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The Influence of Competence and Transformational Leadership on Employee Performance with Performance Motivation as A Mediating Variable in A State-Owned Enterprise Company (BUMN) Managing Water Resources

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Abstract: This study aims to examine the effect of competence and transformational leadership on employee performance, as well as the role of work motivation as a mediating variable, in the context of a state-owned company managing water resources, namely Perum Jasa Tirta II. The background of this research is the stagnation of employee performance that occurs despite policy changes and increasing demands for professionalism. The research method used is a quantitative approach with descriptive and verification designs, using data from 222 respondents analyzed through Partial Least Squares-based Structural Equation Modeling. The results showed that competence has a positive and significant effect on work motivation and employee performance, and work motivation is able to mediate the relationship between competence and performance. Meanwhile, transformational leadership only has a weak effect on performance and is insignificant on work motivation, and does not have a significant indirect effect on performance through motivation. In conclusion, competency development is more effective than the transformational leadership approach in improving employee performance in BUMN managing water resources.

Keyword: Competence, Transformational Leadership, Employee Performance, Work Motivation.

INTRODUCTION

Global challenges in water resources management are increasing due to population growth, urbanization and climate change. The Indonesian government has made water self-sufficiency a top priority in its national development vision to support food and energy security (BPMI Setpres, 2024). In this context, effective water management is critical, especially for the agricultural sector that relies on irrigation systems. However, the sector faces major obstacles, including the stagnation of human resource performance in water management BUMN such as Perum Jasa Tirta II, which over the past five years has shown minimal improvement in individual performance, despite increasing demands for professionalism and efficiency.

To answer these challenges, the Ministry of PUPR through the Director General of Water Resources prepares strategic programs based on sustainable management which includes

conservation, utilization, control of water destructive power, and the active role of the community (Kementerian PU, 2025). As part of a state-owned enterprise, Perum Jasa Tirta II plays a key role in supporting national water management (Perum Jasa Tirta II, 2025). Along with organizational restructuring and new policies, demands for employee professionalism and accountability have also increased. The changes to the performance appraisal system from 2020 to 2023 reflect the company's commitment to improving accountability and encouraging the development of sustainable performance, which is an important foundation in achieving sustainable development targets and the integration of water, energy and food security (Nugroho et al., 2022) (McCarthy & Obidzinski, 2015).

Employee performance at Perum Jasa Tirta II is a major concern because over the past four years there has been no significant improvement in the performance appraisal category, even though employees have shown good performance. This condition has an impact on career stagnation, decreased motivation, and job dissatisfaction, which in turn can interfere with the achievement of company goals, service quality, and competitiveness, especially in the face of work area expansion.

Secondary data from performance reports had not been able to reveal the main causes of this stagnation, so a pre-survey was conducted to explore perceptions directly from employees. The results showed that the five main factors thought to influence employee performance were work motivation, discipline, competence, leadership and compensation. Additional factors such as career development, job satisfaction and training also emerged as important aspects of more effective HR management.

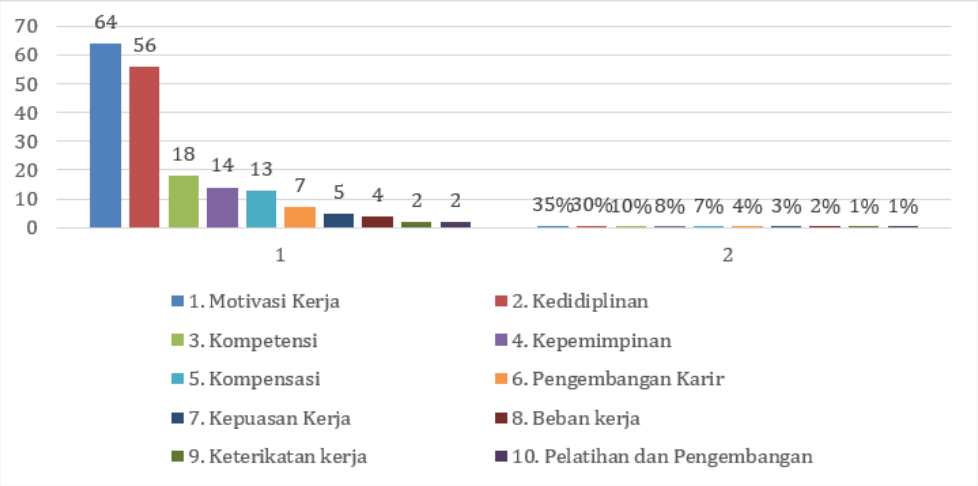

Figure 1.1. Graph of Perceptions of Factors Affecting Employee Performance based on pre-survey.
Source: Researcher's Results, 2025

Pre-survey results indicate a relationship between competence, leadership, and work motivation on employee performance. However, the findings of various previous studies still show inconsistent results. Some studies found that competence and transformational leadership have direct or indirect effects on performance through work motivation, while other studies showed the opposite (Fahlevi, 2021) (Lianasari & Ahmadi, 2022). This difference indicates the need for further testing in different organizational contexts. Research that specifically highlights BUMN that manage water resources is still very limited. Therefore, it is important to examine the relationship between competence, transformational leadership, work motivation, and employee performance simultaneously in the context of Perum Jasa Tirta II (Tecoalu et al., 2022).

This research is expected to provide evidence that competence, transformational leadership has a significant effect on employee performance, including work motivation can

mediate competence and leadership on employee performance. The targets and achievements in this study are to produce empirical findings on how much direct and indirect influence competence and transformational leadership have on employee performance in State-Owned Enterprises (BUMN) companies managing water resources. The results of this study are expected to make a real contribution in strengthening human resource management, especially in designing performance improvement strategies based on competency development, effective leadership, and increasing employee motivation.

METHOD

This research method adopts a quantitative approach with descriptive and verification designs (Sugiyono, 2018). This research focuses on all employees of work units & employee representatives of regional units V, VI and VII at Perum Jasa Tirta II (PJT II). This research uses stratified random sampling technique with a population of 413 respondents. The minimum sample size was determined using the Slovin formula, which resulted in a sample requirement of 204 respondents. However, considering that this number is a minimum limit, the researcher decided to use all respondents who filled out the questionnaire completely, namely 222 respondents. Data analysis was conducted using the Structural Equation Modeling (SEM) method based on Partial Least Squares (PLS), allowing researchers to evaluate the relationship between variables in a complex manner (Ghozali, 2015).

RESULTS AND DISCUSSION

Based on data from 222 respondents who are all employees of work units & representatives of employees of regional units V, VI and VII at Perum Jasa Tirta II (PJT II). obtained the identity of respondents regarding gender, age, education and length of service. Based on data collection through questionnaires, the respondent's profile is obtained, the frequency distribution of which is presented in table 1:

Table 1. Respondents

	Variable	Frequnecy	Percentage
Gender	Male	118	53,20%
	Female	104	46,80%
Age	<20 Years	0	0%
	20-30 years	37	16,70%
	31-40 years	65	29,30%
	41-50 years	82	36,90%
	>50 Tahun	38	17,10%
Education	High School	21	9,50%
	Associate Degree	31	14%
	Bachelor's Degree	133	59,90%
	Master's Degree	36	16,20%
	Doctorate Degree	1	0,50%
Position	BOD-1	17	7,70%
	BOD-2	29	13,10%
	BOD-3	56	25,20%
	BOD-4	48	21,60%
	BOD-5	72	32,40%

Source: Researcher's results, 2025

Based on Table 1, the majority of respondents were male (53.20%) and female (46.80%). Most respondents were 41-50 years old (36.90%), followed by 31-40 years old (29.30%), >50 years old (17.10%), and 20-30 years old (16.70%). The majority of respondents have a Bachelor's degree (S1) as much as 59.90%, followed by Master's degree (S2) 16.20%, Diploma 14%, SMA 9.50%, and Doctoral degree (S3) 0.50%. In terms of position, most respondents were in the BOD-5 position (32.40%), followed by BOD-3 (25.20%), BOD-4 (21.60%), BOD-2 (13.10%), and BOD-1 (7.70%).

Discussion of Research Results

The data in this study were processed using Structural Equation Modeling (SEM) with partial least square (PLS) with the help of SmartPLS 4.0 software. In partial least square (PLS) there are two types of models formed, namely the Outer Model and Inner Model.

1. Outer Model

Evaluation of the measurement model can be done by looking at internal consistency reliability using composite reliability, indicator reliability using the outer loadings value, convergent validity using the average variance extracted (AVE) value and discriminant validity using cross loadings.

Internal Consistency Reliability
Composite Reliability

Table 1. Model Specification of Reliability and Construct Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Competence (X1)	0.966	0.969	0.969	0.558
Work Motivation (Z)	0.976	0.979	0.977	0.470
Performance (Y)	0.990	0.990	0.990	0.623
Transformational Leadership (X2)	0.981	0.982	0.982	0.737

Source: Researcher's results, 2025

In exploratory research, composite reliability (CR) values between 0.60 to 0.70 are accepted, while for more advanced research, values between 0.70 to 0.90 are considered satisfactory (Nunnally & Bernstein, 1994). CRs above 0.90, especially over 0.95, are undesirable as they indicate that the indicators are overly correlated, measuring the same phenomenon, and may indicate a mismatch of construct sizes (Hair et al., 2014). Based on the results presented in Table 1, all constructs have CR values greater than 0.708, indicating good internal consistency, although CR values higher than 0.95 indicate that the indicators within the constructs are highly correlated and measure similar concepts.

Indicator Reliability

The higher the outer loading value of a construct, the greater the similarity between its indicators. Each indicator must have an outer loading of at least 0.708. Indicators with an outer loading between 0.4 to 0.7 should be considered for deletion if their removal can increase composite reliability and average variance extracted (AVE) (Marliana, 2019).

Table 2. Outer Loading Model Specification

	Transformational Leadership (X2)	Performance (Y)	Competence (X1)	Work Motivation (Z)
X1.1			0.696	
X1.10			0.823	
X1.11			0.791	
X1.12			0.675	
X1.13			0.681	
X1.14			0.486	
X1.15			0.736	
X1.16			0.723	
X1.17			0.811	
X1.18			0.752	
X1.19			0.729	
X1.2			0.756	
X1.20			0.837	
X1.21			0.833	
X1.22			0.800	
X1.23			0.769	
X1.24			0.776	
X1.25			0.633	
X1.3			0.767	
X1.4			0.703	
X1.5			0.761	
X1.6			0.765	
X1.7			0.749	
X1.8			0.770	

	Transformational Leadership (X2)	Performance (Y)	Competence (X1)	Work Motivation (Z)
X1.9			0.775	
X2.1	0.847			
X2.10	0.902			
X2.11	0.890			
X2.12	0.775			
X2.13	0.847			
X2.14	0.829			
X2.15	0.866			
X2.16	0.853			
X2.17	0.861			
X2.18	0.865			
X2.19	0.888			
X2.2	0.840			
X2.20	0.839			
X2.3	0.847			
X2.4	0.844			
X2.5	0.849			
X2.6	0.874			
X2.7	0.878			
X2.8	0.874			
X2.9	0.888			
Y.1		0.749		
Y.10		0.844		
Y.11		0.757		
Y.12		0.791		
Y.13		0.742		
Y.14		0.806		
Y.15		0.778		
Y.16		0.776		
Y.17		0.757		
Y.18		0.788		
Y.19		0.808		
Y.2		0.675		
Y.20		0.847		
Y.21		0.829		
Y.22		0.822		
Y.23		0.838		
Y.24		0.760		
Y.25		0.712		
Y.26		0.793		
Y.27		0.788		
Y.28		0.717		
Y.29		0.690		
Y.3		0.814		
Y.30		0.795		
Y.31		0.719		
Y.32		0.761		
Y.33		0.731		
Y.34		0.818		
Y.35		0.752		
Y.36		0.863		
Y.37		0.833		
Y.38		0.798		
Y.39		0.833		
Y.4		0.702		
Y.40		0.828		
Y.41		0.817		
Y.42		0.797		
Y.43		0.870		
Y.44		0.755		
Y.45		0.726		
Y.46		0.795		
Y.47		0.821		
Y.48		0.798		
Y.49		0.811		
Y.5		0.678		
Y.50		0.800		
Y.51		0.771		
Y.52		0.822		
Y.53		0.813		
Y.54		0.802		
Y.55		0.802		
Y.56		0.836		
Y.57		0.812		
Y.58		0.837		

	Transformational Leadership (X2)	Performance (Y)	Competence (X1)	Work Motivation (Z)
Y.59		0.830		
Y.6		0.775		
Y.60		0.761		
Y.7		0.817		
Y.8		0.846		
Y.9		0.768		
Z.1				0.603
Z.10				0.707
Z.11				0.719
Z.12				0.764
Z.13				0.730
Z.14				0.742
Z.15				0.731
Z.16				0.470
Z.17				0.697
Z.18				0.702
Z.19				0.661
Z.2				0.686
Z.20				0.363
Z.21				0.659
Z.22				0.681
Z.23				0.718
Z.24				0.773
Z.25				0.225
Z.26				0.777
Z.27				0.727
Z.28				0.774
Z.29				0.711
Z.3				0.664
Z.30				0.776
Z.31				0.765
Z.32				0.780
Z.33				0.719
Z.34				0.784
Z.35				0.434
Z.36				0.627
Z.37				0.761
Z.38				0.655
Z.39				0.481
Z.4				0.689
Z.40				0.652
Z.41				0.748
Z.42				0.676
Z.43				0.711
Z.44				0.473
Z.45				0.724
Z.46				0.761
Z.47				0.753
Z.48				0.688
Z.49				0.556
Z.5				0.712
Z.50				0.681
Z.6				0.634
Z.7				0.744
Z.8				0.741
Z.9				0.773

Source: Researcher's results, 2025

The outer loading value for several indicators (table 2) is still below 0.708, so it is necessary to consider removing some of these indicators, the removal of these indicators still pays attention to the dimensions, so that if all indicators in a dimension have an outer loading value below 0.708, it will still leave at least 1 indicator that has the highest outer loading. The removal of this indicator will also be evaluated, if the results after removing the indicator produce a greater AVE value, then the model after removing the indicator will be used for the next stage.

Convergent Validity

Average Variance Extracted (AVE)

An Average Variance Extracted (AVE) value of 0.50 or more indicates that, on average, the construct is able to explain more than half of the variance of its indicators. Conversely, if the AVE value is less than 0.50, this indicates that the proportion of variance that cannot be explained by the construct is greater than the variance successfully explained by the construct (Hair et al., 2014). It can be seen in table 1, that the AVE value for the work motivation construct is still below the minimum threshold (0.5) while the rest have exceeded 0.5. Therefore, it is necessary to adjust the model by removing invalid indicators to produce better values.

Discriminant Validity

Cross Loading

A higher cross loading than the cross loading on the construct itself indicates a problem in discriminant validity. This criterion is generally quite flexible in determining whether discriminant validity has been met (Hair et al., 2011).

Table 3. Cross Loading Model Specification

	Transformational Leadership (X2)	Performance (Y)	Competence (X1)	Work Motivation (Z)
X1.1	0.298	0.598	0.696	0.577
X1.10	0.523	0.734	0.823	0.712
X1.11	0.434	0.662	0.791	0.680
X1.12	0.429	0.567	0.675	0.587
X1.13	0.398	0.608	0.681	0.602
X1.14	0.247	0.405	0.486	0.347
X1.15	0.353	0.636	0.736	0.619
X1.16	0.413	0.648	0.723	0.571
X1.17	0.511	0.717	0.811	0.626
X1.18	0.425	0.652	0.752	0.590
X1.19	0.305	0.657	0.729	0.578
X1.2	0.395	0.657	0.756	0.624
X1.20	0.424	0.747	0.837	0.703
X1.21	0.426	0.713	0.833	0.671
X1.22	0.435	0.698	0.800	0.701
X1.23	0.376	0.689	0.769	0.705
X1.24	0.354	0.694	0.776	0.693
X1.25	0.297	0.526	0.633	0.581
X1.3	0.312	0.661	0.767	0.594
X1.4	0.431	0.630	0.703	0.608
X1.5	0.390	0.635	0.761	0.586
X1.6	0.407	0.627	0.765	0.590
X1.7	0.338	0.621	0.749	0.582
X1.8	0.342	0.716	0.770	0.659
X1.9	0.433	0.659	0.775	0.639
X2.1	0.847	0.465	0.450	0.416
X2.10	0.902	0.496	0.479	0.438
X2.11	0.890	0.473	0.436	0.397
X2.12	0.775	0.480	0.485	0.463
X2.13	0.847	0.508	0.487	0.443
X2.14	0.829	0.497	0.454	0.488
X2.15	0.866	0.473	0.401	0.438
X2.16	0.853	0.532	0.494	0.518
X2.17	0.861	0.467	0.426	0.460
X2.18	0.865	0.474	0.452	0.434
X2.19	0.888	0.503	0.484	0.483
X2.2	0.840	0.480	0.465	0.439
X2.20	0.839	0.452	0.393	0.406
X2.3	0.847	0.481	0.463	0.407
X2.4	0.844	0.432	0.377	0.358
X2.5	0.849	0.537	0.500	0.477
X2.6	0.874	0.404	0.375	0.341
X2.7	0.878	0.409	0.374	0.343
X2.8	0.874	0.478	0.474	0.406
X2.9	0.888	0.447	0.424	0.372
Y.1	0.388	0.749	0.626	0.636
Y.10	0.393	0.844	0.744	0.726
Y.11	0.389	0.757	0.688	0.622
Y.12	0.416	0.791	0.706	0.653
Y.13	0.435	0.742	0.682	0.591

	Transformational Leadership (X2)	Performance (Y)	Competence (X1)	Work Motivation (Z)
Y.14	0.403	0.806	0.735	0.669
Y.15	0.429	0.778	0.674	0.644
Y.16	0.417	0.776	0.709	0.663
Y.17	0.367	0.757	0.653	0.621
Y.18	0.379	0.788	0.699	0.675
Y.19	0.440	0.808	0.697	0.680
Y.2	0.353	0.675	0.573	0.553
Y.20	0.406	0.847	0.718	0.742
Y.21	0.401	0.829	0.712	0.722
Y.22	0.473	0.822	0.718	0.726
Y.23	0.488	0.838	0.716	0.734
Y.24	0.347	0.760	0.640	0.698
Y.25	0.285	0.712	0.615	0.646
Y.26	0.477	0.793	0.701	0.685
Y.27	0.496	0.788	0.676	0.728
Y.28	0.459	0.717	0.602	0.659
Y.29	0.486	0.690	0.568	0.631
Y.3	0.419	0.814	0.681	0.703
Y.30	0.552	0.795	0.676	0.715
Y.31	0.560	0.719	0.619	0.646
Y.32	0.523	0.761	0.679	0.718
Y.33	0.490	0.731	0.638	0.702
Y.34	0.490	0.818	0.728	0.750
Y.35	0.546	0.752	0.634	0.680
Y.36	0.476	0.863	0.765	0.759
Y.37	0.509	0.833	0.704	0.721
Y.38	0.400	0.798	0.693	0.749
Y.39	0.560	0.833	0.709	0.766
Y.4	0.331	0.702	0.622	0.599
Y.40	0.522	0.828	0.678	0.739
Y.41	0.424	0.817	0.719	0.744
Y.42	0.473	0.797	0.667	0.686
Y.43	0.433	0.870	0.772	0.792
Y.44	0.338	0.755	0.659	0.672
Y.45	0.434	0.726	0.617	0.636
Y.46	0.414	0.795	0.691	0.720
Y.47	0.490	0.821	0.692	0.752
Y.48	0.420	0.798	0.711	0.721
Y.49	0.516	0.811	0.698	0.719
Y.5	0.289	0.678	0.599	0.578
Y.50	0.419	0.800	0.692	0.694
Y.51	0.439	0.771	0.704	0.723
Y.52	0.469	0.822	0.725	0.725
Y.53	0.436	0.813	0.725	0.745
Y.54	0.474	0.802	0.717	0.729
Y.55	0.387	0.802	0.720	0.743
Y.56	0.419	0.836	0.741	0.784
Y.57	0.498	0.812	0.721	0.719
Y.58	0.464	0.837	0.697	0.731
Y.59	0.463	0.830	0.736	0.765
Y.6	0.415	0.775	0.684	0.671
Y.60	0.455	0.761	0.683	0.711
Y.7	0.415	0.817	0.711	0.718
Y.8	0.457	0.846	0.716	0.726
Y.9	0.345	0.768	0.650	0.659
Z.1	0.391	0.552	0.576	0.603
Z.10	0.464	0.722	0.681	0.707
Z.11	0.446	0.664	0.629	0.719
Z.12	0.400	0.760	0.695	0.764
Z.13	0.408	0.709	0.692	0.730
Z.14	0.376	0.636	0.614	0.742
Z.15	0.337	0.692	0.675	0.731
Z.16	0.221	0.331	0.310	0.470
Z.17	0.347	0.588	0.526	0.697
Z.18	0.335	0.593	0.534	0.702
Z.19	0.377	0.604	0.578	0.661
Z.2	0.401	0.592	0.604	0.686
Z.20	0.135	0.285	0.245	0.363
Z.21	0.283	0.545	0.492	0.659
Z.22	0.210	0.543	0.485	0.681
Z.23	0.276	0.573	0.491	0.718
Z.24	0.396	0.689	0.609	0.773
Z.25	-0.062	0.102	-0.007	0.225
Z.26	0.338	0.668	0.565	0.777
Z.27	0.415	0.697	0.593	0.727

	Transformational Leadership (X2)	Performance (Y)	Competence (X1)	Work Motivation (Z)
Z.28	0.442	0.708	0.674	0.774
Z.29	0.302	0.635	0.583	0.711
Z.3	0.443	0.568	0.552	0.664
Z.30	0.372	0.742	0.677	0.776
Z.31	0.383	0.737	0.607	0.765
Z.32	0.399	0.710	0.641	0.780
Z.33	0.256	0.610	0.508	0.719
Z.34	0.396	0.752	0.627	0.784
Z.35	0.163	0.384	0.307	0.434
Z.36	0.269	0.503	0.473	0.627
Z.37	0.419	0.676	0.660	0.761
Z.38	0.340	0.513	0.488	0.655
Z.39	0.152	0.336	0.305	0.481
Z.4	0.353	0.627	0.624	0.689
Z.40	0.327	0.502	0.487	0.652
Z.41	0.301	0.597	0.588	0.748
Z.42	0.339	0.570	0.581	0.676
Z.43	0.309	0.618	0.601	0.711
Z.44	0.167	0.319	0.304	0.473
Z.45	0.380	0.611	0.578	0.724
Z.46	0.398	0.665	0.637	0.761
Z.47	0.311	0.660	0.639	0.753
Z.48	0.350	0.563	0.571	0.688
Z.49	0.176	0.401	0.379	0.556
Z.5	0.440	0.676	0.671	0.712
Z.50	0.343	0.582	0.567	0.681
Z.6	0.323	0.559	0.573	0.634
Z.7	0.355	0.692	0.639	0.744
Z.8	0.415	0.716	0.701	0.741
Z.9	0.409	0.690	0.713	0.773

Source: Researcher's results, 2025

It can be seen that the cross loading value of each indicator in its own construct has a value that is much greater than the cross loading value other than with the construct, for example the cross loading value of Z.10 on its own construct (Work Motivation) has a value of 0.707, which is smaller than the cross loading value on the Performance construct (Y) which is 0.727, this indicates that the Z.10 indicator tends to represent the Performance construct more than its original construct, namely Work Motivation. This condition indicates an overlap between constructs, which can affect the clarity of each variable in the model. Therefore, if an indicator has a cross loading value on other constructs that is greater or close to its own construct, the indicator can be considered for deletion.

Heterotrait-Monotrait Ratio (HTMT)

Table 4. *Discriminant Validity: Heterotrait-Monotrait Ratio (HTMT)*

	Competence (X1)	Transformational Leadership (X2)	Performance (Y)	Work Motivation (Z)
Competence (X1)				
Transformational Leadership (X2)	0.537			
Performance (Y)	0.875	0.567		
Work Motivation (Z)	0.813	0.475	0.882	

Source: Researcher's results, 2025

According to Henseler, Ringle, and Sarstedt (2015), the Heterotrait-Monotrait Ratio (HTMT) value used to assess discriminant validity between constructs must be below 0.90 for discriminant validity to be considered good. Values that exceed this limit indicate the possibility of overlap or mismatch in construct measurement. Based on Table 4, all HTMT values between constructs are below 0.90, except between the constructs of Performance (Y) and Work Motivation (Z) which has a value of 0.882, which although still slightly below the threshold, indicates that the relationship between the two needs further scrutiny because it is close to the threshold, which could indicate a strong conceptual linkage.

Adjusted Model

The adjustment model is carried out by removing several indicators that have an outer loading value below 0.708, and also have a poor cross loading value, where the results of the specification model (initial model) will be compared with the results of the model after adjustment, if the AVE value or others show a better value, the adjustment model will be used, and vice versa.

Table 5. AVE Comparison

	AVE Model Spesifikasi	AVE *Adjusted Model*
Competence (X1)	**0.558**	**0.603**
Work Motivation (Z)	**0.470**	**0.561**
Performance (Y)	**0.623**	**0.637**
Transformational Leadership (X2)	**0.737**	**0.737**

Source: Researcher's results, 2025

The AVE values (Table 5) for all constructs increased, except for the Transformational Leadership construct which remained at 0.737 because no indicators were deleted. The adjustment model successfully increased the AVE above 0.5, especially for the Work Motivation construct. CR values (Table 7) for all constructs remain above 0.708 after adjustment. Therefore, the adjustment model is considered feasible for further testing, as shown in Figure 2.

Table 7. Comparison of Composite Reliability (CR)

	CR (rho_c) Model Spesifikasi	CR (rho_c) *Adjusted Model*
Competence (X1)	**0.969**	**0.965**
Work Motivation (Z)	**0.977**	**0.967**
Performance (Y)	**0.990**	**0.987**
Transformational Leadership (X2)	**0.982**	**0.982**

Source: Researcher's results, 2025

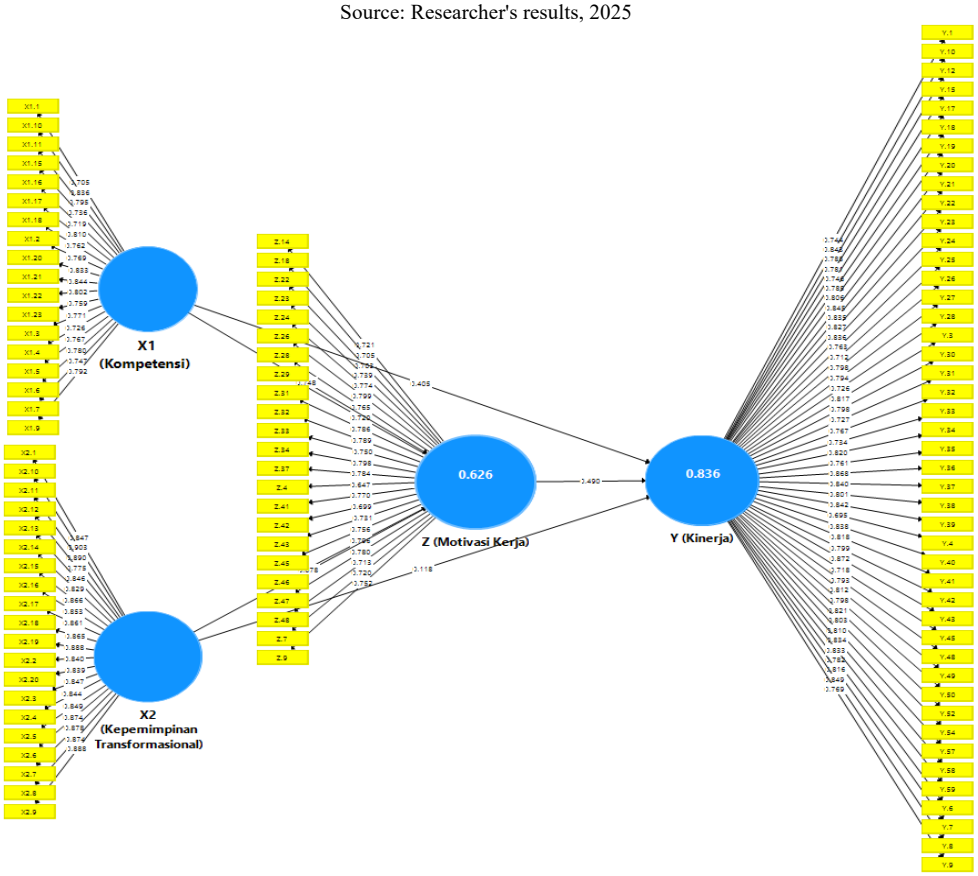

Figure 2. Adjusted Model
Source: Researcher's results, 2025

2. Inner Model

Colinearity Test

Table 8. *Colinearity Test*

	Tolerance	VIF
Competence -> Performance	**0.347**	**2.878**
Competence -> Work Motivation	**0.723**	**1.383**
Transformational Leadership -> Performance	**0.714**	**1.400**
Transformational Leadership -> Work Motivation	**0.723**	**1.383**
Work Motivation -> Performance	**0.863**	**1.158**

Source: Researcher's results, 2025

According to Hair (2014), collinearity can be assessed using the tolerance value and Variance Inflation Factor (VIF). If the tolerance value is less than 0.20 or VIF exceeds 5.00 in the predictor constructs, then there is an indication of a collinearity problem. If collinearity is detected based on these criteria, steps that can be taken to overcome it include deleting constructs, combining several predictor constructs into one, or forming higher-level constructs. Based on the results of the collinearity test in Table 8, the VIF values for all relationships between constructs are below 5, then no construct has a tolerance value of less than 0.2, indicating no collinearity problem.

Coefficient of Determination (R^2)

Table 9. Coefficient of Determination (R^2)

	R Square	R Square Adjusted
Performance (Y)	**0.836**	**0.834**
Work Motivation (Z)	**0.626**	**0.623**

Source: Researcher's results, 2025

The R^2 value is a measure that ranges from 0 to 1, where the higher the value, the more accurate the model predictions. In some disciplines, such as consumer behavior, an R^2 value of 0.20 is considered good enough. However, in research that examines the determinants of success, such as customer satisfaction or loyalty, the expected R^2 value is higher, around 0.75 or more. In academic research that addresses marketing aspects, R^2 values can be categorized as substantial, moderate, or weak, with limits of 0.75, 0.50, and 0.25 for endogenous latent variables (inner model), respectively. (Hair et al., 2011; Henseler et al., 2009).

Based on Table 9, the Work Motivation variable as an intervening variable has an R^2 value of 0.626, which is classified as moderate. This shows that the model is only able to explain 62.6% of the variability of Work Motivation and the remaining 38.4% is explained by other factors outside the model. Then, the Performance variable has an R^2 value of 0.836 which is in the substantial category. Overall, the model can explain the variability of the two variables well because it has a fairly high R2 value.

Effect Size (f^2)

Table 10. Effect Size Value(f^2)

	Competence (X1)	Transformational Leadership (X2)	Performance (Y)	Work Motivation (Z)
Competence (X1)			**0.346**	**1.081**
Transformational Leadership (X2)			0.061	**0.012**
Performance (Y)				
Work Motivation (Z)			**0.548**	

Source: Researcher's results, 2025

In addition to evaluating the R^2 value of each inner model construct, the change in R^2 value when an exogenous construct is removed from the model can also be used to determine whether the construct has a significant effect on the endogenous construct. This measure is referred to as the f^2 effect. Based on (Cohen, 1988) guidelines, the f^2 effect can be classified as

follows: a value of 0.02 indicates a small effect, 0.15 indicates a medium effect, and 0.35 indicates a large effect of an exogenous latent variable on an endogenous latent variable. Based on Table 10, the variable Competence (X1) has a moderate effect on Performance (Y) (f^2 = 0.346) and a large effect on Work Motivation (Z) (f^2 = 1.081). In contrast, Transformational Leadership (X2) only has a very small effect on Performance (Y) (f^2 = 0.061) and insignificant on Work Motivation (Z) (f^2 = 0.012). Work Motivation (Z) itself has a moderate effect on Performance (Y) (f^2 = 0.548). This finding suggests that Competence is more dominant than Transformational Leadership, and Work Motivation plays an important role as a mediator in the model.

Hypothesis (Direct Effect)

Table 11. Direct Effect

	Effect (β)	*T Statistics (|O/STDEV|)*	*P Values*
X1 (Competency variable) -> Y (Performance)	0.402	5.282	**0.000**
X1 (Competency variable) -> Z (Work Motivation)	0.783	18.562	**0.000**
X2 (Transformational Leadership) -> Y (Performance)	0.094	2.484	**0.013**
X2 (Transformational Leadership) -> Z (Work Motivation)	0.093	1.658	**0.098**
Z (Work Motivation) -> Y (Performance)	0.504	7.100	**0.000**

Source: Researcher's results, 2025

Based on Table 11, most of the relationships in the model are significant with p-values below 0.05. Competency (X1) has a positive and significant effect on Performance (Y) (β = 0.402; t = 5.282; p = 0.000) and Work Motivation (Z) (β = 0.783; t = 18.562; p = 0.000). Work Motivation (Z) also has a positive and significant effect on Performance (Y) (β = 0.504; t = 7.100; p = 0.000). In contrast, Transformational Leadership (X2) only has a weak but significant effect on Performance (Y) (β = 0.094; t = 2.484; p = 0.013) and insignificant on Work Motivation (Z) (β = 0.093; t = 1.658; p = 0.098). These results suggest that Competence is more dominant in improving work motivation and performance, with Work Motivation as an important mediator.

Hypothesis (Indirect Effect)

Table 12. Indirect Effect

	Effect (β)	*T Statistics (|O/STDEV|)*	*P Values*
Competence (X1) -> Performance (Y)	0.395	6.850	**0.000**
Transformational Leadership (X2) -> Performance (Y)	0.047	1.576	**0.116**

Source: Researcher's results, 2025

From the table, Competence (X1) has a positive and significant indirect effect on Performance (Y) (β = 0.395; t = 6.850; p = 0.000), indicating the important role of mediating variables in strengthening the relationship. In contrast, Transformational Leadership (X2) has an insignificant indirect effect on Performance (Y) (β = 0.047; t = 1.576; p = 0.116), so its median role in this model is meaningless.

CONCLUSION

The results showed that employee competence was proven to have a direct and significant effect on performance and work motivation. This means that the higher the competence, the higher the motivation and performance of employees. In addition, work motivation also has a significant effect on performance, and is able to mediate the relationship between competence and performance, so that the role of motivation is very important in bridging the influence of competence on achieving optimal work results. Meanwhile, transformational leadership only shows a weak effect on performance and has no significant effect on work motivation, nor an indirect effect on performance through motivation. These findings confirm that employee competency development is a more effective strategy than the leadership approach in efforts to improve performance, especially in the environment of BUMN managing water resources. This

research contributes to strengthening human resource management in designing competency-based work systems and motivation.

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