

# The Effect of Leadership, Work Culture and Competence on Service Performance with Motivation as an Intervening Variable on Health Workers at West Sumatra Pulmonary Hospital

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This study aims to examine the influence of leadership, work culture, and competence on service performance, with motivation as an intervening variable, among healthcare workers at the West Sumatra Lung Hospital. Data collection was conducted through a survey and questionnaire distribution, with a sample of 129 respondents. The analysis method used was structural equation modeling using SmartPLS. The results showed a significant influence of leadership on motivation. There was a significant influence of work culture on motivation. There was a significant influence of competence on motivation. There was a significant influence of leadership on service performance. There was an insignificant influence of work culture on service performance. There was an insignificant influence of competence on service performance. There was a significant influence of motivation on service performance. Motivation mediated the influence of leadership on service performance. Motivation mediated the influence of work culture on service performance. Motivation mediated the influence of competence on service performance.

**Keywords:** Leadership, Work Culture, Competence, Motivation, and Service Performance

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## 1. Introduction

In an agency or organization, the role of human resources is crucial in determining the effectiveness of a company's operations. Competent and qualified human resources are essential for organizations, especially in the current era of globalization. In this era, all business organizations must be ready to adapt and strengthen themselves to compete and meet future challenges. Human resources, specifically employees, must always play an active and dominant role in every organizational activity because humans are the planners, behaviorists, and determinants of the achievement of organizational goals. Effective workforce utilization is key to improving employee performance, so organizational policies are needed to motivate employees to work more productively according to established plans. Productivity is a company's benchmark for measuring employee performance.[1].

According to[2] performance is work results in terms of quality and quantity achieved by an employee in carrying out his duties in accordance with the responsibilities given to him. The factors that influence performance are Ability and Motivation. According to[3] Factors that influence performance are knowledge, skills, competence, compensation, motivation, leadership, enthusiasm, work environment, organizational commitment and job satisfaction.. Performance is not an individual characteristic, such as talent or ability, but is a manifestation of the talent or ability itself.

Performance is the results of work and work behavior achieved in completing assigned tasks and responsibilities within a specific period. Performance is a function of motivation and ability. To complete a task or job, a person should have a certain degree of willingness and ability. Performance is the work results

achieved by employees in developing their tasks and work originating from the organization. Performance is also a work result produced by an individual through an organizational or company process that can be measured concretely and compared through standards that have been determined by the company or organization.

The important things in performance are quality, quantity, timeliness, effectiveness, and independence. Work quality is measured by an individual's perception of the quality of the work produced and the perfection of the individual's skills and abilities. Quantity of work, which is the amount produced, is expressed in terms such as the number of units and the number of activity cycles completed. Timeliness is the level of activity completed at the beginning of the specified time. The effectiveness of the level of organizational resource utilization is maximized with the aim of increasing the results of each unit in the use of resources. The level of independence of an individual who will later be able to carry out his work function. Performance is an individual's success in carrying out the tasks assigned to him. Good performance from an individual can be seen from an individual's ability to understand and complete the tasks given to him so that in working, he gets optimal and satisfactory results.

West Sumatra Lung Hospital, formerly known as the Lubuk Alung Lung Disease Treatment Center (BP4), is a technical implementation unit of the West Sumatra Provincial Health Service which was later designated as a class B specialty hospital in accordance with West Sumatra Regional Regulation Number 11 of 2017..The performance level of employees at the West Sumatra Lung Hospital is not yet optimal. Performance-related issues will always be faced by the management of any institution. Therefore, management must understand the factors that influence employee performance. These factors will enable management to take various policy directions as needed to produce and improve employee performance, meeting employee expectations.From this it can be concluded that the realization of employee performance fluctuates, meaning that the level of employee performance is not optimal, which is suspected to be caused by leadership, work culture and competence through work motivation.

Work motivation is a way to encourage employees to work according to expectations. Providing motivation to employees can improve performance, resulting in high work enthusiasm and completing tasks assigned by management. Every manager's job is to ensure that employees have a high level of motivation by providing monetary and non-monetary incentives. Highly motivated employees have high work productivity and performance. According to [4] states that work motivation is a way to encourage employees to work according to expectations. Providing motivation to employees can improve performance, leading to high work enthusiasm and completing tasks assigned by management.

Leadership It serves as a model or social influence for an organization where leaders strive to participate in efforts to achieve organizational goals. A good leadership style will motivate employees to improve their performance. It also creates high employee morale and encourages them to complete tasks assigned by their leaders. To achieve optimal work results, companies must consider leadership style. Leadership style significantly determines the company's desired results.[4].

The most important factor in leadership style is the factors that influence it. These include autocratic, militaristic, paternalistic, and democratic leadership styles. Autocratic leaders prioritize personal goals over organizational goals. Militaristic leaders often use a command system to motivate their subordinates. Paternalistic leaders rarely give subordinates the opportunity to develop their creativity and imagination. Democratic leaders always prioritize cooperation and coworkers in achieving goals. Leadership style is a factor that can influence job satisfaction and performance.

Employee work culture reflects the values, attitudes, and behaviors upheld in carrying out duties and responsibilities in the work environment. This culture serves as an important foundation in creating a

professional, harmonious, and productive work atmosphere. Every employee plays a strategic role in realizing the vision and mission of an agency or organization. Therefore, it is important for all employees to internalize work culture values, such as integrity, responsibility, discipline, teamwork, excellent service, and a commitment to quality. A good work culture not only encourages individual performance but also strengthens collective work, increases efficiency, and builds public trust in the institution where we work. In practice, a positive work culture is reflected in time discipline, effective communication, concern for work results, and the ability to continuously learn and innovate.[5].

Competence is the ability to carry out or perform a job or task based on skills and knowledge and supported by the work attitude required by the job.[6]. Competence is related to an individual's ability to carry out a job correctly and have advantages based on matters concerning knowledge, skills and attitudes. Competence is a person's ability to produce at a satisfactory level in the workplace, including a person's ability to transfer and apply these skills and knowledge in new situations and increase agreed benefits. Competence also shows the characteristics of knowledge and skills possessed or needed by each individual that enable them to carry out their duties and responsibilities effectively and raise professional quality standards in their work.

Based on the results of research conducted by[7]which states that leadership, work culture and competence have a significant influence on performance. The research conducted[8]that leadership, work culture and competence have a positive and significant influence on performance. Research conducted by[9] which states that leadership, work culture and competence have a significant influence on employee performance. Research conducted by[10]which states that work motivation has a significant influence on performance.

## 2. Method

### Structural Equation Modeling (SEM) Analysis

This study used the Structural Equation Modeling (SEM) analysis tool using the SmartPLS program. SmartPLS is a component-based approach for testing structural equation models, commonly called SEM. SmartPLS is based on the idea of having two iterative procedures that use least squares estimation for single and multi-component models. By applying these procedures, this algorithm aims to minimize the variance of all dependent variables, therefore the cause and direction between all variables need to be clearly defined. SmartPLS is divided into measurement models and structural models. SmartPLS is a powerful method because it is not based on many assumptions. Data does not have to be multivariate normal distribution (indicators with categorical, ordinal, interval, and ratio scales can be used in the same model). SmartPLS is also more efficient with algorithmic calculations that are capable of estimating larger and more complex models with hundreds of latent variables and thousands of indicators.[12].

### Measurement Model Test (Outer Model)

In data analysis techniques using SmartPLS, there are three criteria for assessing the outer model: Convergent Validity, Discriminant Validity, and Composite Reliability. Convergent validity of a measurement model with reflective indicators is assessed based on the correlation between item scores or component scores estimated using SmartPLS software. An indicator is considered to have good reliability if it has a value above 0.7. We can see this figure by referring to the Outer Loading table in SmartPLS.[13].In this composite reliability test, there are two tables that must be observed: the values contained in the Composite Reliability table and Cronbach's Alpha, which must be greater than 0.7. For the Discriminant Validity test, it can be seen from the cross-loading value. The correlation value of the indicator to its construct must be greater than the correlation value between the indicator and other constructs. There is another way to test

Discriminant Validity by comparing the root value of the Average Variance Extracted (AVE) for each construct with the correlation between the construct and other constructs.

1. *Measurement Model* Validity

There are three criteria for using data analysis techniques to assess the outer model: Convergent Validity, Discriminant Validity, and Composite Reliability. In the development stage, a correlation of 0.50 to 0.6 is considered acceptable. In research, the limit for convergent validity is above 0.7.

2. *Reliability*

Once the data validity level is known, the next step is to determine the level of data reliability or the level of reliability of each construct or variable. This assessment is done by looking at Composite reliability value and Cronbach alpha value. A construct is said to be reliable if it provides a Cronbach alpha value > 0.70.

3. R-square

Next, as explained previously, the inner model assessment will be evaluated through the R-Squared value, to assess the influence of certain exogenous latent constructs on endogenous latent constructs to see whether they have a substantive influence.

### Path Coefficient and Hypothesis Testing

Testing the inner model or structural model is conducted to examine the relationship between variables, the significance value, and the R-square of the research model. Model assessment using PLS begins by examining the R-square for each dependent latent variable. Changes in the R-square value can be used to assess the influence of a particular independent latent variable on the dependent latent variable and whether it has a substantive effect.

## 3. Results and Discussion

### Research Description

Table 1. Calculation of Questionnaire Distribution Results

No.	Questionnaire	Amount	Percentage%
1	Distributed questionnaires	129	100
2	Unreturned questionnaires	0	0
3	Incorrectly filled out (defective or damaged) questionnaire	0	0
4	Questionnaires suitable for data processing	129	100

Source: Survey Results, 2026

### Research Data Analysis

The data processing technique in this study uses the SEM method based on Partial Least Square (PLS) which requires two stages for the assessment of a research model: the outer model and the inner model. The outer model assessment aims to assess the correlation between item or indicator scores and their construct scores, which indicate the level of validity of a statement item. Outer model testing is carried out based on the results of questionnaire trials that have been conducted for all research variables. There are three criteria in the use of data analysis techniques to assess the outer model: Convergent Validity, Discriminant Validity, and Composite Reliability. In the development stage, a correlation of 0.50 to 0.6 is considered adequate or acceptable. In research, the limit for convergent validity values is above 0.7.

### Outer Model (Structural Model) Testing Before Elimination

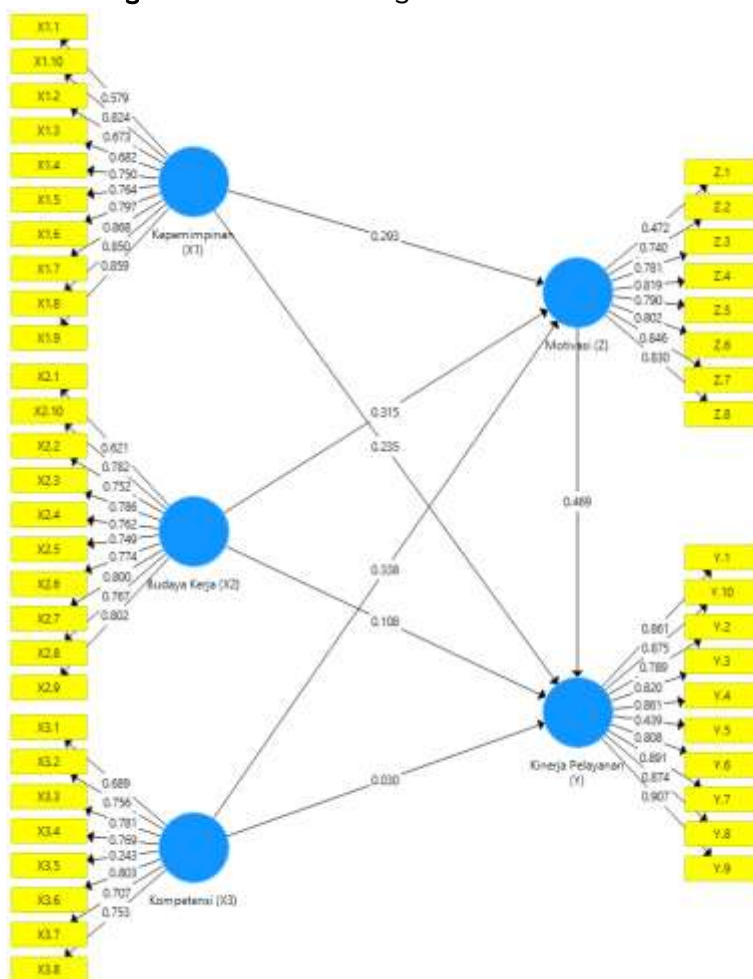
Testing of the outer model (measurement model) before elimination was conducted to assess the validity and reliability of indicators for each construct in the study. Analysis using SmartPLS software showed that

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correlation values (outer loadings) between statement items and latent variables still varied. Some indicators met convergent validity criteria with loading values above 0.70, while others fell below the recommended limit. Furthermore, evaluation of the Average Variance Extracted (AVE) and Composite Reliability values indicated that not all constructs met the established standards. Therefore, a process of eliminating invalid indicators was necessary to improve the quality of the measurement model.

Based on the results Testing the outer model using SmartPLS, obtained the correlation values between the statement items of the research variables as follows:

**Figure 1.** Outer Loadings Before Elimination

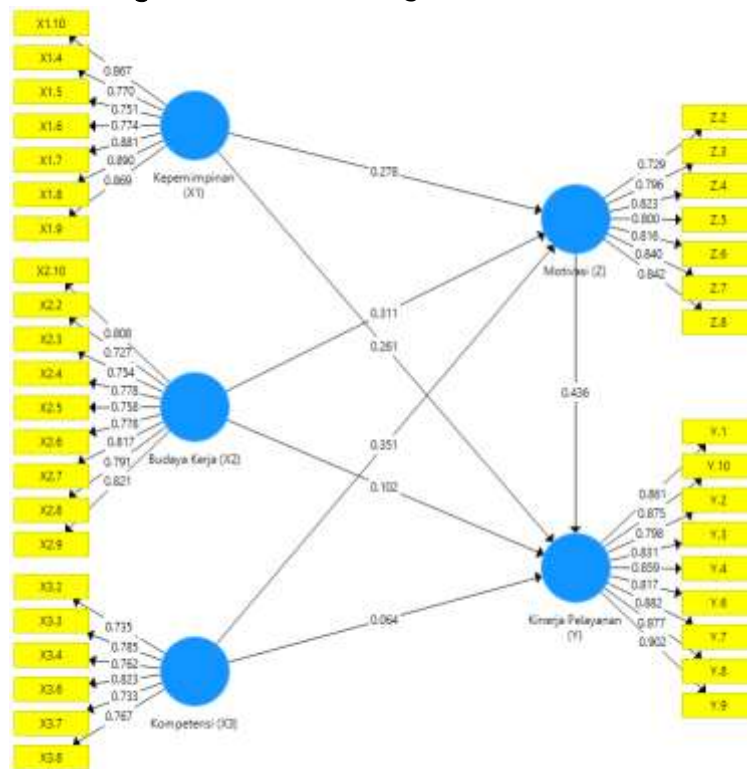


In data analysis techniques using SmartPLS, there are three criteria for assessing the outer model: convergent validity, discriminant validity, and composite reliability. Convergent validity of a measurement model with reflective indicators is assessed based on the correlation between item scores or component scores estimated with PLS software. Indicators are considered to have good reliability if they have a value above 0.7. There are three criteria in the use of data analysis techniques to assess the outer model: convergent validity, discriminant validity, and composite reliability. In the development stage, a correlation of 0.50 to 0.6 is considered adequate or acceptable. In research, the limit value of convergent validity is above 0.7.

**Outer Model (Structural Model) Testing After Elimination**

Based on the results Testing the outer model using SmartPLS, obtained the correlation values between the statement items of the research variables as follows:

Figure 2. Outer Loadings After Elimination



**Average Variance Extracted (AVE) Assessment**

The validity criteria for a construct or variable can also be assessed through the Average Variance Extracted (AVE) value for each construct or variable. A construct is considered to have high validity if its value is above 0.50. The AVE values for all variables are presented below.

Table 2. Average Variance Extracted (AVE) Value

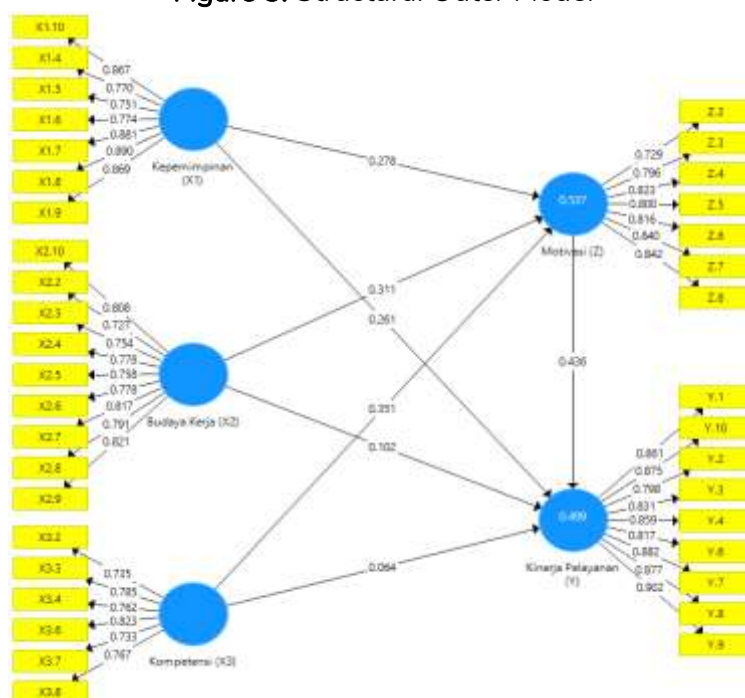
	<i>Average Variance Extracted (AVE)</i>
Service Performance (Y)	0.733
Leadership (X1)	0.690
Work Culture (X2)	0.611
Competence (X3)	0.590
Motivation (Z)	0.652

Based on Table 2, it can be concluded that all constructs or variables above meet good validity criteria. This is indicated by the Average Variance Extracted (AVE) value above the recommended 0.50 criterion.

**Outer Model Testing (Structural Mode)**

The next testing process is testing the inner model, or structural model, which aims to determine the relationships between hypothesized constructs. The structural model is evaluated by observing the R-Square value for the endogenous construct and the influence it receives from the exogenous construct.

Figure 3. Structural Outer Model



Based on the image above, the structural model above can be formed into the following model equation:

- a. Equation model I, is a description of the magnitude of the influenceconstructleadership, work culture and competencetomotivation with the existing coefficients plus the error rate which is an estimation error or which cannot be explained in the research model.

$$Z = 0.278X1 + 0.311X2 + 0.351X3$$

- b. Equation model II, is a description of the magnitude of the influenceconstructleadership, work culture, competencedmotivation towards service performance with each coefficient for each construct plus an error which is an estimation error.

$$Y = 0.261X1 + 0.102X2 + 0.064X3 + 0.436 Z$$

Next, as explained previously, the inner model assessment will be evaluated through the R-Squared value, to assess the influence of certain exogenous latent constructs on endogenous latent constructs to see whether they have a substantive influence. The following is the R-Square estimate:

Table 3. Evaluation of R Square Value

	<i>R Square</i>	<i>R Square Adjusted</i>
Service Performance (Y)	0.499	0.482
Motivation (Z)	0.537	0.526

Source: SmartPLS Outer Model Test Results, 2026

In the table above, the r-square value of the service performance variable is 0.499 or 49.9%, so the contribution of the leadership, work culture, and competence variables is 0.499 or 49.9%. and motivation towards service performance is 49.9%, the remaining 50.1% is influenced by other variables outside this research such as work environment, organizational commitment and job satisfaction.

The R-Square value of the motivation variable is 0.537 or 53.7%, so the contribution of the variables of leadership, work culture and competence to motivation is 53.7%, the remaining 46.3% is influenced by other variables outside this research such as the work environment, organizational commitment and job satisfaction.

## PenHypothesis test

TestingThe hypothesis aims to answer the problems in this study, namely the influence of certain exogenous latent constructs on certain endogenous latent constructs, either directly or indirectly through mediating variables. Hypothesis testing in this study can be assessed from the magnitude of the t-statistic or t-count compared to the t-table of 1.96 at 5% alpha. If the t-statistic/t-count < t-table 1.96 at 5% alpha, then Ho is rejected and if the t-statistic/t-count > t-table 1.96 at 5% alpha, then Ha is accepted. The following SmartPLS output results illustrate the estimated output for testing the structural model.

**Table 4.** Results for Inner Weights Direct Affect

	<i>Original Sample (O)</i>	<i>Sample Mean (M)</i>	<i>Standard Deviation (STDEV)</i>	<i>T Statistics ( O/STDEV )</i>	<i>P Val ues</i>
Leadership (X1) -> Motivation (Z)	0.278	0.292	0.067	4,183	0,000
Work Culture (X2) -> Motivation (Z)	0.311	0.308	0.072	4,312	0,000
Competence (X3) -> Motivation (Z)	0.351	0.348	0.093	3,779	0,000
Leadership (X1) -> Service Performance (Y)	0.261	0.270	0.073	3,578	0,000
Work Culture (X2) -> Service Performance (Y)	0.102	0.097	0.073	1,392	0.165
Competence (X3) -> Service Performance (Y)	0.064	0.068	0.078	0.827	0.409
Motivation (Z) -> Service Performance (Y)	0.436	0.433	0.076	5,709	0,000
Leadership (X1) -> Motivation (Z) -> Service Performance (Y)	0.121	0.126	0.033	3,628	0,000
Work Culture (X2) -> Motivation (Z) -> Service Performance (Y)	0.136	0.134	0.039	3,481	0.001
Competence (X3) -> Motivation (Z) -> Service Performance (Y)	0.153	0.153	0.056	2,729	0.007

## 4. Conclusion

There is a significant influence of leadership on motivation. There is a significant influence of work culture on motivation. There is a significant influence of competence on motivation. There is a significant influence of leadership on service performance. There is an insignificant influence of work culture on service performance. There is an insignificant influence of competence on service performance. There is a significant influence of motivation on service performance. Motivation mediates the influence of leadership on service performance. Motivation mediates the influence of work culture on service performance. Motivation mediates the influence of competence on service performance.

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