Research Paper

A Theoretical Model of Training, Compensation, and Employee Performance in Indonesia's State-Owned Enterprise

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Received: July 19, 2025	Revised : October 05, 2025	Accepted : October 27, 2025	Online : October 31, 2025

Abstract

Human resources are a strategic source of organizational competitiveness, and employee performance plays a central role in determining organizational outcomes. Training and compensation are two critical mechanisms through which organizations can shape employee behavior and enhance performance. Drawing on human capital theory and social exchange perspectives, this study develops a theoretical model that positions training as a developmental investment and compensation as a motivational driver of performance. The model is empirically examined in the context of Indonesia's state-owned enterprise sector, using data from 104 employees of PTPN I Regional 2 Bandung. A quantitative approach with regression analysis provides evidence that both training and compensation have a significant positive effect on employee performance. While grounded in a specific organizational context, the findings extend the conceptual understanding of how human resources development (HRD) practices interact to improve performance, particularly in emerging economic settings. The study contributes to human resource development scholarships by offering a framework that underscores the importance of integrating developmental and motivational HR practices. This theoretical positioning highlights the transferability of the model to diverse organizational contexts, making it relevant for broader discussions in HRD and performance management.

Keywords: *Compensation, Employee Performance, Human Capital, Human Resources Development, Employee Training*

INTRODUCTION

In the era of globalization, the increasing number of challenges that arise forces companies to prepare themselves to adapt to the evolving times and the intensifying competition. Human resources are widely recognized as a strategic driver of sustainable competitive advantage, with employee performance serving as a central determinant of organizational success. According to (Mangkunegara, 2017), organizational performance achievement is a component that must be considered to enable the company to achieve its established goals. Thus, performance is considered as an outcome produced by employees in their work according to specific criteria applicable to a job (Robbins, 2016). The performance results provided by employees will directly lead to the achievement of organizational goals.

It is important for organizations to improve employee performance, which can be measured through the quality and quantity of work produced, punctuality, effectiveness, and employee independence (Robbins, 2016). Within the fields of human resource development (HRD) studies, training and compensation are consistently identified as central mechanisms shaping individual and organizational outcomes.

Providing employee training can be considered one of the most important investments for organizations to enhance employee productivity and work quality. Training has a positive and significant impact on employee performance (Fitri et al., 2023;Karyono & Gunawan, 2021). Training becomes the process of teaching new employees or existing employees the basic skills they need to perform their jobs (Dessler, 2016). In line with the opinion of (Rivai, 2018), training is part of education that encompasses the learning process to acquire and enhance skills outside

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the existing education system in a relatively short period with methods that are more focused on practice than theory.

From a human capital perspective, training is not merely a technical intervention but a strategic investment that enhances employees' knowledge, skills, and adaptability, thereby strengthening organizational resilience in dynamic environments (Becker, 2009; Wang et al., 2014). An effective training is measured by the instructor's ability, participants' enthusiasm, the training methods provided, the materials delivered, and the objectives of the training itself. Paying attention to the training needs of employees in supporting their work will result in optimal employee performance (Fitri et al., 2023).

At the same time, drawing on social exchange theory, compensation reflects organizational recognition and fairness, motivating employees to reciprocate with higher levels of effort, commitment, and performance (Al Halbusi et al., 2022; Cropanzano et al., 2017). Together, these perspectives underscore the dual developmental and motivational functions of HR practices in advancing human capital and leadership effectiveness.

Although the significance of training and compensation has been well established, much of the literature remains fragmented, often treating them as separate levers rather than interconnected mechanisms. Recent HRD scholarship emphasizes the importance of integrated frameworks that explain how multiple HR practices interact to influence performance (Kim & Ployhart, 2018; Noe et al., 2014a). Moreover, most conceptual developments have been grounded in Western or highly industrialized contexts, leaving gaps in understanding how these mechanisms operate in emerging economies and state-owned enterprises (SOEs). In such contexts, institutional arrangements, governance logics, and cultural norms may alter the dynamics through which training and compensation affect employee outcomes (Cooke et al., 2015; Horwitz & Mellahi, 2018).

This research was conducted at PTPN I Regional 2, which is a state-owned enterprise engaged in the management, processing, and marketing of plantation products. In accordance with the company's founding objectives, the company conducts performance evaluations of all employees grouped by work units, and these evaluations are compiled into performance appraisal reports that will show the extent of achievements produced by each work unit within the company. The achievement of performance results will influence the level of profitability obtained by the company. The higher the level of performance achievement produced by each work unit, the greater the profit generated.

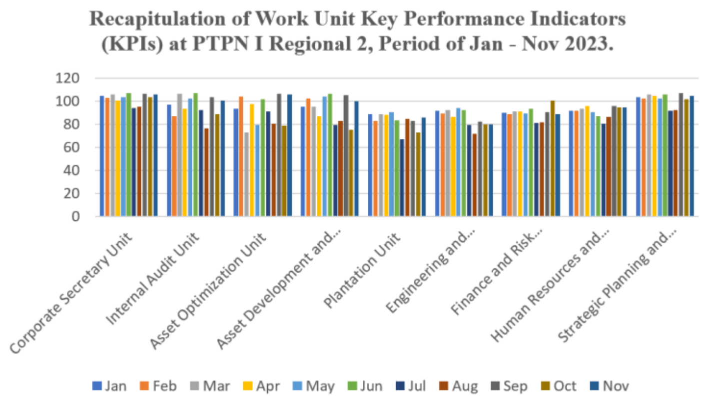

Figure 1. Recapitulation of KPI Work Unit

Referring to the employee performance report for the year 2023, the researcher observed a decline in performance in certain months in several work units over the past year. Through the image above, these work units have not been able to achieve the targets that were previously set.

The intense competition among companies operating in the same field requires companies to continuously pay attention to their consumers' needs. To ensure consumer satisfaction, it is necessary to support it with good employee performance, which positively impacts the company's performance. Training programs that have been implemented aim to improve the quality of human resources through various training, development, and mentoring programs that align with the needs of the plantation industry.

However, considering the number and variety of training methods provided, further research is needed to determine whether the quantity and methods of training given are effective in supporting the improvement of knowledge and skills of employees. Because an organization is an institution driven by humans, the alignment of behavior with appropriate work standards can result in performance that meets expectations. Not only training, but also the provision of compensation is a factor related to employee performance. The provision of compensation serves as a reward for the contributions made by employees, and the compensation given will take various forms. For example, compensation is provided in the form of salaries and incentives, position allowances, social assistance, employment insurance, health insurance, and several office facilities to the employees to enable them to deliver their best performance while working. The amount and form of compensation provided by the company are categorized based on a grading system using two different types of grading, job grade and person grade.

There are some differences in the compensation received by employees, such as the regulation that overtime pay is only given to operational employees and position allowances are given to managerial employees. Additionally, the implementation of non-financial compensation has not been carried out well because there are no clear programs for appreciation/recognition/reward for performance results. Then, for job promotions, they are only conducted when the position is vacant, and a replacement is sought through a recruitment mechanism and internal selection, providing wide opportunities for all employees interested in advancing their positions. Thus, the promotion of career opportunities is still not well-structured, leading to the conclusion that the non-financial compensation implemented is also not well-structured and clear. Thus, it highlights the issue of whether the amount of financial compensation and the forms of non-financial compensation received by employees are considered sufficient as a reward for their contributions to the company.

Despite extensive research on training and compensation, prior studies often examine these practices in isolation, overlooking their potential interactive and complementary effects on employee performance. Theoretical integration remains limited, with few models addressing how developmental practices such as training and motivational mechanisms such as compensation jointly shape long-term outcomes. Moreover, much of the scholarship has been developed in Western or highly industrialized contexts, leaving significant gaps in understanding how these dynamics unfold in state-owned enterprises (SOEs) operating within emerging economies. SOEs represent a unique institutional setting where government ownership, bureaucratic structures, and societal expectations intersect, creating distinctive challenges and opportunities for human resource development. Exploring how training and compensation function together in SOEs not only strengthens the conceptual link between HRD practices and employee performance but also extends leadership and HRD theory into underrepresented organizational contexts.

Accordingly, this study addresses the following guiding questions:

1. How does training, as framed by human capital theory, enhance employee performance?
2. In what ways does compensation, viewed through social exchange theory, influence performance outcomes?
3. How do these two practices interact as complementary HRD mechanisms in shaping long-term employee performance?

To answer these questions, the study develops and validates a theoretical model that integrates training and compensation, contributing to HRD and leadership scholarship by moving beyond the isolated examination of HR practices. Furthermore, by situating the model within Indonesia's state-owned enterprise sector, the study extends the application of established theories to an underexplored organizational setting, offering insights relevant to emerging economies and cross-cultural contexts.

LITERATURE REVIEW

Training and compensation are among the most widely studied human resource development (HRD) practices, both of which play a central role in shaping employee performance. Training enhances employees' knowledge, skills, and abilities, directly influencing task effectiveness and adaptability (Noe et al., 2014b; Salas et al., 2012a). According to (Dessler, 2016), it is the process of teaching new or existing employees the basic skills necessary to perform their jobs. According to (Rivai, 2018), training is a part of education that includes the learning process to acquire and enhance skills outside the existing education system in a relatively short time with methods that focus more on practice than theory.

Furthermore, (Sinambela, 2021) describes training as a systematic process conducted by organizations to help staff members acquire skills, abilities, knowledge, or attitudes that can assist in achieving organizational goals. By facilitating learning and capability building, training supports both immediate job performance and longer-term employability (Busso et al., 2023). This study is using (Dessler, 2016) dimensions of training: instructor, participants, method, training material, and training objectives. Conceptually, the recent literature supports integrating human capital theory (training builds capability) with employees' performance. Training enhances employees' knowledge, skills, and work-related competencies that directly improve task performance and adaptability (Hosen et al., 2024a; Salas et al., 2012b).

In HRD context, to foster higher performance, capability development should be integrated with motivational reinforcement. Compensation serves as a key motivational lever, signaling value and fairness while aligning individual behavior with organizational objectives (Gerhart & Fang, 2015; Kim & Park, 2017). According to Mondy and Martocchio (2016) compensation is a sum of rewards that the company provides to employees for the performance given to the organization, whether direct or indirect, financial or non-financial. According to (Siagian, 2018), compensation is a form of appreciation for the work achievements that employees have accomplished in helping to improve the company.

Compensation has traditionally been regarded as one of the most powerful levers for influencing employee behavior and aligning individual efforts with organizational goals (Milkovich et al., 2014). Beyond its role as a basic economic exchange, contemporary research highlights compensation as a strategic tool that signals value, fairness, and recognition, thereby shaping motivation and commitment (Gerhart & Fang, 2015; Kim & Park, 2017). Compensation systems today are increasingly designed not only to reward output but also to encourage engagement, innovation, and knowledge sharing, which are crucial for sustained performance (Caza et al., 2015; Chen et al., 2023a).

Compensation consists of two parts according to Mondy and Martocchio (2016), which are financial and non-financial compensation. Financial compensation, which is compensation given to employees in the form of money. Whereas non-financial compensation is the amount of compensation that is not in the form of money given to employees, which include interesting tasks, responsibilities, satisfaction from achieving goals, recognition of work results, and opportunities for promotion. Fair and performance-based compensation systems encourage greater employee effort and commitment, which translate into higher job performance (Chen et al., 2023b; Hudiyah et al., 2025)

However, the relationship between training, compensation, and performance is more complex than treating each in isolation. Research on training effectiveness demonstrates that even well-designed programs may fail to translate into performance improvements if employees perceive inadequate rewards or recognition (Aguinis & Kraiger, 2009). Similarly, studies of compensation suggest that financial incentives alone may not sustain motivation without opportunities for skill development and growth (Busso et al., 2023). This interplay highlights the need to consider how training and compensation complement one another: training provides the capacity to perform, while compensation strengthens the willingness to apply and sustain those capabilities in practice.

From a theoretical perspective, this complementarity can be explained through the integration of human capital theory and social exchange theory. Human capital theory posits that investment in training increases employee value and productivity (Becker, 2009), while social exchange theory suggests that employees reciprocate organizational support, including fair pay, with higher levels of commitment and performance (Blau et al., 1964). When organizations align these mechanisms, by providing relevant learning opportunities and equitable compensation, they create both the competence and motivation necessary for high performance outcomes (Awoitau et al., 2024; Kang et al., 2008).

Despite these insights, empirical research often examines training and compensation separately, leading to fragmented understandings of their combined effects. This gap is particularly salient in state-owned enterprises, where unique institutional logics, governance structures, and public accountability create tensions between efficiency and developmental goals (Haerah, 2024). Exploring how training and compensation interact in such contexts can refine HRD theory by illustrating how development- and motivation-based practices jointly shape employee performance under institutional complexity.

Based on the conceptual framework and literature review above, the hypothesis formulation in this study is as follows

H1: Employee training has a positive and significant effect on employee performance.

H2: Compensation has a positive and significant effect on employee performance.

H3: Employee training and Compensation has a positive and significant effect on employee performance simultaneously.

RESEARCH METHOD

This study adopts an explanatory research design, aiming to examine the causal relationships between training, compensation, and employee performance in the context of a state-owned enterprise. Explanatory research is appropriate for this study because the purpose is not only to describe employee perceptions but to test theoretical linkages between HRD practices and performance outcomes (Babbie, 2013; Saunders et al., 2023). Specifically, the study investigates whether training enhances employees' capacities, compensation strengthens their motivation, and together these mechanisms improve performance, as posited by human capital theory (Becker, 2009) and social exchange theory (Blau et al., 1964). The explanatory approach is suitable because it allows examination of causal links among variables and contributes to theory building by empirically validating conceptual relationships (Creswell & Creswell, 2018; Hair et al., 2019)

The population of this study consisted of 182 employees of PTPN I Regional 2 Bandung, which represents the total number of staff in the office. From this population, purposive sampling was employed. The inclusion criterion was employees below the board of directors' level who are most frequently dispatched to participate in training programs, based on information obtained from the Human Resources division. This approach ensured that the sample reflected employees directly exposed to both training and compensation practices, making them theoretically relevant for testing the research model. The final sample comprised 104 employees, which is sufficient for regression analysis and exceeds the general minimum requirements for explanatory research in organizational studies (Hair et al., 2019).

Primary data were collected using a structured questionnaire supported by semi-structured interviews to enrich the interpretation of quantitative findings. The questionnaire was designed on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree), as this format is widely used to capture employee attitudes and perceptions (Joshi et al., 2015). To strengthen the explanatory power of the study, semi-structured interviews were conducted with 10 employees and 2 HR managers. Content validity was ensured through expert review by three HRD academics and two practitioners, who assessed the representativeness and clarity of items (Laerkner et al., 2015). While not analyzed statistically, these interviews contextualized how training and compensation practices were experienced in practice, thereby supporting theory-driven interpretation.

Construct validity was assessed using Pearson's product-moment correlation (Lee Rodgers & Nicewander, 1988), where each item's correlation with its construct score was compared against the critical r-table value (0.195, n = 104, α = 0.05). All items exceeded this threshold, confirming convergent validity. Reliability was examined using Cronbach's alpha, with results well above the recommended 0.70 cutoff (Training = 0.86; Compensation = 0.88; Performance = 0.91), indicating strong internal consistency.

Data were analyzed using simple and multiple linear regression with SPSS version 25. Regression analysis is appropriate in explanatory research because it tests hypothesized relationships and quantifies the degree to which independent variables (training and compensation) explain variation in the dependent variable (employee performance) (Cohen et al., 2003). The T-test was employed to assess the partial effect of each independent variable (training and compensation) on employee performance. The F-test was used to evaluate the simultaneous effect of training and compensation on performance, indicating whether the model as a whole is significant. The coefficient of determination (R^2) measured the proportion of variance in employee performance explained by training and compensation, which reflects the model's explanatory power and supports theory testing (Hair et al., 2019). This analytical approach provides empirical validation of the theoretical model, offering evidence for how developmental (training) and motivational (compensation) mechanisms jointly contribute to employee performance in the context of a state-owned enterprise.

FINDINGS AND DISCUSSION

The background characteristics of the respondents establish an empirical foundation for analyzing the relationship between training, compensation, and performance.

Table 1. Respondents' Demographic Profile (N = 104)

By Gender	Frequency	%
Male	75	72.12%
Female	29	27.88%
By Length of Service	**Frequency**	**%**
1-5 years	22	21.15%
6-10 years	23	22.12%
> 10 years	59	56.73%

The sample consisted of 104 employees from PTPN I Regional 2 Bandung. Most respondents were male (72.1%), with females representing 27.9%. In terms of tenure, more than half of the participants (56.7%) had been employed for over ten years, while 22.1% reported six to ten years of service and 21.2% had between one and five years.

This demographic profile carries several analytical implications. The predominance of long-tenured employees suggests that the findings reflect not only immediate perceptions but also accumulated evaluations of organizational practices over time. Furthermore, the distribution across multiple functional units provides broader insights into how training and compensation are experienced within both administrative and operational domains. Taken together, these characteristics enhance the validity of the analysis and provide a strong empirical basis for interpreting the mechanisms through which training and compensation influence employee performance in a state-owned enterprise context. While the demographic information situates the study within its organizational setting, a deeper understanding emerges when examining respondents' perceptions of the key study variables.

Descriptive Analysis of Variables

Table 2. Descriptive Statistics of Research Variables (N = 104)

Dimension	Average	%	Classification
Training	434.73	83.60%	High
Compensation	379.99	73.07%	High
Employee Performance	379.99	73.07%	High

The descriptive statistics indicate that the training variable obtained an average score of 434.73 or 83.60%, reflecting a high level of effectiveness in the training programs implemented by PTPN I Regional 2. The company conducts systematic training needs analyses through competency index assessments and development plan evaluations to ensure that training initiatives are aligned with both employee development and organizational objectives. Interviews further revealed that approximately 20 training sessions are organized each month, demonstrating a sustained organizational commitment to capability enhancement and skill renewal.

Similarly, the compensation variable achieved an average score of 425.50 or 81.83%, suggesting generally favorable employee perceptions of the compensation system. At PTPN I Regional 2, compensation practices are regulated through a collective labor agreement established with the plantation workers' union and harmonized with government regulations, ensuring equitable access to both financial and non-financial benefits. Differentiation based on job grade and personal grade provides structured variation in rewards, while maintaining distributive fairness.

The employee performance variable also recorded an average score of 425.50 or 81.83%, signifying a consistently high level of performance across the organization. Employees operate under performance targets outlined in the *Rencana Kerja dan Anggaran Perusahaan (RKAP)*, which are formally approved by the board of management and commissioners, thereby ensuring accountability and clarity of expectations. Supporting evidence from interview data further indicates that employees exhibit strong coordination, commitment, and responsibility in carrying out their work, contributing to sustained performance outcomes. Following the descriptive analysis, diagnostic tests were conducted to examine the extent to which the dataset fulfills the statistical assumptions underlying the regression estimation.

Classical Assumption Test

Table 3. Classical Assumption Test

Assumption Test	Variable(s)	Result and Criteria	Conclusion
Normality	Residuals	Monte Carlo Sig. = 0.120 > 0.05	Data normally distributed
Multicollinearity	Training (X1)	Tolerance = 1.000 > 0.10; VIF = 1.784 < 10	No multicollinearity
	Compensation (X2)	Tolerance = 0.560 > 0.10; VIF = 1.784 < 10	No multicollinearity
Heteroskedasticity	Training (X1)	Sig. = 0.869 > 0.05	No heteroskedasticity
	Compensation (X2)	Sig. = 0.692 > 0.05	No heteroskedasticity
Correlation	Training → Performance	r = 0.656, p = 0.000; 0.60–0.785 = strong correlation	Strong positive correlation
	Compensation → Performance	r = 0.537, p = 0.000; 0.40–0.599 = moderate correlation	Moderate positive correlation
	Training ↔ Compensation	r = 0.663, p = 0.000; 0.60–0.785 = strong correlation	Strong positive correlation

The classical assumption tests confirmed that the regression model met all required statistical conditions. The normality assumption was satisfied, as indicated by the Monte Carlo significance value of 0.120 ($p > 0.05$). Multicollinearity was not present, with tolerance values above 0.10 and VIF values below 10 for both independent variables. The heteroskedasticity test further showed significance values above 0.05, confirming homoscedastic residuals. Correlation analysis revealed that training had a strong positive relationship with employee performance ($r = 0.656$, $p < 0.001$), while compensation demonstrated a moderate positive relationship ($r = 0.537$, $p < 0.001$). In addition, training and compensation were strongly correlated with one another ($r = 0.663$, $p < 0.001$). Taken together, these results indicate that the dataset fulfills the statistical assumptions required for regression analysis.

Multiple Linear Regression Analysis

Table 4. Multiple Linear Regression Analysis on Training and Compensation as Predictors of Employee Performance

Coefficients						
Model		Unstansdardized Coefficients		Standardized Coefficient	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16.404	4.497		3.648	.000
	TOTAL_X1	.608	.112	.535	5.421	.000
	TOTAL_X2	.118	.064	.182	1.844	.068
a. Dependent Variable: TOTAL_Y						

The results of the multiple linear regression test yield a training variable coefficient of 0.608, a compensation of 0.118, and a constant of 16.404, resulting in the following multiple linear regression equation:

$$Y = 16.404 + 0.608X1 + 0.118X2 + e$$

From the results of the regression equation above, it can be interpreted as follows:

a. The obtained constant value of 16.404 means that if variable X1 (training) and variable X2 (compensation) are assumed to be 0, then the value of Y (employee performance) is 16.404.
b. The regression coefficient value of variable X1 (training) is positive at 0.608, which means that if there is an increase of one unit in variable X1 (training) and variable X2 (compensation) is assumed to be 0 or constant, it will result in an increase in variable Y (employee performance) by 0.698.
c. The regression coefficient value of variable X2 (compensation) is positive at 0.118, which means that if there is an increase of one unit in variable X2 (compensation) and variable X1 (training) is assumed to be 0 or constant, it will result in an increase in variable Y (employee performance) by 0.118.
d.

Partial Influence Significance Test (T-Test)

Table 5. Results of the T-Test for the Effect of Training on Employee Performance

Coefficients						
Model		Unstansdardized Coefficients		Standardized Coefficient	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.241	4.526		3.809	.000
	TOTAL_X1	.745	.085	.656	8.772	.000
a. Dependent Variable: TOTAL_Y						

The T-test results indicate that training has a significant positive effect on employee performance, $B = 0.745$, $SE = 0.085$, $t(101) = 8.772$, $p < 0.001$, 95% CI [0.576, 0.914], $\beta = 0.656$. This implies that a one-unit increase in training is associated with a 0.745-unit increase in employee performance, holding other variables constant. The standardized coefficient (β) of 0.656 demonstrates a strong effect size, underscoring the central role of training in enhancing performance outcomes. This indicates that H1 is accepted, confirming that employee training contributes significantly to improving performance.

Table 6. Results of the T-Test for the Effect of Compensation on Employee Performance

Coefficients						
Model		Unstansdardized Coefficients		Standardized Coefficient	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	32.762	3.769		8.629	.000
	TOTAL_X2	.348	.054	.537	6.425	.000
a. Dependent Variable: TOTAL_Y						

The t-test results indicate that compensation has a significant positive effect on employee performance, $B = 0.348$, $SE = 0.054$, $t(101) = 6.425$, $p < 0.001$, 95% CI [0.241, 0.455], $\beta = 0.537$. This suggests that for every one-unit increase in compensation, employee performance increases by 0.348 units, holding other factors constant. The standardized coefficient (β) of 0.537 reflects a moderate-to-strong effect size, underscoring the substantive importance of compensation in predicting performance outcomes. This indicates a significant positive influence on performance. Therefore, H2 is accepted.

Overall Significance of the Model (F-Test)

Table 7. Results of the F-Test for the Joint Effect of Training and Compensation on Employee Performance

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3099.127	2	1549.563	41.077	.000
	Residual	3810.099	101	37.724		
	Total	6909.225	103			
a. Dependent Variable: TOTAL_Y						
b. Predictors: (Constant), TOTAL_X2, TOTAL_X1						

The F-test results confirm that the regression model is statistically significant, $F(2, 101) = 41.077$, $p < 0.001$. This indicates that training and compensation, when considered jointly, have a significant effect on employee performance. Hence, H3 is accepted, meaning that together these two HR practices explain a substantial proportion of performance variation.

R^2 Determination Coefficient Test

Table 8. Model Summary and Coefficient of Determination (R^2) for Training and Compensation on Employee Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.670	.449	.438	6.141966
a. Predictors: (Constant), TOTAL_X2, TOTAL_X1				

The coefficient of determination indicates that the model accounts for a substantial proportion of variance in employee performance, Adjusted $R^2 = 0.438$. This means that training and compensation jointly explain 43.8% of the variation in performance outcomes, whereas the remaining 56.2% is attributable to other factors not included in the model.

The empirical findings confirm that both training and compensation exert significant positive effects on employee performance, consistent with prior research in HRD. From a human capital perspective (Becker, 2009), the evidence demonstrates that systematic and frequent training programs enhance employees' knowledge, skills, and adaptability, thereby strengthening organizational capacity and resilience. The relatively strong standardized coefficient for training suggests that developmental interventions play a central role in shaping individual contributions, particularly in complex and competitive industries such as plantation management. Statistical results further show that dimensions such as instructor competence, participant engagement, training methods, material relevance, and clarity of objectives are all critical in determining training effectiveness. This synergy ensures that training contributes optimally to organizational goals. In line with the research conducted by (Hosen et al., 2024b) it is explained that training is one of the efforts to develop employee performance in the workplace and is carried out or is also something related to the job. Performance is the result of the quality and quantity of work done by an employee in carrying out their tasks according to the responsibilities assigned to them.

At the same time, the positive effect of compensation aligns with the assumptions of social exchange theory (Cropanzano et al., 2017), whereby employees perceive fair and structured compensation both financial and non-financial as organizational recognition of their contributions. Such recognition fosters reciprocity expressed through stronger commitment and enhanced performance. The empirical findings support this theoretical linkage by showing that financial rewards, including salaries, wages, commissions, bonuses, allowances, insurance schemes, and educational assistance, significantly influence employee motivation to deliver optimal results in exchange for equitable treatment (Ahyauddin & Yosepha, 2025). Complementarily, non-financial compensation embedded in the nature of work and organizational environment adds value by reinforcing employees' sense of fairness and belonging. The moderate effect size observed suggests that while compensation is an essential performance driver, its motivational power is most effective when integrated with opportunities for growth and professional development. This interpretation is consistent with (Wahdiniawati & Immamah, 2024), who demonstrate that well-structured and transparent compensation systems encourage greater employee effort and, in turn, higher organizational performance outcomes.

Moreover, the high level of performance reported across respondents supports the explanatory logic of expectancy theory by Vroom, which posits that employees are motivated when they believe that effort will lead to valued outcomes. The integration of training and compensation creates a reinforcing mechanism: training equips employees with the capacity to perform, while compensation assures them that effort and capability will be rewarded, thereby strengthening expectancy and instrumentality perceptions. Therefore, employee engagement has been shown to have a positive relationship with business sustainability and social entrepreneurship performance. Engagement enhances employees' sense of ownership and strengthens their commitment to organizational goals related to social value creation and sustainability (Iskandar et al., 2023). The statistical findings further confirm that training and compensation have a simultaneous positive effect on employee performance. Effective training enhances employees' skills and knowledge, enabling them to perform better and adapt more effectively to workplace challenges. Alongside this, a well-designed compensation system motivates employees not only to improve their performance but also to remain committed to the organization. In line with (Sulistiani, 2016), compensation functions as both a performance driver and a retention tool, ensuring that competent employees continue to contribute to organizational success.

While the findings strongly support the central arguments of human capital, social exchange, and expectancy theory, the analysis also reveals that a considerable proportion of performance outcomes remains unexplained by training and compensation alone. With an Adjusted R^2 of 0.438, more than half of the variance in employee performance is attributable to other factors, suggesting that the mechanisms captured in this study are only part of a broader HRD landscape. One critical set of alternative explanations concerns organizational culture and leadership practices. In the context of Indonesian state-owned enterprises, bureaucratic governance structures and hierarchical decision-making norms may moderate how HR interventions are designed, perceived, and enacted. For example, limited transparency in career progression or inconsistent recognition of non-financial contributions could dilute the motivational impact of compensation. Similarly, if training initiatives are implemented primarily as compliance-driven activities rather than as developmental investments, their long-term contribution to performance may be constrained. These observations imply that the effectiveness of HRD practices cannot be fully understood without situating them within the institutional and cultural realities of SOEs.

Another layer of complexity arises from the tenure composition of the workforce. With more than half of respondents having served for over a decade, entrenched routines and organizational inertia may shape employees' responses to training and compensation. In such settings, the marginal utility of additional training may decrease, as employees rely on established practices, while compensation may serve more as a retention device than as a motivational driver for enhanced performance. This suggests that the relationship between HRD practices and outcomes is dynamic and contingent on workforce demographics. Taken together, these insights underscore the need for an integrated HRD framework that combines developmental mechanisms (training) with motivational mechanisms (compensation), while also accounting for contextual moderators such as organizational culture, leadership style, and institutional logics specific to state-owned enterprises. Addressing these contingencies is crucial not only for strengthening the explanatory power of human capital, social exchange, and expectancy theory in emerging-economy contexts but also for expanding the theoretical boundaries of HRD research.

The findings demonstrate that training not only enhances employees' skills and competencies but also functions as an investment that strengthens the organization's intangible assets, aligning with human capital principles. At the same time, compensation reinforces reciprocal relationships between employees and the organization, validating the social exchange mechanism that sustains motivation and engagement. By empirically confirming that both factors interact synergistically to influence performance within the unique institutional setting of Indonesia's state-owned enterprises, this study extends the applicability of Western-based HRD theories into emerging-market contexts. Thus, it provides a foundation for future theoretical refinement by illustrating how developmental and reward-based HR practices can be mutually reinforcing mechanisms for sustainable performance outcomes.

CONCLUSIONS

This study provides an integrated understanding of how training and compensation, grounded respectively in human capital theory and social exchange theory, contribute to enhancing employee performance in Indonesia's state-owned enterprises (SOEs). The empirical results demonstrate that both variables significantly improve performance, with training showing a stronger effect. This outcome indicates that within the institutional complexity of SOEs, developmental practices tend to generate more sustainable performance improvements than transactional incentives alone.

Viewed through the lens of human capital theory, the findings confirm that training functions as a strategic investment that strengthens organizational knowledge, adaptability, and resilience. Meanwhile, the social exchange perspective receives partial support, as compensation fosters motivation and reciprocity when employees perceive fairness, transparency, and recognition in the reward system. However, its effect appears moderated by bureaucratic structures and institutional norms, suggesting that contextual factors may limit the direct influence of compensation on performance. This observation challenges the assumption of universal reciprocity in social exchange theory and underscores the need to account for governance and cultural dimensions in HRD studies involving public enterprises.

The findings collectively highlight that training and compensation operate most effectively when aligned as complementary HRD mechanisms. Training enhances the capacity and confidence of employees to perform, while compensation strengthens their motivation to apply acquired capabilities productively. The interaction between these two practices creates a reinforcing cycle of competence and commitment that supports long-term organizational effectiveness. By addressing the interdependence of developmental and motivational HR strategies, this study contributes to a more contextually grounded extension of HRD theory in emerging economy environments, particularly within the governance framework of SOEs.

This research offers three key theoretical implications. First, it reinforces Human Capital Theory by affirming that sustained investment in learning and capability development remains essential for performance enhancement, even in regulated and hierarchical settings. Second, it refines Social Exchange Theory by revealing that compensation-based reciprocity is shaped by institutional and cultural characteristics, thus extending the theory's contextual applicability. Third, it broadens HRD scholarship by proposing an integrated model that links developmental and motivational practices, bridging a long-standing gap in studies that typically examine HR mechanisms in isolation.

For practitioners and policymakers, several recommendations emerge. Organizations should view training as a continuous strategic priority, emphasizing data-driven needs assessments, competency mapping, and measurable performance outcomes. Compensation systems should combine financial fairness with non-financial recognition, ensuring that reward mechanisms are transparent, equitable, and aligned with career progression. At the policy level, SOE administrators are encouraged to develop integrated HRD frameworks that connect training and compensation policies to organizational transformation and performance management agendas.

LIMITATION & FURTHER RESEARCH

The findings of this study are subject to a key limitation concerning their generalizability. The research was conducted exclusively within PTPN I Reg 2 Bandung, a state-owned enterprise in the plantation sector. This unique organizational context, including its specific operational environment, ownership structure, and cultural attributes, may significantly influence the observed outcomes. Therefore, the conclusions drawn from this research may not be directly applicable to organizations in different industries, with alternative ownership models, or in varying cultural settings. This specificity is a critical consideration for any interpretation and application of the study's results.

To advance scholarly understanding of human resource and performance management within state-owned enterprises, future research should build upon this study's findings to address the identified limitations and deepen the understanding of human resource and performance management within the specific context of state-owned enterprises. Comparative studies across multiple SOEs within similar or differing industries would help determine whether the relationships between training, compensation, and performance identified here are context-dependent or generalizable. Cross-industry analyses, involving private sector organizations or other institutional forms, could further clarify which aspects of these findings are distinctive to public-sector entities and which have broader relevance across organizational contexts.

In addition to comparative designs, scholars are encouraged to adopt longitudinal approaches to capture the evolution of training and compensation effects over time, thereby uncovering the causal and sustained impacts of HRD interventions beyond cross-sectional snapshots. Future studies could also expand the analytical model by integrating additional HRD dimensions such as organizational culture, leadership development, or digital HR innovation to provide a more comprehensive understanding of performance drivers in dynamic and technology-driven work environments. The use of multi-level and mixed-method methodologies is likewise recommended to link individual-level motivation with organizational-level HRD strategy, enhancing theoretical depth and empirical robustness.

Finally, building upon the empirical evidence of this study, future research could contribute to the refinement and theoretical advancement of human capital and social exchange perspectives. By examining these mechanisms across institutional and cultural settings, subsequent studies can offer a more nuanced understanding of how developmental and motivational HRD practices interact to shape sustainable performance, thereby enriching the broader academic discourse on human resource development in emerging economies.

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