to all employees.	
	X1.6	My supervisor provides guidance and mentoring on career development.	
	X1.7	I understand the requirements for promotion to the next position.	
	X1.8	The career path from my current position to the next is explained transparently.	
	X1.9	Selection and promotion processes are fair and transparent.	
Sustainable Leadership (M1)	M1.1	The leader emphasizes long-term work quality, not merely short-term results.	McCann & Holt (2010)
	M1.2	The leader makes decisions considering their impact on the unit's future.	
	M1.3	The leader encourages responsible innovation in customer service.	
	M1.4	The leader actively supports employees' skill and competence improvement.	
	M1.5	The leader consistently gives constructive feedback on performance.	
	M1.6	The leader creates opportunities to learn from work experience.	
	M1.7	The leader considers employee welfare in every managerial decision.	
	M1.8	The leader encourages sustained mutually supportive teamwork.	
	M1.9	The leader applies ethics and integrity in managing the work unit.	
Work Engagement (M2)	M2.1	I feel full of energy and enthusiasm when performing tasks.	Schaufeli et al. (2006)
	M2.2	I remain enthusiastic despite high work pressure.	
	M2.3	I am willing to exert extra effort when the job demands it.	
	M2.4	My job has meaningful purpose for me.	

Variable	Code	Indicator	Source
Employee Performance (Y)	M2.5	I feel enthusiastic and proud of the work I do.	Bernardin & Russell (1993); Arifin & Narmaditya (2024)
	M2.6	I feel this job encourages me to keep developing.	
	M2.7	I easily concentrate fully when handling customers.	
	M2.8	When working, time passes quickly because I am fully involved.	
	M2.9	It is difficult to detach myself from work when fully immersed.	
	Y1	I complete every customer service according to the set quality standard.	
	Y2	I minimize errors in every complaint-handling process.	
	Y3	I meet the targeted number of services or calls in every shift.	
	Y4	I achieve the monthly KPI targets set by management.	
	Y5	I complete every customer request within the set service time.	
	Y6	I do not delay handling customer problems requiring immediate follow-up.	
	Y7	I use work resources and facilities efficiently in every service.	
	Y8	I handle customer complaints effectively and on target.	
	Y9	I complete routine tasks without waiting for instructions from my supervisor.	
	Y10	I proactively seek solutions when facing unexpected service obstacles.	

Source: Developed by the researchers (2026) based on the cited sources

Instrument validation involved expert assessment of content validity, pilot testing with 30 respondents excluded from the main sample, and construct validation using the main study data. The pilot test yielded outer loadings ranging from 0.759 to 0.947, except for item Y10 (0.556), which was subsequently revised to improve clarity and contextual relevance. All constructs demonstrated satisfactory internal consistency and convergent validity, with Cronbach's alpha values ranging from 0.958 to 0.973, composite reliability values from 0.964 to 0.976, and average variance extracted (AVE) values from 0.735 to 0.822 (Field, 2018; Sekaran & Bougie, 2020).

Data were analyzed using partial least squares structural equation modeling (PLS-SEM) in SmartPLS 4 to examine direct, individual mediation, and serial mediation effects (Hair et al., 2022). The measurement model was assessed using indicator loadings (≥ 0.70), AVE (≥ 0.50), discriminant validity through the heterotrait–monotrait ratio (HTMT < 0.85) (Henseler et al., 2015), the Fornell–Larcker criterion (Fornell & Larcker, 1981), and cross-loadings. Internal consistency reliability was evaluated using Cronbach's alpha, rho_A, and composite reliability ($\geq$

0.70). The structural model was evaluated using variance inflation factors ($VIF < 5$), coefficients of determination (R^2), and effect sizes (f^2), following established assessment criteria (Chin, 1998). Predictive performance was assessed using PLSpredict with 10 folds and 10 repetitions, considering Q^2_{predict} values greater than zero and prediction errors relative to a linear model benchmark (Shmueli et al., 2019). Hypotheses were tested using 5,000 bootstrap resamples with a fixed random seed, one-tailed significance testing at the 5% level, and bias-corrected and accelerated 95% confidence intervals. Hypotheses were considered supported when the path coefficients were consistent with the hypothesized directions, t-values exceeded 1.645, and p-values were below 0.05. Mediation effects were examined through specific indirect effects and classified according to the statistical significance and direction of the corresponding direct and indirect relationships (Hair et al., 2022).

RESULT AND DISCUSSION

Respondent Profile and Descriptive Statistics

Table 5. Respondent Characteristics (n = 160)

Characteristic	Category	Frequency	Percentage
Gender	Male	77	48.1%
	Female	83	51.9%
Age	23–30 years	45	28.1%
	31–40 years	81	50.6%
	> 41 years	34	21.3%
Tenure	2–5 years	47	29.4%
	6–10 years	59	36.9%
	> 10 years	54	33.8%
Education	Diploma (D3)	47	29.4%
	Bachelor (S1)	102	63.8%
	Master (S2)	11	6.9%

Source: Primary data, 2026

The respondents were relatively balanced by gender (51.9% female), and most were aged 31–40 years (50.6%), indicating a workforce with mature experience that is still in an active career development phase. All respondents had worked for at least two years, with 6–10 years as the largest group (36.9%), exceeding the minimum tenure criterion, and most held a bachelor's degree (63.8%). Descriptive statistics were interpreted using a class interval of 0.80: 1.00–1.80 very low, 1.81–2.60 low, 2.61–3.40 moderate, 3.41–4.20 high, and 4.21–5.00 very high.

Table 6. Descriptive Statistics of Research Variables

Variable	Mean	SD	Highest Indicator	Lowest Indicator	Category
Career Path	3.926	0.790	X1.7 (4.013)	X1.4 (3.831)	High
Sustainable Leadership	4.110	0.689	M1.4 (4.206)	M1.2 (4.019)	High
Work Engagement	3.949	0.750	M2.4 (4.112)	M2.6 (3.781)	High
Employee Performance	4.094	0.721	Y7 (4.200)	Y10 (3.981)	High

Source: Primary data processed, 2026

All four variables fall into the high category. For career path, the availability of structured training and competence development programs (X1.4) is the relatively weakest aspect, while understanding promotion requirements (X1.7) is the strongest. For sustainable leadership, supporting employees' skill improvement (M1.4) is rated highest, whereas decisions considering the future impact on the unit (M1.2) are rated lowest. For work engagement, meaningful work (M2.4) is strongest and the feeling that the job encourages continuous development (M2.6) is weakest. For employee performance, efficient use of resources (Y7) is highest and proactive problem solving (Y10) is lowest, suggesting that initiative in non-standard situations still requires clearer authority limits, scenario-based coaching, and decision support from Team Leaders.

Measurement Model Evaluation

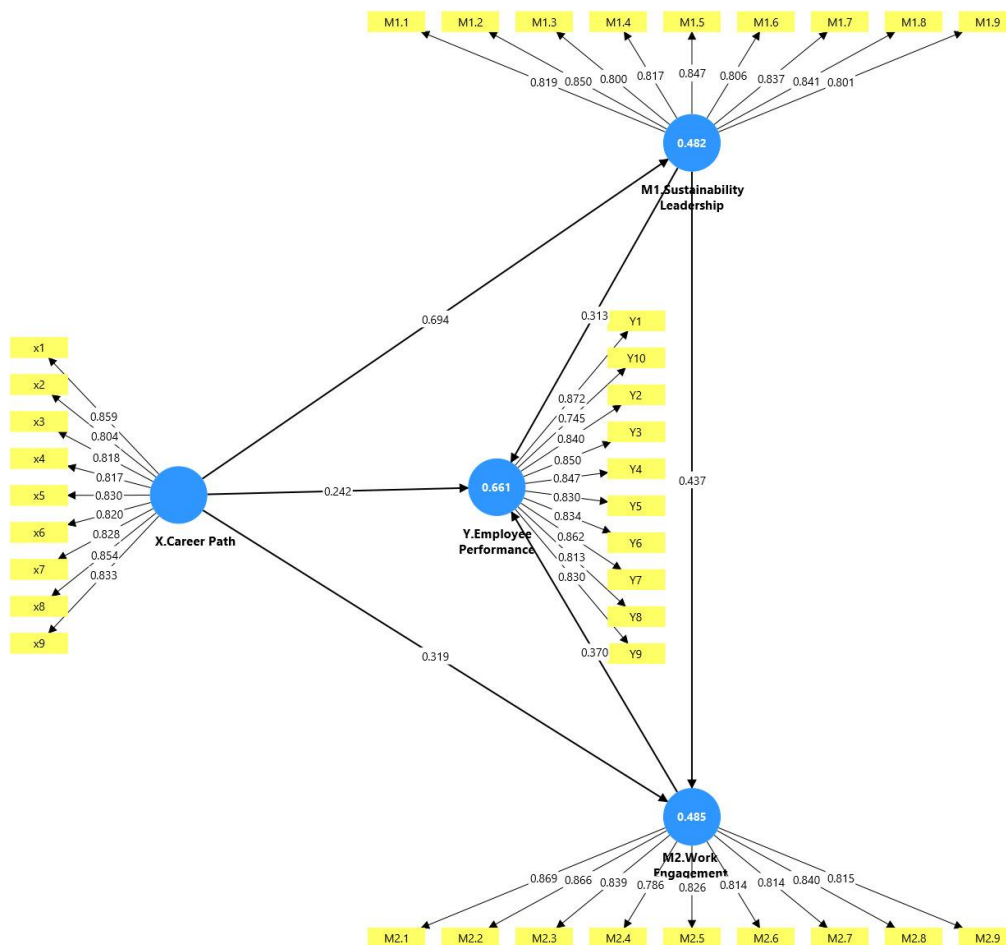


Figure 2. Outer Model – SmartPLS 4 Algorithm Output

Source: Data processed using SmartPLS 4, 2026

Table 7. Outer Loadings

CP	Loading	SL	Loading	WE	Loading	EP	Loading
X1.1	0.859	M1.1	0.819	M2.1	0.869	Y1	0.872
X1.2	0.804	M1.2	0.850	M2.2	0.866	Y2	0.840
X1.3	0.818	M1.3	0.800	M2.3	0.839	Y3	0.850
X1.4	0.817	M1.4	0.817	M2.4	0.786	Y4	0.847
X1.5	0.830	M1.5	0.847	M2.5	0.826	Y5	0.830
X1.6	0.820	M1.6	0.806	M2.6	0.814	Y6	0.834
X1.7	0.828	M1.7	0.837	M2.7	0.814	Y7	0.862
X1.8	0.854	M1.8	0.841	M2.8	0.840	Y8	0.813
X1.9	0.833	M1.9	0.801	M2.9	0.815	Y9	0.830
						Y10	0.745

Source: SmartPLS 4 output, 2026. CP = Career Path; SL = Sustainable Leadership; WE = Work Engagement; EP = Employee Performance.

All 37 indicators have outer loadings above 0.70, ranging from 0.745 (Y10) to 0.872 (Y1), so every indicator adequately reflects its construct and was retained. Table 7 further shows that all AVE values (0.679–0.694) exceed 0.50, so each construct explains more than half of the variance of its indicators, and that Cronbach's alpha, rho_A, and rho_C of all constructs exceed 0.70. The rho_C of employee performance (0.958) slightly exceeds 0.95, which may indicate item similarity, but the indicators were retained because each represents a distinct substantive aspect (Hair et al., 2022).

Table 8. Construct Reliability and Convergent Validity

Construct	Cronbach's Alpha	rho_A	rho_C	AVE	Conclusion
Career Path	0.943	0.944	0.952	0.688	Reliable and valid
Sustainable Leadership	0.941	0.942	0.950	0.679	Reliable and valid
Work Engagement	0.943	0.944	0.952	0.689	Reliable and valid
Employee Performance	0.951	0.952	0.958	0.694	Reliable and valid

Source: SmartPLS 4 output, 2026

Table 9. Fornell-Larcker Criterion

Construct	CP	SL	WE	EP
Career Path (CP)	0.829			
Sustainable Leadership (SL)	0.694	0.824		
Work Engagement (WE)	0.622	0.658	0.830	
Employee Performance (EP)	0.688	0.724	0.726	0.833

Source: SmartPLS 4 output, 2026. Diagonal values are the square roots of AVE.

Table 10. Heterotrait-Monotrait Ratio (HTMT)

Construct	CP	SL	WE	EP
Career Path (CP)	–			
Sustainable Leadership (SL)	0.734	–		
Work Engagement (WE)	0.657	0.697	–	
Employee Performance (EP)	0.724	0.763	0.764	–

Source: SmartPLS 4 output, 2026

The cross-loading check showed that every indicator loads highest on its own construct (for example, X1.1 = 0.859 on career path versus 0.624, 0.563, and 0.650 on the other constructs). The square root of AVE of each construct is higher than its correlations with other constructs (Table 8), and all HTMT values are below 0.85, with the highest value of 0.764 between work engagement and employee performance (Table 9). Cross loadings, the Fornell-Larcker criterion, and HTMT therefore consistently confirm discriminant validity, and the measurement model meets all evaluation criteria.

Structural Model Evaluation

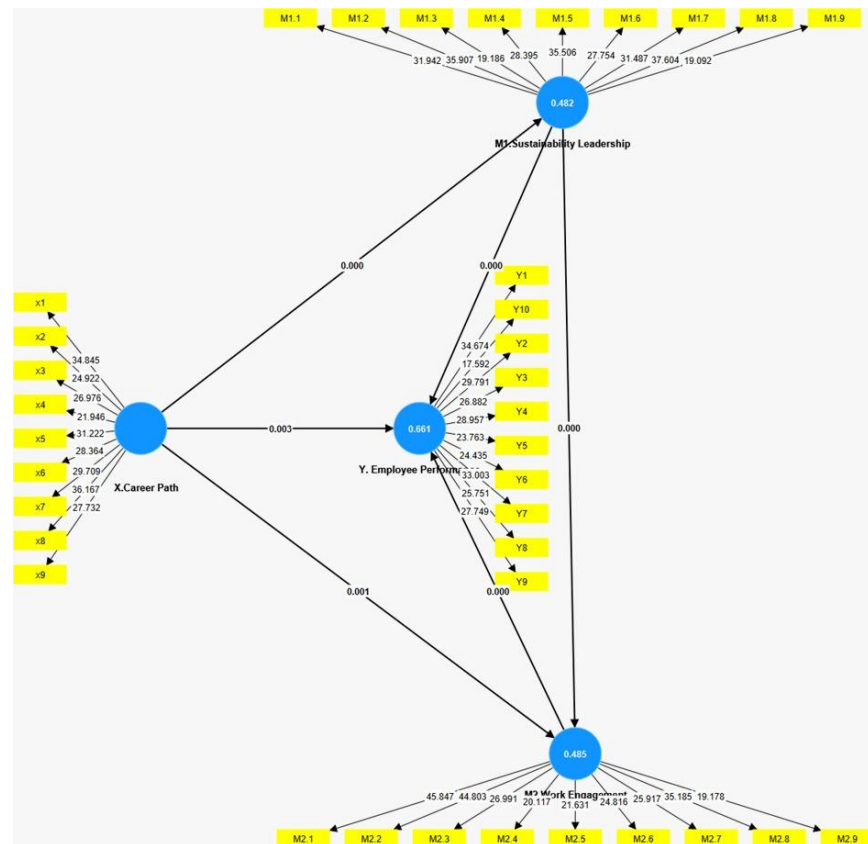


Figure 3. Bootstrapping Results of the Structural Model (Inner Model)

Source: Data processed using SmartPLS 4, 2026

Table 11. Inner VIF and Effect Size (f^2)

Path	VIF	f^2	Interpretation
Career Path → Sustainable Leadership	1.000	0.930	Large
Career Path → Work Engagement	1.930	0.102	Small
Sustainable Leadership → Work Engagement	1.930	0.192	Medium
Career Path → Employee Performance	2.127	0.081	Small
Sustainable Leadership → Employee Performance	2.300	0.125	Small
Work Engagement → Employee Performance	1.943	0.208	Medium

Source: SmartPLS 4 output, 2026.

Table 12. Coefficient of Determination and PLSpredict Results

Endogenous Construct	R ²	R ² Adjusted	Q ² predict	RMSE	MAE
Sustainable Leadership	0.482	0.478	0.475	0.735	0.572
Work Engagement	0.485	0.479	0.378	0.802	0.623
Employee Performance	0.661	0.654	0.468	0.744	0.585

Source: SmartPLS 4 output, 2026

Inner VIF values range from 1.000 to 2.300, well below 5, so collinearity does not bias the path estimates. Career path explains 48.2% of the variance in sustainable leadership; career path and sustainable leadership together explain 48.5% of work engagement; and the three predictors explain 66.1% of employee performance, which is moderate and approaching substantial (Chin, 1998). The largest effect size is career path on sustainable leadership ($f^2 = 0.930$), while for employee performance work engagement has the largest (medium) contribution ($f^2 = 0.208$), showing that engagement is an important proximal mechanism. All Q²predict values exceed zero, and at the indicator level PLS-SEM yields lower RMSE than the linear model for 25 of 28 endogenous indicators, indicating medium predictive power (Shmueli et al., 2019).

Hypothesis Testing

Table 13. Direct Effect Test Results

Hyp.	Path	β	t	p	95% CI	Decision
H1	CP → SL	0.694	14.613	< 0.001	[0.597; 0.780]	Supported
H2	CP → WE	0.319	3.394	< 0.001	[0.127; 0.499]	Supported
H3	CP → EP	0.242	2.935	0.002	[0.080; 0.404]	Supported
H4	SL → EP	0.313	3.700	< 0.001	[0.136; 0.466]	Supported
H5	WE → EP	0.370	5.540	< 0.001	[0.240; 0.502]	Supported
H6	SL → WE	0.437	5.092	< 0.001	[0.265; 0.605]	Supported

Source: SmartPLS 4 bootstrapping, 2026. CP = Career Path; SL = Sustainable Leadership; WE = Work Engagement; EP = Employee Performance.

Table 14. Indirect and Serial Mediation Effect Test Results

Hyp.	Indirect Path	β	t	p	95% CI	Classification
H7	CP → SL → WE	0.303	4.833	< 0.001	[0.184; 0.433]	Complementary partial
H8	CP → SL → EP	0.217	3.682	< 0.001	[0.096; 0.327]	Complementary partial
H9	CP → WE → EP	0.118	2.843	0.002	[0.045; 0.209]	Complementary partial
H10	SL → WE → EP	0.162	3.645	< 0.001	[0.086; 0.261]	Complementary partial
H11	CP → SL → WE → EP	0.112	3.477	< 0.001	[0.060; 0.185]	Serial complementary partial

Source: SmartPLS 4 bootstrapping, 2026; classification based on Hair et al. (2022).

All six direct effects are positive and significant, with confidence intervals excluding zero (Table 12). The largest coefficient is career path on sustainable leadership ($\beta = 0.694$), and for employee performance the strongest effect comes from work engagement ($\beta = 0.370$). The smallest

direct effect is career path on employee performance ($\beta = 0.242$; $p = 0.002$), but its t -value of 2.935 exceeds 1.645, so H3 is supported. All four single indirect effects (H7–H10) are positive and significant, the largest being career path on work engagement through sustainable leadership (0.303). The serial indirect effect (H11) is 0.112 ($t = 3.477$; $p < 0.001$; CI 0.060–0.185), the product of the three sequential paths ($0.694 \times 0.437 \times 0.370$); it is smaller than the single-mediator effects but remains significant. Because every direct effect paired with each mediation is also significant and positive, all mediations are classified as complementary partial mediation (Hair et al., 2022). Thus, all eleven hypotheses are supported.

The support for H1 indicates that a perceived clear, fair, and development-oriented career path is associated with stronger perceptions of long-term oriented leadership. In JD-R terms, career path is a structural resource that provides a direction for growth, while sustainable leadership is a social resource that translates this direction into support, role modeling, empowerment, and subordinate development. Through reciprocity, organizational investment in careers is associated with leaders developing others responsibly. This is consistent with the link between career development and leadership capacity (De Vera & Martir, 2025) and with individual development as a micro-level mechanism of sustainable leadership (Sajjad et al., 2024).

The support for H2 shows that career growth opportunities act as a job resource that strengthens engagement by connecting daily effort with competence and role development, in line with the positive link between organizational career growth and work engagement (Okon et al., 2025). The support for H3 shows that clarity of career direction, promotion requirements, and development opportunities gives meaning to current work achievement, consistent with Faisal (2024) and Liana and Indrawati (2025).

The support for H4 indicates that leaders who set long-term direction, maintain value consistency, and develop team members create a work context that supports decision accuracy and service consistency, in line with the role of sustainability-focused leadership in employee outcomes (Piwowar-Sulej & Iqbal, 2026) and the relationship between sustainable leadership and employee performance (Lim et al., 2025). The support for H5, with work engagement as the strongest direct predictor of performance, confirms that employees with vigor, dedication, and absorption allocate greater energy, attention, and persistence to service tasks, consistent with the meta-analytic evidence of a positive relationship between work engagement and task performance (Neuber et al., 2021). The support for H6 shows that leaders who provide meaning, support, clarity, and learning space serve as a social resource that sustains energy and focus, consistent with Lim et al. (2025), Samul (2024), Boccoli et al. (2024), and Dhaneesh et al. (2025).

The mediation results (H7–H10) show that career path and sustainable leadership retain direct relationships with their outcomes while also working through additional mechanisms. Sustainable leadership translates the career system into work experiences that support engagement (H7) and performance (H8), consistent with De Vera and Martir (2025), Tjahjanto et al. (2025), Sajjad et al. (2024), and Piwowar-Sulej and Iqbal (2026). Work engagement explains the psychological process through which growth prospects (H9) and leader support (H10) lead to more consistent task execution, consistent with Faisal (2024), Liana and Indrawati (2025), Boccoli et al.

(2024), Samul (2024), and Dhaneesh et al. (2025). The support for H11 reveals a structural chain in which career path is related to sustainable leadership, sustainable leadership to work engagement, and work engagement to employee performance. From the multilevel JD-R perspective (Bakker et al., 2023), this sequence shows why the benefits of career policy are not always translated directly into performance but can unfold through sequential organizational and psychological processes, while SET explains the gradual and cumulative reciprocity underlying it. Based on the literature synthesized in this study, no single study has tested this full chain in an Indonesian state-owned contact center, so H11 is positioned as a contextual empirical novelty.

The high self-reported performance scores do not contradict the decline in objective KPI achievement described in Table 1; rather, they depict two layers of performance reality. KPI data reflect technical outputs recorded in the reporting system, while self-report scores reflect employees' perceptions and self-efficacy. The gap suggests that employees believe their competence and effort are adequate, whereas actual technical output may still be constrained by factors beyond individual control, such as resource limitations, procedural obstacles, or high workload. Theoretically, the findings show that formal resources such as career policies produce more complete performance effects when enacted through leader behavior and internalized as engagement.

CONCLUSION

This study concluded that career paths, sustainable leadership, and work engagement were significantly associated with employee performance among customer service officers (CSOs) at Contact Center PLN 123 Site Jakarta, with all 11 hypotheses supported. Career paths exhibited positive and statistically significant relationships with sustainable leadership, work engagement, and employee performance, with the strongest path coefficient observed for sustainable leadership. Sustainable leadership was positively associated with both work engagement and employee performance, while work engagement emerged as the strongest direct predictor of employee performance. Sustainable leadership and work engagement each demonstrated complementary partial mediation effects and jointly formed a statistically significant serial mediation pathway linking career paths to employee performance. These findings were consistent with the motivational process proposed by the Job Demands–Resources (JD-R) model and Social Exchange Theory, although the cross-sectional design did not establish temporal causality. Based on these findings, management should prioritize work engagement through job enrichment, structured rotation between voice and live chat services, peer mentoring, case-based microlearning, employee recognition based on first contact resolution (FCR) achievements, and balanced shift scheduling. Sustainable leadership practices should be strengthened through coaching programs for trainers and team leaders informed by quality assurance (QA) evaluations, alongside transparent communication regarding the long-term implications of operational decisions. Career development should be supported through structured training and certification programs, transparent promotion criteria, and regular career development discussions. The effectiveness of these initiatives should be assessed using employee performance indicators, particularly FCR rates and improvements

following scenario-based coaching. This study was limited by its cross-sectional design, single-site purposive sample, and four-variable research model. Future research should employ longitudinal or time-lagged designs, expand the sample to other Contact Center PLN 123 locations or public service organizations, and incorporate additional job demands and potential moderating variables, such as perceived organizational support and organizational climate. Replication across banking, telecommunications, and other service industries would further strengthen the generalizability of the findings.

ACKNOWLEDGEMENTS

The authors thank the management and the Customer Service Officers of Contact Center PLN 123 Site Jakarta for their permission, data support, and participation in this research, as well as the Master of Management Program, Faculty of Economics and Business, Universitas Mercu Buana. (Panigoro, 2025)

REFERENCES

- Aguinis, H. (2024). *Research methodology: Best practices for rigorous, credible, and impactful research*. SAGE Publications.
- Ali, A. A. A., AlZgool, M., Alzoraiki, M., Milhem, M., & Al-Absy, M. S. M. (2023). Moderating effect of strategic planning on the relationship between career path planning and job performance. *Sustainability*, 15(11), 8490. <https://doi.org/10.3390/su15118490>
- Alim, D. F. J., & Rahmawati, S. (2023). Pengaruh budaya organisasi terhadap keterlibatan karyawan generasi Y kantor pusat PT PLN Jakarta. *JIMFE (Jurnal Ilmiah Manajemen Fakultas Ekonomi)*, 9(1), 1–14. <https://doi.org/10.34203/jimfe.v9i1.6477>
- Arifin, S., & Narmaditya, B. S. (2024). Fostering employee performance of civil servants in Indonesia: The mediating role of organisational citizenship behaviour. *SA Journal of Human Resource Management*, 22, 1–9. <https://doi.org/10.4102/sajhrm.v22i0.2412>
- Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309–328. <https://doi.org/10.1108/02683940710733115>
- Bakker, A. B., & Demerouti, E. (2023). Job demands-resources theory: Frequently asked questions. *Frontiers in Psychology*, 14, 1071768. <https://doi.org/10.3389/fpsyg.2023.1071768>
- Bakker, A. B., Demerouti, E., & Sanz-Vergel, A. (2023). Job demands-resources theory: Ten years later. *Annual Review of Organizational Psychology and Organizational Behavior*, 10, 25–53. <https://doi.org/10.1146/annurev-orgpsych-120920-053933>
- Bernardin, H. J., & Russell, J. E. A. (1993). *Human resource management: An experiential approach*. McGraw-Hill.
- Boccoli, G., Gastaldi, L., & Corso, M. (2024). Transformational leadership and work engagement in remote work settings: The moderating role of the supervisor's digital communication skills. *Leadership & Organization Development Journal*, 45(7), 1240–1257. <https://doi.org/10.1108/LODJ-09-2023-0490>
- Chin, W. W. (1998). The partial least squares approach for structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research* (pp. 295–336). Lawrence Erlbaum Associates.
- Creswell, J. W., & Creswell, J. D. (2023). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). SAGE Publications.

- De Vera, F. G., & Martir, E. M. (2025). Leadership development, career progression and operational effectiveness. *International Journal of Science and Management Studies (IJSMS)*, 8(5), 62–81. <https://doi.org/10.51386/25815946/ijsms-v8i5p104>
- Dhaneesh, R., Iswarya, V. S., & Anand, S. T. (2025). An analysis of stress burnout and work engagement of paternalistic leadership using job demand-resource (JD-R) model. *Rajagiri Management Journal*, 19(1), 44–56. <https://doi.org/10.1108/RAMJ-12-2023-0343>
- Faisal, A. (2024). The effect of work-life balance, organizational culture, career path and key performance indicator on productivity through employee engagement. *Global International Journal of Innovative Research in Science, Engineering & Technology (GIJLSS)*, 2(4), 198–215. <https://doi.org/10.38035/gijlss.v2i4>
- Ferreira, P., Gomes, S., & Lopes, J. M. (2025). Psychosocial working conditions on work engagement and burnout in European communication industry. *Corporate Communications: An International Journal*, 30(7), 172–190. <https://doi.org/10.1108/CCIJ-10-2024-0178>
- Field, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). SAGE Publications.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.1177/002224378101800104>
- Grzesiak, L., & Ulrych, W. (2025). How management support and diversity factors affect employee performance within the digital workplace. *Central European Management Journal*, 33(1), 20–39. <https://doi.org/10.1108/CEMJ-06-2023-0238>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). SAGE Publications.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Hosen, S., Uddin, M. N., Hosen, M., & Ali, M. A. (2023). Career development and employee performance: The mediating role of motivation. *International Journal of Business and Applied Economics*, 2(2), 55–72.
- Iqbal, Q., & Piwowar-Sulej, K. (2022). Sustainable leadership in higher education institutions: Social innovation as a mechanism. *International Journal of Sustainability in Higher Education*, 23(8), 1–20. <https://doi.org/10.1108/ijshe-04-2021-0162>
- Iqbal, Q., & Piwowar-Sulej, K. (2023). Sustainable leadership and heterogeneous knowledge sharing: The model for frugal innovation. *European Journal of Innovation Management*, 26(7). <https://doi.org/10.1108/EJIM-03-2022-0144>
- Iqbal, Q., Piwowar-Sulej, K., & Kallmuenzer, A. (2024). Sustainable development through frugal innovation: The role of leadership, entrepreneurial bricolage and knowledge diversity. *Review of Managerial Science*, 19(2), 573–594. <https://doi.org/10.1007/s11846-024-00764-y>
- Lestari, S. D., & Emi, E. (2021). Pengaruh career path dan ambiguitas peran terhadap kinerja karyawan PT Wijaya Anugerah Cipta Optima. *Dynamic Management Journal*, 5(2), 83–93.
- Liana, E., & Indrawati, N. K. (2025). Determination of employee performance: Analysis of employee involvement, job satisfaction, path career and remuneration. *Siber Journal of Advanced Multidisciplinary (SJAM)*, 3(1), 45–58. <https://doi.org/10.38035/sjam.v3i1>
- Liao, Y. (2022). Sustainable leadership: A literature review and prospects for future research. *Frontiers in Psychology*, 13, 1045570. <https://doi.org/10.3389/fpsyg.2022.1045570>

- Lim, M. J., Nugroho, D., & Ramachandaran, S. D. (2025). Sustainable leadership, organizational culture and organizational commitment: A pathway to enhanced employee performance through employee engagement in Malaysia's oil and gas sector. *Discover Sustainability*, 6, Article 1399. <https://doi.org/10.1007/s43621-025-01869-4>
- Lukito, D., Susanti, M., Susanto, Y., Judijanto, L., Ali, M., Hartono, & Mahardhani, A. J. (2025). Determinants of sustainable employee performance: A study of family businesses in Indonesia. *Asia Pacific Management Review*, 30(2), 100340. <https://doi.org/10.1016/j.apmr.2024.12.004>
- Mangkunegara, A. A. A. P. (2017). *Manajemen sumber daya manusia perusahaan* (14th ed.). Remaja Rosdakarya.
- McCann, J. T., & Holt, R. A. (2010). Defining sustainable leadership. *International Journal of Sustainable Strategic Management*, 2(2), 204–210. <https://doi.org/10.1504/IJSSM.2010.032561>
- Neuber, L., Englitz, C., Schulte, N., Forthmann, B., & Holling, H. (2021). How work engagement relates to performance and absenteeism: A meta-analysis. *European Journal of Work and Organizational Psychology*, 31(2), 292–315. <https://doi.org/10.1080/1359432X.2021.1953989>
- Okon, S. E., Dakare, O., Akaighe, G. O., & Adebisi, S. O. (2025). Organisational career growth and work engagement: A moderated mediated model. *Career Development International*, 30(3), 239–254. <https://doi.org/10.1108/CDI-05-2024-0228>
- Piowar-Sulej, K., & Iqbal, Q. (2026). Sustainability-focused leadership and pro-environmental behavior in SMEs: Through the lens of conservation of resources theory. *Central European Management Journal*, 34(1), 166–182. <https://doi.org/10.1108/CEMJ-11-2024-0375>
- Riyanto, S., Endri, E., & Herlisha, N. (2021). Effect of work motivation and job satisfaction on employee performance: Mediating role of employee engagement. *Problems and Perspectives in Management*, 19(3), 162–174.
- Sajjad, A., Eweje, G., & Raziq, M. M. (2024). Sustainable leadership: An integrative review and conceptual synthesis. *Business Strategy and the Environment*, 33(4), 2849–2867. <https://doi.org/10.1002/bse.3631>
- Saks, A. M., Gruman, J. A., & Zhang, Q. (2022). Organization engagement: A review and comparison to job engagement. *Journal of Organizational Effectiveness: People and Performance*, 9(1), 20–49. <https://doi.org/10.1108/JOEPP-12-2020-0253>
- Samul, J. (2024). Spiritual leadership and work engagement: A mediating role of spiritual well-being. *Central European Management Journal*, 32(3), 421–435. <https://doi.org/10.1108/CEMJ-05-2023-0223>
- Sari, N. L., & Kasmir. (2025). The influence of career development and work environment on employee performance mediated by work motivation. *Indikator: Jurnal Ilmiah Manajemen dan Bisnis*, 9(2), 1–86.
- Schaufeli, W. B., & Bakker, A. B. (2008). Positive organizational behavior: Engaged employees in flourishing organizations. *Journal of Organizational Behavior*, 29(2), 147–154. <https://doi.org/10.1002/job.515>
- Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement*, 66(4), 701–716. <https://doi.org/10.1177/0013164405282471>
- Sekaran, U., & Bougie, R. (2020). *Research methods for business: A skill-building approach* (8th ed.). Wiley.

- Shmueli, G., Sarstedt, M., Hair, J. F., Cheah, J.-H., Ting, H., Vaithilingam, S., & Ringle, C. M. (2019). Predictive model assessment in PLS-SEM: Guidelines for using PLSpredict. *European Journal of Marketing*, 53(11), 2322–2347. <https://doi.org/10.1108/EJM-02-2019-0189>
- Stor, M. (2024). The effects of shaping employee work engagement and job satisfaction on company performance results: The mediating role of HRM outcomes in Central European MNCs. *Central European Management Journal*, 32(3), 490–510. <https://doi.org/10.1108/CEMJ-05-2023-0215>
- Suharto, B., & Suprpto, S. (2023). The role of organizational commitment and employee engagement in mediating the impact of perceived organizational support on employee performance. *Dinasti International Journal of Management Science*, 4(6), 1215–1225. <https://doi.org/10.31933/dijms.v4i6.1960>
- Tentama, F., & Ermawati, U. (2021). Hubungan antara pengembangan karir dengan employee engagement pada karyawan PT X Indonesia Area Yogyakarta. *Jurnal Psikogenesis*, 9(2), 196–204.
- Tjahjanto, A., Ustriyana, N. G., & Diarta, K. S. (2025). Sustainable leadership and employee engagement: A key driver of productivity in Indonesian companies. *International Journal of Current Science Research and Review*, 8(2), 650–672. <https://doi.org/10.47191/ijcsrr/V8-i2-10>
- Zielinska, A., Bezzina, F., Tracz-Krupa, K., & Cassar, V. (2025). Transformational and shared leadership relationships with employee performance and intention to leave among IT knowledge workers: Mediating effects of communication quality and organizational commitment. *Central European Management Journal*. <https://doi.org/10.1108/CEMJ-08-2024-0263>