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The Effect of Adaptive Supervision, Employee Competence and Organizational Commitment on Employee Performance through Work Discipline as an Intervening Variable at the Binjai City Secretariat Office

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ABSTRACT

This study aims to examine the influence of adaptive supervision, employee competence, and organizational commitment on employee performance with work discipline as an intervening variable at the Binjai City Regional Secretariat Office. The study used a quantitative approach with the Partial Least Squares Structural Equation Modeling (PLS-SEM) method through the SmartPLS 3.0 application to analyze the data collected from the employees. The results of the measurement model evaluation showed that the entire construct met the criteria of convergent validity, discriminant validity, and reliability, as indicated by the values of outer loading, Average Variance Extracted (AVE), Composite Reliability, and Cronbach's Alpha which were above the required limits. The results of the structural model evaluation showed a strong clear power of the model, with an adjusted R-square value of 0.783 for work discipline and 0.842 for employee performance. The results of the hypothesis test revealed that organizational commitment has a positive and significant effect on work discipline and employee performance. In addition, work discipline has been shown to mediate the relationship between organizational commitment and employee performance. In contrast, adaptive supervision and employee competence do not show a significant direct or indirect influence on employee performance through work discipline. Work discipline also does not have a significant direct effect on employee performance. Overall, these findings show that organizational commitment is the most dominant factor in improving employee performance, so strengthening employee loyalty and attachment to the organization is an important aspect in encouraging sustainable performance improvement in the public sector.

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Introduction

Improving the quality of public services requires an adaptive, effective, and results-oriented bureaucracy. Employee performance is the main determining factor for service quality, because productive, disciplined, and adaptable employees make a direct contribution to the effectiveness of the implementation of public administration at the local government level (Tang, Abu Bakar, & Omar, 2024). Rapid changes in technology, regulations, and public expectations are further strengthening the demands on the adaptability of public sector organizations. This adaptability is highly dependent on the capacity of employees to adjust their work behavior to a dynamic environment, which in the human resource management literature is known as adaptive performance (Rahayu, 2024).

Recent empirical studies show that psychological and organizational factors such as motivation, work attachment, organizational support, and commitment have a strong relationship with employees' adaptive capacity and the resulting performance (Tang et al., 2024; Katsaros, 2024). Therefore, effective human resource management is very important, especially in the public organization environment, in order to improve the competence, adaptability, and organizational commitment of employees so that performance is maintained in conditions of continuous change (Rahayu et al., 2023).

In this context, supervision has a strategic role not only as a control mechanism, but also as a development process. Adaptive supervision emphasizes flexibility, providing constructive feedback, and adjusting the supervision approach to the characteristics of employee duties and conditions, so as to be able to balance the functions of control and empowerment (Sudarajat, 2023). Previous research has shown that this kind of supervision is positively correlated with work discipline and employee performance. Work discipline itself reflects compliance, punctuality, responsibility, and behavioral consistency, and has been identified as an important mediating variable that links managerial practices to performance achievement (Paramitha, Indiani, & Yasa, 2024).

However, empirical findings in the context of local government in Indonesia still show mixed results, so more context-specific research is needed. Therefore, this study aims to analyze the influence of adaptive supervision, employee competence, and organizational commitment on employee performance with work discipline as an intervening variable in the Binjai City Regional Secretariat.

Method

This study uses an associative quantitative research design that aims to test the relationship between two or more variables (Sugiyono, 2021). In line with these goals, this study analyzes the influence of adaptive supervision, employee competence, and organizational commitment on employee performance, both directly and indirectly through work discipline as an intervening variable (Sugiarto et al., 2024). A quantitative approach

was chosen to allow objective hypothesis testing through statistical analysis based on structural models.

The research was carried out at the Binjai City Regional Secretariat Office located at Jalan Jenderal Sudirman No. 6, Kartini Village, Binjai City, North Sumatra. The data collection process was carried out in the period from March to August 2025. The research population consists of all State Civil Apparatus (ASN) working at the Binjai City Regional Secretariat with a total of 52 employees. Given the relatively small size of the population, this study uses a saturated sampling technique, in which all members of the population are made as research respondents, so that data representation can be ensured comprehensively and minimizes sampling bias.

Employee performance is defined as behaviors and work outcomes that are relevant to individual tasks in the organization, which include the quality and quantity of work (Hellwig, 2016), measured through indicators of work quality, work quantity, punctuality, effectiveness, and work independence. Work discipline refers to the level of employee compliance with organizational regulations, punctuality, responsibility, behavioral consistency, and obedience to superiors' instructions as a form of commitment to organizational goals (Cheung, 2021). Adaptive supervision is conceptualized as a flexible and responsive approach to supervision, with adjustment of levels of supervision, decision-making, and evaluation according to the dynamics of organizational conditions (Provan et al., 2020). Employee competencies represent the individual characteristics that underlie superior performance, including knowledge, skills, motives, traits, and self-concept (Spencer & Spencer, 2023). Organizational commitment is defined as a psychological attachment between employees and the organization that includes affective, sustainability, and normative dimensions (Meyer & Allen, 2023). Data analysis was carried out using the Structural Equation Modeling (SEM) method based on Partial Least Squares (PLS) using SmartPLS software version 3.3.3 to evaluate the measurement model and structural model.

Results and Discussion

The evaluation of the measurement model (outer model) in this study was carried out through algorithm analysis using SmartPLS software version 3.0. This procedure aims to assess the level of validity and reliability of measurement indicators based on the outer loading value of each indicator against its construct. Through this test, it can be ensured that each construct in the model meets the required criteria, namely convergent validity, discriminant validity, and reliability, so that it is suitable for use in structural model testing at a later stage.

Convergent Validity

The convergent validity of measurement models with reflective indicators can be evaluated by looking at the correlation between the score of each indicator and the construct score it represents. An indicator is declared valid if it has an outer loading value

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above 0.70. However, in studies that are still in the model development stage, the outer loading value in the range of 0.50–0.60 is still acceptable.

Based on the results of the outer loading test, it was found that several indicators had values below 0.60 and were not statistically significant, so that these indicators were eliminated from the measurement model. The outer loading value of each indicator is presented in the following table.

Table 1. Outer Loading

Indicator	Outer Loading	Ket
Adaptive Supervision (X1)		
PA1	0.802	Valid
PA2	0.881	Valid
PA3	0.895	Valid
PA4	0.896	Valid
Employee Competencies (X2)		
KP1	0.791	Valid
KP2	0.914	Valid
KP3	0.878	Valid
KP4	0.804	Valid
FP5	0.881	Valid
Organizational Commitment (X3)		
KO1	0.911	Valid
KO2	0.751	Valid
KO3	0.930	Valid
KK6	0.764	Valid
Work Discipline (Z)		
DK1	0.786	Valid
KK2	0.710	Valid

Source: PLS Smart Output, 2025

Based on Table 1 (Outer Loadings), all indicators in each research variable show an outer loading value above 0.70. This indicates that each indicator is able to reflect the construct it measures well, so that it meets the criteria of convergent validity and is declared suitable for use in advanced analysis.

In the Adaptive Supervision variable (X1), the outer loading value of indicators PA1 to PA4 is in the range of 0.802 to 0.896. All of these values exceeded the recommended minimum limit of 0.70, so that all indicators were declared valid and representative in measuring the Adaptive Supervision construct.

In the Employee Competency variable (X2), the KP1 to KP5 indicator has an outer loading value between 0.791 to 0.914. This value shows a strong correlation between the indicator and the latent construct being measured. Thus, all employee competency indicators are declared valid for construct measurement.

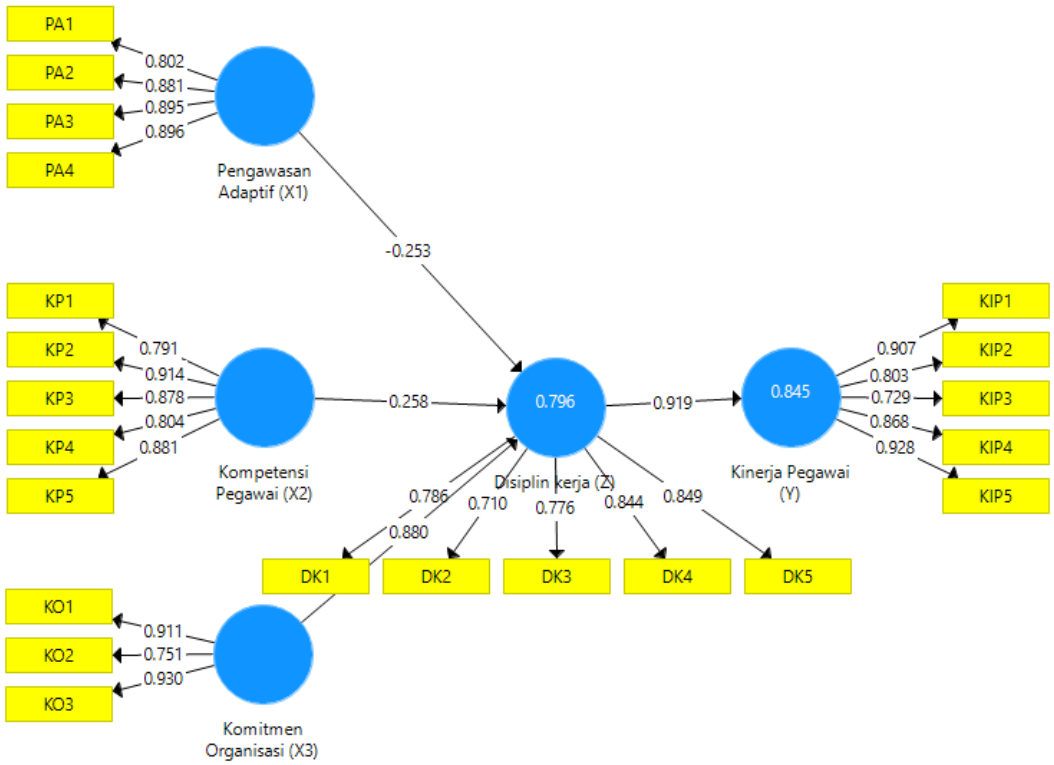
For the Organizational Commitment variable (X3), the KO1, KO2, and KO3 indicators have an outer loading value of 0.911 each; 0,751; and 0.930. Even if there is one

indicator that is close to the minimum limit, all values remain above 0.70 so that they still meet the requirements for convergent validity.

In the Work Discipline (Z) variable, the DK1 to DK5 indicator shows an outer loading value in the range of 0.710 to 0.849. These results show that all indicators are able to represent the Work Discipline construct well and are declared valid.

Similarly, in the Employee Performance variable (Y), the KIP1 to KIP5 indicator has an outer loading value between 0.729 to 0.928. All values have exceeded the minimum criteria, so the indicators have sufficient convergent validity.

Overall, the test results show that all constructs in this study have met the requirements for convergent validity. Thus, the measurement model is declared adequate and reliable, so that the analysis can be continued at the structural model testing stage. The results of the outer loading are visualized in the next structural model drawing.



Discriminatory Validity

The results of the discriminant validity test in this study were carried out through cross-loading analysis, namely by comparing the loading value of each indicator in its original construct with the loading value of other constructs. A summary of the results of the cross-loading analysis is presented in Table 2.

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Table 2. Discriminant Validity

Indicator	Work Discipline (Z)	Employee Performance (Y)	Organizational Commitment (X3)	Employee Competencies (X2)	Adaptive Supervision (X1)
DK1	**0.886**	0.803	0.749	0.533	0.577
DK2	**0.810**	0.729	0.651	0.878	0.814
DK3	**0.876**	0.647	0.729	0.484	0.500
DK4	**0.844**	0.766	0.740	0.551	0.449
DK5	**0.849**	0.687	0.632	0.628	0.540
CHICKEN1	0.826	**0.907**	0.930	0.738	0.667
KIP2	0.786	**0.803**	0.749	0.533	0.577
CHICKEN3	0.710	**0.929**	0.651	0.878	0.814
KIP4	0.720	**0.868**	0.829	0.804	0.675
KIP5	0.850	**0.928**	0.851	0.772	0.762
KO1	0.852	0.841	**0.911**	0.769	0.697
KO2	0.596	0.709	**0.951**	0.699	0.896
KO3	0.826	0.907	**0.930**	0.738	0.667
KP1	0.563	0.633	0.609	**0.791**	0.683
KP2	0.672	0.778	0.811	**0.914**	0.900
KP3	0.710	0.729	0.651	**0.878**	0.814
KP4	0.720	0.868	0.829	**0.894**	0.675
FP5	0.607	0.688	0.683	**0.881**	0.799
PA1	0.628	0.670	0.710	0.865	**0.892**
PA2	0.627	0.784	0.812	0.799	**0.881**
PA3	0.661	0.689	0.661	0.786	**0.895**
PA4	0.596	0.709	0.751	0.699	**0.896**

Source: PLS Smart Output, 2025

Discriminant validity is tested using cross-loading criteria to ensure that each indicator has a stronger correlation to the construct it is measuring compared to other constructs in the model. Discriminant validity is stated to be fulfilled if the loading value of an indicator in the original construct is higher than the loading value of other constructs. The test results showed that all indicators in the Work Discipline (Z) variable, namely DK1 to DK5, had the highest loading value in the Work Discipline construct compared to Employee Performance, Organizational Commitment, Employee Competence, and Adaptive Supervision. The loading value of these indicators is in the range of 0.810 to 0.886, thus confirming that the indicators are able to represent the Work Discipline construct clearly and differently from other constructs.

In the Employee Performance variable (Y), the indicators KIP1 to KIP5 show the highest loading value in the Employee Performance construct with a value range between 0.803 to 0.929. Although some indicators have a moderate correlation with other constructs, the loading value of the Employee Performance construct remains the highest, thus meeting the criteria of discriminant validity. Similarly, in the Organizational Commitment variable (X3), the KO1, KO2, and KO3 indicators have the largest loading in their respective constructs, which are 0.911, 0.951, and 0.930, which are higher than cross-

loading to other constructs. This shows that the indicator is able to distinguish the construct of Organizational Commitment well. In the Employee Competency variable (X2), indicators KP1 to KP5 also have the highest loading in the Employee Competency construct with a value range of 0.791 to 0.914. Thus, all indicators are proven to be more strongly correlated with their own constructs compared to other constructs, so that the discriminant validity of the model is declared fulfilled.

Reliability and Validity of Constructs

Construct reliability testing was performed using Cronbach's Alpha, rho_A, and Composite Reliability values. A construct is declared to have good reliability if all of these values exceed the minimum limit of 0.70. This test aims to ensure that the indicators in each construct have strong internal consistency in measuring the same concept.

Table 3. Reliability and Validity of Constructs

Variable	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Work Discipline (Z)	0.853	0.854	0.895	0.631
Employee Performance (Y)	0.902	0.907	0.928	0.723
Organizational Commitment (X3)	0.834	0.867	0.900	0.753
Employee Competencies (X2)	0.907	0.912	0.931	0.731
Adaptive Supervision (X1)	0.891	0.892	0.925	0.756

Source: PLS Smart Output, 2025

The results confirm that the entire construct has good reliability and strong convergent validity, so that the measurement model can be declared robust and feasible for structural model testing.

Evaluation of Structural Models (Inner Model)

Structural model evaluation was carried out to assess the strength and accuracy of the relationships between latent constructs in the research model. This evaluation includes testing the coefficient of determination, goodness of fit, and hypothesis testing to ensure that the model is able to adequately explain the causal relationship between variables.

Coefficient of Determination

Based on the results of the R-square value, the adjusted R-square value for the Work Discipline (Z) variable was 0.783 or 78.3%. These findings show that Adaptive Supervision (X1), Employee Competence (X2), and Organizational Commitment (X3) are simultaneously able to explain 78.3% of the variation in Work Discipline. This value is included in the high category, which means that the three independent variables make a strong contribution in shaping the Work Discipline of employees at the Binjai City

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Regional Secretariat. The remaining 21.7% variation in Work Discipline was influenced by other factors outside of this research model. In addition, the adjusted R-square value for the Employee Performance variable (Y) is 0.842 or 84.2%. These results show that Adaptive Supervision (X1), Employee Competency (X2), Organizational Commitment (X3), and Work Discipline (Z) are together able to explain 84.2% of the variation in Employee Performance. The magnitude of this value confirms that the proposed structural model has a very strong clear power in explaining employee performance.

Table 4. R Square Results

Variable	R Square	R Square Adjusted
Work Discipline (Z)	0.796	0.783
Employee Performance (Y)	0.845	0.842

Model Fit

The evaluation of the suitability of the model (goodness of fit) was carried out to assess the extent to which the proposed structural model was able to represent empirical data. In the PLS-SEM approach, model suitability testing was carried out using several indicators, including Standardized Root Mean Square Residual (SRMR), d_ULS, d_G, Chi-Square, and Normed Fit Index (NFI).

Table 5. Fit Model

	Saturated Model	Estimated Model
SRMR	0.139	0.149
d_ULS	4.887	5.598
d_G	2,763	2,499
Chi-Square	759,769	759,236
NFI	0,764	0,788

Source: PLS Smart Output, 2025

These results show that the structural model has an adequate level of suitability and is suitable for hypothesis testing.

Hypothesis Testing Results

Hypothesis testing was carried out by looking at T-statistics and P-values. A hypothesis is declared acceptable if the T-value is greater than 1.96 and the P-value is less than 0.05. The results of the direct effects test are presented in Table 6.

Table 6. Path Coefficients

Relationships Between Variables	Original Sample (O)	Sample Mean (M)	Std. Deviation	T-Statistics	P-Values	Results
Work Discipline (Z)→ Employee Performance (Y)	0.289	0.310	0.167	1.728	0.090	Rejected
Organizational Commitment (X3)→ Work Discipline (Z)	0.896	0.936	0.180	4.974	0.000	Accepted
Organizational Commitment (X3) → Employee Performance (Y)	0.650	0.622	0.191	3.403	0.000	Accepted
Employee Competencies (X2) → Work Discipline (Z)	0.280	0.233	0.261	1.073	0.288	Rejected
Adaptive Supervision (X1) → Work Discipline (Z)	-0.293	-0.276	0.257	1.140	0.259	Rejected
Adaptive Supervision (X1) → Employee Performance (Y)	0.048	0.056	0.156	0.307	0.760	Rejected

Source: PLS Smart Output, 2025

The results of the hypothesis test showed that Work Discipline (Z) did not have a significant effect on Employee Performance (Y). This is evidenced by the path coefficient value of 0.289, the t-statistic value of 1.728, and the p-value of 0.090 which is greater than the significance limit of 0.05. Thus, the hypothesis that states that there is a significant influence of Work Discipline on Employee Performance is rejected. These findings show that the level of work discipline of employees has not directly contributed to improving performance at the Binjai City Secretariat.

Furthermore, Organizational Commitment (X3) has a positive and significant effect on Work Discipline (Z). This relationship is shown by the path coefficient value of 0.896, the t-statistical value of 4.974, and the p-value of 0.000. Thus, the hypothesis is accepted,

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which means that the higher the organization's commitment, the stronger the employee's work discipline. In addition, Organizational Commitment (X3) also has a positive and significant effect directly on Employee Performance (Y). The path coefficient value of 0.650 with a t-statistic of 3.403 and a p-value of 0.000 confirms the acceptance of this hypothesis. These results highlight the important role of organizational commitment in improving employee performance directly.

On the other hand, Employee Competency (X2) does not have a significant effect on Work Discipline (Z). This is shown by the path coefficient value of 0.280, t-statistic of 1.073, and p-value of 0.288, so the hypothesis is rejected. This means that employee competence independently is not always followed by an increase in work discipline. Similarly, Adaptive Supervision (X1) had no significant effect on Work Discipline (Z) with a path coefficient value of −0.293, t-statistic of 1.140, and p-value of 0.259. The negative direction of the relationship indicates that the implementation of adaptive supervision has not been effective in encouraging the improvement of employee work discipline.

Conclusion

Based on the results of the analysis and discussion on the influence of Adaptive Supervision, Employee Competence, and Organizational Commitment on Employee Performance through Work Discipline as an intervening variable at the Binjai City Secretariat Office, it can be concluded that Organizational Commitment is the most dominant factor in improving Work Discipline and Employee Performance. Employees who have a high level of organizational commitment tend to show better compliance with work regulations and stronger responsibility in carrying out tasks, thus having a positive impact on performance.

The results of the study also show that Organizational Commitment has a significant effect directly on Employee Performance and has an indirect effect through Work Discipline. This confirms that Work Discipline functions as an intervening variable that strengthens the influence of Organizational Commitment on Employee Performance. Thus, performance improvement is determined not only by compliance with work rules, but also by the level of attachment and loyalty of employees to the organization.

On the other hand, Employee Competence has not been proven to have a significant effect on Work Discipline or Employee Performance through Work Discipline. These findings show that employees' abilities and skills do not automatically result in disciplined work behavior or performance improvement without the support of other internal factors. Similarly, Adaptive Supervision does not have a significant effect on Employee Work Discipline or Performance, either directly or indirectly, indicating that the supervisory approach applied has not been effective in encouraging changes in employee work behavior. Although Work Discipline does not have a significant direct effect on Employee Performance, this variable still plays an important role as an intermediary in the

relationship between Organizational Commitment and Employee Performance, so the impact will be more optimal if it is driven by strong organizational commitment.

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