

Leadership, work environment, and work motivation on employee performance at PT Telkomsel's IT directorate

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ABSTRACT

Keywords:

leadership
working environment
motivation
employees
performance

PT Telkomsel acquired Fixed Line Business from Telkom Indonesia on July 1st, 2023, integrating IndiHome services. The acquisition process involved system integration and employee joining. A research study was conducted to examine the impact of leadership, work environment, and motivation on employee performance at the IT Directorate of PT Telkomsel. Data was collected through questionnaires distributed via Google Form and analyzed using Likert scale and structural equation model partial least square. Results showed that leadership factors positively influence employee performance, while the merger of IndiHome business line did not affect IT director performance. Leaders' ability to encourage creativity, skill development, and collaboration were the most influential management indicators. Working environment factors, such as harmonious relationships between managers and employees, also positively impacted employee performance. Work facilities were crucial in supporting employee productivity. Motivation also positively influenced employee performance.

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INTRODUCTION

The development of the business world today is increasing rapidly, so that companies are expected to be able to use their human resources properly and correctly in managing their business (Batubara, 2020). In achieving organizational goals, both large and small companies, human resources are the most important part in addition to having high-tech modern equipment (Sutrisno, 2016). Human resources are one of the main driving forces for every company's operations, so efforts in developing human resources are the main strategy to uphold global competition.

Human Resource Management is one of the key factors to get the best performance, because in addition to handling skills and expertise, HR management is also obliged to build conducive behavior of employees to get the best performance. Competitive pressures in the business world require companies to think about how companies adapt to the ever-changing environment (Mangkunegara, 2016). The success or failure of a company in achieving goals depends largely on the ability of HR or employees in carrying out the tasks given, therefore all matters that include human resources must be an important concern for management.

Problems related to human resources in a company demand attention, because no matter how sophisticated the technology used in a company and how much the company's capital, employees in the company are ultimately running. This shows that without being supported by good quality of employees in carrying out their duties, the company's success is not achieved. The contribution of employees to a company will determine the progress or retreat of the company (Sembiring & Marbun, 2021).

Employee performance is one indicator to measure the success of an organization. According to (Sedamaryanti, 2018) Performance is an employee achievement that has been determined periodically. The results of this work have been set targets and standards of assessment criteria so that they are measurable for all employees in an organization. Individual characteristics cannot be separated in determining the results of work in an organization (Robbins & Judge, 2018). Employee performance is a measure that can be used to determine the comparison of the results of task implementation, responsibilities given by the organization in a certain period and relatively can be used to measure work performance or organizational performance.

Performance appraisal is one way to improve employee performance, because with performance appraisal it will be known how well someone has worked in accordance with the goals he wants to achieve.

The ability of employees and motivation to work can determine a person at work (Mangkunegara, 2016). According to Nasution & Maqfirah (2017), employee performance can be influenced such as employee characteristics, salaries received, health and social security in old age, existing technology, facilities and infrastructure, work climate, and leadership management from superiors. Leaders become a very decisive part for the growth and survival of education today, where leaders provide direction, influence and work procedures to all employees to work in accordance with the philosophy, vision, mission and values in the organization as the basic principles to be achieved (Bahri, 2020).

The implementation of work by employees in the organizational environment basically takes place in the condition of employees as human beings, the inner and psychological atmosphere of an individual in the organizational community whose work environment has a great influence on the implementation of his work (Robbins & Judge, 2018). The inner atmosphere is seen in the spirit or passion of work that produces work activities as a contribution to the achievement of the goals of the organization where he works. Reality shows that from a psychological point of view, passionate or excited and vice versa not passionate or not excited an employee in carrying out his work is greatly influenced by the work motivation that drives him.

Leadership is the backbone of organizational development because without good leadership it will be difficult to achieve organizational goals, even to adapt to changes that are happening inside and outside the organization (Sembiring & Marbun, 2021). Every leader can exert influence on his subordinates, for example on job satisfaction and employee performance. Realizing that there is no single best leadership style that applies universally to all situations and environments, so situational or contingency approaches in choosing an effective leadership model are the best alternative answers.

Leadership according to Siagian (2018), leadership is the ability of a person to influence others (his subordinates) in such a way that others are willing to do the leader's will even though personally it may not please him. Hasibuan (2017) suggests that the role of leaders or leadership in organizations or companies has three forms, namely interpersonal roles, informational roles, and decision-making roles.

A leader in an organization is interpersonal, which means that a leader in a company or organization is a symbol of the existence of the organization (Asadul et al., 2023). A leader is responsible for motivating and giving direction to subordinates, and a leader has the role of liaison. Informational role means that a leader in the organization has a role as a giver, receiver and analysis of information. While the role of the leader in decision making means that the leader has a role as a determinant of policies that will be taken in the form of business strategies that are able to develop innovation, take opportunities or opportunities and negotiate and run the business consistently (Manzoor et al., 2019).

Prasada (2020) states that for employees, a leader will always be an example and example in working in the company because the leader has a duty as an internal facilitator in carrying out his control function directed to each subordinate because actually human relationships with each other are symbiotic mutualism, namely mutually beneficial and needy relationships between both parties. The ability of leaders to mobilize and empower employees will affect employee performance (Alrowwad et al., 2020).

Leadership describes the form of leaders' rules and their ability to achieve performance effectiveness through others leadership as a leader who designates his followers seeking to achieve goals to demonstrate values and motivations, wants and needs, aspirations and expectations between leaders and subordinates. Leadership is a form of persuasion, an art of moving and fostering certain groups of people, usually through human relation and the right motivation, so that without fear they are willing to work together and understand to achieve everything that is the goal of the organization (Handoko, 2015). Leadership is the process by which a person or group attempts to influence the tasks and attitudes of others toward an end of desired outcome to achieve the organization's vision and mission.

According to Hasibuan (2017), in leadership, work motivation is a source of driving that is closely related to work productivity in organizations. It is necessary to apply a motivation model that is as capable as possible to inspire employees. Not only through high salaries or wages but leaders must be able to inspire through good examples, such as serious behavior at work, enthusiasm at work, effective behavior, consistent behavior, and high work ethic. This can have multiple effects on employee motivation (Newman & Ford, 2021).

Motivation is the drive contained in a person to do certain activities, in order to achieve certain goals (Hamzah, 2016). Motivation arises because it has goals that must be achieved so that motivation can cause activities that must be done to support these goals. Motivation is a change in energy in a person characterized by affective (feeling) and reactions to achieving goals. Motivation is the key of a successful organization to maintain continuity of work in the organization in a strong way and help to survive. Motivation is providing appropriate guidance or direction, resources and rewards so that they are inspired and interested to work the

way you want (Rifa'i et al., 2021). Motivation is the willingness to expend a high level of effort to organizational goals, conditioned by the ability of that effort in (Robbins & Judge, 2018).

Motivation is the driving force that causes a member of the organization to be willing and willing to move abilities in the form of expertise or skills, energy and time to drive various activities that are his responsibility and combine his obligations in order to achieve goals and various predetermined organizational goals (Siagian, 2018). Motivation is strongly influenced by the performance of a leader and affects the work in every situation. In other words, the role of leadership greatly influences the emergence of work motivation in a subordinate (Akhmad et al., 2022).

In addition to leadership style, the work environment in a company also has an influence on employee performance (Mardiani & Sepdiana, 2021). Employees who like the work environment where they work will certainly feel at home in their workplace and can complete their tasks well. Poor working conditions have the potential to cause employees to fall ill easily, easily stressed, and difficult to concentrate so that it can affect the performance they produce. If the workspace is hot, air circulation is inadequate, the workspace is too dense, the work environment is not clean, and noisy, it causes employees to be uncomfortable at work.

A conducive work environment such as an employee's expectations will make employees at work become enthusiastic. This motivation is because the existing environment supports employees in working from physical and non-physical aspects. Employees who work equipped with workspaces for example, appropriate technological equipment, and other physical facilities will make employees satisfied at work. Friends and superiors who provide harmonious relationships will also make comfort in working so that work motivation will be created (Hasibuan, 2017).

The work environment in a company is very important for management to pay attention to (Khan et al., 2020). Although the work environment does not carry out the production process. A work environment that focuses on employees can improve performance, while an inadequate environment can reduce employee performance and ultimately employee motivation (Ángeles et al., 2022). The work environment is everything that is around workers and can affect work including lighting settings, controlling noise, workplace hygiene settings and workplace safety settings. A work environment is said to be good or appropriate if humans can carry out activities optimally, healthy, safe and comfortable. The suitability of the work environment can be seen as a result in the long term. Furthermore, poor work environments can demand more labor and time and do not support the acquisition of efficient work system design (Sedamaryanti, 2018).

Results of research conducted Akhmad et al. (2022), Hartinah et al. (2020), and Bahri (2020) show that leadership has a significant effect on work motivation. The leadership given by superiors to subordinates is proven to increase employee motivation. The results also show that with good leadership and work motivation can improve performance. This means that leadership through work motivation can improve employee performance. Good leadership will make work motivation also good so that employee performance will increase high. However, when the leadership applied is not good, work motivation becomes less good as a result of which employee performance will also be low.

Research by Rasool et al. (2021) shows that the work environment has an influence on employee performance. A conducive, comfortable, and supportive work environment will help employees complete work in accordance with existing targets. However, when the existing work environment is uncomfortable, employees will find it difficult to complete work according to the specified target. A comfortable work environment will foster morale in employees so that all work will be done with enthusiasm and meticulousness.

On June 21, 2023, the Indonesian government declared the end of the Covid-19 pandemic status in Indonesia which was marked by the issuance of Presidential Decree of the Republic of Indonesia Number 17 of 2023 concerning the Determination of the End of the Coronavirus Disease 2019 (COVID-19) Pandemic Status in Indonesia. With the end of this pandemic, it has an impact on all lines of business and business, including State-Owned Enterprises (SOEs). Telkom Indonesia as one of the (SOEs) where PT Telekomunikasi Cellular (Telkomsel) as one of Telkom's subsidiaries, responded to the policy by issuing Circular Number 18/HM.01/HC-00/VII/2023 concerning Adjustment of Hybrid Working Arrangement (HWA) Arrangements. In the circular, the mechanism for hybrid work arrangements between Work from Office (WFO) and Work from Field (WFF) is explained.

The results of interviews with several employees stated that these employees were more comfortable working from home (WFH) than WFO/WFF, citing work flexibility and time efficiency, especially the trip to the office which took anywhere from 30 minutes to 2 hours. Along with the establishment of this Hybrid Working Arrangement, on July 1, 2023, PT Telkomsel acquired Fixed Line Business from Telkom Indonesia with the integration of IndiHome services. This acquisition process consists of system integration and joining employees who run the unit.

The joining of a number of IndiHome employees has led to an increase in the number of employees who have to work directly in the office, which causes the work environment to become denser and the increased use of office facilities, one of which is the availability of meeting rooms which causes direct coordination

obstacles. The implementation of HWA and the acquisition of IndiHome's business to PT Telkomsel has an impact on overall employee performance and especially in the IT directorate of 610 employees where 531 employees were previously plus 79 IndiHome employees, where there was a decrease in individual performance appraisals of IT directorate employees from 2022-2023.

Regarding the background description of the above, the research would like to reveal the influence of leadership, work environment, and work motivation on employee performance at the IT Directorate of PT Telkomsel. The research is expected to contribute to the improvement of each variable at work and become a reference for further study in the future.

METHOD

The research was conducted at the IT Directorate of PT Telkomsel, The Telkom Hub, Telkomsel Smart Office Building, South Jakarta. The data collection was carried out in November – December 2023. The source of data in this study included in the primary data is data from questionnaires distributed to respondents using Google Form. The results of the questionnaire were collected for analysis in research with the Likert scale and structural equation model partial least square (SEM-PLS). In addition to questionnaires, research data sourced from primary data is documentation in the form of research photos. Data sources included in secondary data in this study are company profiles, documentation data from companies related to attendance reports, employee performance appraisal reports.

The population in this study is operational employees per directorate with staff and officer positions broken down by group as follows.

Table 1. Research Population

No	Group	Employee	Population
1	Business Intelligence and Analytics Platforms Group	73	52
2	Customer and Billing Platforms Group	59	34
3	ICT Security Management Group	39	23
4	IT Corporate Solutions and Cloud CoE Group	58	41
5	IT Customer Touchpoint and Digital Product Solutions Group	107	81
6	IT Enterprise Architecture and Strategy Group	39	18
7	IT Operation and Infrastructure Group	125	86
8	IT Technology Advisory Group	50	19
9	Product, Fulfillment and Integration Platforms Group	60	32
Total		610	386

The sample size in this study will be calculated using the Slovin formula because looking at the population size that is too large with a margin of error of 10% which refers to the maximum tolerable error rate. The calculation of the sample size can be described as follows:

$$n = \frac{N}{1 + Ne^2} = \frac{386}{1 + 386 (0.1)^2} \approx 79$$

Based on the number of samples, the sampling technique in this study uses *purposive random sampling*. Sampling is eventful but still considers the proportions of each group so that group representatives are well represented. Based on the number of populations and samples, the number of samples per group can be calculated as follows:

Table 2. Research Sample

No	Group	Population	Sample
1	Business Intelligence and Analytics Platforms Group	52	11
2	Customer and Billing Platforms Group	34	7
3	ICT Security Management Group	23	5
4	IT Corporate Solutions and Cloud CoE Group	41	8
5	IT Customer Touchpoint and Digital Product Solutions Group	81	16
6	IT Enterprise Architecture and Strategy Group	18	4
7	IT Operation and Infrastructure Group	86	18
8	IT Technology Advisory Group	19	4
9	Product, Fulfillment and Integration Platforms Group	32	6

Total	386	79
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RESULTS AND DISCUSSION

Description Analysis

The employees of PT Telkomsel's IT directorate are 610 people consisting of a director, 9 vice presidents, 43 general managers, 167 managers, 259 officers, 122 staff, and 9 secretaries. The study was conducted from November 1 to December 31, 2023 by distributing online questionnaires to 79 employees who qualified to be respondents. Until the end of the research period, employees who became respondents who had filled out the research instrument completely as many as 79 respondents or 100%. Respondents had several individual characteristics studied in this study including gender, marital status, position, last education, length of work.

Table 3. Number and Percentage of Respondent Characteristics

Characteristics of Respondents	Number (People)	Percentage
Gender	Man	53
	Woman	26
Marital Status	Marry	63
	Unmarried	16
Department	Officer	67
	Staff	12
Recent Education	Bachelor	70
	Magister	9
Period of Work	< 5 years	5
	5-10 years	45
	11-15 years	9
	> 15 years	20

Source: Primary data, processed (2023)

Based on the results of data processing in Table 9, it is known that male respondents carry out more work (67%) than female respondents (33%). Based on the results of observations in the field, it does appear that many male respondents carry out work in the office.

Based on marital status, there are (80%) married respondents (20%) who are still unmarried. Based on the results of observations in the field, married respondents are more able to manage work time arranged by the Company.

By position, respondents with officer positions (85%) are more than respondents with staff positions (15 %). This is in line with the comparison of the number of officers and staff in the IT directorate. In addition, officers also have greater duties and responsibilities in managing daily operational activities.

In Table 9, it is known that respondents with Bachelor education (89%) are dominant in carrying out tasks, followed by Masters education (11%). Based on observations in the field, the education level in the IT directorate is dominated by the Bachelor level. As for the length of work, it is known that respondents with a working period of 5-10 years (57%) followed by a working period of more than 15 years (25%), a working period of 11-15 years (11%), and a working period of less than 5 years (6%).

Evaluation of the Measurement Model (Outer Model)

Data evaluation in this study using SEM PLS with SmartPLS program. The latent variables in this study are leadership, work environment, work motivation, and employee performance. Each of these variables has manifest variables (indicators) that are reflective of their latent variables. SEM PLS uses criteria that include two parts, namely the evaluation of the measurement model (outer model) and the structural model (inner model).

The purpose of measuring model evaluation (outer model) is to measure how each indicator relates to its latent variable. Evaluation of the measurement model is carried out by testing validity and reliability on each latent variable indicator. By initiating an assessment of the measurement model, the researcher can trust that the latent variables or constructs that form the basis for the assessment of structural model relationships are measurable and accurate (Hair et al., 2014). The evaluation of the reflective measurement model consists of convergent validity, namely internal consistency reliability, namely by ensuring the value of composite reliability is greater than 0.7, indicator reliability, namely by ensuring each indicator or outer loading must be greater than 0.7, average variance extracted (AVE) by ensuring an AVE value of at least 0.50 and discriminant validity by ensuring the AVE of each latent variable is greater than the other variables (Fornell-Larcker

criterion) and the indicator of each variable must be greater than the other indicators (cross loadings) (Hair et al., 2011).

Assessment of the validity of reflective measurement models focuses on convergent validity and discriminant validity. The first stage is to calculate the outer loading value. Convergent validity is said to favor if each outer loading (λ) in each indicator contains a value greater than 0.7 and AVE 0.5 or higher (Hair et al., 2014). The results of the measurement model at the initial stage of the research model are presented below.

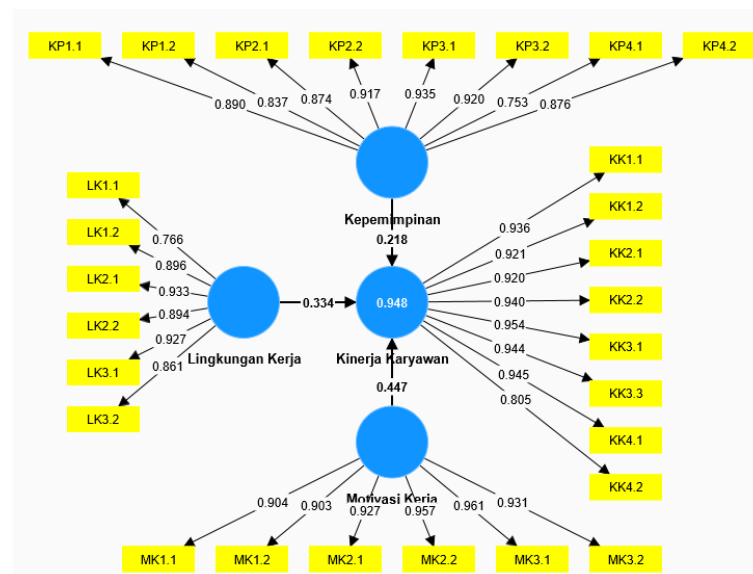


Figure 1. Measurement Results Model

The loading factor value of each indicator has a value of more than 0.7, so there is no need to reduce the number of indicators, because it has strong enough validity to explain the latent construct (Hair et al., 2010). The results of validity testing on all indicators of leadership, work environment, work motivation, and employee performance variables show a value of > 0.7 and can be declared valid. The Loading Factor value of each research indicator can be seen in table 3.

Table 3. Value Loading Factor Research Indicator

Latent Variable	Symbol	Indicator	Loading Factor	Information
Leadership (KP)	KP1.1	Leaders can be proud of	0.936	Valid
	KP1.2	Leaders have loyalty	0.921	Valid
	KP2.1	The leader is able to arouse the morale of his subordinates	0.920	Valid
	KP2.2	Leaders encourage you to share new ideas with each other	0.940	Valid
	KP3.1	Leaders encourage subordinates to be more creative	0.954	Valid
	KP3.2	Leaders provide innovative input for job success	0.944	Valid
	KP4.1	The leader has concern and cares for subordinates	0.945	Valid
	KP4.2	Leaders give appreciation when you excel	0.805	Valid
Work Environment (LK)	LK1.1	Availability of meeting rooms for easy coordination	0.890	Valid
	LK1.2	Completeness of places of worship, parking facilities, and places to eat	0.837	Valid
	LK2.1	Team members' contribution to working together	0.874	Valid
	LK2.2	Coordinate teamwork	0.917	Valid

Work Motivation (MK)	LK3.1	Supervisor's concern for employee performance	0.935	Valid
	LK3.2	Provision of direction in determining work standardization	0.920	Valid
	MK1.1	Compatibility of duties and responsibilities with the expertise possessed	0.753	Valid
	MK1.2	Increased competence	0.876	Valid
	MK2.1	Benefits encourage morale	0.766	Valid
	MK2.2	Award for work achievements	0.896	Valid
	MK3.1	Promotion due to merit	0.933	Valid
	MK3.2	Provide opportunities to achieve the best achievements	0.894	Valid
	KK1.1	Completion of work in accordance with the quality standards of the organization	0.927	Valid
	KK1.2	Completion of employment with complete	0.861	Valid
Employee Performance (KK)	KK2.1	The number of work completions in accordance with the set work target	0.904	Valid
	KK2.2	The number of work completions exceeded predefined performance targets	0.903	Valid
	KK3.1	Completion of work in accordance with the target time	0.927	Valid
	KK3.2	Have good time management skills	0.957	Valid
	KK4.1	Able to solve all challenges in work independently in accordance with their potential	0.961	Valid
	KK4.2	Can work independently without supervision	0.931	Valid

The Average Validity Extracted (AVE) value can be declared valid if it has an AVE > 0.5. From the test results, the Average Validity Extracted (AVE) value of each variable of this study shows a value of > 0.5 so that it can be declared valid. The Average Validity Extracted (AVE) value of the research variable can be seen in table 4.

Table 4. Average Validity Extracted (AVE) Value of Research Variables

Variable	Average Variance Extracted (AVE)	Information
Leadership	0.769	Valid
Work Environment	0.777	Valid
Work Motivation	0.866	Valid
Employee Performance	0.850	Valid

The cross loading value for each indicator of each latent variable is greater when compared to the value of other latent variables and has a value of > 0.7. This means that each latent variable already has good discriminant validity, where some latent variables have gauges that are highly correlated with other constructs. Cross Loading values of each research indicator can be seen in table 5.

Table 5. Cross Loading Value of Research Variables

Indicator	Leadership	Work Environment	Work Motivation	Employee Performance
KP1.1	0.883	0.936	0.884	0.902
KP1.2	0.862	0.921	0.847	0.878
KP2.1	0.895	0.920	0.865	0.890
KP2.2	0.866	0.940	0.863	0.875
KP3.1	0.902	0.954	0.896	0.928
KP3.2	0.907	0.944	0.897	0.904
KP4.1	0.886	0.945	0.902	0.899
KP4.2	0.759	0.805	0.836	0.721

LK1.1	0.890	0.853	0.838	0.819
LK1.2	0.837	0.728	0.790	0.669
LK2.1	0.874	0.790	0.788	0.783
LK2.2	0.917	0.901	0.881	0.862
LK3.1	0.935	0.921	0.903	0.878
LK3.2	0.920	0.862	0.872	0.865
MK1.1	0.753	0.680	0.711	0.677
MK1.2	0.876	0.859	0.852	0.848
MK2.1	0.744	0.705	0.766	0.649
MK2.2	0.874	0.850	0.896	0.827
MK3.1	0.906	0.899	0.933	0.861
MK3.2	0.833	0.871	0.894	0.824
KK1.1	0.853	0.861	0.927	0.835
KK1.2	0.799	0.811	0.861	0.797
KK2.1	0.831	0.859	0.813	0.904
KK2.2	0.852	0.859	0.825	0.903
KK3.1	0.842	0.881	0.857	0.927
KK3.2	0.875	0.902	0.853	0.957
KK4.1	0.893	0.923	0.874	0.961
KK4.2	0.828	0.886	0.855	0.931

After going through the validity test stage and being declared valid, the last stage in the evaluation of the measurement model (outer model) is a reliability test seen from the value of Cronbach's Alpha and Composite Reliability (CR). From the results of cross loading estimates in table 12, it is shown that the cross loading value of each indicator variable per construct is greater than 0.7 and greater than other cross loading values in one construct. From the results of the analysis, it can be concluded that there is no problem with the validity of discrimination.

Table 6. Research Variable Reliability Test Results

Variable	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)	Information
Leadership	0.956	0.961	0.769	Valid
Work Environment	0.942	0.946	0.777	Valid
Work Motivation	0.969	0.970	0.866	Valid
Employee Performance	0.974	0.976	0.850	Valid

Based on the results of validity and reliability testing that can be seen in table 13, each research variable can be declared valid because the AVE value of each variable is > 0.5 , and can be declared reliable because the value of composite reliability and Cronbach's alpha > 0.7 .

Evaluation of Structural Model Results (Inner Model)

The r-square value of each endogenous latent variable can be the first step in evaluating structural models (Ghazali & Latan, 2012). R-square values range from 0 to 1, with categories of 0.75 considered strong, 0.50 moderate, and also 0.25 considered weak. The magnitude of the r-square value can explain the influence of exogenous latent variables on endogenous latent variables. Table 7 shows the r-square value for the study's dependent variable, employee performance.

Table 7. R-Square value

Variable	R-Square	Information
Employee Performance	0.948	Strong

From the hypothesis that has been designed, the r-square value of employee performance variables is 0.948 which means that the variables of leadership, work environment, and work motivation can explain the diversity of employee performance variables by 94.80% while the remaining 5.20% can be explained by other variables outside this research model. The next stage in measuring the inner model is to look at the t-count which is a requirement for the significance of the model through bootstrapping the outer model. Figure 6 shows the results of bootstrapping the outer model of this study.

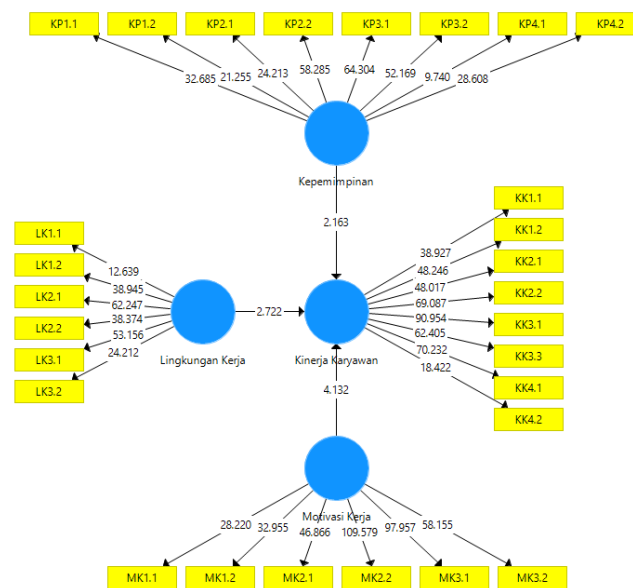


Figure 2. Bootstrapping Results

Model significance testing was performed to test the relationship between exogenous latent variables and endogenous latent variables. A research indicator variable can be said to be significant if it has a t-count value of > 1.96 . The relationship between research variables can be seen in table 8.

Table 8. Relationship Between Research Variables

Relationship between Variables	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Leadership → Employee Performance	0.218	0.226	0.101	2.163	0.031
Work Environment → Employee Performance	0.334	0.328	0.123	2.722	0.007
Work Motivation → Employee Performance	0.447	0.445	0.108	4.132	0.000

Goodness of Fit Evaluation

Partial Least Square (PLS) is a variance-based analysis that aims to test model theory that focuses on prediction studies. So that several measures are developed that can state a model can be said to have a good level of match with the data tested if most of the criteria or parameters of goodness of fit show fit results such as SRMR values (Hair et al. 2019), Q2 (Ghazali & Latan, 2012), and Goodness of Fit Index (Henselet & Srstedt, 2013).

Table 9. The Value of Model Goodness and Fit Testing

	Saturated Model	Estimated Model
SRMR	0.042	0.042
d_ ULS	0.720	0.720
d_ G	2.362	2.362
Chi-Square	805.257	805.257
NFI	0.791	0.791

The results of the evaluation of the research model in table 16 obtained a value for the Standardized Root Mean Square Residual (SRMR) parameter, which is 0.042 where this value is above 0.08 so that it can be said to be good fit. Meanwhile, for the Normed Fit Index (NFI) parameter, a value of 0.791 is obtained where this value is below 0.90 so that it can be said to be marginal fit. The results of the overall model fit test show good fit results. So, the model fit in this study is good because it has met most of these parameters.

Hypothesis Testing

In hypothesis testing there is a significant value between variables where this significant value is obtained through the bootstrapping procedure. The rule of thumbs of supporting a research hypothesis is if the coefficient or direction of the variable relationship (indicated by the original sample value) is in line with the hypothesized, that is, if the statistical t value is more than 1.96 and the probability value (p-value) is less than 0.05. Hypothesis testing of this study is one-way so that the t-count cut-off value of 1.96 with a significance of 0.05 is presented in the following table 10.

Table 10. Research Hypothesis Testing Results

Relationship between Variables	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Test Results
Leadership → Employee Performance	0.218	0.226	0.101	2.163	0.031	Significant
Work Environment → Employee Performance	0.334	0.328	0.123	2.722	0.007	Significant
Work Motivation → Employee Performance	0.447	0.445	0.108	4.132	0.000	Significant

There are 3 hypotheses in this study which were then tested using SEM-PLS analysis. Endogenous variables in this study consist of leadership, work environment, and work motivation. Based on the test results, all hypotheses proved to have a significant effect.

The Influence of Leadership on the Performance of IT Directorate Employees

Hypothesis 1 in this study states that leadership affects employee performance in the IT directorate. After SEM testing, it can be seen in Table 17 that the t-test value is 2.163 where the value is greater than the t-count value (1.96) and also seen from the P-value of 0.031 where the value is smaller than 5% (0.05), so it can be concluded that H0 is rejected and accepts H1 which means empirically there is an influence between leadership on employee performance in the IT directorate. This hypothesis states that the leadership of a leader affects employee performance to achieve predetermined targets significantly.

This result is in line with research conducted by Bahri (2020) which states that leadership variables have a significant effect on employee performance at the Yogyakarta Academy of Administrative Management. Another study that also supports this hypothesis is conducted by Batubara (2020) which states that leadership affects employee performance in the procurement department of PT Inalum (Persero). This is also in line with the research of Pasaribu et al. (2022) which states that leadership affects the performance of employees at the Bekasi City Investment and One-Stop Integrated Services Office.

According to Megawati et al. (2022), leaders who always coordinate with their subordinates will create satisfaction with their colleagues to be able to work optimally. They can contribute significantly in shaping leadership style variables that affect employee satisfaction at PT Semen Tonasa. Leaders who always treat their subordinates indiscriminately will give satisfaction to their subordinates so that they can work more optimally.

PT Telkomsel, especially the IT Directorate, is committed to providing the best digital experience for Telkomsel customers by maximizing the use of technology as well as developing the best digital talents in Indonesia. The use of technology must be balanced by qualified employee talents to achieve the company's vision and mission, therefore leaders in the IT directorate must be observant in developing these talents as much as possible.

The Influence of the Work Environment on the Performance of IT Directorate Employees

Hypothesis 2 in this study states that the Work Environment affects the performance of employees in the IT directorate. After SEM testing, it can be seen in Table 17 that the t-test value is 2.722 where the value is greater than the t-count value (1.96) and also seen from the P-value of 0.007 where the value is 5% smaller (0.05), so it can be concluded that H2 is accepted and rejected H0 which means empirically there is indeed an influence between the work environment on employee performance in the IT directorate. This hypothesis states that a comfortable and well-facilitated work environment has a positive effect on employee performance to achieve predetermined work targets.

These results are in line with research conducted by Ghalenoei et al. (2022) which states that work environment variables have a positive and significant effect on the performance of researchers in the laboratory. Another study that also supports this hypothesis is that conducted by Verstappen et al. (2022) which states that

work environment variables have a positive and significant effect on employee performance at Netherlands Railways.

The role of a work environment that is well facilitated by the company certainly has a very important importance to increase employee comfort in doing work, which directly affects the performance produced by these employees. In addition, the establishment of good communication among employees and harmonious relationships with superiors, both when working indoors and during breaks, increases employee confidence, which will affect the results of employee performance.

The Effect of Work Motivation on the Performance of IT Directorate Employees

Hypothesis 3 in this study states that Work Motivation affects employee performance in the IT directorate. After SEM testing, it can be seen that the t-test value is 4.132 where the value is greater than the t-count value (1.96) and also seen from the P-value of 0.000 where the value is smaller by 5% (0.05), so it can be concluded that H3 is accepted and rejected H0 which means empirically there is indeed an influence between work motivation on employee performance in the IT directorate. This hypothesis states that work motivation provided by superiors has a positive effect on employee performance to achieve predetermined work targets.

These results are in line with research conducted by Widarto et al. (2022) and Ghalenoei et al. (2022) which states that work motivation variables have a positive and significant effect on employee performance in the Administration Bureau of the Head of the Regional Secretariat of South Kalimantan Province. Another study that also supports this hypothesis is that conducted by Duanta et al. (2022) which states that work motivation variables have a positive and significant effect on nurse performance at RSU Bhakti Husada Krikilan Glenmore.

Based on SEM testing, work motivation became the variable with the greatest significance, namely 4.132 out of 3 variables tested. The most influencing factors are related to career development including promotion opportunities and the opportunity to become the best employee.

CONCLUSION

The study found that leadership significantly impacts employee performance in the IT directorate of PT Telkomsel. The top three indicators of leadership are encouraging creativity development, skill development, and motivating collaboration. The work environment also plays a significant role in employee performance, with harmonious relationships between leaders and employees creating a conducive atmosphere. Work facilities support productivity and help employees achieve work targets. Work motivation has the greatest influence on employee performance, with transparent promotion processes, incentives, and competency development opportunities being the most important factors. The study highlights the importance of these factors in ensuring a positive and productive work environment for employees.

REFERENCES

- Akhmad, Z., Hasran, H., & Rahman, R. (2022). Pengaruh Kepemimpinan dalam Peningkatan Motivasi Kerja PNS di Kantor Kecamatan. *Journal of Government Insight*, 2(2), 182–197. <https://doi.org/10.47030/jgi.v2i2.472>
- Alrowwad, A., Abualoush, S. H., & Masa'deh, R. (2020). Innovation and intellectual capital as intermediary variables among transformational leadership, transactional leadership, and organizational performance. *Journal of Management Development*, 39(2), 196–222. <https://doi.org/10.1108/JMD-02-2019-0062>
- Ángeles, L.-C. M., Vázquez-Rodríguez, P., & Quiñoá-Piñeiro, L. M. (2022). An approach to employees' job performance through work environmental variables and leadership behaviours. *Journal of Business Research*, 140, 361–369. <https://doi.org/10.1016/j.jbusres.2021.11.006>
- Asadul, Jantan, A. H., Yusoff, Y. M., Chong, C. W., & Hossain, M. S. (2023). Green Human Resource Management (GHRM) Practices and Millennial Employees' Turnover Intentions in Tourism Industry in Malaysia: Moderating Role of Work Environment. *Global Business Review*, 24(4), 642–662. <https://doi.org/10.1177/0972150920907000>
- Bahri, B. (2020). ANALISIS PENGARUH KEPEMIMPINAN TERHADAP KINERJA KARYAWAN DENGAN MOTIVASI KERJA SEBAGAI VARIABEL INTERVENING (Studi Kasus Pada Akademi Manajemen Administrasi Yogyakarta). *Bongaya Journal for Research in Management (BJRM)*, 3(1), 49–59. <https://doi.org/10.37888/bjrm.v3i1.56>
- Batubara, S. S. (2020). Pengaruh Gaya Kepemimpinan terhadap Kinerja Karyawan pada Departemen Pengadaan PT INALUM (Persero). *LIABILITIES (JURNAL PENDIDIKAN AKUNTANSI)*, 3(1), 40–58. <https://doi.org/10.30596/liabilities.v3i1.4581>
- Duanta, S. N. P., Wahyuni, S., & Zulianto, M. 2022. Pengaruh Budaya Organisasi, Motivasi , dan Kompetensi Terhadap Kinerja Perawat RSU Bhakti Husada Krikilan Glenmore. *Jurnal Pendidikan Ekonomi:Jurnal*

- Ilmiah Ilmu Pendidikan, Ilmu Ekonomi, Dan Ilmu Sosial*, 16(1), 53–59.
<https://doi.org/10.19184/jpe.v16i1.23453>
- Ghalenoei, M., Mortazavi, S. B., Mazloumi, A., & Pakpour, A. H. 2022. Impact of workload on cognitive performance of control room operators. *Cognition, Technology & Work*, 24(1), 195–207.
<https://doi.org/10.1007/s10111-021-00679-8>
- Hamzah, U. (2016). *Teori Motivasi dan Pengukurannya*. Bumi Aksara.
- Handoko. (2015). *Manajemen Personalia dan Sumber Daya Manusia*. BPFE.
- Hartinah, S., Suharso, P., Umam, R., Syazali, M., Lestari, B. D., Roslina, R., & Jermisittiparsert, K. (2020). Teacher's performance management: The role of principal's leadership, work environment and motivation in Tegal City, Indonesia. *Management Science Letters*, 235–246.
<https://doi.org/10.5267/j.msl.2019.7.038>
- Hasibuan. (2017). *Manajemen Sumber Daya Manusia. Edisi Revisi*. Bumi Aksara.
- Khan, M. A., Ismail, F. B., Hussain, A., & Alghazali, B. (2020). The Interplay of Leadership Styles, Innovative Work Behavior, Organizational Culture, and Organizational Citizenship Behavior. *SAGE Open*, 10(1), 215824401989826. <https://doi.org/10.1177/2158244019898264>
- Mangkunegara. (2016). *Manajemen Sumber Daya Manusia Perusahaan*. Roesdakarya.
- Manzoor, F., Wei, L., Nurunnabi, M., Subhan, Q. A., Shah, S. I. A., & Fallatah, S. (2019). The Impact of Transformational Leadership on Job Performance and CSR as Mediator in SMEs. *Sustainability*, 11(2), 436. <https://doi.org/10.3390/su11020436>
- Mardiani, I. N., & Sepdiana, Y. D. (2021). Pengaruh Gaya Kepemimpinan dan Budaya Organisasi Terhadap Kinerja Karyawan. *MASTER: Jurnal Manajemen Strategik Kewirausahaan*, 1(1), 1–10.
<https://doi.org/10.37366/master.v1i1.23>
- Megawati, M., Hamdat, A., & Aida, N. 2022. Examining Linkage Leadership Style, Employee Commitment, Work Motivation, Work Climate on Satisfaction and Performance. *Golden Ratio of Human Resource Management*, 2(1), 01–14. <https://doi.org/10.52970/grhrm.v2i1.86>
- Nasution, N. M. S., & Maqhfirah, D. (2017). Hubungan Lingkungan Kerja Non Fisik dengan Kepuasan Kerja pada Perawat RSJ Prof.Dr.Muhammad Ildrem Sumatera Utara. *Jurnal Diversita*, 3(2), 25.
<https://doi.org/10.31289/diversita.v3i2.1259>
- Newman, S. A., & Ford, R. C. (2021). Five Steps to Leading Your Team in the Virtual COVID-19 Workplace. *Organizational Dynamics*, 50(1), 100802. <https://doi.org/10.1016/j.orgdyn.2020.100802>
- Pasaribu, R., Adler Haymans Manurung, & Tussoleha Rony, Z. 2022. The Effect Of Leadership, Employee Performance, Motivation And Information Technology On Employee Job Satisfaction Moderated By Age Of Employees At Dinas Penanaman Modal Dan Pelayanan Terpadu Satu Pintu Kota Bekasi. *Dinasti International Journal of Management Science*, 3(3), 592–602. <https://doi.org/10.31933/dijms.v3i3.1130>
- Prasada, D. (2020). Pengaruh Gaya Kepemimpinan dan Budaya Organisasi Terhadap Kinerja Karyawan Pada PT. Mandiri Konstruksi di Tangerang Selatan. *Journal of Education, Humaniora and Social Sciences (JEHSS)*, 3(2), 629–636. <https://doi.org/10.34007/jehss.v3i2.381>
- Rasool, S. F., Wang, M., Tang, M., Saeed, A., & Iqbal, J. (2021). How Toxic Workplace Environment Effects the Employee Engagement: The Mediating Role of Organizational Support and Employee Wellbeing. *International Journal of Environmental Research and Public Health*, 18(5), 2294.
<https://doi.org/10.3390/ijerph18052294>
- Rifa'i, M., Sela, R., & Sayekti, R. N. S. (2021). Kompensasi Dan Motivasi Kerja Pengaruhnya Terhadap Kinerja Karyawan Melalui Kepuasan Kerja Sebagai Variabel Intervening. *J-MACC: Journal of Management and Accounting*, 4(1), 42–56. <https://doi.org/10.52166/j-macc.v4i1.2403>
- Robbins, S. P., & Judge, T. A. (2018). *Perilaku organisasi (Organizational behavior)*. Salemba Empat.
- Sedamaryanti. (2018). *Sumber Daya Manusia dan Produktivitas Kerja*. CV.Mandar Maju.
- Sembiring, H. F. B., & Marbun, P. (2021). Pengaruh Gaya Kepemimpinan dan Disiplin Kerja Terhadap Kinerja Karyawan Pada Perseroan Terbatas Perusahaan Listrik Negara (Persero) Pembangunan Sumatera Bagian Utara. *Jurnal Ilmiah Manajemen Dan Bisnis (JIMBI)*, 2(2), 167–175.
<https://doi.org/10.31289/jimbi.v2i1.459>
- Siagian, S. (2018). *Manajemen Sumber Daya Manusia*. Bumi Aksara.
- Sutrisno. (2016). *Manajemen Sumber Daya Manusia*. Prenada Media.
- Verstappen, V. J., Pikaar, E. N., & Zon, R. G. 2022. Assessing the impact of driver advisory systems on train driver workload, attention allocation and safety performance. *Applied Ergonomics*, 100, 103645.
<https://doi.org/10.1016/j.apergo.2021.103645>