The Role of the Work Environment in Mediating Competence on Work Performance at the Regional Finance and Assets Agency of North Sumatra Province

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Abstract

This study aims to analyze the influence of competence on work performance with the work environment as an intervening variable in the Regional Finance and Assets Agency of North Sumatra Province. The research approach used is quantitative with a survey method through the distribution of questionnaires to employees as respondents. The research sample was determined by purposive sampling technique so that the data obtained was in accordance with the research needs of 80 respondents. The data was analyzed using path analysis to measure the direct and indirect influence between variables. The results of the study show that competence has a positive and significant effect on work performance. Competence has a positive and significant effect on the environment. The work environment also has a positive and significant effect on employee work performance. Thus, the work environment has been proven to mediate the influence of competence on employee work performance. The results of this research are expected to be input materials for management in improving work performance through improving employee competencies, and creating a supportive work environment.

Keywords: Competence, Work Environment, Work Performance

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Introduction

In an effort to improve the performance of public organizations, especially in government agencies such as the Regional Finance and Assets Agency of North Sumatra Province, employee competence is one of the key factors that cannot be ignored. Competencies, which include knowledge, skills, and work attitudes, are believed to significantly affect job performance. This is in line with the opinion of Robbins and Judge (2022) who affirm that competent employees have the ability to produce optimal work output compared to employees with low competence. The results of Sutrisno's research (2020) also support this view, where competence has been proven to make a great contribution to improving employee work performance. More recent research, such as the one conducted at the North Sumatra Provincial BKKBN Representative Office (Siregar, 2023), shows that competence has a direct and significant effect on employee work performance.

However, the influence of competence on work performance does not stand alone, but is influenced by other factors, one of which is the work environment. A conducive work environment can facilitate employees to actualize their competencies. Herzberg (in Robbins & Judge, 2022) through the Two-Factor Theory states that the work environment is included in the hygiene factor that can prevent job dissatisfaction and support the achievement of optimal work performance. Research by Susanto and Rahmawati (2021) confirms that a good work environment, both physically and psychosocially, is able to increase job satisfaction and employee performance. Furthermore, Robbins and Judge (2022) through the Job Demands–Resources Model approach explain that the work environment is one of the job resources that can strengthen the relationship between competencies and employee work performance.

Other empirical findings also show that the role of the work environment as a mediating variable is increasingly relevant to be studied. Research at the Solok Regency DPRD (Amrizal, 2023) proves that competence and work environment simultaneously have a significant effect on job satisfaction, which ultimately has an impact on employee performance. Similarly, research on BPJS Ketenagakerjaan Medan (Hasibuan, 2024) revealed that the physical work environment has a significant influence on employee performance through job satisfaction as a mediating variable. Research at the Medan City Cultural Office (Hutabarat, 2022) also shows that the work environment and competence together can improve employee work performance.

Although various previous studies have discussed the influence of competence and work environment on work performance, research on the role of the work environment as a mediating variable is still relatively limited, especially in the context of the Regional Finance and Assets Agency of North Sumatra Province. In fact, the condition of the work environment in government agencies often faces challenges, such as limited infrastructure, bureaucratic work climate, and high workload. Thus, it is important to examine the extent to which the work environment can strengthen the influence of competence on employee work performance. Based on this description, this research is expected to make a theoretical contribution through strengthening the Job Demands-Resources model and Herzberg's Two-Factor Theory, as well as making a practical contribution to the Regional Finance and Assets Agency of North Sumatra Province in creating a work environment that supports the development of employee competencies to achieve optimal work performance.

Literature Review
Work Performance

Definition of Work Performance

Gomes (2016) work achievement is the results achieved by a person in accordance with the role played in the organization and influenced by his ability, expertise, motivation, and opportunity to do his work.

Work Performance Indicators

According to Gomes (2016), work performance indicators include several main aspects that can be used to measure the extent to which employees achieve the expected work results. The following are the indicators of work performance according to Gomes:

1) Working Quantity
   Describe the amount of work that can be completed in a given time.
2) Quality of Work
   Showing the quality of the work done, seen from the thoroughness, neatness, and conformity with work standards.
3) Timeliness
   Relating to the ability to complete work according to a predetermined time limit.
4) Presence
   Describe the consistency of employee attendance at work, which has an impact on the smooth running of organizational tasks.
5) Collaborate
   Demonstrate the individual's ability to work with colleagues, both in a team and in relationships between individuals.

Work Environment

Definition of Work Environment

According to Sedarmayanti (2017), the work environment is the totality of tools, materials, conditions, and procedures that exist around workers that can affect the implementation of work and work comfort. A good work environment will provide a sense of security, comfort, and motivate employees to work more productively. On the other hand, a poor work environment can cause stress, lower morale, and even affect employee attendance and work performance.

Work Environment Indicators

According to Sedarmayanti (2017), work environment indicators are divided into two main groups, namely:

1. Physical Work Environment
   1) The physical work environment is related to conditions that can be observed and felt directly by the five senses. The indicators include:
   2) Lighting
      Enough light will improve concentration and reduce eye fatigue.
   3) Air circulation and ventilation
      Fresh air and good ventilation are important for health and comfort at work.
   4) Noise
      The noise level must be within the comfort limit so as not to interfere with concentration.
   5) Workspace layout
      Efficient spatial planning supports the smooth activities and mobility of employees.
   6) Cleanliness and safety
      A clean and safe workspace will encourage employees to work more comfortably and productively.

2. Non-Physical Work Environment (Psychological/Social)
   It includes social and psychological aspects that support work comfort, such as:
   1) Relationships between colleagues
      A harmonious work atmosphere can improve teamwork.

2) Relationship with superiors
A good relationship between subordinates and superiors encourages effective communication.
3) Leadership and management support
A fair and participatory leadership style creates a positive work climate.
4) Organizational culture
Values, norms, and habits that are embraced together in the organization also shape work comfort.

Competence

Definition of Competence

According to Sedarmayanti (2017), competence is a work ability of each individual that includes aspects of knowledge, skills, and work attitudes in accordance with the set standards.

Competency Indicators

Competency indicators according to Sedarmayanti (2017):
1) Knowledge
The individual's ability to understand and master certain information, procedures, or areas needed in the performance of a task.
2) Skills
A person's technical and non-technical ability to complete work effectively and efficiently.
3) Work Attitude
An individual's way of behaving towards work, including motivation, responsibility, discipline, and cooperation.
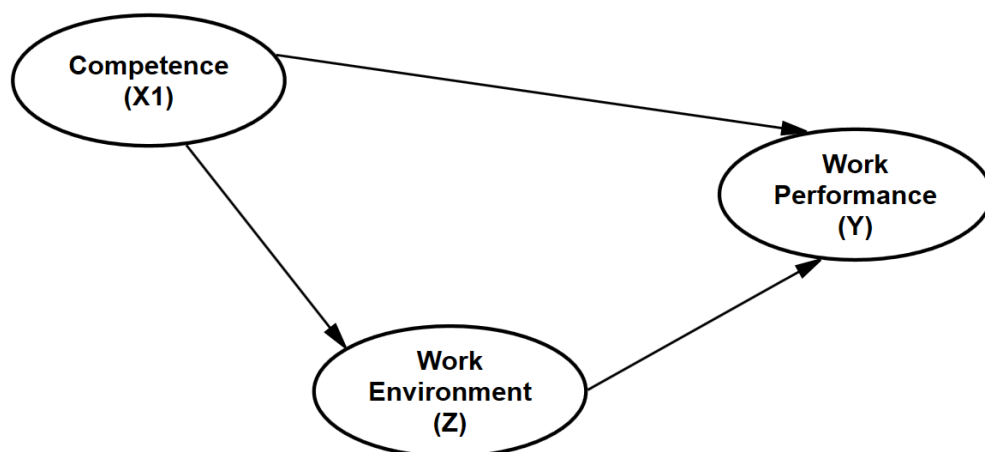
Conceptual Framework

Figure 1. Research Conceptual Framework

Research Hypothesis

H1: Competence has a positive and significant effect on work performance at the Regional Finance and Assets Agency of North Sumatra Province.

H2: Competence has a positive and significant effect on the work environment at the Regional Finance and Assets Agency of North Sumatra Province.

H3: The work environment has a positive and significant effect on work performance at the Regional Finance and Assets Agency of North Sumatra Province.

H4: Competence has a positive and significant effect on work performance through the work environment at the Regional Finance and Assets Agency of North Sumatra Province.

Methods
Types of Research

The type of research that the researcher uses is quantitative research. This type of quantitative research is carried out to make a study that aims to adjust a study and to analyze the influence of competence on work performance with the work environment as an intervening variable in the Regional Finance and Assets Agency of North Sumatra Province.

Research Location and Research Time

The location of the research was conducted at the Regional Finance and Assets Agency of North Sumatra Province, which is located on Jl. Imam Bonjol No. 61, Suka Damai, Medan 20142. The research period was carried out for 3 months, from April to June 2025.

Population and Sample

The population and sample in this study are all permanent employees at the Regional Finance and Assets Agency of North Sumatra Province. The number of employees at the office of the Regional Finance and Assets Agency of North Sumatra Province is 135 employees, with details: 80 ASN and 55 people as honorary employees. In this study, the sample was taken only from 80 ASN employees.

Research Data Sources

The data source used in this study is primary data.

Result and Discussion
Outer Model *Analysis*

The *Outer Model* analysis using *the PLS Algorithm* yielded:

Validity Test

Table 1. Value of Outer Loadings

	Competence	Work Performance	Work environment
X1.1	0,890		
X1.2	0,895		
X1.3	0,877		
Y.1		0,793	
Y.2		0,763	
Y.3		0,802	
Y.4		0,774	
Y.5		0,766	
Z.1			0,800

Z.2			0,800
Z.3			0,781
Z.4			0,776

Source: PLS Smart Output, 2025

Based on the values in Table 1 above, showing the results of the outer model test through the loading factor / outer loadings value, all indicators in each variable have a loading value ≥ 0.70. This shows that each indicator is able to represent a measured construct validly and robustly. Therefore, it can be concluded that all items in the questionnaire have met the criteria of convergent validity and can be used in subsequent analysis. For more details on the above value, you can also see the following figure.
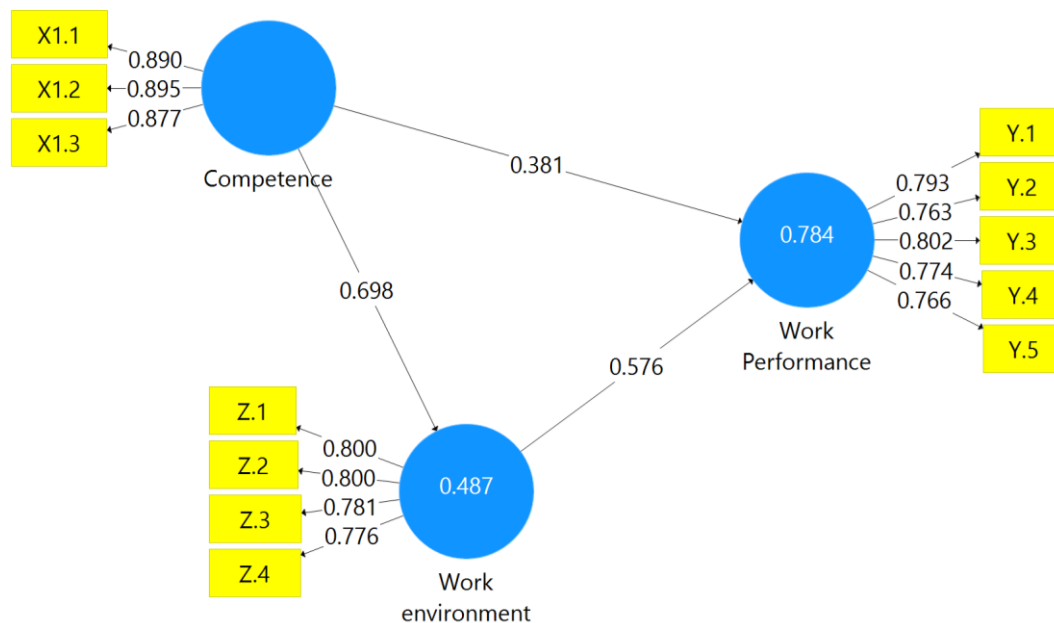

Figure 1. Outer Loading

Reliability Test

Table 2. Construct Reliability and Validity Test

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Competence	0,866	0,873	0,918	0,788
Work Performance	0,839	0,840	0,886	0,608
Work environment	0,799	0,800	0,869	0,623

Source: PLS Smart Output, 2025

From Table 2 above, the reliability test results show that Cronbach's Alpha and Composite Reliability values on all constructs have values above 0.70. This shows that all indicators have high internal consistency and are reliable in measuring their respective constructs. Thus, the research instrument is declared reliable and feasible for use in structural model testing.

Coefficient of Determination (R2)

In assessing a model with PLS it starts by looking at the R-square for each dependent latent variable. The table below is the result of Rsquare estimation using SmartPLS.

Table 3. R Square Results

	R Square	R Square Adjusted
Work Environment	0,487	0,481
Work Performance	0,784	0,778

Source: Smart PLS, 2025

In table 3, there is an R-square value in both dependent variables for the work environment variable, there is an R-square value of 0.487, meaning that the influence of competence is 0.487 or 48.7%, the rest is in other variables outside the model. The R square value of work performance is 0.784, meaning that the influence of competence and work environment is 0.784 or 78.4%, the rest is on other variables outside the model.

Structural Model Testing (Inner Model)

Internal testing of the model or structural model is carried out to see the relationship between the construct, significance value and R-square of the research model. The structural model is evaluated by using R-square for dependent constructs.

Hypothesis Testing
Direct Influence Between Variables

The direct influence between variables can be seen in the value *of path coefficients*. The results of the data processing show the value of direct influence can be seen in the following table.

Table 4. *Path Coefficients* (Direct Influence)

	Original Sample	T Statistics	P Values	Conclusion
Competence -> Work Performance	0,381	4,372	0,000	Accepted
Competence -> Work Environment	0,698	10,909	0,000	Accepted
Work Environment -> Work Performance	0,576	6,398	0,000	Accepted

Source: PLS Smart Output, 2025

In the results of Table 4, there is a direct influence value which will be explained as follows:

1. Competency has a positive and significant effect on work performance with a t-statistical value of 4.372 above 1.96 and significance of 0.000 below 0.05, meaning that competence has a positive and significant effect on work performance because the significance value is below 0.05. The results of this study are in line with the results of previous research, namely Baharuddin (2022) which stated that competence has a positive and significant effect on the work performance of sales employees.
2. Competence has a positive and significant effect on the work environment with a t-statistical value of 10.909 above 1.96 and a significance of 0.000 below 0.05, meaning that

competence has a positive and significant effect on the work environment because the significance value is below 0.05.

3. The work environment has a positive and significant effect on work performance with a t-statistical value of 6.398 above 1.96 and a significance of 0.000 below 0.05, meaning that the work environment has a positive and significant effect on work performance because the significance value is below 0.05. The results of this study are in accordance with the results of previous research, namely Kusumaningrum's research (2024) stating that the work environment has a positive and significant effect on work performance in employees of the DIY Environment and Forestry Service.

Indirect Influence Between Variables

The indirect influence between variables can be seen in the value *of specific indirect effects*. The results of data processing show the value of indirect influence can be seen in Table 5 below.

Table 5. *Specific Indirect Effects*

	Original Sample	T Statistics	P Values	Conclusion
Competence -> Work Environment -> Work Performance	0,402	6,671	0,000	Accepted

Source: Smart PLS, 2025

In table 5, there is an indirect influence between variables which will be explained as follows: Competency has a positive and significant effect on work performance through the work environment with a t-statistical value of 6.671 and a significance value of 0.000, meaning that the work environment plays an intervening variable between competence and work performance.

Conclusion

1. Competence has a positive and significant effect on work performance at the Regional Finance and Assets Agency of North Sumatra Province.
2. Competence has a positive and significant effect on the work environment at the Regional Finance and Assets Agency of North Sumatra Province.
3. The work environment has a positive and significant effect on work performance at the Regional Finance and Assets Agency of North Sumatra Province.
4. Competence has a positive and significant effect on work performance through the work environment at the Regional Finance and Assets Agency of North Sumatra Province.

Suggestion

1. In the competency variable, it turns out that the indicator that has the lowest value is the statement "I show a positive work attitude such as discipline, honesty, and responsibility". Suggestions that can be given by strengthening the internalization of work ethics and leadership values become an example for their employees.
2. For the variable of the work environment with the statement "The relationship between employees in my workplace is harmonious". Suggestions from agencies that can be given are in the form of building a collaborative work culture and holding team strengthening activities.
3. Work achievements with the statement "I am able to work effectively with colleagues in a team". Suggestions can be given to conduct teamwork training and create a team evaluation system, not just an individual.

References

[1] Amrizal. (2023). The Influence of Competence and Work Environment on Job Satisfaction of Solok Regency DPRD Employees. Journal of Innovative Research, 4(2), 112–120.

[2] Baharuddin, A. A., Musa, M. I., & Burhanuddin, B. (2022). The effect of motivation and work competence on the work performance of sales employees.*Journal of Accounting, Management and Economics*,*1*(1), 55-62.

[3] Efendi, M., & Mesra, B. (2023). The Role Of Work Discipline In Mediating Teamwork And Work Environment On Employee Performance (Study At The Property Office, Pt. Graha Kreasi Medan).*Lead Journal of Economy and Administration*,*2*(2), 104-113.

[4] Ghozali, I. (2021). Structural Equation Modeling: An Alternative Method with Partial Least Square (PLS). Semarang: Publishing Agency of Diponegoro University.

[5] Hasibuan, I. (2024). The Influence of Work Environment and Job Satisfaction on the Performance of BPJS Employment Medan Employees. Repository of the University of Muhammadiyah North Sumatra.

[6] Hasibuan, M. S. P. (2016). Human Resource Management. Jakarta: Bumi Aksara.

[7] Hutabarat, L. (2022). The Influence of Competence and Work Environment on Employee Work Performance at the Medan City Cultural Office. Repository of the Islamic University of North Sumatra.

[8] Jamhuri, A. M., Ferine, K. F., & Mesra, B. (2024). The influence of work environment and work discipline on employee performance with motivation as an intervening variable of PT Hutama Binjai-Brandan Infrastructure Works Zone IV.*World Journal of Advanced Research and Reviews*,*21*(3), 2040-2049.

[9] Kusumaningrum, R., & Kusuma, N. T. (2024). The Influence of Transformational Leadership, Work Environment, Work Discipline on Work Performance in Employees of the DIY Environment and Forestry Service.*Journal of Education and Social Sciences Management (JMPIS)*,*5*(4).

[10] Mangkunegara, A. A. A. P. (2017). Corporate Human Resource Management. Bandung: PT Remaja Rosdakarya.

[11] Nitissemito, A. S. (2018). Personnel Management. Jakarta: Ghalia Indonesia.

[12] Pranoto, W., & Mesra, B. (2024). The Influence of Work Motivation and Leadership Style On Employee Performance Through Job Satisfaction as A Mediating Variable at The Employment BPJS Sumbagut Regional Office.*Lead Journal of Economy and Administration*,*3*(1), 31-49.

[13] Robbins, S. P., & Judge, T. A. (2022). Organizational Behavior (19th ed.). Pearson Education.

[14] Serendipity. (2017). Human Resource Management, Bureaucratic Reform, and Civil Service Management. Bandung: Refika Aditama.

[15] Siregar, R. (2023). The Influence of Work Discipline, Communication, and Competence on Work Performance and Its Implications on the Performance of Employees of the North Sumatra Provincial BKKBN Representative Office. Repository of Panca Budi Development University.

[16] Sugiyono. (2017). Statistics for Research. Bandung: Alfabeta.

[17] Susanto, T., & Rahmawati, I. (2021). The Influence of the Work Environment on Job Satisfaction and Employee Performance. Journal of Management and Business, 8(1), 45–52.

[18] Sutrisno, E. (2020). Human Resource Management. Kencana Prenada Media Group.