



RESEARCH ARTICLE

The Influence of Transformational Leadership and Work Motivation on Employee Productivity

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Abstract

Employee productivity is a critical factor in supporting operational effectiveness, particularly in distribution supply chain management companies. Improving productivity relies on effective leadership that inspires employees, alongside work motivation that boosts enthusiasm for achieving organizational goals. This study aims to analyze the effect of Transformational Leadership and Work Motivation on Employee Productivity in the Supply Chain Management Division at PT Parit Padang Global Pusat, East Jakarta. A quantitative approach was employed using questionnaires for data collection. A total sampling method was applied, involving all 60 employees as respondents. Data were analyzed using SPSS version 22, encompassing validity tests, reliability tests, classical assumption tests, multiple linear regression analysis, partial t-tests, simultaneous F-tests, and coefficient of determination (R^2) analysis. The results indicate that Transformational Leadership has a positive and significant effect on Employee Productivity ($b = 0.402$, $t = 3.378$, $p = 0.000 < 0.05$). Work Motivation also exhibits a positive and significant effect on Employee Productivity ($b = 0.578$, $t = 4.988$, $p = 0.000 < 0.05$). Simultaneously, Transformational Leadership and Work Motivation significantly influence Employee Productivity ($F = 14.325$, $p = 0.000 < 0.05$). The coefficient of determination (R^2) is 0.3345 (33.45%), indicating that the two independent variables explain 33.45% of the variance in Employee Productivity, while the remaining 66.55% is influenced by other unexamined factors. Therefore, enhancing the quality of Transformational Leadership and Work Motivation is strategic for improving employee productivity.

Keywords

Transformational Leadership; Work Motivation; Employee Productivity.

1 | INTRODUCTION

The pharmaceutical distribution industry in Indonesia has experienced significant growth in recent years, in line with increasing public demand for quality health products, medicines, and medical devices. Pharmaceutical distribution companies play a strategic role in ensuring the availability of pharmaceutical products in a timely manner, in the correct quantity, and with the appropriate quality. Therefore, pharmaceutical distribution companies are required to have effective operational systems and productive human resources to maintain a smooth pharmaceutical supply chain. Efforts to improve company performance can begin with improving the quality of human resources or employees, because without optimal employee performance, organizational activities cannot run effectively.

Employee productivity is a key factor in determining the success of a pharmaceutical distribution company. High levels of productivity help companies increase distribution speed, reduce delivery errors, enhance customer satisfaction, and maintain competitiveness. Conversely, low productivity can lead to distribution delays, delivery errors, increased operational costs, and decreased customer service quality. Employee productivity reflects the efficiency and effectiveness of producing specific results based on the input provided. Productivity is closely related to employee performance, efficiency, and attendance. It also encompasses work performance, absenteeism, and work effectiveness as key measures of an individual's contribution to the company (Saputra *et al.*, 2025). Transformational leadership is characterized as a method of influencing major changes in the perspectives, beliefs, and values of followers to such an extent that organizational objectives and the leader's vision are internalized, resulting in followers delivering performance that exceeds normal expectations (Cesilia *et al.*, 2025). Transformational leadership is considered an effective leadership approach for improving employee performance and productivity. It emphasizes the leader's ability to inspire, motivate, and provide individual attention to employees. Transformational leaders focus not only on achieving organizational goals but also on developing employee potential through effective communication, support, and the creation of a clear organizational vision.

In pharmaceutical distribution companies, transformational leadership is essential for navigating complex operational dynamics. Leaders who provide clear direction, encourage innovation, and address employee needs can enhance employee engagement. High employee engagement can lead to increased productivity and reduced errors in the distribution process. PT Parit Padang Global currently implements a transformational leadership style, demonstrated through direct involvement in problem-solving, effective communication of the company's vision and mission to subordinates, and the provision of support, encouragement, and training. In addition to leadership style, another factor influencing employee productivity is work motivation. Work motivation is both an internal and external force that influences employee behavior. Employees with high work motivation tend to demonstrate better performance, take responsibility for their work, and strive to achieve established targets. Conversely, employees with low work motivation tend to perform less optimally, lack initiative, and experience lower productivity.

In pharmaceutical distribution companies, work motivation is a crucial factor because the work is routine but requires high precision. Without strong work motivation, employees tend to experience burnout, which can affect productivity. Therefore, companies need to create systems that can increase work motivation, such as providing rewards, career development opportunities, and a supportive work environment. Stimulating employee motivation is essential to encourage good performance. Motivation is the process of explaining a person's direction, strength, and perseverance in an effort to achieve predetermined goals. Employees with strong work motivation will also have good performance. Motivation can be viewed as a form of energy change within a person, characterized by a response to the presence of goals (Lailana & Nurhasanah, 2024). Several factors influence work motivation, including compensation and career development. Therefore, motivation refers to a condition that encourages or causes someone to consciously engage in actions or activities.

The company that is the object of this research is PT Parit Padang Global Pusat Jakarta, a pharmaceutical distribution company whose employee output is service. The company has a leadership style that focuses on efficient and productive management. However, although the company has achieved a good level of productivity, company leaders are still striving to improve employee productivity. Transformational leadership is one leadership style that can help increase employee productivity. This leadership style emphasizes ways to increase employee motivation and commitment. It also emphasizes the development and improvement of employee capabilities. Thus, transformational leadership can create an inclusive work environment and increase employee motivation. Productivity in this study refers to the extent to which employees achieve their performance in carrying out their duties (Hia *et al.*, 2024) at PT Parit Padang Global Pusat Jakarta in achieving the company's goal of becoming a leader in the field of health services and a leading provider of natural and innovative pharmaceutical products, while promoting public welfare and introducing a healthy lifestyle in a socially responsible manner in accordance with the vision and mission of PT Parit Padang Global. Efforts to achieve goals in line with the vision and mission require qualified human resources who are able to compete effectively.

PT Parit Padang Global has a KPI (Key Performance Indicator) standard for achieving distributor business goals, assigned to each position according to its function. Employee productivity at PT Parit Padang Global is assessed from final performance, consisting of a combination of work unit target values, individual targets, other main tasks, and

competencies contained in the Personal Score Card of PT Parit Padang Global employees, namely Financial, Customer, Internal Process, and Learning and Growth. The total score may be reduced by warning letters and employee absences.

According to the transformational leadership theory of Bass and Riggio (2006), as cited in Cesilia *et al.* (2025), transformational leaders influence subordinates through four main dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. When leaders are able to set an example, communicate a vision in an inspiring manner, encourage creative problem-solving, and provide individual attention, employee work engagement increases. Employees who feel supported and inspired are more likely to exert discretionary effort, that is, effort beyond the minimum standard. In the context of the pharmaceutical supply chain and distribution sector, which requires high precision, this encouragement improves operational efficiency and work quality, which directly affects employee productivity.

Work motivation is the internal and external energy that directs, stimulates, and maintains individual behavior in achieving organizational goals (BR. Pasaribu & Azwina, 2024). According to Maslow's Theory of Needs and Herzberg's Two-Factor Theory, the fulfillment of employee needs, such as physiological, safety, social, esteem, and self-actualization needs, can build a positive attitude toward work. In a distribution operational environment, employees are often required to complete routine tasks under strict time targets and high accuracy standards. Under such conditions, strong work motivation becomes essential because it encourages employees to remain focused, persistent, and responsible in carrying out their duties. Motivated employees are more likely to reduce errors, minimize absenteeism, and use working time efficiently. As a result, work motivation plays an important role in improving overall employee productivity.

The integration of leadership and motivation is an important basis for predicting work productivity (Affan *et al.*, 2025). Transformational leadership functions as an external force that directs, supports, and shapes the work environment, while work motivation operates as an internal drive that encourages employees to perform their duties effectively. Strong leadership alone cannot produce optimal results if employees lack motivation, and high motivation without clear leadership direction may result in ineffective work processes. In an organizational setting, both factors must work together to create consistency, responsibility, and strong commitment among employees. When transformational leadership provides inspiration, guidance, and support, and work motivation remains high, employees are more likely to focus on targets, complete tasks efficiently, and maintain better performance. As a result, productivity can be improved more effectively and sustainably.

Although studies on the influence of transformational leadership and work motivation on employee productivity have been widely conducted in various industrial sectors, such as manufacturing, banking, and education, there is still a significant research gap, particularly in the context of pharmaceutical supply chain and distribution. Most previous studies have focused on the impact of leadership on general performance or organizational commitment, but have not specifically examined how the dimensions of transformational leadership and work motivation interact directly in influencing work productivity as measured by Personal Score Card performance indicators in the pharmaceutical distribution operational environment. The uniqueness and urgency of the research at PT Parit Padang Global Pusat, East Jakarta lie in the operational characteristics of the pharmaceutical supply chain, which is highly regulated and requires a strict level of precision and time efficiency (Good Distribution Practice/GDP). Work in the supply chain division not only demands excellent physical condition but also compliance with accuracy standards for health product distribution that directly affect public safety. In this context, field conditions show operational challenges in the form of high pressure to meet Key Performance Indicators (KPIs), the risk of burnout due to routine tasks, and a workforce dominated by high school graduates and employees in the mature age range of 35–45 years. The limited number of studies empirically examining the interaction of these variables in the pharmaceutical distribution sector creates uncertainty regarding which variables contribute most significantly to employee productivity.

Therefore, the novelty of this research lies in the integration of transformational leadership style and work motivation with employee productivity, measured comprehensively using the Personal Score Card matrix, which covers four perspectives: Financial, Customer, Internal Process, and Learning and Growth, within the specific context of the pharmaceutical supply chain industry. This research not only fills a theoretical gap regarding the application of leadership and motivation theories to the healthcare supply chain ecosystem but also provides practical contributions in the form of empirically based managerial recommendations for optimizing operational efficiency and productive work behavior amid the increasingly competitive pharmaceutical distribution industry.

2 | BACKGROUND THEORY

2.1 Human Resource Management

Management is the science and art of managing the process of utilizing human resources and other resources effectively and efficiently to achieve certain goals. In addition to being viewed as a science and art, management can also be regarded as a profession because it is based on special skills to achieve managerial performance, is bound by a code of ethics, and requires professionalism. The development of management science contributes to our

understanding by presenting several indicators of approaches implemented through studies, analysis, and solutions to problems that have occurred and are related to the science that regulates managers (Siswadi, 2022). Thus, management refers to all activities carried out to organize and manage various resources in order to achieve desired goals effectively and efficiently. For a company to grow, human resources (HR) must be managed properly because they are a very valuable asset (Prabowo & Rachmawati, 2024). Human resource management can also be defined as the management and utilization of resources within individuals (employees). An organization needs human resources or employees to achieve its goals (Ayuningtyas *et al.*, 2024).

2.2 Transformational Leadership

According to Bass and Riggio, transformational leadership is described as a leader's ability to inspire others, foster work enthusiasm, and formulate a shared vision (Wisnumaya, 2025). Transformational leadership encourages followers not only to believe in themselves, but also to believe in their own potential to imagine and create a better future for the organization. Transformational leadership is a leadership style that instills noble principles such as freedom, justice, and equality in the real world to increase followers' awareness (Juniari *et al.*, 2025). According to Northouse (2019), there are four main dimensions emphasized in transformational leadership: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Harmen *et al.*, 2025). Based on the various definitions above, it can be concluded that transformational leadership changes followers' awareness of problems by helping them view old problems in new ways. It is also able to encourage, arouse, and inspire followers to exert extra effort in order to achieve organizational goals.

2.3 Motivation

Hasibuan (2020) stated that work motivation is a force that can increase work enthusiasm so that employees are willing to work effectively and efficiently to achieve company goals (Andayani & Nuary, 2025). Without employee motivation to work together for the benefit of the company, goals will not be achieved. On the other hand, if employee motivation is high, it will support the success of the company (BR. Pasaribu & Azwina, 2024). Work motivation is a driving factor that encourages someone to complete a task with the best results, so employees who have strong work motivation tend to achieve high productivity and success (Lailana & Nurhasanah, 2024). According to Robbins and Judge (2017), motivation is the force that drives someone to act intensely, purposefully, and consistently to achieve certain goals (Saputra *et al.*, 2025). Motivation is one of the most important factors in the management process. The success of an organization in achieving productivity depends largely on motivation. Therefore, leaders or managers must strive to ensure that the employees they lead have high motivation to carry out their work. Strong motivation leads to more effective teamwork and collaboration. Conversely, a lack of enthusiasm for work can have a negative impact. Unmotivated employees perform worse, are less enthusiastic, and are more prone to making mistakes (Affan *et al.*, 2025). Production decreases and costs increase because errors must be corrected, while high employee turnover can result from low motivation, causing workers to leave the organization more quickly.

2.4 Productivity

Productivity is the ability of each individual, system, or company to use resources efficiently and effectively to achieve desired goals. This was explained by Eka and Wibowo (2021), as cited in Hia *et al.* (2024). Employee productivity shows how efficiently and effectively employees produce certain outputs based on the input they receive (Saputra *et al.*, 2025). According to Hasibuan in Busro (2018), "productivity is a comparison between output and input." Increased productivity will result in improved work systems, efficiency in terms of time, materials, and energy, as well as better product quality (BR. Pasaribu & Azwina, 2024). Productivity is also understood as the belief that someone can do a job better today than yesterday and better tomorrow than today.

2.5 Research Hypothesis

Based on the literature review and theoretical elaboration above, the hypotheses in this study are formulated as follows.

- 1) H1: It is suspected that there is a positive and significant influence between transformational leadership style and employee work productivity at PT Parit Padang Global Pusat, East Jakarta, Supply Chain Management Division.
- 2) H2: It is suspected that there is a positive and significant influence between work motivation and employee work productivity at PT Parit Padang Global Pusat, East Jakarta, Supply Chain Management Division.
- 3) H3: It is suspected that there is a positive and significant influence between transformational leadership style and work motivation on employee work productivity at PT Parit Padang Global Pusat, East Jakarta, Supply Chain Management Division.

2.6 Conceptual Framework

This conceptual framework is based on theoretical foundations and previous research results that explain the relationship between Transformational Leadership Style (X_1) and Work Motivation (X_2) on Work Productivity (Y). This research model illustrates that transformational leadership style and work motivation are factors that play a role in increasing employee work productivity, both partially and simultaneously. Conceptually, transformational leadership is a leadership approach that inspires, motivates, and develops employee potential through providing a clear vision, individual attention, intellectual stimulation, and idealized influence. Effective leadership encourages employees to work optimally, thereby increasing productivity. On the other hand, work motivation is an internal and external drive that influences employee enthusiasm, commitment, and willingness to carry out their duties. Highly motivated employees tend to work harder, be more responsible, and be oriented towards achieving targets, thus producing higher work productivity. Therefore, these two variables are believed to have a positive relationship with work productivity, both individually (partially) and together (simultaneously). The better the implementation of the transformational leadership style and the higher the employee's work motivation, the higher the resulting work productivity.

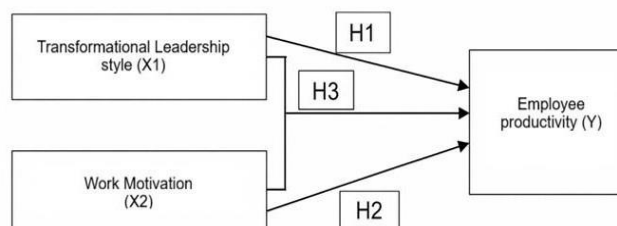


Figure 1. Framework of Thought

Description.

- 1) Box X_1 shows the independent variable Transformational Leadership Style, which is measured based on transformational leadership indicators.
- 2) Box X_2 shows the independent variable Work Motivation, which is measured through work motivation indicators.
- 3) Box Y shows the dependent variable Work Productivity, which describes the level of employee effectiveness and efficiency in producing work output.
- 4) H1 indicates the alleged partial influence of Transformational Leadership Style (X_1) on Work Productivity (Y).
- 5) H2 indicates the alleged partial influence of Work Motivation (X_2) on Work Productivity (Y).
- 6) H3 indicates the suspicion of simultaneous influence. Transformational Leadership Style (X_1) and Work Motivation (X_2) on Work Productivity (Y).

The following is the operational data for the variables along with the indicators for each variable, using a Likert scale of 1–5.

Table 1. Research Variables and Indicators

Variables	Definition of variables	Indicator	Size	Measuring scale
Transformational Leadership Style (X_1)	A leadership style that inspires and empowers individuals, groups and organizations by transforming the organization's paradigms and values towards independence.	Charisma, Inspirational Motivation, Intellectual Stimulation, Individualized Attention	Personal charm, communicative leader, leadership ability, leadership attention	Likert 1-5
Work motivation (X_2)	Something that creates encouragement or enthusiasm for work or motivates work enthusiasm	Physical, safety, social, appreciation, drive to achieve goals	Facilities, physical security, dependency, protection of freedom, interaction, need for status, glory, attention,	Likert 1-5

			reputation, motivation	and	
Work productivity (Y)	Employee work results are seen from the aspects of quality, quantity, work time and cooperation to achieve the goals set by the organization.	Ability, improving results, work enthusiasm, self-development, efficiency	Abilities, relationships, communication	skills,	Likert 1-5

3 | METHOD

This research technique uses a quantitative approach with an explanatory (causal-associative) design to test the effect of Transformational Leadership (X₁) and Work Motivation (X₂) on Employee Productivity (Y). Population and Sample: The population in this study was all 60 employees of the Supply Chain Management Division of PT. Parit Padang Global Pusat, East Jakarta. The sampling technique used a census method (total sampling), with the entire population of 60 employees being selected as respondents. The Research Instrument and Number of Research Items were obtained from primary data collected through a structured questionnaire using a 5-point Likert Scale. The instrument consisted of 15 questions, divided into.

- 1) Transformational Leadership Variable (X₁): 5 statement items (adapted from Northouse, 2019).
- 2) Work Motivation Variable (X₂): 5 statement items (adapted from Robbins & Judge, 2017).
- 3) Employee Productivity Variable (Y): 5 statement items (adapted from Busro, 2018).

Data collection was conducted from January to June 2026. The procedure began with obtaining agency permits, followed by distributing questionnaires to respondents under the principle of confidentiality (anonymity), and double-checking the completeness of the questionnaires before the data analysis stage. Data analysis techniques were processed using SPSS version 22. The analysis stages included instrument validity and reliability tests, classical assumption tests (normality, multicollinearity, heteroscedasticity, and autocorrelation), multiple linear regression analysis, partial t-tests, simultaneous F-tests, and coefficient of determination (R²) analysis.

The types and sources of data used are primary and secondary. In this study, the data used is primary data obtained directly from questionnaires distributed to employees of PT. Parit Padang Global Pusat, East Jakarta. Secondary data is data or information obtained indirectly or through intermediary sources. This data is obtained by quoting from other sources, so it is not authentic because it is obtained second-hand, third-hand, and so on. Secondary data in this study was obtained from previous research journals and books. The technique for collecting research data uses a questionnaire/survey with a Likert scale format of 1-5, then processed using data analysis techniques through SPSS version 22 analysis. Initial instrument testing was carried out through validity and reliability tests. An item was considered valid if the r value (r) (calculated) is greater than the r table value. Meanwhile, the reliability of the instrument is measured using Cronbach's Alpha, where a variable is declared reliable if its value is greater than 0.60. Before conducting the regression analysis, the data must meet the classical assumption test. The normality test is used to ensure that the residual data is normally distributed. The multicollinearity test is applied to ensure there is no strong correlation between the independent variables, which is indicated by a Tolerance value > 0.10 and a Variance Inflation Factor (VIF) < 10. The heteroscedasticity test is carried out to detect whether there is an imbalance in the variance of the residuals from one observation to another. After the classical assumptions are met, multiple linear regression analysis is applied to predict the magnitude of the influence of the independent variables on the dependent variable. The mathematical regression equation used is $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e$.

The final step, hypothesis testing, is conducted using several parameters. The t-test is used to determine the partial significance of each independent variable on the dependent variable, with a probability value (Sig.) < 0.05. The F-test is used to assess the simultaneous significance of all independent variables collectively, also with a significance criterion of < 0.05. In addition, the coefficient of determination (R²) is also used. analyzed to measure the percentage of fluctuations in the dependent variable that can be explained by the independent variable, while the remaining percentage is explained by other factors outside the research model.

4 | RESULTS AND DISCUSSION

4.1 Results

4.1 Descriptive Analysis of Respondents

The respondents in this study consisted of 60 employees from the Supply Chain Management Division of PT Parit Padang Global Pusat, East Jakarta. The respondent profile was examined through gender, age, and educational background to show the general characteristics of the sample. This description provides a clearer picture of who participated in the study and helps frame the interpretation of the findings that follow.

Table 2. Respondent Identity Profile

Characteristics	Category	Frequency	Percentage (%)
Gender	Woman	26	43%
	Man	34	57%
Age	20–35	16	27%
	35–45	35	58%
	>45	9	15%
Education	High school/equivalent	23	38%
	Diploma	22	37%
	S1	11	18%
	Others	4	7%

The demographic analysis in Table 2 shows that the majority of respondents were male (57%). The dominant age group was 35–45 years (58%). In the education category, most respondents had a high school/equivalent educational background (38%). Therefore, it can be assumed that the majority of employees were male heads of households of mature age and had a high school/equivalent level of education.

4.1.2 Validity Test

Validity testing was conducted to determine whether the questionnaire items were appropriate and valid for measuring each variable in this study. This stage was important to ensure that every statement item could accurately represent the concept being measured. The results of the validity test are presented in the following table and serve as the basis for assessing the quality of the research instrument.

Table 3. Results of Testing Variable Items

Item	r Count	r Table	Information
pert01(X1)	.682**	0.2542	Valid
pert02(X1)	.703**	0.2542	Valid
pert03(X1)	.737**	0.2542	Valid
pert04(X1)	.712**	0.2542	Valid
pert05(X1)	.578**	0.2542	Valid
pert01(X2)	.750**	0.2542	Valid
pert02(X2)	.841**	0.2542	Valid
pert03(X2)	.793**	0.2542	Valid
pert04(X2)	.751**	0.2542	Valid
pert05(X2)	.503**	0.2542	Valid
pert01(Y)	.775**	0.2542	Valid
pert02(Y)	.726**	0.2542	Valid
pert03(Y)	.923**	0.2542	Valid
pert04(Y)	.761**	0.2542	Valid
pert05(Y)	.773**	0.2542	Valid

Based on the validity test results in the table above, all 15 questionnaire items across the 3 variables, answered by 60 respondents, were tested. To determine whether the items were valid, the r table was first identified. The formula used was $df = N - 2$, so $60 - 2 = 58$, and the r table value was 0.2542. The results show that all r count values are greater than the r table value; therefore, all 15 items are declared valid.

4.1.3 Reliability Test

Reliability testing was carried out to assess the consistency of the questionnaire items in measuring each variable. A

reliable instrument produces stable results when used repeatedly under similar conditions. The test results indicate whether the instrument can be trusted for further analysis. The reliability values are presented in the following table as the basis for evaluating the consistency of the measurement tool.

Table 4. Reliability of Transformational Leadership (*X1*)

Cronbach's Alpha	N of Items
0.732	5

Based on the table above, the Transformational Leadership variable consists of five items with a Cronbach's Alpha value of 0.732. Because this value exceeds the minimum requirement of 0.60, the items are considered reliable. This indicates that the instrument has good internal consistency for measuring the variable.

Table 5. Reliability of Work Motivation (*X2*)

Cronbach's Alpha	N of Items
0.783	5

Based on the table above, the Work Motivation variable consists of five items with a Cronbach's Alpha value of 0.783. Since this value is above the minimum threshold of 0.60, all items are declared reliable. The result shows that the questionnaire has a consistent level of measurement for this variable.

Table 6. Employee Productivity Reliability (*Y*)

Cronbach's Alpha	N of Items
0.851	5

Based on the table above, the Employee Productivity variable consists of five items with a Cronbach's Alpha value of 0.851. Because this value is higher than the minimum standard of 0.60, all items are declared reliable. The result indicates that the instrument is consistent and suitable for measuring employee productivity in this study.

4.1.4 Normality Test

The normality test was conducted using graphical analysis in the form of a histogram and a P-P Plot to examine whether the data were distributed normally. This step was necessary to determine whether the regression model met the normality assumption. The interpretation of both graphs provides an overview of the pattern of data distribution and becomes an initial reference before proceeding to further statistical testing.

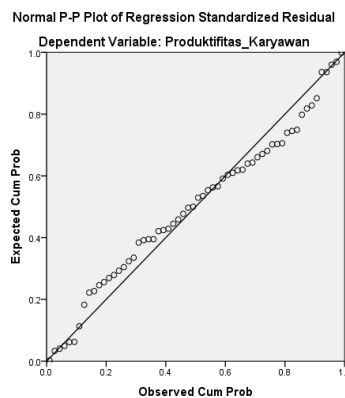


Figure 2. Normality Test

Figure 2 shows that the data points are positioned close to the diagonal line and generally follow its direction. This pattern indicates that the residuals are normally distributed and that there is no strong deviation from the expected normal pattern. Based on this graphical result, the normality assumption in the regression model can be considered satisfied.

4.1.5 Multicollinearity Test

In a regression model, multicollinearity does not occur when the tolerance value is greater than 0.10 and the VIF value is less than 10. These criteria indicate that the independent variables do not have a strong correlation with each other, so they can be used properly in the regression analysis. Therefore, if the test results meet these requirements, the

regression model can be considered free from multicollinearity problems.

Table 7. Multicollinearity Test

Model	Tolerance	VIF
Transformational Leadership	.992	1.008
Work Motivation	.992	1.008

Based on the table above, the Transformational Leadership variable has a VIF value of 1.008 and the Work Motivation variable also has a VIF value of 1.008. Therefore, all VIF values are below 10, indicating that there are no symptoms of multicollinearity in this regression model.

4.1.6 Heteroscedasticity Test

A good regression model is one that does not show heteroscedasticity, as indicated by the spread of points in the regression scatterplot. When the points are distributed in an unclear pattern and appear randomly above and below the 0 line on the Y-axis, it suggests that heteroscedasticity is not present. This condition shows that the variance of the residuals is relatively constant, so the regression model is appropriate for further analysis.

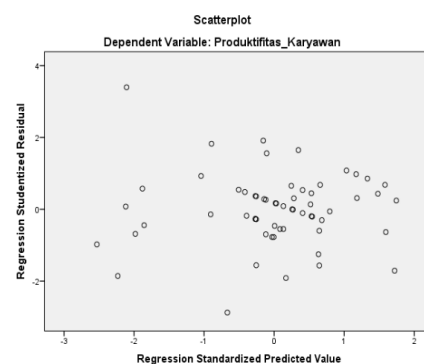


Figure 3. Heteroscedasticity Test

From the image above, the points are spread in an unclear pattern and appear both above and below 0 on the Y-axis. This distribution indicates that the regression model does not show a heteroscedasticity problem. Based on this pattern, the residual variance is considered stable, so the model meets the assumption required for further analysis.

4.1.7 Autocorrelation Test

A good regression model is one that is free from autocorrelation because this condition shows that the residuals are independent from one observation to another. If autocorrelation does not occur, the regression results become more reliable for interpretation and further statistical testing. Therefore, this test is used to ensure that the model meets one of the basic assumptions in multiple linear regression analysis.

Table 8. Autocorrelation Test

Model	Durbin-Watson
1	1.933

a. Predictors: (Constant), Work Motivation, Transformational Leadership

b. Dependent Variable: Employee Productivity

Based on the table above, the DW value can be known as 1.933. This value will be compared with the significance table value of 5%, with the number of samples 60 (n) and the number of independent variables 2 ($k = 2$), then the du value is 1.616 and the DW value is 1.933. Then the results of the Autocorrelation Test are $1.616 < 1.933 < 2.384$, the conclusion is that there is no Autocorrelation in the data.

4.1.8 Multiple Linear Regression Test

For regression with two or more independent variables, the analysis is called multiple linear regression. This method is used to determine the extent to which each independent variable influences the dependent variable, either partially or simultaneously. In this study, multiple linear regression helps explain the relationship between transformational leadership and work motivation toward employee productivity. The results of this analysis provide a clearer picture of the direction and strength of the effect of each variable.

Table 9. Multiple Linear Regression Test and Partial t-Test

Model	B	Std. Error	Beta	t	Sig.
Constant	12.413	3.475		8.695	.000
Transformational Leadership	.402	.127	.458	3.378	.000
Work Motivation	.578	.116	.541	4.988	.000

Based on the table above, the multiple linear regression equation can be arranged as follows.

$$ZY = 0,458ZX1 + 0,541ZX2$$

Interpretation.

- 1) The Relative Effect of Transformational Leadership ($\beta_1=0.458$): The Beta coefficient value of 0.458 is positive. This indicates that Transformational Leadership has a significant positive effect on Employee Productivity. Every 1 standard deviation increase in Transformational Leadership (X_1) will increase Employee Productivity (Y) by 0.458 standard deviations, assuming the Work Motivation (X_2) variable remains constant.
- 2) Relative Effect of Work Motivation ($\beta_2=0.541$): The Beta coefficient value of 0.541 is positive. This indicates that Work Motivation has a significant positive effect on Employee Productivity. Every 1 standard deviation increase in Work Motivation (X_2) will increase Employee Productivity (Y) by 0.541 standard deviations, assuming the Transformational Leadership (X_1) variable remains constant.
- 3) Comparison of the Most Dominant Variables: Based on the standardized Beta coefficient value, the Work Motivation variable ($\beta=0.541$) has a greater value than Transformational Leadership ($\beta=0.458$). This indicates that Work Motivation is the variable that provides the most dominant contribution/influence on increasing Employee Productivity at PT. Parit Padang Global Pusat, East Jakarta.

4.1.9 Partial T-test

The basis used in testing the hypothesis is the value contained in the SPSS output coefficients table. A two-sided test was conducted with a significance level of $\alpha = 0.05$ ($\alpha/2 = 0.025$), $T = (a/2 : nk-1) = t(0.05/2 : 60-1-1) = 0.025 : 58$ (t table = 1.672), then the calculated t of X_1 was 3.378, the calculated t of X_2 was 4.988.

4.1.10 Simultaneous F test

Testing of independent variables together with the dependent variable is carried out using the F test, $df = nk-1$, so that $df = 60 - 2 - 1 = 57$, $\alpha = 0.05$, then the F table is obtained = 3.16 while the calculated F value from the computer in the F column is obtained as 14,325.

Table 10. Simultaneous F-Test

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	285.909	2	142.954	14.325	.000
Residual	568.825	57	9.979		
Total	854.733	59			

The F-test result is 14.325 with a significance level of $p < 0.05$. The coefficient table also shows a significance value of 0.000, which is smaller than 0.05. This means that Transformational Leadership and Work Motivation have a significant simultaneous effect on Employee Productivity.

4.2 Discussion

4.2.1 Transformational Leadership (X_1) on Employee Productivity (Y)

The results of the partial t-test indicate that Transformational Leadership has a positive and significant effect on Employee Productivity ($\beta=0.458$; $t_{\text{count}}=3.378$; $p=0.000 < 0.05$). This demonstrates that improving the quality of the implementation of a transformational leadership style by management will significantly increase employee productivity in the field. Theoretically, this finding supports the Transformational Leadership Theory proposed by Bass & Riggio (2006) and Northouse (2019), which states that this leadership style operates through four main dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. The fundamental reason why transformational leadership has been shown to have a significant impact on PT. Parit Padang Global (a pharmaceutical product distribution supply chain management company) lies in its operational nature, which involves high precision and high risk. Pharmaceutical supply chain work is not simply a physical routine but requires strict adherence to Good Distribution Practice (GDP) standards and efficient distribution time.

- 1) Intellectual Stimulation & Inspirational Motivation: When leaders directly support the achievement of Personal Scorecard indicators (such as Financial, Customer, Internal Process, and Learning and Growth), they not only provide mechanical direction but also inspire employees to understand the importance of their role in maintaining drug

quality throughout the life of the customer. Employees who receive intellectual stimulation become more agile in overcoming operational logistical challenges.

- 2) Individualized Consideration: Respondents in this study were predominantly in the mature age group (35–45 years old, 58%), with the highest educational attainment being high school or equivalent (38%). Workers in this demographic are highly oriented toward stability and personal appreciation. A leadership approach that provides training, personal support, and inclusive communication fosters emotional attachment (employee engagement). Employees feel valued not simply as task performers but as a vital part of achieving the company's vision, thus triggering discretionary effort (the desire to go the extra mile).

The results of this study are consistent with and support research conducted by (Setiarlan *et al.*, 2021) and (BR. Pasaribu & Azwina, 2024), which found that transformational leadership significantly influences work productivity. This research also aligns with the findings of (Affan *et al.*, 2025) and (Putri *et al.*, 2025). However, this study provides a different emphasis: in the pharmaceutical distribution industry, the influence of transformational leadership is stronger through clear communication of operational standards and individual attention, which reduces the tendency for physical fatigue and employee absenteeism.

4.2.2 Work Motivation (X2) on Employee Productivity (Y)

The results of the standardized regression analysis indicate that Work Motivation has a positive and significant effect on Employee Productivity ($\beta=0.541$; $t_{\text{count}}=4.988$; $p=0.000<0.05$). The standardized beta coefficient for work motivation ($\beta=0.541$) is higher than that of transformational leadership ($\beta=0.458$). This indicates that Work Motivation is the most dominant factor in determining employee productivity at PT. Parit Padang Global. This finding aligns with Maslow's Hierarchy of Needs and Herzberg's Two-Factor Theory (Robbins & Judge, 2017; Hasibuan, 2020). Work motivation acts as an internal driving force that transforms employee potential into tangible work achievements. Reasons Why Work Motivation Is the Most Dominant Driver.

- 1) Respondent Demographics: The majority of respondents were men (57%) of mature productive age (35–45 years old, 58%) who act as heads of households. Basic needs (physical, facilities, and financial security) and the need for job stability significantly influence their motivation levels. When a company is able to provide encouragement to achieve targets, a sense of security, and a conducive work environment, this directly impacts the fulfillment of family obligations, thus increasing the drive to work productively.
- 2) Characteristics of Supply Chain Work: Work in warehouses and distribution chains often faces the routine of achieving Key Performance Indicator (KPI) targets. Without strong motivation and work ethic, repetitive work risks burnout, which can lead to misdelivery of goods or high absenteeism. High motivation ensures employee consistency in maintaining quality, quantity, and delivery time efficiency.

These findings reinforce previous research by (Ayuningtyas *et al.*, 2024) and (Nadut *et al.*, 2025), which emphasized that work motivation plays a vital role in increasing work output. This research also confirms studies by (Saputra *et al.*, 2025) and (Lailana & Nurhasanah, 2024), which show that goal achievement motivation and a safe work environment directly influence individual work efficiency.

4.2.3 Transformational Leadership (X1) and Work Motivation (X2) together on Employee Productivity (Y)

Together, Transformational Leadership and Work Motivation significantly influence Employee Productivity ($F_{\text{calculated}}=14.325$; $p=0.000<0.05$). The combination of these two variables contributes 33.45% ($R^2=0.3345$) to the variation in Employee Productivity, while the remaining 66.55% is influenced by other variables not examined (such as organizational climate, workload, financial compensation, and logistics technology). The integration of Transformational Leadership and Work Motivation creates a synergistic effect in driving the organization. Transformational leadership functions as an external enabler, providing direction, vision, guidance, and facilities. Meanwhile, work motivation acts as an internal driving force within employees to move toward that direction. Good leadership without employee motivation will only foster passive compliance; conversely, motivation without clear leadership direction can result in work inefficiency, Managerial Implications (Practical).

- 1) Strengthening the Role of Supervisors: PT. Management. Parit Padang Global needs to equip supervisors in the Supply Chain Management Division with transformational leadership skills particularly dialogic communication skills and individualized consideration.
- 2) Integrated Motivation Scheme with KPIs: Given that Work Motivation is the most dominant influence, management is recommended to review the Personal Scorecard reward system. Motivation should not only be achieved through financial incentives, but also through performance recognition, clear career paths for high school/diploma graduates, and the creation of a safe and conducive work environment to reduce the number of reprimands and operational errors.

5 | CONCLUSIONS AND FUTURE WORK

Based on the results of this study, it can be concluded that transformational leadership and work motivation have a positive and significant effect on employee productivity in the Supply Chain Management Division of PT Parit Padang Global Pusat, East Jakarta. Transformational leadership has been proven to improve employee productivity, as shown by a positive regression coefficient and a significant t-value, meaning that better leadership implementation will encourage employees to work more effectively. Work motivation also has a positive and significant effect on employee productivity and shows a stronger influence than transformational leadership, indicating that motivated employees are more likely to achieve higher performance. In addition, the two variables simultaneously have a significant effect on employee productivity, which means that leadership and motivation together play an important role in improving employee performance. The coefficient of determination shows that the two independent variables explain only part of the variation in productivity, while the rest is influenced by other factors outside this study. Therefore, increasing employee productivity cannot rely solely on leadership style and motivation, but also requires other supporting factors such as work environment, organizational culture, compensation, and employee commitment. Based on these findings, companies are advised to strengthen transformational leadership practices, improve employee motivation through reward systems and career development opportunities, and create a supportive work environment. Future researchers are also suggested to expand the research scope and include additional variables in order to gain a more comprehensive understanding of factors affecting employee productivity.

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How to cite this article: Nuryadi, A., & Asrarudin, A. (2026). The Influence of Transformational Leadership and Work Motivation on Employee Productivity. *Indonesian Journal Economic Review (IJER)*, 6(3), 1407–1419. <https://doi.org/10.59431/ijer.v6i3.958>.