

The Influence of Talent Retention and Performance Management on Management Talent with Talent Development as a Moderating Variable in UPT PLN Padangsidempuan Employees

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ABSTRACT

Talent management is a strategic issue for organizations, especially in the public sector, in maintaining the sustainability and competitiveness of human resources. This study aims to analyze the influence of talent retention and performance management on talent management with talent development as a moderating variable in UPT PLN Padangsidempuan employees. This study uses a quantitative approach, where all 102 employees of UPT PLN Padangsidempuan were used as respondents. Data was collected through questionnaires and analyzed using the Structural Equation Modeling–Partial Least Squares (SEM-PLS) method with the help of the SmartPLS 4 application. The results of the study show that talent retention, performance management, and talent development have a positive and significant effect on talent management. Performance management is the most dominant variable influencing talent management. However, talent development is not able to moderate the influence of talent retention and performance management on talent management. The results of this study show that talent development plays a role as an independent variable, not as a moderating variable, in the research model

Introduction

Key elements in talent management that are an important foundation for creating a sustainable human resource management system include talent planning, talent acquisition, talent development, talent retention, performance management, succession management (succession management) and talent culture engagement.(Rahayu 2025) Human resources are one of the supporting factors as well as the determining factor for the success of a company. (Hernawaty, 2016) Leadership that supports an open, supportive and inspiring leadership style has a direct impact on talent's desire to survive. Leadership style reflects the way a person influences and directs subordinates to achieve the common common goals of authoritarian, democratic and transformational leadership.(Pratiwi dan Rizky 2024)

Talent Management is carried out in order to optimize the management of Human Resources (HR). Based on the Implementation Regulations of PT. PLN (PERSERO) Number: 0050.E/DIR/2023 concerning Standard Procedures for Talent and Employee Management System of PT. PLN (PERSERO), with the aim of creating an excellent talent and employee management system in order to create superior, competitive, and highly adaptable talents to transformative changes. Improvements efforts to improve quality, the company makes talent management achievements in the public sector which must be implemented strategically and holistically.

Employee development Continuous training and coaching is essential to ensure their adaptation to changing needs and expectations of society. According to Ferine K.,F (2022) that company culture was found to have a good impact on employee work discipline. In contrast to the impact of organizational culture on performance, this variable has a small but beneficial impact on work discipline. But it has not been associated with talent management, therefore researchers want to conduct research on talent management based on several factors that affect others.

Based on the above background, the purpose of the research is to test and analyze the influence of talent retention, performance management and talent development on performance management. As well as testing and analyzing talent retention and performance management on performance management moderated by talent development. The problem-solving plan is the identification and formulation of the problem, the determination of research variables, data collection and the stages of analysis using Smart PLS 4 to be able to determine the hypothesis results.

Problem Identification

The identification of problems in this study is as follows:

1. The implementation of talent management has not been fully integrated with the organization's strategy, so the potential of superior employees has not been utilized to the fullest to support the achievement of organizational performance.

2. The level of talent retention is a challenge where there are still limited career development opportunities and a lack of retention programs specifically aimed at key talent.
3. Performance management has not fully integrated talent management.
4. Talent development programs are not even and structured, have not been implemented consistently and have not been fully adjusted to the needs of superior talents.

Formulation of the problem

The formulation of the problem in this study is as follows:

1. Does Talent Retention have a positive and significant influence on Talent Management at UPT PLN Padangsidempuan ?
2. Does Performance Management have a positive and significant influence on Talent Management at UPT PLN Padangsidempuan?
3. Does Talent Development have a positive and significant influence on Talent Management at UPT PLN Padangsidempuan?
4. Does Talent Retention have a positive and significant influence on Talent Management moderated by Talent Development at UPT PLN Padangsidempuan?
5. Does Performance Management have a positive and significant effect on Talent Management moderated by Talent Development at UPT PLN Padangsidempuan?

LITERATURE REVIEW

Talent management is a strategic approach to managing human resources that aims to identify, recruit, develop and retain talented individuals who have high potential to create an organization's competitive advantage.(Rahayu, 2025). Factors that affect talent management according to (Rahayu, 2025) which are an important foundation for creating a strategic and sustainable human resource management system are talent planning, talent acquisition, talent development, talent retention, performance management, succession management, and talent culture involvement commitment). (Rahayu, 2025).

Talent Retention is an organizational strategy effort to retain employees who have high performance, superior competencies and great potential for long-term growth of the organization. The focus of retention is not just to keep employees from leaving, but to create a work environment where talent is valued, connected and growing

The factors that affect talent retention are:

1. Employee well-being is by ensuring that employees have a balance between personal and work lives.
2. Social support is by building strong relationships between employees and

providing adequate social support. In this case, it is necessary to solidarity between the leader and subordinates or fellow personals.

3. Organizational reputation, namely a good organizational reputation can increase talent trust and satisfaction
4. Job market conditions, namely competitive market conditions, can influence talents' decisions to stay in the organization.

The indicators of Talent Retention are as follows: Leadership that supports an open, supportive and inspiring leadership style has a direct impact on talent's desire to survive.

1. Leadership style reflects the way a person influences and directs subordinates to achieve the common common goals of authoritarian, democratic and transformational leadership. (Pratiwi and Rizky 2024)
2. Career development, learning opportunities, promotions, and new challenges will significantly increase retention.
3. Fair and competitive compensation and reward systems are a major factor in retaining talent.
4. A positive organizational culture, a healthy, collaborative work environment and respect for diversity create comfort for talent.
5. Work-life balance, a reasonable workload and attention to mental well-being are also very important.

According to Rahayu, Sri (2025) performance management is a strategic and continuous process that aims to increase organizational effectiveness through systematic improvement of individual and team performance. Performance management has the goal of aligning individuals with the strategic goals of the organization, improving employee productivity and work quality, providing constructive and sustainable feedback, promoting the development of competencies and talent potentials and becoming the basis for human resource decision-making.

The Factors Affecting Performance Management:

1. Learning and development programs.
2. The existence of HR professionals to manage the entire talent lifecycle.
3. A change in the current approach to talent management.
4. Changes in employee interaction procedures.
5. Instilling a mindset about talent management at all levels of managers.
6. Create an Employee Value Proposition (EVP) to attract and retain talent.
7. Continue to recruit great talent.
8. Cultivate great leaders.
9. Differentiating high-performers

The Performance Management indicators are as follows:

1. Performance planning by compiling performance or work targets based on clear and measurable results
2. Monitoring and coaching, continuous monitoring and mentoring to achieve targets and overcome obstacles.
3. Evaluation of assessment performance on the achievement of targets, competencies and performance behavior.
4. Feedback and development provide periodic feedback and establish a talent development plan.
5. Awards and Corrective Action implement incentives or consequences that are fair, transparent, and supportive of growth.

Talent development is a continuous process to grow the potential of human resources so that they can face future challenges and take a greater role in the organization. Given that the future is speculation, some general considerations need to be made regarding planning and talent development in 2045. The factors that affect Talent Development are as follows:

1. Individual Development Plan with a personal development plan that is prepared based on the needs of the organization and individual career aspirations.
2. Learning and Development Programs through training, workshops, certifications and blended learning programs for technical and soft skills development.
3. Coaching and Mentoring by superiors or senior mentors to accelerate leadership growth and personal reflection.
4. Rotation and Job Enlargement is the expansion or change of strategic roles for individuals to learn across functions and increase work flexibility.
5. Talent mobility and stretch assignments, short-term or international project assignments to challenge employees out of their comfort zones.
6. Periodic assessment and feedback competency evaluation, potential tests and performance reviews as the basis for further development.
7. Employee development succession programs replace key positions in a planned manner through a clear career path.

The indicators of Talent Development are as follows:

1. A supportive work environment, collaboration, innovation and growth through a culture that values individual contribution and development.
2. Provide development and training opportunities, coaching and mentoring.
3. Build effective communication between superiors and subordinates to understand the needs and desires of talents.
4. Work flexibility helps talents achieve work-life balance

The conceptual framework explains that Talent Retention and Performance Management play a role as independent variables that affect Talent Management as a dependent variable, with Talent Development as a moderation variable that strengthens or weakens the influence of Talent Retention and Performance Management on Talent Management.

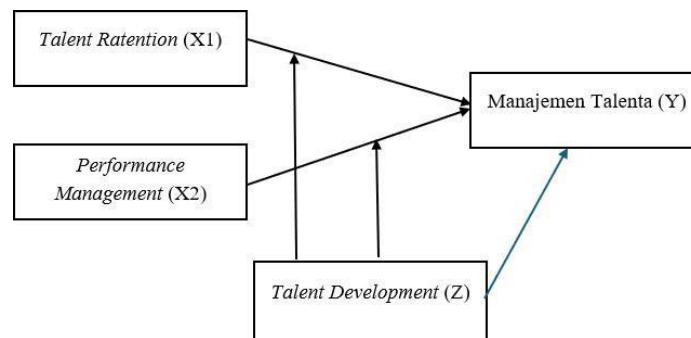


Figure 1. Conceptual Framework Hypothesis

Hypothesis

The hypothesis according to Muin is a temporary answer from the formulation of the problem. Technically, a hypothesis is a statement about the state of the population to be tested or studied. (Fall 2023) This research is based on data taken from research samples. The hypotheses in this study are as follows:

- H1 : Talent Retention has a positive and significant influence on talent management at UPT PLN Padangsidimpuan.
- H2: Performance Management has a positive and significant influence on talent management at UPT PLN Padangsidimpuan.
- H3 : Talent Development has a positive and significant influence on talent management at UPT PLN Padangsidimpuan.
- H4 : Talent Retention has a positive and significant influence on talent management which is moderated by Talent Development at UPT PLN Padangsidimpuan.
- H5 : Performance Management has a positive and significant influence on talent management which is moderated by Talent Development at UPT PLN Padangsidimpuan.

Method

This study uses a type of quantitative research. Quantitative data is a research method based on positivity (concrete data), research data in the form of numbers that will be measured using statistics as a calculation test tool, related to the problem being researched to be concluded. This research was conducted in January 2025 at the location of the UPT PLN Padangsidimpuan. The population in this study is all employees of UPT PLN Padangsidimpuan which totals 102 people. The sample in this study was the entire population, namely 102 people using saturated sampling techniques. The data collection technique used was a questionnaire, the researcher distributed the questionnaire to the respondents who became the sample. Questionnaire is a data collection technique that is

carried out by giving a set of questions or written questions to respondents to be answered.

A variable is an attribute or characteristic or value of an object, person or activity that has a certain variation of activity that is determined by the researcher to be researched and drawn conclusions. The data analysis technique uses SEM-PLS with the help of SmartPLS 4.0 software. The Partial Least Square (PLS) method explains that a variance-based structural equation model is able to describe latent variables (not directly measured or measured using indicators (manifest variable)). PLS is a powerful method of analysis because it does not assume that the data must be measured at a certain scale and that the sample size is small. The purpose of PLS is to help researchers derive latent variable values for prediction purposes.

This model includes testing the reliability of individual items, internal consistency or reliability of construction, and the average variance extracted. These three measures are grouped based on convergent validity, which measures the degree of correlation between a variable and a latent variable. In addition to convergent validity, there is also discriminant validity testing. Measurement modeling is performed to determine the relationship between variables and their indicators. This individual item reliability test describes the correlation between each measurement item (metric) and its structure in standard loading factor values. If the ideal load factor value is greater than 0.5, this indicator is valid as an indicator that can measure the structure. Furthermore, internal consistency measurements were performed, evaluated with composite reliability with a minimum value of 0.7. The validity of the convergence was then measured by testing the Average Variance Extracted (AVE) value. This value describes the number of variances or variations of the manifest variable that can be accommodated by the latent variable. An ideal AVE value of 0.5 means a good convergent validity value. The discriminant validity was evaluated by cross-loading, then comparing the AVE value with the squared correlation value between variables. Crossloading measure is comparing a variable's correlation with other block variables, which indicates that the variable predicts its block size better than other blocks. Another measure of discriminant validity is that the square of AVE must be greater than the correlation between other variables, or the value of AVE must be greater than the square of the correlation between variables.

The researcher conducts structural model measurements to determine the relationships between the hypothesized structures. This model involves several steps in evaluation. The first step is to examine the significance of the relationships between variables. This can be seen from the path coefficient, which describes the strength. relationships between variables. A path coefficient (β) with a threshold value greater than 0.2 indicates that the path has an effect in the model.

The second step is to test the value of the T-test using the bootstrapping method using a two- tail test with a significance level of 5% to test the research hypothesis. If the T-test value is greater than α , the developed research hypothesis is accepted. The third step is to evaluate the R² value (determinant coefficient). This value explains the

variance of each target variable with a standard size of about 0.75 declared strong, about 0.5 moderate, and less than 0.25 indicating a low level of variance.

Results and Discussion

Convergent validity is part of the validity test in a measurement model, which is used to assess the extent to which the indicators used to measure constructions are indeed highly correlated with each other, by showing that convergent validity indicates whether the indicators really represent the constructs they are intended to measure.

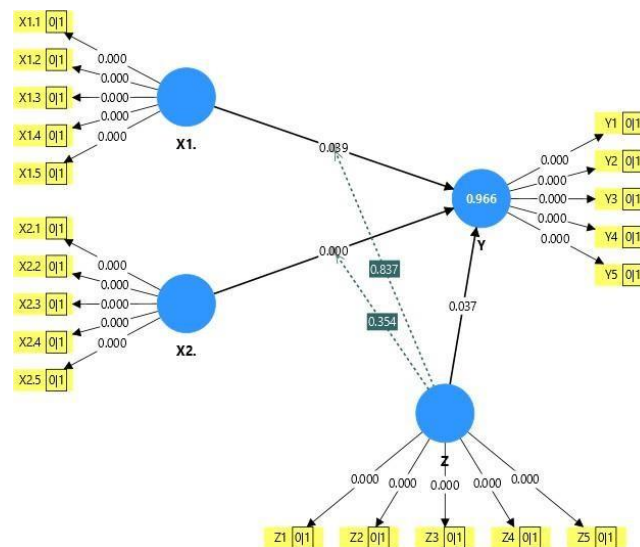


Figure 1. Smart PLS Research Model

a. Outer Model

An outer model is a measurement model that shows how observed indicators reflect or form latent variables in a study. External model evaluation aims to ensure that the research instrument is valid and reliable before testing the relationship between variables (inner model). The following are the results of the analysis on the outer model:

1. Outer Loadings

Measuring the strength of the relationship between the indicator and the construct with the result of the analysis criterion ≥ 0.70 . Here are the results of the outer loadings below:

Table 1. Outer Loadings

	X1.	X2.	Y	Z	Z x X1.	Z x X2.
X1.1	0.701					
X1.2	0.798					
X1.3	0.768					
X1.4	0.871					
X1.5	0.814					
X2.1		0.738				
X2.2		0.841				
X2.3		0.905				
X2.4		0.905				
X2.5		0.874				
Y1			0.755			
Y2			0.888			
Y3			0.898			
Y4			0.920			
Y5			0.887			
Z1				0.696		
Z2				0.797		
Z3				0.879		
Z4				0.842		
Z5				0.838		
Z x X1.					1.000	
Z x X2.						1.000

Based on the results of the outer loadings test, it can be found that almost all indicators in each research variable have an outer loadings value of ≥ 0.70 , so it is declared valid in measuring the construct. However, there is one indicator that has an outer loadings value of 0.696, which is slightly below the ideal limit of 0.70.

However, the indicator is still acceptable and maintained in this study model because the outer loading value is close to 0.70 and is still above the minimum acceptable limit (≥ 0.50). In addition, the indicator is conceptually still relevant and able to represent the measured construct. Therefore, an indicator with an outer loading value of 0.696 is still used in the next analysis.

2. Discriminant Validity

Discriminant validity is a test to ensure that each indicator (question item) actually measures its own construct and does not measure other constructs. In the cross loading method, discriminant validity is seen by comparing the loading value of an indicator in its own construct with the loading value of another construct. The following are the results of the discriminatory validity below:

	X1.	X2.	Y	Z	Z x X1.	Z x X2.
X1.1	0.701	0.680	0.663	0.659	0.667	0.651
X1.2	0.798	0.780	0.788	0.769	0.772	0.751
X1.3	0.768	0.741	0.718	0.723	0.732	0.724
X1.4	0.871	0.865	0.871	0.848	0.847	0.835
X1.5	0.814	0.793	0.781	0.788	0.803	0.794
X2.1	0.726	0.738	0.712	0.719	0.708	0.715
X2.2	0.819	0.841	0.838	0.831	0.812	0.818
X2.3	0.875	0.905	0.880	0.884	0.869	0.880
X2.4	0.889	0.905	0.900	0.879	0.877	0.880
X2.5	0.857	0.874	0.850	0.862	0.846	0.851
Y1	0.742	0.745	0.755	0.726	0.712	0.710
Y2	0.862	0.871	0.888	0.864	0.851	0.848
Y3	0.863	0.883	0.898	0.872	0.843	0.848
Y4	0.899	0.904	0.920	0.890	0.890	0.887
Y5	0.845	0.862	0.887	0.848	0.825	0.831
Z1	0.694	0.699	0.673	0.696	0.679	0.678
Z2	0.725	0.742	0.751	0.797	0.752	0.757
Z3	0.846	0.868	0.854	0.879	0.854	0.857
Z4	0.820	0.838	0.835	0.842	0.829	0.835
Z5	0.803	0.822	0.799	0.838	0.802	0.808
Z x X1.	0.968	0.965	0.948	0.967	1.000	0.990
Z x X2.	0.951	0.972	0.949	0.972	0.990	1.000

Based on the results of the discriminant validity test, it can be seen that each indicator has a higher correlation value to its respective constructs compared to other constructs. Although there is one question instrument that has a value of 0.696, the value is still below the set maximum limit (< 0.90), so it can be concluded that the validity of the discriminator has been met and there are no construct problems in the research model.

3. Composite Reliability

Composite Reliability (CR) is a measure of the internal consistency of a construction in a measurement model. CR is used to assess the extent to which indicators that make up a construction consistently measure that construction.

Table 3. Construct Reliability and Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
X1.	0.850	0.859	0.893	0.628
X2.	0.906	0.913	0.931	0.731
Y	0.919	0.924	0.940	0.759
Z	0.870	0.877	0.906	0.661

Based on the results of construct reliability and validity testing, it can be found that all constructs in this study have a Composite Reliability value and Cronbach's Alpha above 0.85, so it can be concluded that each variable has a very good and consistent level of reliability in measuring the construct being studied.

In addition, the results of the Average Variance Extracted (AVE) test showed that all variables had an AVE value above the minimum limit of 0.50. The Talent Retention (X1) variable has an AVE value of 0.628, Performance Management (X2) of 0.732, Talent Management (Y) of 0.759, and Talent Development (Z) of 0.661.

The AVE value shows that each construct is able to explain more than 50% of the variance of its constituent indicators, so that the validity of the convergence has been met. Thus, it can be concluded that all constructs in this research model are reliable and valid, and are suitable for use for the next stage of analysis.

B. Inner Model

Inner model or structural model is a model that describes the causal relationship between latent constructs based on the conceptual framework of research. The internal evaluation of the model aims to determine the direction, strength, and significance of the influence between variables that have been formulated in the research hypothesis. The following are the results of the analysis on the inner model:

1. R-Square (R²)

Indicates how much the independent variable explains the dependent variable. The following are the results of the R² analysis in the model analysis using Smart PLS:

Table 4. R-Square (R²) Results

	R-square	R-square adjusted
Y	0.966	0.965

The results of the R-square (R²) test showed that the R² value for the dependent variable of Talent Management (Y) was 0.966. This value shows that 96.6% of the variation in Talent Management can be explained by independent variables in the research model, namely Talent Retention, Performance Management, Talent Development, and the interaction (moderation) of Talent Development with the two independent variables. Meanwhile, the remaining 3.4% is explained by other variables outside of this research model. The R² value of 0.966 is included in the very strong category, which shows that the research model has a very high elucidation of the Talent Management variable.

2. Hypothesis testing

Hypothesis testing in this study was carried out using the bootstrapping method on the SmartPLS 4 application to determine the direct influence and moderation between the research variables. Hypothesis testing is based on the t-statistical and p-value values of each relationship path in the structural model (inner model). Based on the results of the test using SmartPLS 4, the following results were obtained:

Table 5. Hypothesis Results

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Results
X1. -> Y	0.203	0.205	0.099	2.061	0.039	Accepted
X2. -> Y	0.744	0.748	0.161	4.612	0.000	Accepted
Z -> Y	0.188	0.187	0.090	2.091	0.037	Accepted
Z x X1. -> Y	0.025	0.022	0.121	0.205	0.837	Rejected
Z x X2. -> Y	-0.150	-0.151	0.162	0.927	0.354	Rejected

1) The test results showed that talent retention (X1) had a significant effect on talent management (Y). This is evidenced by a t-statistical value of 2.061 (> 1.96) and a p-value of 0.039 (< 0.05) with a path coefficient of 0.203. The positive coefficient value shows that the better the implementation of talent retention (X1), the more talent management (Y) at UPT PLN Padangsidimpuan will increase. Thus, the first hypothesis is accepted

2) The test results showed that performance management (X2) had a positive and significant influence on talent management (Y). This is shown by a t-statistical value of 4.612 and a p-value of 0.000, with a path coefficient of 0.744. These results show that performance management (X2) is the most dominant variable in influencing talent management (Y). Therefore, the second hypothesis is accepted

3) The test results showed that talent development (Z) had a significant effect on talent management (Y). This is evidenced by a t-statistical value of 2.091 (> 1.96) and a p-value of 0.037 (< 0.05), as well as a path coefficient of 0.188. This means that increasing talent development will contribute positively to talent management. the third hypothesis is accepted

4) The results of the moderation effect test showed that the interaction between talent retention (X1) and talent development (Z) did not have a significant effect on talent management. (Y) This is indicated by a t-statistical value of 0.205 (< 1.96) and a p-value of 0.837 (> 0.05) with a path coefficient of 0.025. Thus, talent development is not able to moderate the influence of talent retention (X1) on talent management (Y), so the fourth hypothesis is rejected.

5) The results of the moderation test showed that the interaction between performance management (X2) and talent development (Z) had no significant effect on talent management (Y). This is evidenced by a t-statistical value of 0.927 (< 1.96) and a p-value of 0.354 (> 0.05), as well as a path coefficient of -0.150 . The value of the negative coefficient indicates the opposite direction of the relationship, but it is not significant. Therefore, the fifth hypothesis is rejected.

Conclusion

Based on the results of data analysis and hypothesis testing regarding the Influence of Talent Retention and Performance Management on Talent Management with Talent Development as a Moderating Variable in UPT PLN Padangsidempuan Employees, the following conclusions can be drawn:

1. Talent retention has a positive and significant effect on talent management in UPT PLN Padangsidempuan employees. This shows that organizational efforts to retain talented employees, such as rewards, career opportunities, and job comfort, can improve the effectiveness of talent management.
2. Performance management has a positive and significant effect on talent management in UPT PLN Padangsidempuan employees. This variable is the most dominant factor in influencing talent management, indicating that a clear, measurable, and sustainable performance management system plays a major role in organizational talent management.
3. Talent development has a positive and significant effect on talent management in UPT PLN Padangsidempuan employees. This shows that talent development programs, such as training, coaching, and competency development, directly support improving the quality of talent management.
4. Talent development is not able to moderate the influence of talent retention on talent management. This means that although talent development has a direct effect on talent management, its existence does not strengthen or weaken the relationship between talent retention and talent management.
5. Talent development is not able to moderate the influence of performance management on talent management. This shows that the relationship between performance management and talent management is not affected by the level of talent development carried out by the organization.
6. Overall, the results of the study show that talent retention, performance management, and talent development play as independent variables that directly affect talent management, but talent development does not function as a moderating variable in this research model.

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