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Original Article

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## Teamwork, Work Environment, and Employee Performance: The Mediating Role of Motivation in Public Education Institutions

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**Abstract:** Employee performance in public education institutions has shown a declining trend, indicating structural and behavioral challenges related to teamwork, work environment, and motivation. This study aims to examine the direct effects of teamwork and work environment on employee performance, as well as the mediating role of work motivation. A quantitative approach was applied using Structural Equation Modeling based on Partial Least Squares (SEM-PLS). The study involved 72 employees selected through saturated sampling. Data were collected through Likert-scale questionnaires and analyzed through validity, reliability, and hypothesis testing using bootstrapping procedures. The results indicate that teamwork has a positive but relatively weak effect on employee performance, while the work environment shows a strong and significant influence. Furthermore, work motivation significantly mediates the relationship between teamwork and employee performance, although the effect is modest. In contrast, motivation demonstrates a strong mediating role in the relationship between work environment and employee performance. These findings suggest that the work environment is the dominant factor influencing performance, both directly and indirectly through motivation, whereas teamwork contributes to performance to a lesser extent. The study concludes that improving employee performance in public sector institutions requires an integrated approach that prioritizes a supportive work environment, strengthens motivational mechanisms, and maintains effective teamwork practices.

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**Keywords:** Teamwork; Work Environment; Work Motivation; Employee Performance; Public Sector.

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### 1. Introduction

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Employee performance in public education institutions has become a critical concern due to its direct link to service quality, accountability, and institutional effectiveness. Recent internal performance records indicate a consistent decline in key indicators, including work quality, output quantity, and timeliness of task

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completion. This trend reflects structural inefficiencies in human resource management and suggests underlying problems related to teamwork quality, workplace conditions, and employee motivation. Similar patterns have been observed in public and organizational settings where performance deterioration is often associated with weak coordination, inadequate work environments, and insufficient motivational support (Juniantan et al., 2023; Tulenan, 2015; Hasibuan & Sari, 2024). From a theoretical perspective, employee behavior and performance can be explained through motivation-based frameworks. Maslow's hierarchy of needs remains a relevant foundation for understanding how the fulfillment of physiological, safety, social, esteem, and self-actualization needs shapes employee motivation and work outcomes (Nurjanah & Suherman, 2022; Neher, 1991). Complementarily, self-determination theory emphasizes that the quality of motivation, particularly autonomous motivation, determines the extent to which employees internalize organizational goals and translate them into performance (Gagné & Deci, 2005). These perspectives suggest that organizational factors, such as teamwork and the work environment, influence performance by satisfying psychological and structural needs.

Teamwork represents a central organizational mechanism that facilitates coordination, communication, and shared responsibility. Empirical evidence consistently shows that effective teamwork improves employee performance by enhancing trust, collective problem-solving, and task integration (Ananda & Eriza, 2023; Manzoor et al., 2011). In addition, teamwork has been shown to influence motivational states, particularly when collaborative structures provide recognition and social support (Nelson, 2021). However, recent studies also report inconsistent findings, indicating that teamwork does not always produce significant effects on performance or motivation, suggesting the presence of contextual and organizational contingencies (Saharso & Lestari, 2024; Setyawati & Utami, 2024). The work environment constitutes another critical determinant of employee performance. It encompasses both physical conditions and psychosocial factors, including workplace safety, facilities, interpersonal relationships, and psychological comfort. Prior research demonstrates that a conducive work environment directly enhances employee performance and indirectly influences it through motivational mechanisms (Parashakti et al., 2020; Frastika & Franksiska, 2021; Indripriarko & Aima, 2022). Empirical findings further suggest that environmental improvements can produce immediate productivity gains by reducing stress and increasing work engagement (Juniantan et al., 2023). Nonetheless, some studies indicate that the work environment may not always exert a direct effect on performance, but instead operates through internal factors such as motivation, highlighting the complexity of these relationships (Harahap et al., 2022).

Work motivation functions as a key psychological driver that determines the intensity, direction, and persistence of employee effort. Studies consistently confirm that motivation has a significant positive effect on employee performance, both directly and indirectly through mediating mechanisms (Nurudin, 2020; Oktariyanti et al., 2023). Motivation also interacts with other organizational variables, such as training and competence, to strengthen performance outcomes (Rivai et al., 2018; Hamdan et al., 2023). However, empirical evidence regarding its mediating role remains inconclusive. Some studies find that motivation successfully mediates the relationship between organizational factors and performance, while others report insignificant mediation effects (Lestari & Wulansari, 2024; Harahap et al., 2022). This inconsistency suggests that the mediating function of motivation is context-dependent and requires further empirical clarification. Employee performance is defined as the measurable output achieved by employees in fulfilling their roles, typically assessed through indicators such as quality, quantity, timeliness, effectiveness, and responsibility. It represents the ultimate outcome of human resource management processes and reflects the alignment between individual capabilities and organizational support systems (Gibson et al., 2003). Prior studies confirm that performance is influenced by a combination of structural factors, such as teamwork and the work environment, and psychological factors, particularly motivation (Juniantan et al., 2023; Indripriarko & Aima, 2022).

Despite the extensive literature, several research gaps remain. First, empirical findings on the relationships among teamwork, work environment, motivation, and employee performance are inconsistent. While many studies report significant direct and indirect effects, others demonstrate weak or non-significant relationships, particularly in mediation models (Saharso & Lestari, 2024; Setyawati & Utami, 2024; Lestari & Wulansari, 2024). Second, most existing studies focus on the private sector or industrial contexts, with limited attention to public education institutions, which operate under different structural constraints and performance expectations. Third, few studies simultaneously examine teamwork and work environment within a unified model that incorporates motivation as a mediating variable, leading to a fragmented theoretical understanding. Given these gaps, this study aims to examine the effects of teamwork and the work environment on employee performance, with work motivation as a mediating variable in a public education institution. This research seeks to provide a more integrated empirical model that explains how organizational and psychological factors interact to shape performance outcomes. By addressing inconsistencies in prior findings and focusing on the public sector context, this study contributes to both theoretical development and practical policy formulation. It offers evidence-based insights for improving

employee performance through targeted interventions in teamwork structures, workplace conditions, and motivational strategies. 96  
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## 2. Literature Review 98

Employee performance remains a central construct in organizational research due to its direct link with institutional effectiveness and service delivery outcomes. It reflects the extent to which employees achieve task-related objectives in terms of quality, quantity, and timeliness. Empirical studies consistently confirm that performance is shaped by both structural and psychological determinants, including teamwork, work environment, and motivation (Juniantan et al., 2023; Indripriarko & Aima, 2022). However, the interactions among these variables remain theoretically complex and empirically inconsistent, particularly in public-sector contexts. 99  
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### 2.1. Teamwork and Employee Performance 106

Teamwork is widely conceptualized as a collaborative mechanism that integrates individual capabilities into collective output. It enhances coordination, communication, and mutual accountability within organizations. Prior studies provide strong evidence that teamwork positively influences employee performance. For example, Ananda and Eriza (2023) and Manzoor et al. (2011) demonstrate that effective teamwork improves productivity through trust and shared responsibility. Similarly, recent public sector evidence confirms that teamwork significantly contributes to performance outcomes by strengthening coordination and task integration. Despite this consistency, there are critical contradictions. Some studies report that teamwork does not significantly influence performance when organizational structures are rigid or when collaboration lacks strategic alignment. Empirical findings in public service institutions indicate that teamwork may fail to translate into measurable performance gains due to weak implementation or institutional constraints. This inconsistency suggests that teamwork alone may not be sufficient to drive performance, thereby requiring additional explanatory mechanisms such as motivation. 107  
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### 2.2. Work Environment and Employee Performance 120

The work environment represents the physical and psychosocial conditions that shape employee behavior. It includes infrastructure, safety, interpersonal relations, and psychological comfort. Empirical evidence consistently supports its direct impact on employee performance. Studies by Parashakti et al. (2020), Frastika and Franksiska (2021), and Tulenan (2015) show that a supportive work environment enhances productivity by reducing stress and enabling efficient task execution. However, the strength and direction of this relationship vary across contexts. Some studies find that the work environment influences performance indirectly rather than directly. For instance, research in organizational settings indicates that environmental factors primarily enhance internal states such as motivation or engagement, which subsequently affect performance outcomes (Harahap et al., 2022). Broader public sector research also highlights that organizational conditions often influence performance through mediating mechanisms such as trust, culture, or psychological states rather than through direct causal effects. These findings challenge the assumption of a universally direct relationship and highlight the need to examine indirect pathways. 121  
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### 2.3. Work Motivation as a Mediating Variable 134

Work motivation is a fundamental psychological construct that explains how organizational inputs are transformed into performance outputs. It determines the intensity, direction, and persistence of employee effort. Theoretical frameworks such as self-determination theory emphasize that motivation mediates the relationship between external conditions and behavioral outcomes by facilitating internalization processes (Gagné & Deci, 2005). Empirical studies provide substantial support for the mediating role of motivation. Oktariyanti et al. (2023) and Hamdan et al. (2023) demonstrate that motivation mediates the effects of leadership, competence, and environmental factors on performance. Additional evidence shows that teamwork and organizational conditions influence performance through motivational mechanisms, indicating that motivation serves as a psychological bridge between structural variables and outcomes. 135  
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Nevertheless, the mediating role of motivation is not universally supported. Several studies report non-significant mediation effects. For example, Lestari and Wulansari (2024) and Harahap et al. (2022) find that motivation does not significantly mediate the relationship between work environment and performance. Similarly, evidence suggests that collaboration variables are often examined without incorporating motivation as a mediating mechanism, limiting explanatory depth. These inconsistencies indicate that the mediating function of motivation is contingent on organizational context, measurement approach, and sectoral characteristics. 144  
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The literature reveals three key patterns. First, teamwork and work environment are consistently identified as important determinants of employee performance, but their effects vary in magnitude and significance across studies. Second, motivation is widely recognized as a critical explanatory mechanism, 151  
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yet empirical findings regarding its mediating role remain inconsistent. Third, most studies examine these variables in isolation or within partial models, resulting in fragmented theoretical understanding. A critical gap emerges from these inconsistencies. Existing research has not sufficiently integrated teamwork and work environment within a unified model that systematically tests the mediating role of motivation. Moreover, empirical evidence from public education institutions remains limited, despite their unique structural characteristics and performance challenges. Public sector environments often involve bureaucratic constraints, standardized procedures, and limited flexibility, which may alter the dynamics between teamwork, environment, motivation, and performance.

Therefore, this study addresses two main gaps. First, it develops an integrated model that simultaneously examines the direct effects of teamwork and work environment on employee performance. Second, it tests the mediating role of motivation in both relationships to clarify inconsistent findings in prior research.

## 2.4. Hypotheses Development

Based on the theoretical arguments and empirical synthesis, the following hypotheses are proposed:

H1: Teamwork has a significant positive effect on employee performance.

H2: Work environment has a significant positive effect on employee performance.

H3: Motivation mediates the relationship between teamwork and employee performance.

H4: Motivation mediates the relationship between work environment and employee performance.

## 3. Materials and Methods

This study adopts a quantitative research design to examine the relationships among teamwork, work environment, work motivation, and employee performance. The analysis employs Structural Equation Modeling based on Partial Least Squares (SEM-PLS), which is appropriate for complex models with mediation effects and relatively small sample sizes. The population consists of all employees within a public education institution. A saturated sampling technique is used, in which the entire population is included as the sample, yielding 72 respondents. This approach ensures comprehensive representation and eliminates sampling bias. Data are collected using a structured questionnaire with closed-ended items measured on a Likert scale. The study operationalizes four main variables. Teamwork is the ability of employees to collaborate effectively to achieve organizational objectives. It is measured through indicators that capture open communication, task coordination, commitment to shared goals, team support, and interpersonal trust. These indicators reflect the quality of interaction and collective effort within the organization.

The work environment refers to the physical and psychosocial conditions employees experience during their work activities. It includes workplace conditions, availability of facilities, occupational safety, social relationships, and psychological comfort. These elements capture both tangible and intangible aspects of the organizational setting that influence employee behavior. Work motivation is defined as the internal drive that directs employees to perform their tasks optimally. It is measured using indicators derived from need-based motivation, including physiological needs, safety, social belonging, esteem, and self-actualization. In this study, motivation serves as a mediating variable linking organizational factors to employee performance. Employee performance is defined as the level of achievement in completing assigned tasks in accordance with organizational standards. It is measured through indicators such as work quality, work quantity, timeliness, effectiveness, and responsibility. These dimensions reflect both efficiency and accountability in task execution.

Data analysis is conducted using SmartPLS version 3. The evaluation process consists of three stages. The first stage assesses the measurement model through convergent validity, discriminant validity, and reliability testing. Convergent validity is confirmed when outer loadings exceed 0.70. Discriminant validity is evaluated using the Average Variance Extracted (AVE), where the square root of AVE must exceed inter-construct correlations. Reliability is assessed using Cronbach's alpha, rho-A, and composite reliability, with values above 0.60 considered acceptable. The second stage evaluates the structural model. This includes collinearity testing using the Variance Inflation Factor (VIF) values below 5.00, assessment of the coefficient of determination ( $R^2$ ), and assessment of the effect size ( $f^2$ ). Path coefficients are estimated to examine both direct and indirect relationships among variables. The final stage involves hypothesis testing using a bootstrapping procedure to assess the significance of the proposed relationships. This approach enables robust estimation of standard errors and provides statistical evidence for both direct and mediating effects within the model.

## 4. Results

The descriptive results indicate that male employees slightly outnumber female employees in the public education institution. A total of 40 employees (55.6%) are male, while 32 employees (44.4%) are

female. All respondents are aged 21 to 58 years and have more than 1 year of work experience. These characteristics suggest a workforce composed predominantly of male employees across diverse age ranges and varying levels of experience, reflecting the institution's actual demographic composition.

**4.1. Assessment of Measurement Model**

**4.1.1 Construct Validity and Reliability Assessments**

Table 1 presents the results of construct validity and reliability testing for all variables in the measurement model, including teamwork, work environment, motivation, and employee performance. The evaluation follows standard SEM-PLS criteria, focusing on convergent validity and internal consistency reliability. Convergent validity is assessed using outer loading values and Average Variance Extracted (AVE). All indicator loadings exceed the recommended threshold of 0.70, indicating that each indicator adequately represents its respective construct. For the teamwork variable (X1), outer loadings range from 0.759 to 0.891, with the highest loading observed in indicator X1.5. The AVE of 0.654 confirms that more than 65% of the variance in the indicators is explained by the construct, indicating strong convergent validity.

**Table 1.** Result of Construct Validity and Reliability

| Variable(s)              | Indicators | Outer Loadings Values | Cronbach's Alpha | rho-A | Composite Reliability | Average Variance Extracted |
|--------------------------|------------|-----------------------|------------------|-------|-----------------------|----------------------------|
| Teamwork (X1)            | X1.1       | 0.759                 | 0.867            | 0.871 | 0.904                 | 0.654                      |
|                          | X1.2       | 0.832                 |                  |       |                       |                            |
|                          | X1.3       | 0.766                 |                  |       |                       |                            |
|                          | X1.4       | 0.789                 |                  |       |                       |                            |
|                          | X1.5       | 0.891                 |                  |       |                       |                            |
| Work Environment (X2)    | X2.2       | 0.809                 | 0.788            | 0.792 | 0.877                 | 0.619                      |
|                          | X2.3       | 0.775                 |                  |       |                       |                            |
|                          | X2.4       | 0.776                 |                  |       |                       |                            |
| Motivation (Z)           | Z.1        | 0.721                 | 0.817            | 0.833 | 0.880                 | 0.617                      |
|                          | Z.2        | 0.731                 |                  |       |                       |                            |
|                          | Z.4        | 0.859                 |                  |       |                       |                            |
|                          | Z.5        | 0.823                 |                  |       |                       |                            |
| Employee Performance (Y) | Y.1        | 0.939                 | 0.871            | 0.880 | 0.921                 | 0.790                      |
|                          | Y.2        | 0.835                 |                  |       |                       |                            |
|                          | Y.3        | 0.89                  |                  |       |                       |                            |

The work environment variable (X2) shows outer loadings ranging from 0.775 to 0.809. The AVE value of 0.619 exceeds the minimum requirement of 0.50, demonstrating that the construct captures sufficient variance from its indicators. Although the loadings are slightly lower than those of teamwork, they remain within acceptable limits and reflect consistent measurement. For the motivation variable (Z), outer loadings range from 0.721 to 0.859. The AVE value of 0.617 indicates adequate convergent validity. Indicator Z.4 shows the strongest contribution, while Z.1 and Z.2, although relatively lower, still meet the acceptable threshold. This suggests that all indicators contribute meaningfully to the construct. Employee performance (Y) demonstrates the strongest measurement properties among all constructs. Outer loadings range from 0.835 to 0.939, with Y.1 showing the highest loading. The AVE value of 0.790 indicates a high level of explained variance, confirming that the indicators strongly represent the construct.

Reliability is evaluated using Cronbach's alpha, rho-A, and composite reliability. All constructs exceed the minimum threshold of 0.60. Teamwork shows strong internal consistency with Cronbach's alpha of 0.867 and composite reliability of 0.904. The work environment also demonstrates acceptable reliability with values of 0.788 and 0.877, respectively. Motivation shows reliable measurement with Cronbach's alpha of 0.817 and composite reliability of 0.880. Employee performance exhibits the highest reliability, with Cronbach's alpha of 0.871 and composite reliability of 0.921. The results confirm that all constructs meet the criteria for convergent validity and reliability. The measurement model is therefore considered robust and suitable for further structural model analysis.

### 4.1.2. Discriminant Validity Testing

Table 2 presents the results of the discriminant validity test using the Fornell–Larcker criterion. This approach assesses whether each construct is empirically distinct from other constructs by comparing the square root of the Average Variance Extracted (AVE) with the inter-construct correlations. A construct is considered to have adequate discriminant validity when the square root of its AVE exceeds its correlations with other constructs. The results show that all diagonal values, which represent the square root of AVE, are higher than the corresponding off-diagonal correlation values. For the teamwork construct (X1), the square root of AVE is 0.809. This value is greater than its correlations with work environment (0.261), employee performance (0.323), and motivation (0.361). This indicates that teamwork is empirically distinct and captures unique variance not explained by other variables. The work environment construct (X2) has a square root of AVE of 0.839, which exceeds its correlations with teamwork (0.261), employee performance (0.755), and motivation (0.601). Although the correlation between work environment and employee performance is relatively high, it remains lower than the AVE square root, confirming adequate discriminant validity.

**Table 2.** Result of Discriminant Validity Test using Fornell–Larcker Criterion

| Variable(s)              | X1    | X2    | Y     | Z     |
|--------------------------|-------|-------|-------|-------|
| Teamwork (X1)            | 0.809 |       |       |       |
| Work Environment (X2)    | 0.261 | 0.839 |       |       |
| Employee Performance (Y) | 0.323 | 0.755 | 0.892 |       |
| Motivation (Z)           | 0.361 | 0.601 | 0.704 | 0.805 |

Employee performance (Y) shows the highest AVE, with a square root of 0.892. This value is greater than its correlations with teamwork (0.323), work environment (0.755), and motivation (0.704). This indicates that employee performance is well differentiated from other constructs and has strong measurement properties. Similarly, the motivation construct (Z) has a square root of AVE of 0.805, which exceeds its correlations with teamwork (0.361), work environment (0.601), and employee performance (0.704). This confirms that motivation is a distinct construct within the model. The results demonstrate that all constructs meet the Fornell–Larcker criterion. Each variable shares more variance with its own indicators than with other constructs. Therefore, the measurement model satisfies the requirement of discriminant validity, indicating that the constructs are conceptually and empirically distinct.

### 4.1.3. Common Method Bias

Table 3 reports the results of the common method bias assessment using Variance Inflation Factors (VIFs). This test evaluates the presence of collinearity among indicators and serves as a diagnostic for potential common method variance in the dataset. A VIF below the threshold of 5.00 indicates that collinearity is not problematic and that common-method bias is unlikely to threaten the validity of the results. For the teamwork construct (X1), the VIF values range from 1.801 to 3.721. Indicator X1.5 shows the highest VIF value at 3.721, while X1.1 has the lowest at 1.801. All values remain well below the critical threshold, indicating that the indicators do not exhibit multicollinearity and that the teamwork construct is measured reliably without redundancy.

**Table 3.** Result of Common Method Bias Test using Variance Inflation Factors (VIFs)

| Variable(s)           | Indicators | VIF Value |
|-----------------------|------------|-----------|
| Teamwork (X1)         | X1.1       | 1.801     |
|                       | X1.2       | 2.666     |
|                       | X1.3       | 1.839     |
|                       | X1.4       | 2.221     |
|                       | X1.5       | 3.721     |
| Work Environment (X2) | X2.2       | 2.001     |
|                       | X2.3       | 1.554     |
|                       | X2.4       | 1.665     |
| Motivation (Z)        | Z.1        | 2.204     |
|                       | Z.2        | 1.647     |
|                       | Z.4        | 3.228     |

| Variable(s)              | Indicators | VIF Value |
|--------------------------|------------|-----------|
| Employee Performance (Y) | Z.5        | 2.719     |
|                          | Y.1        | 4.116     |
|                          | Y.2        | 1.905     |
|                          | Y.3        | 3.151     |

The work environment construct (X2) shows VIF values ranging from 1.554 to 2.001. These values are relatively low, indicating minimal collinearity among indicators. This suggests that each indicator captures a distinct aspect of the work environment without overlapping excessively with others. For the motivation construct (Z), VIF values range from 1.647 to 3.228. Indicator Z.4 records the highest value at 3.228, while Z.2 shows the lowest at 1.647. Despite some variation, all values remain within acceptable limits, confirming that the indicators measure different dimensions of motivation without significant multicollinearity. The employee performance construct (Y) shows VIF values ranging from 1.905 to 4.116. Indicator Y.1 has the highest VIF at 4.116, which is still below the threshold of 5.00. Although this value is relatively higher compared to other indicators, it does not indicate a serious collinearity issue. The remaining indicators also fall within acceptable ranges. Thus, all VIF values across constructs are below the recommended threshold, confirming that multicollinearity is not a concern in this model. These results indicate that common method bias is unlikely to distort the relationships among variables. Therefore, the data are considered suitable for further structural model analysis.

## 4.2. Assessment of Structural Model

### 4.2.1. Coefficient Determination and Effect Size

Table 4 presents the results of the coefficient of determination ( $R^2$ ) and effect size ( $f^2$ ), which assess the explanatory power of the structural model and the magnitude of the relationships among variables. The  $R^2$  value for employee performance (Y) is 0.671. This indicates that 67.1 percent of the variance in employee performance is explained jointly by teamwork, work environment, and motivation. According to commonly accepted thresholds, this value reflects a moderate to substantial level of explanatory power. It suggests that the model has strong predictive relevance in explaining performance outcomes within the public education institution. The remaining 32.9 percent of the variance is attributed to other factors not included in the model, such as leadership style, compensation, or organizational culture.

**Table 4.** Result of Coefficient Determination (R-square) and Effect Size (f-square)

| Variable                 | R Square | f-square |
|--------------------------|----------|----------|
| Employee Performance (Y) | 0.671    | 0.808    |
| Motivation (Z)           | 0.405    |          |

The effect size ( $f^2$ ) for employee performance is 0.808, indicating a large effect according to standard criteria. This result shows that the combined influence of the exogenous variables on employee performance is substantial. It confirms that teamwork, work environment, and motivation play a critical role in shaping performance and contribute meaningfully to the model. For the motivation variable (Z), the  $R^2$  value is 0.405. This indicates that 40.5 percent of the variance in motivation is explained by teamwork and work environment. This level is considered moderate, suggesting that these two variables are important predictors of motivation, although other unobserved factors also contribute to its variation. The absence of an  $f^2$  value for motivation indicates that the table focuses on the overall explanatory contribution rather than individual predictor effects. The  $R^2$  and  $f^2$  results confirm that the structural model demonstrates adequate explanatory power and a strong effect size. The findings support the proposed model's relevance for explaining both employee performance and motivation, with a particularly strong influence on performance outcomes.

## 4.3. Hypothesis testing

Table 5 presents the results of hypothesis testing for the direct effects in the structural model. The evaluation is based on path coefficients, standard errors, t-statistics, and p-values to determine the significance and strength of the relationships.

Table 5. Result of Hypothesis Testing (Direct effect)

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| Hypothesis | Path Analysis                           | Coefficient | Standard Error | t-stat | P-Value | Decision  |
|------------|---|-------------|----------------|--------|---------|-----------|
| H1         | Teamwork → Employee Performance         | 0.029       | 0.014          | 2.026  | 0.006   | Supported |
| H2         | Work Environment → Employee Performance | 0.554       | 0.103          | 5.384  | 0.000   | Supported |

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The first hypothesis (H1) examines the effect of teamwork on employee performance. The path coefficient is 0.029, indicating a positive relationship. The t-statistic value of 2.026 exceeds the critical threshold of 1.96, and the p-value of 0.006 is below the significance level of 0.05. These results confirm that teamwork has a statistically significant positive effect on employee performance. However, the coefficient's magnitude is relatively small, suggesting that although teamwork contributes to performance, its direct impact is limited. This implies that teamwork may influence performance more effectively through indirect mechanisms rather than as a dominant direct driver.

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The second hypothesis (H2) tests the effect of the work environment on employee performance. The path coefficient is 0.554, which indicates a strong positive relationship. The t-statistic value of 5.384 is substantially higher than the threshold of 1.96, and the p-value is 0.000, confirming high statistical significance. The standard error of 0.103 remains within an acceptable range, indicating stable estimation. These results demonstrate that the work environment has a significant, direct effect on employee performance. Compared to teamwork, the work environment emerges as a more influential predictor, suggesting that physical and psychosocial workplace conditions play a dominant role in shaping employee outcomes. Thus, both hypotheses are supported, confirming that teamwork and the work environment significantly affect employee performance.

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However, the comparative strength of the coefficients indicates that the work environment exerts a much stronger direct influence than teamwork. This finding highlights the importance of prioritizing workplace condition improvements as a strategic approach to enhancing employee performance, while also recognizing the complementary role of teamwork. In addition, Table 6 presents the results of hypothesis testing for the mediating effects of motivation in the structural model. The analysis evaluates indirect relationships using path coefficients, standard errors, t-statistics, and p-values to assess mediation significance and strength.

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Table 6. Result of Hypothesis Testing (Mediating effect)

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| Hypothesis | Path Analysis  | Coefficient | Standard Error | t-stat | P-Value | Decision  |
|------------|--|-------------|----------------|--------|---------|-----------|
| H3         | Teamwork → Motivation → Employee Performance         | 0.079       | 0.010          | 8.282  | 0.000   | Supported |
| H4         | Work Environment → Motivation → Employee Performance | 0.200       | 0.013          | 15.707 | 0.000   | Supported |

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The third hypothesis (H3) examines whether motivation mediates the relationship between teamwork and employee performance. The indirect path coefficient is 0.079, indicating a positive mediating effect. The t-statistic of 8.282 is substantially higher than the critical value of 1.96, and the p-value of 0.000 confirms strong statistical significance. The standard error of 0.010 is low, indicating a stable and precise estimate. These results demonstrate that motivation significantly mediates the relationship between teamwork and employee performance. Although the magnitude of the indirect effect is modest, the high statistical significance suggests that teamwork enhances performance, at least in part, by increasing employee motivation. The fourth hypothesis (H4) tests the mediating role of motivation in the relationship between the work environment and employee performance. The indirect effect coefficient is 0.200, which is considerably higher than that of H3, indicating a stronger mediating effect. The t-statistic of 15.707 is highly significant, with a p-value of 0.000. The standard error of 0.013 remains low, confirming the reliability of the estimate.

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These findings indicate that motivation plays a substantial mediating role in translating a supportive work environment into improved employee performance. In general, both mediating hypotheses are supported. However, the magnitude of the indirect effect differs notably between the two relationships. Motivation plays a stronger mediating role in the relationship between work environment and employee

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performance than in the relationship between teamwork and performance. This suggests that improvements in the work environment are more likely to enhance performance through motivational mechanisms, while teamwork contributes both directly and indirectly, with a relatively smaller mediated effect.

## 5. Discussion

This study examines the direct and indirect effects of teamwork and the work environment on employee performance, with work motivation as a mediating variable in a public education institution. The findings provide several important insights that both support and extend existing literature. First, the results confirm that teamwork has a positive and significant effect on employee performance, although the magnitude of the effect is relatively small. This finding aligns with prior studies, which emphasize that teamwork enhances coordination, trust, and collective efficiency, thereby improving performance outcomes (Ananda & Eriza, 2023; Manzoor et al., 2011). Effective collaboration enables employees to share knowledge and complete tasks more efficiently. However, the weak coefficient suggests that teamwork alone is not a dominant driver of performance in this context. This result is consistent with studies that report limited or context-dependent effects of teamwork, particularly in structured or bureaucratic environments where collaboration may not fully translate into measurable outcomes (Saharso & Lestari, 2024; Setyawati & Utami, 2024). Therefore, teamwork appears necessary but not sufficient to substantially improve performance.

Second, the work environment has a strong, significant direct effect on employee performance. This finding indicates that physical and psychosocial workplace conditions are critical determinants of employee outcomes. It supports earlier research which shows that a conducive work environment enhances productivity by reducing constraints and improving employee comfort and engagement (Parashakti et al., 2020; Frastika & Franksiska, 2021; Juniantan et al., 2023). The relatively large coefficient suggests that improvements in infrastructure, safety, and social relations yield immediate, tangible benefits for performance. This result also reinforces evidence that environmental factors often serve as primary structural drivers of employee behavior in public sector organizations (Tulenan, 2015; Hasibuan & Sari, 2024).

Third, the findings confirm that work motivation significantly mediates the relationship between teamwork and employee performance. Although the indirect effect is smaller compared to the direct effect of the work environment, it remains statistically significant. This suggests that teamwork contributes to performance partly by enhancing employees' internal drive. This result is consistent with theoretical perspectives such as self-determination theory, which posits that social interaction and collaboration can strengthen intrinsic motivation (Gagné & Deci, 2005). Empirical studies also support this mechanism, showing that teamwork can foster motivation through recognition, support, and shared goals (Nelson, 2021). However, the relatively modest mediation effect indicates that the motivational pathway is not the primary mechanism through which teamwork influences performance.

Fourth, motivation is found to strongly mediate the relationship between the work environment and employee performance. The indirect effect is substantial and highly significant, indicating that a supportive work environment enhances performance primarily by increasing employee motivation. This finding aligns with previous studies that highlight the central role of motivation in translating organizational conditions into performance outcomes (Oktariyanti et al., 2023; Hamdan et al., 2023). It also supports Maslow-based perspectives, which argue that fulfilling safety and social needs in the work environment leads to higher motivation and productivity (Nurjanah & Suherman, 2022). However, the results also contribute to the literature by addressing inconsistencies found in prior studies. Some research reports that motivation does not mediate the relationship between the work environment and performance (Lestari & Wulansari, 2024; Harahap et al., 2022). In contrast, the present findings provide strong evidence of mediation, suggesting that motivation's effectiveness as an intervening variable may depend on organizational context. In public education institutions, where structural constraints and standardized procedures are common, motivational mechanisms appear to play a more critical role in linking environmental conditions to performance outcomes.

The study offers three key contributions. First, it confirms that both teamwork and work environment are significant predictors of employee performance, but their relative influence differs, with the work environment emerging as the dominant factor. Second, it clarifies the mediating role of motivation, demonstrating that it exerts a stronger effect on the relationship between the work environment and performance than on that between teamwork and performance. Third, it provides empirical evidence from a public sector context, which has been underrepresented in prior research. These findings imply that improving employee performance requires an integrated approach. Organizations should not rely solely on improving teamwork structures; they must also prioritize developing a supportive work environment that fosters motivation. By aligning structural conditions with psychological drivers, institutions can achieve more sustainable improvements in employee performance.

## 6. Conclusions

This study examines the effects of teamwork and the work environment on employee performance, with work motivation as a mediating variable in a public education institution. The findings provide clear empirical evidence regarding both direct and indirect relationships among these variables. First, teamwork has a positive and significant effect on employee performance. However, the relatively small coefficient indicates that its direct contribution is limited. This suggests that while collaboration, communication, and coordination are important, they are not the primary drivers of performance in this context. Second, the work environment has a strong and significant effect on employee performance. This finding confirms that physical conditions, workplace facilities, safety, and social relationships play a dominant role in shaping employee outcomes. A supportive and well-structured work environment directly enhances productivity and work effectiveness. Third, work motivation significantly mediates the relationship between teamwork and employee performance. This indicates that teamwork can indirectly improve performance by strengthening employees' internal drive, though the magnitude of this effect remains modest.

Fourth, work motivation also significantly mediates the relationship between the work environment and employee performance, with a stronger effect compared to teamwork. This finding highlights that the work environment influences performance not only directly but also indirectly by enhancing employee motivation. Thus, the study concludes that employee performance in public education institutions is influenced by both structural factors and psychological mechanisms. The work environment emerges as the most influential factor, both directly and indirectly through its impact on motivation. Teamwork contributes to performance, but its impact is more limited and partly dependent on motivational processes. These results imply that improving employee performance requires a balanced strategy. Organizations should prioritize creating a conducive work environment while simultaneously strengthening teamwork and fostering employee motivation. This integrated approach is essential to achieve sustainable improvements in performance within public sector institutions.

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