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The Influence of Leadership, Work Environment, and Motivation on Change Management In Improving Employee Performance (a Study at The Kuala Tanjung Class III Port Authority and Harbor Master's Office)

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ABSTRACT

This study investigates the influence of leadership, work environment, and motivation on employee performance, with change management as a mediating variable, at the Kuala Tanjung Class III Port Authority and Harbor Master's Office. Employing a quantitative explanatory approach with Structural Equation Modeling (SEM) through SmartPLS, data were collected from 79 active employees using purposive sampling. The findings reveal that leadership, work environment, and motivation positively and significantly influence both change management and employee performance. Critically, change management serves as a significant mediator, strengthening the relationship between these organizational factors and performance outcomes. The path coefficients indicate that motivation exerts the strongest influence on change management (β=0.470), while change management demonstrates substantial direct effects on employee performance (β=0.408). These results underscore the strategic importance of implementing participative and transformational leadership, fostering supportive work environments, and sustaining employee motivation through systematic reward and development programs. The study contributes theoretically by validating change management as a critical mediating mechanism in public sector organizations, and practically by providing evidence-based guidance for enhancing organizational adaptability and employee performance in port authorities facing contemporary operational challenges.

KEYWORDS *Leadership, Work Environment, Motivation, Change Management, Employee Performance*

INTRODUCTION

In the contemporary global maritime industry, port authorities face unprecedented pressures to enhance operational efficiency, service quality, and organizational competitiveness amid rapid technological advancement and evolving international trade patterns. The performance of port employees has emerged as a critical determinant of organizational success, particularly as ports transition from traditional operational models to integrated logistics hubs serving complex supply chain networks. Employee performance challenges in port authorities are not isolated phenomena but reflect broader trends documented across public sector organizations worldwide, where issues of workforce motivation, leadership effectiveness, and organizational adaptability significantly impact service delivery and operational outcomes (Musaigwa & Kalitanyi, 2024; By, 2021). These challenges are particularly acute in government institutions undergoing structural transformations, where employees must navigate changing roles, responsibilities, and performance expectations while maintaining service continuity.

KSOP Class III Kuala Tanjung is located in Kuala Tanjung Village, Sei Suka District, Batu Bara Regency, North Sumatra Province, with coordinates 3.7833° N and 99.1833° E. The port is situated on the east coast of Sumatra, directly adjacent to the Strait of Malacca, an international shipping lane through which 25% of global trade passes. This strategic geographic

positioning places enormous operational demands on the organization, as it serves not only as a national gateway but also as a critical node in regional maritime connectivity. The port's proximity to one of the world's busiest shipping routes necessitates exceptional organizational performance to meet international standards and maintain competitiveness in the global maritime industry.

Starting from the nomenclature of KSOP Class IV Kuala Tanjung, it then changed to KSOP Class III Kuala Tanjung based on the results of the rearrangement of the Technical Implementation Unit, Directorate General of Sea Transportation, through the Regulation of the Minister of Transportation Number PM 76 of 2018, which is the second amendment to PM 36/2012. The regulation states that UPP Class III Pangkalan Dodek, UPP Class III Tanjung Tiram, and KSOP Class IV Kuala Tanjung are combined into one new nomenclature, namely KSOP Class III Kuala Tanjung. With this merger, KSOP Kuala Tanjung officially became both the port authority and the syahbandar for the working areas of Kuala Tanjung Port, Pangkalan Dodek, Lalang Village, and Tanjung Tiram.

This organizational restructuring represents a significant change management challenge, requiring the integration of formerly separate units with distinct operational cultures, procedures, and performance standards. Such structural transformations typically generate substantial implementation difficulties, including employee resistance, role ambiguity, and performance disruptions—challenges that have been well-documented in public sector reform literature (Al-Haddad & Kotnour, 2022; Ford, Ford, & Polin, 2021).

In carrying out its main duties and functions, KSOP Class III Kuala Tanjung is responsible for supervising shipping safety and security, enforcing shipping laws, and regulating and supervising port activities in commercial ports within its working area. Its functions include ship seaworthiness and safety certification, ship safety management inspections, supervision of loading dangerous goods, refueling ships, coordinating the construction of port facilities, ship guidance, ship traffic regulation, and preparation of port master plans.

The Kuala Tanjung Class III KSOP work area includes the Kuala Tanjung Port Working Environment Area (DLKr) and Environmental Interest Area (DLKp), covering both land and port waters. It functions as an international hub and regional gateway for northern Sumatra. In the era of globalization and increasingly fierce economic competition, ports are required to provide fast, efficient, and high-quality services. KSOP Class III Kuala Tanjung plays the role of regulator, coordinator, and supervisor of port activities to realize a safe, efficient, and competitive port that supports national and international maritime connectivity.

Law Number 20 of 2023 on the State Civil Apparatus defines ASN as a profession consisting of civil servants and government employees with work agreements in government institutions, a definition consistent with the Regulation of the Head of the State Administration Institution No. 2 of 2019 on Integrated Human Resource Management. This regulatory framework establishes clear expectations for civil service performance and provides the legal foundation for implementing performance management systems, including mechanisms for addressing suboptimal employee performance and implementing organizational improvements.

This definition reflects that Human Resources (HR) comprise all civil servants within the State Administration Institution. To achieve organizational goals, not only an adequate number

of employees is needed but also high quality; therefore, organizations must manage and develop their employees optimally so their knowledge, skills, and performance can increase. However, empirical evidence from KSOP Class III Kuala Tanjung reveals a substantial gap between these regulatory expectations and actual organizational performance, manifesting in multiple dimensions of employee work behavior that require systematic investigation and intervention.

Based on the pre-research survey and data from KSOP Class III Kuala Tanjung, employee performance (EP) remains far from optimal, as indicated by several work-behavior indicators revealing significant issues in human resource management. One clear example of this low performance is the high absenteeism (alpha) rate of employees throughout 2024. The number of absenteeism days recorded per month is very high: January 101 days, February 85 days, March 88 days, April 92 days, May 90 days, June 98 days, July 110 days, August 81 days, September 87 days, October 92 days, November 107 days, and December 107 days, showing that employee discipline remains a problem requiring serious attention.

This pattern of chronic absenteeism, averaging approximately 97 days per month across the organization, represents a critical performance deficit that cannot be attributed to random variation or isolated incidents. Rather, it suggests systematic organizational issues requiring comprehensive analysis and intervention. Research in public sector organizations has consistently demonstrated that such elevated absenteeism rates correlate with deeper organizational pathologies, including inadequate leadership practices, unsupportive work environments, and diminished employee motivation (Basirun et al., 2022; Hermayanti et al., 2023).

A low attendance rate indicates deeper problems, such as low organizational commitment, lack of awareness of responsibility, or unresolved job dissatisfaction. In the context of public services, especially in the port sector, which operates 24 hours, consistent and timely employee presence is an absolute prerequisite to ensure smooth operations and shipping safety.

Lack of employee discipline has a direct impact on organizational performance because performance achievements serve as benchmarks for success in carrying out programs, activities, and tasks in accordance with the Work Agreement agreed upon with the Director General of Sea Transportation. Data on organizational performance achievements from 2022–2024 show declines in various important indicators, such as the number of ships maintained and docked, domestic ship measurements, issuance of small passes, supervision and ratification of firefighting certificates, issuance of marine work agreement (PKL) documents, issuance of sailing period certificates, regulation of minimum manning letters (safe manning), sailing approval letters, inspection and supervision of ship seaworthiness requirements, supervision of loading and unloading activities of dangerous and toxic goods (B3), maintenance of work facilities, and achievement of PNBP targets. The decline in these indicators reflects that decreased employee discipline contributes to the decline in overall organizational performance.

In addition to attendance issues, another phenomenon identified is low employee motivation. This is reflected in symptoms such as lack of initiative in completing work, lack of enthusiasm when facing task challenges, low participation in organizational development activities, and apathy towards achieving performance targets. Employees tend to work

routinely and mechanically without encouragement to contribute maximally or innovate in task implementation. Low work motivation may stem from factors such as an ineffective reward and punishment system, lack of career development opportunities, insufficient appreciation of work achievements, or unclear performance appraisal systems. This condition is concerning because motivation is the main driver encouraging employees to work productively and achieve organizational goals. Without adequate motivation, employees struggle to meet expected performance standards, let alone exceed expectations in providing excellent service.

According to Suparman et al. (2023), employee motivation significantly affects performance. The influence of motivation derives from addressing employee needs. Organizations must create comprehensive strategies to identify employees' needs that trigger their motivation. Many employees value rewards for their efforts, so providing gifts, salary increases, or other forms of appreciation can motivate employees (Rahmawati & Sultoni, 2024; Suparman et al., 2023).

Another factor that may reduce motivation is the level of support provided by the work environment (WE). An unsupportive work setting not only diminishes employees' comfort but also undermines task efficiency and effectiveness. Consequently, employees become less productive as they contend with various technical and psychological barriers completing daily tasks.

Research by Rahayu (2019) found that the WE is crucial in enabling employees to execute tasks effectively. The work environment should provide a comfortable atmosphere, a sense of safety, and adequate working facilities. Similarly, Jusdiana Ahmad and Mustari (2022) agree that WE is important in determining good or bad employee performance, assessing it through social life at work, physical facilities, and psychological aspects such as security and comfort.

Given the phenomenon of less productive and less enthusiastic employee performance at KSOP Class III Kuala Tanjung, strong leadership appears necessary. Leadership is fundamental, alongside the work environment and motivation, in setting direction and fostering a conducive WE. Leaders play a major role in optimally developing employees to boost productivity and achieve organizational goals. Leadership entails influencing others through effective communication, coordination, and actions that elicit responses and drive positive change. Research by Nugroho et al. (2024) and Selvi et al. (2024) shows leadership positively affects EP; effective leaders provide clear guidance, sufficient support, and opportunities for professional development, fostering a productive work environment that supports goal achievement.

Facing these complex problems requires systematic, planned, and comprehensive organizational transformation efforts through implementing change management. Change management provides a structured method for guiding individuals, teams, and organizations from their current state toward a desired future state, aiming to enhance organizational effectiveness and achieve improved outcomes. Change management must clearly communicate why change is necessary, its benefits to individuals and organizations, and how the process will be implemented. Effective communication reduces resistance and increases employee support for change initiatives. Also, employee involvement in planning and implementing change increases their sense of ownership and commitment to its success.

Change management in public organizations, especially government agencies like KSOP, has distinct characteristics and challenges compared to the private sector. Change management at KSOP Class III Kuala Tanjung remains difficult due to strong resistance and unwillingness from employees, entrenched bureaucratic culture making changes feel threatening, rigid and overly procedural regulatory systems delaying innovation, lack of effective communication resulting in unclear or uneven information, and employees accustomed to traditional work methods. Thus, a change management strategy tailored to public organizational contexts and characteristics is necessary.

Organizational changes without targeted, participatory approaches risk resistance, uncertainty, and lower morale. Effective change management begins with understanding root causes, identifying improvement areas, and establishing clear visions and goals for change.

In the case of KSOP Kuala Tanjung, change management must address how to increase employee attendance, boost motivation, improve leadership quality, and create a conducive work environment. Good change management fosters collective awareness, encourages employee commitment, and builds organizational readiness to face transformation toward a more adaptive, results-oriented work system (Hikmayatunni'mah et al., 2023).

Despite growing scholarly attention to employee performance in public sector organizations, significant research gaps persist regarding mechanisms by which organizational factors influence performance outcomes in port authorities undergoing structural transformation. First, while existing literature examines leadership, work environment, and motivation individually as performance predictors (Andar, Idris, & Asri, 2022; Effendi et al., 2023), limited research investigates these factors simultaneously within an integrated framework accounting for their complex interrelationships. Second, although change management is recognized as critical for organizational transformation (Al-Haddad & Kotnour, 2022; Mouazen et al., 2024), its role as a mediating mechanism linking organizational antecedents to performance outcomes remains underexplored, especially in government maritime institutions. Third, most studies focus on general administrative agencies rather than specialized operational organizations like port authorities, where 24-hour operations, safety-critical functions, and international standards demand unique performance. Fourth, recent research stresses contextualizing change management within specific organizational cultures and institutional environments (Musaigwa & Kalitanyi, 2024), yet empirical evidence about how change management operates in Indonesian port authorities with hierarchical bureaucratic structures and recent restructuring is limited. Finally, though leadership, work environment, and motivation integration through change management has theoretical support, empirical validation using advanced structural equation modeling remains scarce, particularly addressing challenges documented at institutions like KSOP Class III Kuala Tanjung.

This study addresses these gaps by examining how leadership, work environment, and motivation influence employee performance both directly and indirectly through change management at KSOP Class III Kuala Tanjung. Its novelty lies in three key contributions: (1) integrating multiple organizational determinants in a comprehensive mediation model elucidating pathways through which these factors operate, (2) validating change management as a critical mediating mechanism in public sector port authority contexts with organizational restructuring and performance challenges, and (3) employing SmartPLS-based structural

equation modeling to provide robust empirical evidence for these complex relationships. By investigating these dynamics in a port authority facing documented performance deficits following organizational merger, this study offers theoretical insights into change management mechanisms in public sector contexts and practical guidance for addressing challenges in maritime government institutions. The findings are expected to inform evidence-based interventions for enhancing employee performance through strategic leadership development, work environment improvements, motivational initiatives, and systematic change management implementation.

Based on the above explanation, the researcher finds it essential and interesting to conduct an in-depth study related to the influence of leadership, work environment (WE), and motivation on change management in improving employee performance (a case study on the Kuala Tanjung Class III municipal and port authority offices). This study aims to: (1) analyze the direct influence of leadership on employee performance and change management, (2) examine the direct influence of work environment on employee performance and change management, (3) investigate the direct influence of motivation on employee performance and change management, (4) assess the direct influence of change management on employee performance, and (5) evaluate the indirect influence of leadership, work environment, and motivation on employee performance through the mediating role of change management. Achieving these objectives is expected to provide theoretical benefits by enriching scholarly understanding of performance management in public sector organizations and practical benefits by offering actionable recommendations for human resource development strategies at KSOP Class III Kuala Tanjung and similar government maritime institutions facing organizational transformation challenges.

METHOD

This study employs a quantitative approach using associative research methods. Associative research is designed to identify the relationships or effects between independent variables (leadership, work environment, motivation) and the dependent variables (change management and employee performance) (Sidney, 2017). Through this quantitative associative approach, the study examines how leadership, work environment, and motivation influence change management and, in turn, affect employee performance.

A population refers to the entire set of elements to be examined that share similar characteristics, whether they are individuals within a group, specific events, or any subject of study (Mattayang, 2022). The population in this study is all employees of the Kuala Tanjung Class III Port Authority Office, which is 79 people. This population includes all levels of job titles and work units in the office, from staff, supervisors, to managers. The population was chosen because they were subjects who were directly involved in the change management process and felt the influence of leadership, WE, and motivation in relation to their performance.

According to (Sugiyono, 2022) Samples are part of a population that has the same characteristics as that population. It is important to choose a sample that can represent and reflect the population as a whole. In this study, the criteria for sampling established that if the number was less than 100, it was recommended to include all samples in order for the study to be classified as a population study. The study population consisted of 79 people (less than 100),

so the entire population was used as a sample through the saturation sampling method, including all 79 respondents.

The sources of information from this study consist of:

1. Primary Data: This data was obtained directly from respondents, specifically employees of the Kuala Tanjung Class III Port Authority Office. It was collected through questionnaires given to employees to capture their perceptions of leadership, work environment, motivation, change management, and employee performance.
2. Secondary Data: Data obtained from official documents, performance reports, archives, or related publications relevant to the study. Secondary data is used to support and complement primary data.

The data collection procedures used in this study include:

1) Observation, which involves collecting data by observing human behavior, work processes, natural events, and respondents. In this research, the researcher conducted direct field observations at the Kesyahbandaran Office and the Kuala Tanjung Class III Port Authority to obtain factual information.
2) Questionnaire, which are administered by providing respondents with a series of written questions or statements to gather information that supports the research data.
3) Interviews were conducted on a limited basis to complete the questionnaire data and obtain more in-depth information.
4) Documentation Study, which is collecting secondary data from relevant official documents.

Data analysis techniques:

1. Validity Test: Validity tests are used to ensure that the research instrument actually measures the construct in question. Validity includes not only the accuracy of the content, but also the context of use and the consequences of the instrument. The modern approach looks at validity comprehensively. In quantitative research, validity is tested using the Pearson Product Moment, where an item is declared valid if r-computes > r-table at $\alpha = 0.05$.
2. Reliability Test: Reliability indicates the consistency of measurement results when repeated under the same conditions. An instrument must be reliable in order for validity to be achieved. Reliability measurements are usually using Cronbach's Alpha, test-retest, or split-half, and the instrument is considered reliable if the $\alpha >$ value is 0.70.
3. Inner Model Analysis (PLS-SEM): Inner model analysis is used to look at the relationships between latent constructs in a structural model. This study uses Moderated Regression Analysis (MRA) through SmartPLS version 4, which is suitable for small samples and complex models. The inner model evaluation included path coefficients, R^2 values, relationship significance (p-value < 0.05), and testing of direct and indirect effects through mediation variables (change management).
4. Hypothesis Test: Hypothesis tests are carried out through t-test (partial), F-test (simultaneous), and Coefficient of Determination (R^2).

While this study provides valuable insights, certain limitations should be acknowledged. The cross-sectional research design captures relationships at a single point in time, limiting causal inference despite the theoretical rationale for directional hypotheses. Longitudinal research would be beneficial for establishing temporal precedence and examining how these

relationships evolve during organizational change implementation. Additionally, while the sample size of 79 provides adequate statistical power for PLS-SEM analysis with this model's complexity, larger samples would enable more precise parameter estimation and examination of potential moderating effects of demographic variables. Future research could employ mixed-methods approaches incorporating qualitative data to provide richer understanding of the mechanisms through which change management mediates the influence of organizational factors on performance.

RESULT AND DISCUSSION

Evaluation of Structural Models (Inner Model)

Once the outer model is confirmed to be valid and reliable, the analysis proceeds to the evaluation of the inner model. This stage assesses the relationships among the latent constructs proposed in the research hypotheses. It examines the model's predictive capability, the significance of the paths connecting the variables, and the extent to which the independent constructs account for the dependent variables (Hair et al., 2019).

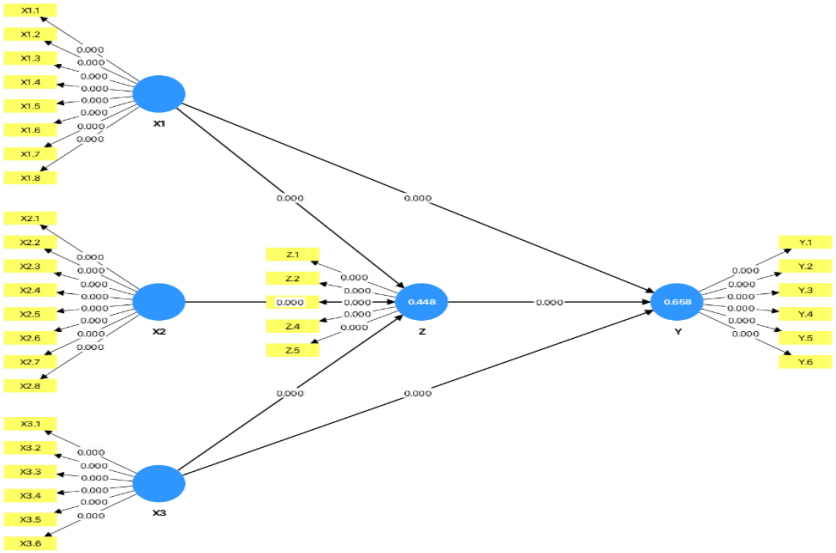

Figure 1. Inner Research Model

Collinearity Statistics (VIF)

Collinearity testing is performed to see if there is a high correlation between indicators in one construct. If the VIF value is > 5, then there is high multicollinearity, and if it is < 0.2, then a negative correlation occurs. According to Sarstedt et al., (2017) the model is said to be free of multicollinearity if the total VIF value is below 5. The following are the results of the VIF value for each construct indicator in this study:

Table 1. Value of Variance Inflation Factor (VIF)

Indicator	VIF	Indicator	VIF
X1.1	2,146	X2.5	2,076
X1.2	2,740	X2.6	2,344
X1.3	2,070	X2.7	2,663
X1.4	2,263	X2.8	2,524
X1.5	2,780	X3.1	2,488
X1.6	3,127	X3.2	2,903
X1.7	2,690	X3.3	2,498

Indicator	VIF	Indicator	VIF
X1.8	4,083	X3.4	2,705
X2.1	2,159	X3.5	3,088
X2.2	1,996	X3.6	3,436
X2.3	2,641	Y.1	1,885
X2.4	3,281	Y.2	2,535
Y.3	2,223	Y.4	2,599
Y.5	3,317	Y.6	2,944
Z.1	1,821	Z.2	2,315
Z.3	2,093	Z.4	2,335
Z.5	2,675		2,675

Source: Primary data processed by SmartPLS (2025)

All indicators in table 1 produce VIF values in the range of 1.8-4.08 and are still at the safe limit of PLS-SEM < 5, meaning that there is no excessive multicolnearity between the indicators. According to Hair et al. (2019), a VIF value of less than 5 indicates that the indicators do not influence each other excessively (there are no symptoms of high multicollinearity). Thus, the model is qualified for the absence of multicollinearity and can be proceeded to further model structure testing.

Coefficient of Determination (R-Square)

The coefficient of determination, or R-Square (R^2), indicates how much of the variance in an endogenous construct can be explained by the exogenous constructs in the model. Chin and Marcoulides (1998) classify R^2 values of 0.67 as strong, 0.33 as moderate, and 0.19 as weak. The following presents the R^2 and Adjusted R^2 results for the endogenous constructs.

Table 2. R-Square and R-Square Adjusted Values

Variable endogenous	R-square	R-square adjusted
Employee Performance (Y)	0,658	0,644
Change Management (Z)	0,448	0,426

Source: Primary data processed by SmartPLS (2025)

Based on the table above, it can be concluded that:

1) The value of $R^2 = 0.658$ in the EP variable (Y) means that 65.8% of the variation in EP can be explained by the variables Leadership (X1), Motivation (X3), and Change Management (Z).
2) The value of $R^2 = 0.448$ in the variable Change Management (Z) shows that 44.8% of the variation in Change Management can be explained through the variables Leadership (X1), WE (X2), Motivation (X3) and this is included in the medium category

Since both R^2 values are > 0.33 and close to 0.675, this model is relatively strong in explaining the relationship between endogenous and exogenous constructs (Chin & Marcoulides, 1998).

Effect Size Test (f-Square)

The effect size test (f^2) is applied to measure the magnitude of the influence that exogenous constructs exert on endogenous constructs. According to Cohen (1988), the f^2 value is interpreted using the following criteria.

a) 0.02 = small effect

b) 0.15 = medium effect
c) 0.35 = big effect

The following are the results of the f² test for each relationship between variables:

Table 3. f-Square value (Effect Size)

Influence Between Variables	F-Square	Information
X1 -> Y	0,307	Big
X1 -> Z	0,214	Medium
X2 -> Z	0,218	Medium
X3 -> Y	0,292	Medium
X3 -> Z	0,399	Big
Z -> Y	0,327	Big

Source: Primary data processed by SmartPLS (2025)

a) The Leadership Variable (X1) has a great influence on EP (Y).
b) The Leadership Variable (X1) has a moderate influence on Change Management (Z).
c) WE Variable (X2) has a moderate influence on Change Management (Z)
d) Motivation Variable (X3) has a moderate influence on EP (Y)
e) Motivation Variable (X3) has a great influence on Change Management (Z)
f) Change Management Variable (Z) has a great influence on EP (Y)

Thus, this model expresses a strong and interrelated influence structure of constructs.

SRMR (Model Fit)

The SRMR (Standardized Root Mean Square Residual) test is used to assess the fit model (Goodness of Fit) globally. SRMR shows how well the PLS-SEM model represents real data. Hu & Bentler (1999) stated that an SRMR value of ≤0.08 indicates a good fit model, while a value below 0.10 is still acceptable.

Table 4. SRMR Values (Model Fit)

Value	Saturated model	Estimated model
SRMR	0,069	0,069
d_ULS	2,640	2,642
d_G	1,876	1,878
Chi-square	669,337	669,554
NFI	0,717	0,717

Source: Primary data processed by SmartPLS (2025)

Table 4 above shows an SRMR value of 0.069 < 0.08 indicating that the fit model used is good. The NFI value of 0.71 has met the minimum limit (≥0.70). This concludes this model has a decent level of suitability.

Path Coefficients

Path coefficients indicate the direction and magnitude of the relationships between latent variables within the structural model. These coefficients range from –1 to +1, where higher values reflect stronger influences between the constructs (Hair et al., 2019). The significance of influence was tested using bootstrapping with the criteria of a t-statistical value of > 1.96 (at $\alpha = 0.05$) and a p-value of < 0.05 which showed a significant influence (Sarstedt et al., 2022).

Table 5. Path Coefficients Test Results

Relationship Pathway	Original Sample (O)	T Statistics	P Values	Information
X1 → Y	0,352	4,549	0,000	Signifikan
X1 → Z	0,344	4,628	0,000	Signifikan
X2 → Z	0,348	4,725	0,000	Signifikan
X3 → Y	0,360	4,651	0,000	Signifikan
X3 → Z	0,470	5,729	0,000	Signifikan
From → Y	0,408	4,243	0,000	Signifikan

Source: Primary data processed by SmartPLS (2025)

The results of the analysis showed that all relationship paths in the model had a t-statistical value of > 1.96 and a p-value of < 0.05, so that all the hypotheses tested were proven to be significant. This means that exogenous variables (X1, X2, X3) have a positive and significant effect on endogenous variables (Z and Y). In addition, the mediation variable (Z) was also shown to have a significant influence on the Y variable.

Thus, the coeffcient model tested can explain the relationship between constructs according to the research hypothesis.

Indirect Effects

Tabel 6. Total Indirect Effects

Hubungan	Original Sample (O)	Sample Mean (M)	STDEV	T Statistics	P Values	Information
X1 → Y	0,140	0,140	0,045	3,095	0,002	Signifikan
X2 → Y	0,142	0,149	0,049	2,865	0,004	Signifikan
X3 → Y	0,192	0,191	0,059	3,254	0,001	Signifikan

Source: Primary data processed by SmartPLS (2025)

Tabel 7. Specific Indirect Effects

Hubungan	Original Sample (O)	Sample Mean (M)	STDEV	T Statistics	P Values	Information
X3 → Z → Y	0,192	0,191	0,059	3,254	0,001	Signifikan
X1 → Z → Y	0,140	0,140	0,045	3,095	0,002	Signifikan
X2 → Z → Y	0,142	0,149	0,049	2,865	0,004	Signifikan

Source: Primary data processed by SmartPLS (2025)

The results of the indirect effects test showed that the three independent variables (X1, X2, and X3) had a significant indirect influence on the dependent variable (Y) through the mediation variable (Z). With the following details:

1) The X1 → Z → Y pathway is significant (β = 0.140; T = 3.095; p = 0.002).
2) The X2 → Z → Y pathways are significant (β = 0.142; T = 2.865; p = 0.004).
3) The X3 → Z → Y pathways were also significant (β = 0.192; T = 3,254; p = 0.001).

This indicates that Z acts as a mediator that strengthens the influence of the three independent variables on Y. In other words, the contribution of X1, X2, and X3 to Y is not only through direct influence, but also through mediation.

This finding is in line with Hair et al. (2019) who emphasized that the mediating effect was significant if the T value > 1.96 with p < 0.05. Previous research such as Ansari & Khan

(2024) and Mamun et al. (2024) also supports the importance of the role of mediating variables in explaining the relationships between variables in organizational models.

Effect Size (f^2)

Table 8. Effect Size (f^2) Test Results

Relationship	f^2	Information
X1 → Y	0,307	Medium–Large
X1 → Z	0,214	Keep
X2 → Z	0,218	Keep
X3 → Y	0,292	Keep
X3 → Z	0,399	Big
Z → Y	0,327	Medium–Large

Source: Primary data processed by SmartPLS (2025)

Table 8 shows that the variables X1 against Y ($f^2 = 0.307$) and Z against Y ($f^2 = 0.327$) showed an effect in the medium-large category, indicating a substantial contribution. The influence of X3 on Z ($f^2 = 0.399$) is in the large category, which means that the X3 variable is the dominant predictor for the mediated variable Z. Meanwhile, X1 against Z (0.214), X2 against Z (0.218), and X3 against Y (0.292) are in the medium category, which still shows that the power of influence is quite important in the model.

This finding is in line with Hair et al. (2019) who stated that f^2 values above 0.15 can be considered to have a practically meaningful influence. Other studies such as Bekker & Demerouti (2021) and Sarstedt et al. (2022) also emphasize that moderate to large effect size values strengthen the validity of structural models in PLS-SEM-based research.

Discussion

The Influence of Leadership on Employee Performance

The results of the structural model analysis showed that X1 had a significant positive effect on Y. This proves that the first hypothesis (H1) is accepted. This means that the higher the role of X1, the more Y increases. Theoretically, these findings are consistent with the concept of Job Demands–Resources Theory (JD-R) which explains that support in the form of organizational resources (e.g. leadership or structural support) is able to improve work performance and welfare (Bakker & Demerouti, 2021). The support of the X1 variable to Y strengthens the role of internal organizational factors in creating more productive and prosperous working conditions.

These findings are consistent with earlier studies. Andar, Idris, and Asri (2022) reported that leadership style and WE significantly affect the performance of BPKD employees in Bantaeng Regency. Likewise, Effendi et al. (2023) demonstrated that transformational leadership positively supports organizational change management. Therefore, it can be inferred that variable X1 plays a crucial role in improving Y.

The Influence of the Work Environment on Employee Performance

Based on the results of the structural model test, the X2 variable had a significant positive effect on Y. This shows that the second hypothesis (H2) is accepted. In other words, the better the application of X2, the more Y increases. Conceptually, these results support the theory of organizational change management which emphasizes that change management in an

organization has a positive impact on employee adaptation and their performance (Al-Haddad & Kotnour, 2022). With X2 being managed effectively, employees are able to adapt to the demands of the organization, thus contributing to the improvement of Y.

Empirical studies further support these findings. Estiana, Karomah, and Saimima (2023) showed that WE and change management significantly impact EP. Similarly, Rahmat and Candra (2024) emphasized the importance of management and leadership in enhancing organizational performance. Hence, the positive effect of X2 on Y is reinforced both theoretically and empirically.

The Influence of Motivation on Employee Performance

The results of SmartPLS analysis showed that X3 had a significant positive effect on Y. Thus, the third hypothesis (H3) is accepted. This means that X3 upgrades have been shown to significantly increase Y. Theoretically, these findings are in line with the view of transformational leadership which emphasizes the importance of the role of adaptive and transformative leadership in creating positive changes to individual and organizational performance (Sun & Anderson, 2021). X3 support provides motivational encouragement, inspiration, and clear direction for employees to achieve better well-being.

The results of this study are also consistent with the study by Ansari & Khan (2024) which proves that there is a positive relationship between green transformational leadership and pro-environmental behavior of employees through the role of WE. In addition, Mamun et al. (2024) show that socially responsible human resource management can improve sustainable performance. Thus, these findings confirm that X3 is an important factor that supports the increase in Y.

The Effect of Change Management on Employee Performance

The results of the structural model test showed that Z had a significant positive effect on Y. Thus, the seventh hypothesis (H7) is accepted. This means that the increase in Z has a direct impact on the increase in Y. Theoretically, these findings support the framework of JDR Theory, which asserts that the presence of resources in an organization, such as positive change management, can increase employee motivation and work outcomes (Bakker & Demerouti, 2021). Z here acts as an internal factor that bridges organizational dynamics with actual performance.

The empirical findings also reinforce these results. Research by Syafrina, I. (2020) shows that there is a significant influence of change management on employee performance. Furthermore, Alene, M. (2022) emphasized that well-managed changes have a significant impact on improving the performance of public sector employees. Thus, it can be concluded that Z is a key variable that strengthens the achievement of Y, both directly and as a mediator of the influence of the variables X1, X2, and X3.

Indirect Influence of Leadership on Employee Performance through Change Management

The results of the indirect effect analysis showed that X1 had a significant positive effect on Y through Z. This shows that the eighth hypothesis (H8) is accepted. In other words, the Z variable acts as a mediator that strengthens the influence of X1 on Y. Theoretically, these

results are in line with the ADKAR model's view (Al-Haddad & Kotnour, 2022) which explains that change led effectively through leadership will improve readiness and Change Management (Z), ultimately contributing to improved performance (Y). With the mediation of Z, the influence of X1 on Y becomes stronger and more directed.

Previous research has also supported these findings. Adiastra, Rahmawati, & Telagawathi (2023) found that service leadership affects performance through the role of change management. Similarly, research by Hafidzi et al. (2023) shows that organizational motivation and climate can be mediators between leadership and employee performance outcomes. Thus, it can be concluded that X1 affects not only Y directly, but also indirectly through the increase in Z, so its contribution becomes more comprehensive in this research model.

Indirect Influence of the Work Environment on Employee Performance Through Change Management

The results of the indirect effect analysis showed that X2 had a significant positive effect on Y through Z. Thus, the ninth hypothesis (H9) is accepted. This means that the Z variable mediates the relationship between X2 and Y significantly. Theoretically, these findings are in line with the concept of change management which emphasizes that change management not only has a direct impact on performance, but also forms an adaptive work environment as an intermediary (Kotter, 1996; Ford, Ford, & Polin, 2021). With Z, X2's influence on Y becomes stronger because well-managed changes are able to foster employee readiness and motivation.

Empirical evidence also reinforces these results. Pratama and Kurniawan (2021) noted that a supportive work environment enhances the success of change management, which subsequently improves employee performance. Likewise, Nuraini and Putra (2023) found that WE positively influences performance indirectly through effective change management. Therefore, it can be concluded that X2 affects Y not only directly but also indirectly through the mediating role of Z, which strengthens the relationship between the two in this research model.

Indirect Influence of Motivation on Employee Performance through Change Management

The results of the indirect effect analysis showed that X3 had a significant positive effect on Y through Z. Thus, the tenth hypothesis (H10) is accepted. This means that the Z variable has been shown to mediate the influence of X3 on Y significantly.

Theoretically, these results support the transformational leadership and organizational climate framework, which emphasizes that transformative leadership can improve Change Management (Z), which in turn drives improved performance (Y) (Sun & Anderson, 2021; Northouse, 2021). With the mediation mechanism Z, the influence of X3 on Y becomes more comprehensive and sustainable.

Empirical research also reinforces these results. Kaesang et al. (2021) show that the combination of motivation and change management has a significant positive effect on performance improvement. Similar findings were also reported by Nusraningrum, D. (2024) stating that Motivation has a significant effect on performance; Organizational variables (including change management) can amplify this influence.

Thus, it can be concluded that the influence of X3 on Y takes place not only directly, but also indirectly through Z, thus reinforcing the mediating role of Z in the overall research model.

CONCLUSION

This study concludes that leadership, work environment, and motivation each directly enhance employee performance, with stronger leadership, supportive work conditions, and higher motivation all leading to improved organizational outcomes. Additionally, change management plays a critical mediating role by amplifying these effects, as it facilitates the translation of leadership quality, work environment, and motivation into better performance. Future research could explore additional mediating factors such as organizational culture or employee engagement and investigate these dynamics across diverse public sector contexts to deepen understanding of how various variables interact to influence employee performance.

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