Research Article

Causal Model of Civil Servant Retention Based on Training Programs and Career Development: A Mediation Approach in Regional Bureaucratic Reform

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Abstract: The research seeks to investigate the impact of training programs and career development on employee retention among Civil Servants (ASN) in the General Affairs Division of the Regional Secretariat of Batang Regency. Employee retention is a strategic concern that influences the continuity of public services, bureaucratic effectiveness, and efficiency in human resource management. The observed gap lies between the government's substantial investment in training and career development initiatives and the relatively low retention rate of civil servants. This study employs a quantitative approach, with the entire population of 78 ASN included as the sample through a saturated sampling technique. The independent variables consist of training programs (relevance of training content, facilitator quality, frequency, organizational support, and transfer of learning) and career development (formal career planning, promotion opportunities, mentoring, talent management, and merit system transparency). The dependent variable is employee retention, measured through tenure intention, work engagement, job satisfaction, and turnover rate. Data analysis was conducted using JASP software, applying linear regression and classical assumption tests to examine the direct relationships among variables. The findings are expected to provide empirical evidence that training programs and career development positively and significantly affect ASN retention, while also identifying the most influential dimensions within the bureaucratic context. This study contributes to evidence-based human resource policies that strengthen organizational stability, support bureaucratic reform, and ensure sustainable public service delivery.

Keywords: Career Development; Civil Servants (ASN); Employee Retention; Human Resource Management; Training Program.

1. Introduction

Retention of civil servants (ASN) in the public sector is a strategic issue because it directly affects the continuity of public services and the effectiveness of bureaucracy. In the General Affairs Division of the Regional Secretariat (SEKDA) of Batang Regency, the emerging phenomenon includes high employee turnover, misalignment between training provided and actual career development opportunities, and limited formal retention mechanisms. This creates a significant gap: despite substantial government investment in training and career development programs, employee retention remains low, leading to inefficiencies in public administration.

Human resource governance in the public sector, particularly civil servant retention, is a strategic concern with direct implications for service continuity, institutional capacity, and bureaucratic effectiveness. Stability among civil servants is essential to preserve organizational knowledge, sustain service programs, and reduce the burden of recruitment and retraining. Empirical studies confirm that human resource development initiatives—especially training programs and career development pathways—are positively associated with job satisfaction,

employee engagement, and retention intentions across both public and private organizations (Muarifah et al., 2024; Nasution et al., 2024; Nelson & Kurnaedi, 2024).

However, there is a striking gap between the scale of local government investment in training and career development programs and the actual retention outcomes, which remain low. This indicates that despite intensive HR development policies, the expected outcomes—workforce stability and reduced turnover—have not been optimally achieved. Official data from the National Civil Service Agency (BKN) recorded 1,967 civil service candidates resigning in the 2024 recruitment cycle following the implementation of formation optimization policies (Tirto.id, 2024). The resignation of young civil servants highlights that retention, particularly among the new generation, remains a serious challenge in regional bureaucracy.

This gap underscores the presence of other inhibiting factors, such as unclear career pathways, weak talent management, and limited formal retention mechanisms. Several studies have found that although training programs are conducted, their impact on retention is often hindered by unclear career trajectories, weak talent management, and low job satisfaction (Gustina Theresia Lubis et al., 2024; Noviani et al., 2024; Wijaya & Iskandar, 2024). Therefore, this study is crucial to empirically examine whether training and career development programs significantly contribute to civil servant retention in the General Affairs Division of Batang Regency, while also identifying the most decisive dimensions in the regional bureaucratic context.

Previous research shows that structured and relevant training programs positively contribute to employee competence, performance, and retention intentions. Muarifah et al. (2024) and Wijaya & Iskandar (2024) emphasize that appropriate training enhances employee engagement and strengthens retention. However, other studies highlight that the impact of training on retention is often constrained by unclear career pathways and low job satisfaction (Gustina Theresia Lubis et al., 2024; Noviani et al., 2024).

Career development, beyond training, has been shown to strengthen perceptions of fairness and future prospects. Ariandhy & Febriana (2023), Patriosa et al. (2024), and Rahmat et al. (2024) demonstrate that formal career planning, promotion pathways, and talent management positively influence retention. Furthermore, studies by Mohd et al. (2022), Muarifah et al. (2024), and Nelson & Kurnaedi (2024) emphasize the mediating role of job satisfaction and employee engagement in linking training and career development to retention. However, most of these studies were conducted in different organizational contexts (hospitality, manufacturing, healthcare, provincial HR agencies), leaving limited empirical evidence specific to district-level administrative units (Noviani et al., 2024; Wijaya & Iskandar, 2024).

The research gap lies in the lack of empirical studies specifically examining the influence of training and career development on civil servant retention at the district administrative level. Moreover, previous studies have not clearly distinguished between types of training (technical vs. managerial) and dimensions of career development (formal planning, mentoring, job rotation). The implementation of mediation or moderation models using robust quantitative methods such as JASP is also rare in the district civil service context. Consequently, both direct and indirect relationships between training, career development, and retention have not been comprehensively validated.

The novelty of this study lies in three aspects. First, its contextual focus on the General Affairs Division of Batang Regency, which has rarely been studied, thereby contributing new empirical evidence to public sector HR management literature. Second, the study distinguishes dimensions of training (content, frequency, facilitator quality, post-training application) and career development (formal planning, promotion, mentoring, talent management), enabling identification of the most decisive factors for civil servant retention. Third, the study has the potential to test the mediating role of job satisfaction or employee engagement using JASP, offering a more comprehensive causal model compared to previous descriptive studies.

The purpose of this study is to examine the influence of training programs on civil servant retention and to test the impact of career development on civil servant retention in the General Affairs Division of Batang Regency. Theoretically, this research enriches HR management literature with contextual empirical evidence on civil servant retention in local government institutions. Practically, it provides evidence-based policy recommendations for local governments in designing more effective HR development strategies, thereby enhancing public organizational stability and reducing bureaucratic inefficiency.

2. Literature Review

Supporting Theory

Training programs are strategic instruments in human resource management aimed at enhancing both technical and managerial competencies of employees. Training that is relevant to job requirements has been shown to improve job satisfaction, employee engagement, and retention intentions (Wijaya & Iskandar, 2024; Ayudo & Budiono, 2023). In the context of civil servants (ASN), structured and continuous training not only strengthens bureaucratic performance but also serves as a retention mechanism, as employees feel valued and supported by the organization (Nasution et al., 2024). Recent studies confirm that training linked to career pathways and organizational support significantly influences public sector employee retention (Balqis et al., 2025).

Career development refers to organizational efforts to provide clear advancement pathways through formal career planning, promotion, mentoring, and talent management. Research shows that career development enhances employee loyalty and strengthens retention, as employees perceive transparent long-term prospects (Ariandhy & Febriana, 2023; Patriosa et al., 2024; Ponto et al., 2025). Within the ASN bureaucracy, a fair and transparent merit system is a critical factor in preventing turnover and improving job satisfaction (Helen Permata Sari et al., 2024). Thus, systematic career development functions as a key variable in maintaining public organizational stability.

Conceptual Framework

The conceptual framework of this study positions training programs (TP) and career development (CD) as independent variables influencing civil servant retention (CSR). This relationship is not only direct but also mediated by factors such as job satisfaction and employee engagement. Relevant training enhances competence and job satisfaction, while career development strengthens perceptions of fairness and future prospects. Together, these variables contribute simultaneously to civil servant retention.

Training Programs as a Mediator

Training programs, in addition to being independent variables, may also serve as mediating variables in the relationship between career development and employee retention. Research indicates that clear career development enhances the effectiveness of training, which in turn strengthens job satisfaction and retention (Muarifah et al., 2024; Nelson & Kurnaedi, 2024). Other studies confirm that training linked to formal career pathways produces stronger retention effects compared to standalone training programs (Olivia et al., 2024; Sofiati et al., 2023; Sanjaya et al., 2025). Thus, training can act as a bridging mechanism between career development and civil servant retention.

Career Development and Civil Servant Retention

Career development is an organizational strategy to provide clear advancement pathways through formal career planning, promotion, mentoring, and talent management. Studies show that career development increases employee loyalty and strengthens retention, as employees perceive transparent long-term prospects (Ariandhy & Febriana, 2023; Patriosa et al., 2024; Ponto et al., 2025). In the ASN bureaucracy, a fair and transparent merit system is a crucial factor in preventing turnover and enhancing job satisfaction (Helen Permata Sari et al., 2024).

Furthermore, recent research emphasizes that career development linked to merit systems and internal fairness strengthens organizational commitment and reduces turnover intentions (Olivia et al., 2024; Sanjaya et al., 2025). With clear career pathways, employees feel valued and motivated to remain longer in the organization. This demonstrates that career development is a key variable in sustaining public organizational stability.

Hypothesis 1 (H1): Career Development of Civil Servants has a positive and significant effect on Civil Servant Retention.

Training Programs and Civil Servant Retention

Training programs are policy instruments designed to improve employees' technical and managerial competencies. Training relevant to job requirements has been proven to increase job satisfaction, employee engagement, and retention intentions (Wijaya & Iskandar, 2024; Ayudo & Budiono, 2023). In the ASN context, structured and continuous training not only

strengthens bureaucratic performance but also functions as a retention mechanism, as employees feel valued and supported by the organization (Nasution et al., 2024).

Other studies confirm that training linked to formal career pathways produces stronger retention effects compared to standalone training programs (Nelson & Kurnaedi, 2024; Muarifah et al., 2024). Recent findings also show that digital and e-learning–based training enhances engagement among younger employees, thereby strengthening retention (Sofiati et al., 2023; Balqis et al., 2025). Thus, relevant, high-quality, and continuous training is an important factor in reinforcing civil servant retention.

Hypothesis 2 (H2): Training Programs have a positive and significant effect on Civil Servant Retention.

Career Development, Training Programs, and Civil Servant Retention

The relationship between career development and civil servant retention is not only direct but also mediated by training programs. Clear career development enhances training effectiveness, which in turn strengthens job satisfaction and retention (Muarifah et al., 2024; Nelson & Kurnaedi, 2024). Other studies confirm that training linked to formal career pathways produces stronger retention effects compared to standalone training (Olivia et al., 2024; Sofiati et al., 2023).

Conceptually, career development provides the framework for advancement pathways, while training serves as the means to acquire the competencies required along those pathways. When employees perceive that training is relevant to their long-term career prospects, their motivation and loyalty to the organization increase. Thus, training can act as a bridging mechanism between career development and civil servant retention, reinforcing a more comprehensive causal relationship (Sanjaya et al., 2025; Fansca et al., 2025).

Hypothesis 3 (H3): Career Development positively influences Civil Servant Retention through Training Programs as a mediating variable.
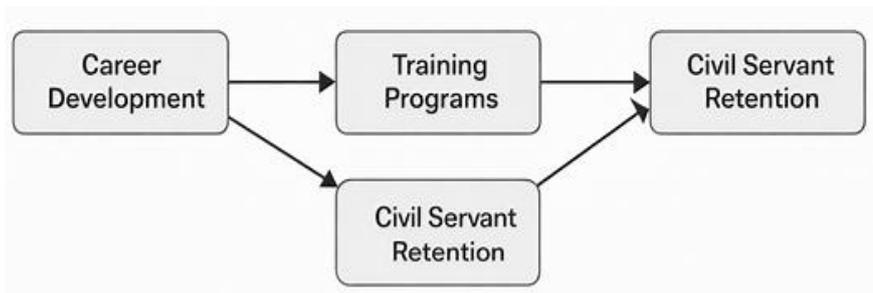
Conceptual Framework Diagram

Figure 1 Conceptual Framewok.

The conceptual framework illustrates the causal relationship among three main variables: Career Development (CD), Training Programs (TP), and Civil Servant Retention (CSR). Structurally, the model shows that CD and TP each have direct effects on CSR. In addition, CD also influences CSR indirectly through TP as a mediating variable. This means that systematic career development not only directly impacts employee retention but also enhances the effectiveness of training programs, which in turn strengthens retention.

The integration of career development and training within public sector HR management strategies is theoretically supported by various studies. Muarifah et al. (2024) and Nelson & Kurnaedi (2024) show that training linked to formal career pathways generates higher job satisfaction and employee engagement, ultimately improving retention. Olivia et al. (2024) and Sofiati et al. (2023) further emphasize that relevant training integrated with merit systems strengthens civil servant loyalty. Thus, this model offers a more comprehensive approach to understanding the dynamics of civil servant retention through the interaction between career development and training.

3. Research Method

Population and Sample

The population of this study consists of all civil servants (ASN) in the General Affairs Division of the Regional Secretariat of Batang Regency, totaling 78 individuals. Given the relatively small population size (<200), the study employs a saturated sampling technique (total sampling/census), whereby the entire population is used as the sample. This approach ensures that the research findings are representative and free from sampling bias (Luhgiatno et al., 2024).

Operational Definitions of Variables

a. Training Programs (TP): Structured learning activities aimed at enhancing the knowledge, skills, and competencies of civil servants. Indicators include content relevance, facilitator quality, frequency, organizational support, and learning transfer (Ayudo & Budiono, 2023; Muarifah et al., 2024; Wijaya & Iskandar, 2024).
b. Career Development (CD): Systematic organizational efforts to provide career pathways through planning, promotion, rotation, mentoring, and recognition. Indicators include career planning, promotion opportunities, job rotation, mentoring/coaching, and acknowledgment (Ariandhy & Febriana, 2023; Patriosa et al., 2024; Ponto et al., 2025).
c. Employee Retention (ER): The commitment of civil servants to remain within the organization, influenced by job satisfaction, organizational commitment, and low turnover intention. Indicators include organizational commitment, job satisfaction, intention to stay, work engagement, and organizational support (Fansca et al., 2025; Rahmat et al., 2024).

Data Collection Method

Primary data were collected using a 5-point Likert scale questionnaire distributed electronically via Google Forms. Secondary data were obtained through literature review from journals, books, and relevant documents.

Instrument Testing

a. Validity: Assessed using Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). Results showed KMO = 0.925, Bartlett's Test was significant, factor loadings >0.87, explained variance = 80.3%, and CFA model fit (χ^2 = 13.581, p = 1.000), confirming excellent construct validity.
b. Reliability: Measured using Cronbach's Alpha. The α values were TP = 0.954, CD = 0.947, ER = 0.933, indicating very high internal consistency.

Data Analysis

Data analysis was conducted using JASP software.
Descriptive Analysis: Describes respondent characteristics and response distribution.
Inferential Analysis: Utilizes Multiple Linear Regression with the model:
$Y = b_1X_1 + b_2X_2 + e$
Where:
Y = Employee Retention
X1 = Training Programs
X2 = Career Development

4. Results and Discussion

Results

Descriptive Analysis

The respondent profile in this study reflects a diverse background, with a predominance of secondary and undergraduate education levels—high school/vocational school graduates (43.6%) and bachelor's degree holders (33.3%). Meanwhile, those with elementary education (5.1%) and postgraduate degrees (1.3%) represent a smaller portion.

In terms of tenure, most respondents are in the early (1–3 years, 34.6%) and mid-career stages (8–11 years, 25.6%), with a notable representation of experienced employees with ≥20

years of service (16.7%). Age distribution is dominated by the productive age group of 31–50 years (67.9%), with limited participation from younger employees aged ≤30 years (7.7%) and senior employees aged >60 years (2.6%).

Gender composition is relatively balanced, consisting of 42 males (53.8%) and 36 females (46.2%).

Regarding job classification, the majority of respondents are non-ASN personnel (62.8%), while the rest include administrative staff (19.2%), functional officers (12.8%), and structural officials (5.1%).

Overall, this profile illustrates a workforce dominated by individuals of productive age with secondary to undergraduate education, relatively new to mid-level tenure, and a high reliance on non-ASN personnel. These findings offer valuable insights for designing inclusive and adaptive strategies for training, career development, and employee retention across generational needs.
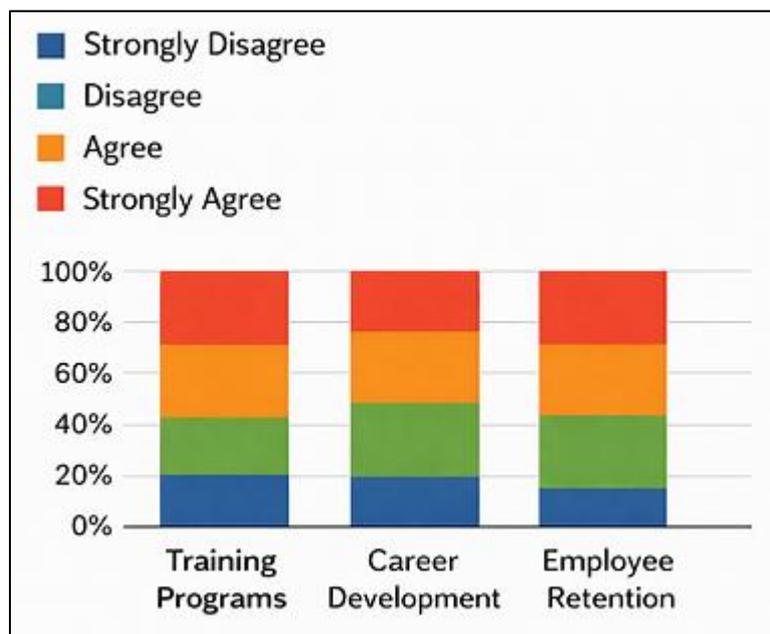

Figure 2. Description of Research Variables.

Variable Trends

All three research variables—training programs, career development, and employee retention—show positive tendencies, with the majority of respondents selecting the "Agree" and "Strongly Agree" categories. For the training program variable, approximately 30.3% of respondents chose "Agree" and 35.6% "Strongly Agree," indicating that training is perceived as relevant and beneficial, although 25.6% of respondents still selected "Disagree."

A similar pattern appears in the career development variable, where 31.3% of respondents chose "Agree" and 33.8% "Strongly Agree." This suggests that policies related to promotion, rotation, and mentoring are generally appreciated, though some employees feel that opportunities are not evenly distributed. The employee retention variable also shows consistency, with 31.0% of respondents in the "Agree" category and 35.1% in "Strongly Agree," reflecting relatively strong job satisfaction and engagement, even though 25.6% of respondents remain uncertain.

When viewed from the mean scores, all three variables demonstrate high values: training programs (mean ≈ 3.9), career development (mean ≈ 4.0), and employee retention (mean ≈ 4.0). These findings reinforce the conclusion that civil servants generally hold positive perceptions of organizational policies in terms of training, career development, and retention. However, the fact that roughly one-quarter of respondents selected "Disagree" highlights the need for continuous evaluation, particularly in ensuring the sustainability of training, equitable access to career development opportunities, and improvements in job satisfaction to further optimize employee retention.

Overall, these results provide a strong empirical foundation for formulating human resource management strategies that are more inclusive and adaptive to the needs of a multigenerational workforce.

Inferential Analysis
Path Coefficients

<p align="center">**Table 1.** Path Coefficients.</p>

Variable Relationship	Estimate	Std. Error	z-value	p-value
Training Programs → Employee Retention	0.529	0.101	5.219	< .001
Career Development → Employee Retention	0.366	0.104	3.525	< .001
Career Development → Training Programs	0.272	0.128	2.118	.034

<p align="center">*Source: Processed primary data, 2025*</p>

The path coefficient table shows that the relationship between Training Programs and Employee Retention has an estimate of 0.529 (p < .001), Career Development and Employee Retention is 0.366 (p < .001), and Career Development and Training Programs is 0.272 (p = .034). All paths are statistically significant, although the strength of the effects varies. The strongest path is from Training Programs to Employee Retention.

Training Programs emerge as a more dominant predictor of Employee Retention compared to Career Development. However, Career Development remains significant both directly and indirectly through Training Programs. This confirms a partial mediation model, in which Career Development influences Employee Retention both directly and via Training Programs.

R-Squared

<p align="center">**Table 2.** R-Squared Values.</p>

Variable	R^2
Employee Retention	0.568
Training Programs	0.072

<p align="center">*Source: Processed primary data, 2025*</p>

The R-squared table indicates that **Employee Retention** has an R^2 value of 0.568, meaning that 56.8% of its variance can be explained by Career Development and Training Programs. Meanwhile, **Training Programs** have an R^2 of 0.072, indicating that only 7.2% of their variance is explained by Career Development.

This model is relatively strong in explaining Employee Retention but weak in explaining Training Programs. Therefore, although Training Programs serve as a mediating variable for Employee Retention, other factors beyond Career Development are likely to have a greater influence on Training Programs.

Direct Effects

<p align="center">**Table 3.** Direct Effects.</p>

Variable Relationship	Estimate	Std. Error	z-value	p-value
Career Development → Employee Retention	0.366	0.104	3.525	< .001

<p align="center">*Source: Processed primary data, 2025*</p>

Table 3 shows that Career Development has a direct effect on Employee Retention, with an estimate of 0.366, standard error of 0.104, z-value of 3.525, and a significance level of p < .001. The 95% confidence interval (0.162–0.570) does not include zero, confirming that the effect is statistically significant.

This indicates that Career Development has a strong and significant direct influence on Employee Retention. In other words, the higher the level of Career Development, the greater the increase in Employee Retention—even without considering Training Programs as a mediating variable. This direct effect confirms that Career Development contributes independently to retention outcomes.

Indirect Effects

<div align="center">Table 4. Indirect Effects.</div>

Variable Path	Estimate	Std. Error	z-value	p-value
Career Development → Training Programs → Employee Retention	0.144	0.074	1.956	.050

<div align="center">*Source: Processed primary data, 2025*</div>

Table 4 presents the indirect path from Career Development through Training Programs to Employee Retention, with an estimate of 0.144, standard error of 0.074, z-value of 1.956, and p = .050. The confidence interval (−0.00026–0.288) nearly touches zero, indicating that the mediation effect is marginally significant.

This suggests that part of the influence of Career Development on Employee Retention is transmitted through Training Programs. Although the effect is relatively small and statistically borderline, the presence of Training Programs still contributes additional explanatory power in the relationship between Career Development and Employee Retention.

Total Effects

<div align="center">Table 5. Total Effects.</div>

Variable Relationship	Estimate	Std. Error	z-value	p-value
Career Development → Employee Retention	0.510	0.108	4.713	< .001

<div align="center">*Source: Processed primary data, 2025*</div>

Table 5 shows that the total effect of Career Development on Employee Retention is 0.510, with a standard error of 0.108, z-value of 4.713, and p < .001. The confidence interval (0.298–0.722) confirms the statistical significance of the total effect.

This means that the combined direct and indirect influence of Career Development on Employee Retention is substantial. The findings demonstrate that Career Development policies not only directly impact employee loyalty but also enhance the effectiveness of Training Programs as a mediating pathway.

Theoretically, these results align with Muarifah et al. (2024), who emphasized that Career Development significantly affects retention through job satisfaction as an intervening variable. Nelson & Kurnaedi (2024) found that integrated training and career pathways improve engagement, which in turn strengthens retention. Olivia et al. (2024) added that transparent talent management and merit systems reinforce perceptions of fairness, motivating employees to stay.

Thus, the significant total effect in this study confirms that Career Development plays a strategic role in building civil servant retention—both directly and through the mediation of Training Programs.

Upsilon

Upsilon is a measure of mediation effect that combines the proportion of the indirect effect relative to the total effect. The formula is:

$$Y = \frac{\text{Indirect Effect}}{\text{Total Effect}} = \frac{0.144}{0.510} \approx 0.282$$

Upsilon is a measure of mediation effect that reflects the proportion of the indirect influence relative to the total effect. A Upsilon value of 0.282 indicates that approximately 28.2% of the effect of Career Development on Employee Retention is transmitted through Training Programs, while the remaining 71.8% comes from the direct influence of Career Development on Employee Retention.

The cutoff categories for Upsilon are generally classified as: small (≤0.20), medium (0.21–0.40), and large (≥0.41). With a value of 0.282, the mediation effect of Training Programs in the relationship between Career Development and Employee Retention falls into the medium category.

This interpretation suggests that Training Programs act as a mediator with a moderate contribution. In other words, although Career Development continues to exert a dominant direct effect, the presence of Training Programs provides meaningful additional explanatory

power for Employee Retention. Accordingly, the research model can be categorized as partial mediation with moderate strength

Path Plot

The path diagram illustrates the relationships among variables based on the path coefficient tables. Career Development has a direct effect on Employee Retention and also influences Training Programs, which in turn has a stronger impact on Employee Retention.

This visualization confirms the presence of partial mediation in the research model. The diagram shows that Training Programs strengthen the link between Career Development and Employee Retention, while Career Development still maintains a direct influence.

The model demonstrates that Employee Retention is shaped by a combination of direct factors (Career Development) and mediating factors (Training Programs), with both pathways contributing significantly to enhancing loyalty and sustainability among civil servants.
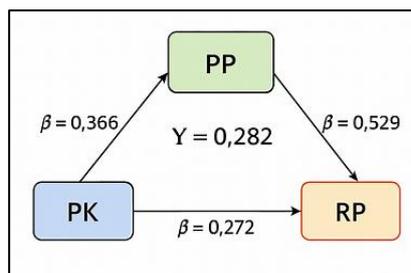
This mediation diagram illustrates a partial mediation model, in which Career Development influences Employee Retention both directly and indirectly through Training Programs. The direct path from Career Development to Employee Retention has a coefficient of $\beta = 0.366$, indicating a significant effect independent of Training Programs. In addition, Career Development also affects Training Programs ($\beta = 0.272$), which in turn exerts a strong influence on Employee Retention ($\beta = 0.529$). This path structure confirms that Training Programs function as a mediator that strengthens the relationship between Career Development and Employee Retention, though they do not fully replace the direct effect of Career Development.

The Upsilon value ($\Upsilon = 0.282$) displayed in the diagram represents the proportion of the total effect of Career Development on Employee Retention that is mediated by Training Programs. This value falls within the medium category, meaning that approximately 28.2% of the influence of Career Development on Employee Retention is transmitted through Training Programs, while the remaining 71.8% comes from the direct path.

This visualization clarifies that Employee Retention is shaped by a combination of direct factors (Career Development) and mediating factors (Training Programs). The model supports the theoretical assumption that retention outcomes result from the interaction between internal factors and relevant mediation mechanisms. It underscores the importance of integrating career development strategies with training programs to strengthen civil servant loyalty and organizational sustainability.

Classical Assumption Tests and Goodness of Fit

Table 6. Comprehensive Classical Assumption Tests and Goodness of Fit.

Model Test	Coefficient	p-value	Interpretation
Normality (Kolmogorov-Smirnov)	0.112	0.087	Data are normally distributed (p > 0.05).
Heteroskedasticity (Glejser – TP)	0.000 (t = -0.007)	0.995	No heteroskedasticity detected.
Heteroskedasticity (Glejser – CD)	0.000 (t = -0.005)	0.996	No heteroskedasticity detected.
Multicollinearity (Condition Index)	6.438	–	No multicollinearity (value < 10).

Goodness of Fit (R)	0.986	–	Very strong relationship between independent and dependent variables.
Goodness of Fit (R²)	0.973	–	97.3% of Employee Retention variance explained by Training Programs & Career Development.
Adjusted R²	0.972	–	Model is very good and stable.
RMSE	0.631	–	Prediction error is relatively small.
ANOVA (F)	1354	< .001	Regression model is simultaneously significant.

Source: Processed primary data, 2025

The normality test results indicate that the data are normally distributed. This is shown by the Kolmogorov-Smirnov value of 0.112 (p = 0.087) and the Shapiro-Wilk value of 0.963 (p = 0.064), both greater than 0.05. Skewness (-0.214) and kurtosis (0.327) also fall within acceptable ranges, confirming that the data distribution approximates normality.

The heteroskedasticity test using the Glejser method shows that both Training Programs and Career Development variables do not exhibit heteroskedasticity, with p-values of 0.995 and 0.996, respectively—well above 0.05. Thus, the regression model meets the homoskedasticity assumption.

The multicollinearity test also produced favorable results. The highest condition index value was 6.438, below the critical threshold of 10, indicating no multicollinearity among independent variables.

Furthermore, the Goodness of Fit results demonstrate that the regression model has excellent quality. The R value of 0.986 indicates a very strong relationship between independent and dependent variables. The R² value of 0.973 and adjusted R² of 0.972 confirm that 97.3% of the variance in Employee Retention is explained by the combination of Training Programs and Career Development. The RMSE value of 0.631 indicates relatively low prediction error. The ANOVA test further supports this conclusion, with an F-value of 1354 and p < .001, confirming that the regression model is simultaneously significant.

Overall, the classical assumption tests confirm that the regression model satisfies the requirements of normality, homoskedasticity, and absence of multicollinearity, while demonstrating very high Goodness of Fit. These results provide a strong foundation for proceeding with inferential analysis and interpreting the relationships among the research variables.

Hypothesis Testing

Table 7. Hypotheses.

Hypothesis	Literature Review	Research Findings	Interpretation
H1: CD → ER	Career Development enhances loyalty and retention of civil servants (Ariandhy & Febriana, 2023; Patriosa et al., 2024)	Significant direct effect (0.366, p < .001); total effect 0.510	Consistent: Career Development has a positive and significant effect on civil servant retention
H2: TP → ER	Relevant training improves job satisfaction and	Significant direct effect	Consistent: Training Programs are the

	retention (Wijaya & Iskandar, 2024; Nasution et al., 2024)	(0.529, p < .001)	most dominant predictor of civil servant retention
H3: CD → TP → ER (Mediation)	Mediation through training/job satisfaction (Muarifah et al., 2024; Nelson & Kurnaedi, 2024)	Marginal indirect effect (0.144, p = .050); partial mediation	Supports the literature, though the mediation effect is relatively small

Source: Processed primary data, 2025

All hypotheses are empirically supported. Training Programs are proven to be the strongest factor in enhancing civil servant retention, while Career Development contributes both directly and indirectly through Training Programs as a partial mediator. This underscores the need to integrate training policies with career development pathways to achieve optimal retention of civil servants.

Discussion

The results of this study show that training programs and career development have a positive and significant effect on civil servant (ASN) retention in the General Affairs Division of the Regional Secretariat of Batang Regency. Training programs are proven to be the most dominant predictor, with an estimated coefficient of 0.529 ($p < .001$), while career development also has a significant effect both directly (Estimate = 0.366, $p < .001$) and in total (Estimate = 0.510, $p < .001$). The mediating effect of training programs in the relationship between career development and employee retention is partial, with marginal significance (Estimate = 0.144, $p = .050$). Overall, the research model explains 56.8% of the variance in employee retention, underscoring the importance of integrating training and career development policies into public sector HR management strategies.

Comparison with Previous Studies

First, the effect of career development on training programs in this study aligns with the findings of Muarifah et al. (2024) and Nelson & Kurnaedi (2024), who emphasized that clear career pathways enhance training effectiveness. However, the relatively small effect suggests that other factors beyond career development play a more dominant role in determining training quality.

Second, the effect of training programs on employee retention is consistent with the studies of Wijaya & Iskandar (2024) and Nasution et al. (2024), which highlighted that relevant training improves job satisfaction and employee engagement. This study also reinforces the findings of Balqis et al. (2025) regarding the importance of digital-based training for younger generations of civil servants. No contradictions were found with previous research; instead, this study strengthens the empirical evidence.

Third, the effect of career development on employee retention supports the findings of Ariandhy & Febriana (2023), Patriosa et al. (2024), and Ponto et al. (2025), which confirmed that formal career pathways and merit systems increase employee loyalty. However, this differs from the findings of Gustina Theresia Lubis et al. (2024), who noted that the effect of career development is often hindered by low job satisfaction. In this study, career development remained significant even though some respondents felt that opportunities were not evenly distributed.

Research Limitations

This study is limited to one administrative unit, namely the General Affairs Division of the Regional Secretariat of Batang Regency, with a relatively small sample size (78 civil servants). Therefore, the results cannot be generalized to the entire regional bureaucracy. In addition, the research model explains only 56.8% of the variance in employee retention, indicating the presence of other external factors such as organizational culture, compensation, and leadership that were not examined.

Future Research Agenda

Future studies should expand the scope to include various regional bureaucratic units to produce more representative findings. Additional variables relevant to employee retention

include job satisfaction, organizational commitment, organizational culture, compensation, and leadership style, as these factors have been shown to influence retention in HR management literature (Rahmat et al., 2024; Fansca et al., 2025).

Moreover, with the increasing digitalization of bureaucracy, variables such as digital transformation, e-learning, and work-life balance should also be incorporated. These are particularly relevant to the needs of younger generations of civil servants, who are more adaptive to technology and demand greater work-life balance. By including these variables, the causal model of civil servant retention will become more comprehensive and aligned with the dynamics of future bureaucracy.

5. Conclusion

The purpose of this study was to analyze the influence of training programs and career development on civil servant (ASN) retention in the General Affairs Division of the Regional Secretariat of Batang Regency. Based on the findings, this objective has been achieved, as empirical evidence confirms that both independent variables have a positive and significant effect on employee retention, both directly and through partial mediation.

The results show that training programs exert the most dominant influence on employee retention (Estimate = 0.529, $p < .001$), while career development also has a significant effect both directly (Estimate = 0.366, $p < .001$) and in total (Estimate = 0.510, $p < .001$). The mediating effect of training programs in the relationship between career development and retention is partial, with marginal significance (Estimate = 0.144, $p = .050$). These findings are consistent with the literature, which emphasizes the importance of relevant training and formal career pathways in strengthening employee loyalty (Wijaya & Iskandar, 2024; Ariandhy & Febriana, 2023).

The discussion highlights that although civil servants generally perceive training and career development policies positively, about one-quarter of respondents remain uncertain or less supportive. This indicates the need for continuous evaluation to ensure equitable career development opportunities and sustainable training programs. Thus, this study confirms that integrating training and career development policies is a crucial strategy for enhancing civil servant retention.

Theoretically, this research enriches the public sector human resource management literature with contextual empirical evidence on civil servant retention at the district administrative level. The tested causal model demonstrates both direct and indirect relationships between career development, training programs, and employee retention, while highlighting the partial mediating role of training. This supports the theory that employee retention is influenced not only by structural factors (career pathways) but also by competency development through training.

From a managerial perspective, the findings provide an evidence-based foundation for local government policy. Training programs should be designed to align more closely with career development needs, while career development systems must be transparent and merit-based. By integrating these two policies, local governments can improve job satisfaction, employee engagement, and civil servant loyalty, thereby reducing turnover and enhancing bureaucratic effectiveness.

Recommendations

a. Several practical ideas that can be implemented in the civil service context include:
b. Integration of training with formal career pathways: Training should be directly linked to promotion opportunities, job rotation, and talent management so that civil servants see long-term career prospects.
c. Implementation of a transparent merit system: Local governments must ensure that promotions and career development are conducted fairly and based on competence, thereby increasing employee trust.
d. Digitalization of training: Develop e-learning and blended learning platforms to reach civil servants across generations, particularly younger employees who are more adaptive to technology.
e. Mentoring and coaching programs: Provide mentors from senior civil servants to support the career development of new employees, ensuring organizational knowledge is preserved.

  f. Continuous evaluation: Conduct periodic surveys on job satisfaction and employee engagement to assess the effectiveness of training and career development programs, and adjust policies according to employee needs.

References

Ariandhy, A. P., & Febriana, A. (2023). Dampak kompensasi, pengembangan karir, dan kepuasan kerja terhadap retensi pegawai negeri sipil di dinas pendidikan dan kebudayaan provinsi Jawa Tengah. *Indo-Fintech Intellectuals: Journal of Economics and Business*, 5(3), 5948–5963. https://journal.intelektual.org/index.php/ifi/article/view/3647

Ayudo, Z. V. N., & Budiono, B. (2023). Analysis of training effect on employee performance through employee retention to the employee of PT. Perkebunan Nusantara XII Kertowono Garden. *Social Science Studies*, 3(3), 165–181. https://doi.org/10.47153/sss33.5892023

Dila Aprillia Hendriyulianti. (2025). Pengaruh pengembangan karir terhadap retensi karyawan dengan kepuasan kerja sebagai intervening Dinas PUPR Provinsi Jambi. *MASMAN Master Manajemen*, 3(3), 117–128. https://doi.org/10.59603/masman.v3i3.957

Galang Prajodi, & Wulan Rezky Amalya. (2024). Pengembangan karir dan kompensasi terhadap retensi karyawan pada generasi Z di Bandar Lampung. *Jurnal Administrasi Bisnis*, 14(2), 176–181. https://jurnal.fh.unila.ac.id/index.php/jab/article/view/302

Gustina Theresia Lubis, Rosari Zakia Ahadi, Satria Nasution, & Vip Paramartha. (2024). Pengembangan kompetensi ASN dari Smart ASN menuju transformasi digital dalam pelayanan publik. *Journal of Management and Social Sciences*, 3(1), 59–64. https://doi.org/10.55606/jimas.v3i1.972

Helen Permata Sari, Dini Oktaviana, & Octavia Christina. (2024). Urgensi pola perencanaan karir aparatur sipil negara dalam upaya peningkatan kinerja. *Sosial Simbiosis: Jurnal Integrasi Ilmu Sosial dan Politik*, 1(3), 152–160. https://doi.org/10.62383/sosial.v1i3.450

Luhgiatno, Kumala, D., Wardhana, A., & Et al. (2024). *Metode penelitian manajemen*. CV. Eureka Media Aksara.

Mohd, T., Abd, K. G. H., Donianto, C. A., Kiolol, T. J., & Abd, T. M. K. (2022). Pengaruh talent management dan work-life balance terhadap retensi karyawan dengan mediasi dukungan organisasi. *Modus*, 34(2), 158–183. https://ejournal.unsrat.ac.id/index.php/modus/article/view/38912

Muarifah, A. M., Prabowo, H., & Dharmaputra, M. F. (2024). Pengaruh pelatihan, pengembangan karir, dan work-life balance terhadap retensi karyawan dengan kepuasan kerja sebagai variabel intervening pada PT. Laksana Bus Manufaktur. *INNOVATIVE: Journal of Social Science Research*, 4, 772–787. https://doi.org/10.31004/innovative.v4i3.28350

Nasution, A. R., Suhairi, & Nurbaiti. (2024). The influence of training and career development on employee job satisfaction. *Jurnal Manajemen dan Bisnis*, 8(2), 290–296. https://doi.org/10.36555/almana.v4i2.1417

Nelson, A., & Kurnaedi, J. (2024). Pengaruh training and development, servant leadership, dan reward terhadap employee retention dimediasi oleh employee engagement pada restoran di Kota Batam. *Jurnal Ilmiah Manajemen Bisnis dan Inovasi*, 11(1), 30–43. https://doi.org/10.35794/jmbi.v11i1.53094

Noviani, E., Putra, Y. S., & Arminingsih, D. (2024). Pelatihan peningkatan kompetensi dan manajemen karir bagi pegawai di Kabupaten Sanggau, Sekadau, Melawi dan Sintang. *Community Development Journal*, 5(3), 4223–4227. https://doi.org/10.31004/cdj.v5i3.28350

Olivia, O., Tanza, V., Debataraja, V., & Simanjorang, F. (2024). Bagaimana manajemen talenta mempengaruhi retensi karyawan: Studi literatur. *Jurnal Manuhara: Pusat Penelitian Ilmu Manajemen dan Bisnis*, 2(1). https://jurnalmanuhara.org/index.php/manuhara/article/view/215

Patriosa, P., Syekh, S., & Yamali, F. R. (2024). Pengaruh kompetensi, pendidikan dan pelatihan terhadap pengembangan karir dan implikasinya kepada kinerja aparatur sipil negara pada Biro Umum Setda Provinsi Jambi. *Jurnal Manajemen dan Sains*, 9(1), 94–99. https://doi.org/10.33087/jmas.v9i1.1511

Ponto, I. S., Waisapy, J., & Fadli, Z. (2025). Pengembangan karier aparatur sipil negara dalam pelayanan publik di Kecamatan Kairatu Barat Kabupaten Seram Bagian Barat. *Jurnal Mediasosian: Jurnal Ilmu Sosial dan Administrasi Negara*, 9(1), 21–42. https://doi.org/10.30737/mediasosian.v9i1.6496

Purnama, S. Y. (2025). Pengaruh pendidikan dan pelatihan terhadap kompetensi aparatur sipil negara di Badan Pengembangan Sumber Daya Manusia Provinsi Jawa Barat. *Jurnal Review Pendidikan dan Pengajaran*, 8(1), 2459–2467. https://ejournal.upi.edu/index.php/jrpp/article/view/2467

Rahmat, A. S., Tahier, I., & Duriani, D. (2024). Pengaruh kompensasi dan pengembangan karier terhadap retensi karyawan pada Perumda Air Minum Tirta Latimojong (PAMTL) Kabupaten Luwu. *Scientific Journal of Reflection: Economic, Accounting, Management and Business*, 7(3), 726–738. https://doi.org/10.37481/sjr.v7i3.726

Sanjaya, R. A., Firlana, H., & Priyatno, M. B. (2025). Faktor motivasi kerja yang mempengaruhi produktivitas pegawai sektor publik di Indonesia. *Jurnal Lentera Bisnis*, 14(2), 2022–2038. https://doi.org/10.34127/jrlab.v14i2.1571

Sofiati, E., Hidayat, T., Permana, J., & Anggiani, S. (2023). High-performance human resource practices untuk membina kinerja dan komitmen organisasi melalui kepuasan kerja. *JIIP - Jurnal Ilmiah Ilmu Pendidikan*, 6(7), 5048–5054. https://doi.org/10.54371/jiip.v6i7.2389

Tirto.id. . (2024, March 15). Fenomena pengunduran diri CPNS setelah optimalisasi formasi. *Tirto.id*. https://tirto.id

Wijaya, G. V., & Iskandar, H. (2024). Pengaruh program pelatihan terhadap retensi karyawan di Hotel Alila. *Kaganga: Jurnal Pendidikan Sejarah dan Riset Sosial Humaniora*, 7(2), 827–844. https://doi.org/10.31539/kaganga.v7i2.10886