

THE EFFECT OF WORK SKILLS, WORK DISCIPLINE, AND WORK MOTIVATION ON EMPLOYEE PERFORMANCE WITH THE MODERATION OF THE REWARD SCHEME AT PT. TJIWI KIMIA PAPER FACTORY, TBK

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ABSTRACT

This study aims to analyze the influence of work skills, work discipline, and work motivation on employee performance with a reward scheme as a moderation variable in BU17 employees of PT. Tjiwi Chemical Paper Factory, Tbk. The research uses an explanatory quantitative approach using the Structural Equation Modeling–Partial Least Square (SEM-PLS) method. The research population amounted to 379 employees with a sample of 192 respondents selected using purposive sampling techniques. Data collection was carried out through a questionnaire based on the Likert scale and analyzed using SmartPLS 3.0. The results of the study show that work skills, work discipline, and work motivation have a positive and significant effect on employee performance. In addition, reward schemes have been shown to be able to moderate the relationship between job skills, work discipline, and work motivation to employee performance significantly. These findings suggest that rewards not only serve as a form of organizational reward, but also as a work behavior reinforcer that is able to increase the effectiveness of individual contributions to performance achievement. This research provides theoretical implications in the development of the human resource management literature based on reinforcement theory and human capital theory, as well as practical implications for companies in designing a fair, transparent, and performance-based reward system to increase organizational productivity and effectiveness.

Keywords: Job Skills, Work Discipline, Work Motivation, Reward Scheme, Employee Performance

1. INTRODUCTION

Employee performance is one of the main determinants of an organization's success in achieving strategic goals and maintaining a long-term competitive advantage. In the era of industry 4.0 which is characterized by technological developments, digitalization of business processes, and increasing operational complexity, the quality of individual performance is no longer seen solely as a result of technical ability, but also as a representation of the effectiveness of the human resource management system as a whole. Organizations are required to be able to manage human resources that are adaptive, competent, disciplined, and motivated so that

productivity, operational efficiency, and service quality can be achieved optimally (Wibowo, 2020). Therefore, attention to the factors that affect employee performance is becoming increasingly important, especially in the manufacturing industry sector which is process-based and has a high level of competition.

In the context of an organization, employee performance is influenced by various internal factors, including work skills, work discipline, and work motivation. These three variables are important elements in shaping productive work behavior and have been the main focus in various studies of human resource management and organizational behavior (Robbins & Judge, 2019). Work skills reflect the ability of individuals to carry out tasks effectively and efficiently, both through technical competence and problem-solving skills. Work discipline is related to compliance with the company's rules, procedures, and operational standards, while work motivation is a psychological force that encourages individuals to work optimally in achieving organizational goals. However, the influence of these three variables on performance is not always direct, but can be strengthened by external factors in the form of reward schemes implemented by the organization.

A reward scheme is a managerial instrument used by organizations to strengthen expected work behavior through financial and non-financial rewards. From the perspective of organizational behavior, rewards not only function as an administrative tool, but also as a psychological stimulus that is able to increase employee motivation, discipline, and work commitment (Luthans, 2017). A reward system that is designed in a fair, transparent, and performance-based manner will create a perception of organizational fairness so that it can strengthen the relationship between personal factors and actual performance. Research by Albrecht et al. (2021) confirms that a reward system that is aligned with employees' intrinsic competencies and motivations can increase productivity and reduce work deviations in a target-based organizational environment.

This phenomenon can be seen in the operations of BU17 PT. Tjiwi Kimia Paper Factory Tbk., one of the main production units under Asia Pulp & Paper (APP) Group which is engaged in the process of converting paper into industrial packaging products. This unit has work characteristics that demand high precision, compliance with SOPs, and production process efficiency. In practice, the company has implemented a Key Performance Indicators (KPI) system combined with a reward scheme as a performance control instrument. However, the implementation of the system has not been fully able to produce optimal performance. This can be seen from the increase in the production waste rate from 8.26% in January 2025 to 9.84% in June 2025, which exceeds the company's maximum target of 8%. In addition, the Return Goods Analysis and Action (RGAA) level reached 0.74%, higher than the KPI target of 0.62%.

When compared to similar units within the APP Group and competitor companies, the performance of the BU17 is still relatively lagging behind. Other units such as BU12 Tjiwi Kimia and Indah Kiat Serang Mill show more stable levels of waste and return goods. This condition indicates ineffectiveness in human resource management, especially related to technical skills, work discipline, work motivation, and the effectiveness of the reward system implemented by the company. In addition, the low Overall Equipment Effectiveness (OEE)

value on some production machines also shows that the combination of work competence and behavioral strengthening through rewards is not optimal.

Theoretically, this research is supported by several main approaches, namely Human Capital Theory, Reinforcement Theory, and Herzberg's Two-Factor Theory. Human Capital Theory explains that employee skills and competencies are productive assets that contribute directly to improving organizational performance (Becker, 1993). Skinner's Reinforcement Theory emphasizes that work behavior can be strengthened through a consistent and relevant reward system, while Herzberg's Two-Factor Theory distinguishes motivator and hygiene factors as determinants of job satisfaction and performance. In this study, skills and motivation were positioned as motivating factors, while discipline and reward were seen as hygiene factors that maintain the stability of work behavior.

Although various previous studies have discussed the influence of skills, discipline, motivation, and rewards on performance, studies that integrate all of these variables simultaneously with reward as a moderation variable are still relatively limited, especially in the context of the Indonesian manufacturing industry. Most previous studies have only examined the direct relationship between variables without explaining how rewards reinforce the influence of personal factors on employee performance. Therefore, this research is important to fill the literature gap while making a practical contribution to companies in building a more effective, fair, and evidence-based human resource management performance management system. This research is expected to provide a more comprehensive understanding of how work skills, work discipline, and work motivation affect employee performance with the support of reward schemes as a reinforcement of the relationship between these variables in the modern manufacturing industry environment.

Employee performance is one of the main indicators of organizational success in achieving strategic goals and maintaining the sustainability of the company's operations. From the perspective of human resource management, performance is understood as the result of individual work measured based on quality, quantity, effectiveness, and contribution to the achievement of organizational targets. Performance not only reflects an individual's technical ability to complete the job, but also demonstrates work behavior, responsibility, and commitment to the organization. In the manufacturing industry environment such as BU17 PT. At Tjiwi Kimia Paper Factory Tbk., employee performance is a very important factor because it is directly related to productivity, production process efficiency, output quality, and the organization's ability to meet operational standards and customer needs. Therefore, companies need to understand the various factors that affect employee performance in order to be able to create an effective and sustainable work system.

In this study, employee performance was measured using indicators developed by Lousã, Alves, and Koopmans (2024), namely task performance, contextual performance, and counterproductive work behavior. Task performance is related to the individual's ability to complete core tasks effectively and on time. Contextual performance shows the voluntary contribution of individuals in supporting the work environment, such as teamwork, initiative,

and self-development. Meanwhile, counterproductive work behavior refers to negative behaviors that can harm the organization, such as work negligence, the spread of negative information, and low concern for job responsibilities. These three indicators provide a comprehensive picture of the quality of individual work behavior in modern organizations.

One of the main factors that affect employee performance is job skills. Work skills are technical and non-technical abilities that individuals have to carry out work effectively and efficiently. In the context of modern industry, skills are no longer limited to manual abilities, but also include digital skills, communication, collaboration, critical thinking, creativity, and problem-solving (Arif & Windarsari, 2026; Dipotmodjo et al., 2026). Employees with high skills tend to be better able to adapt to technological changes, solve operational problems quickly, and produce better work quality. This study adopts job skill indicators from van Laar et al. (2019) which include information management, communication, collaboration, critical thinking, creativity, and problem-solving. The six indicators represent competencies that are relevant to the needs of the technology-based manufacturing industry and modern work processes.

Theoretically, the work skills in this study are supported by Human Capital Theory developed by Gary Becker. This theory explains that individual skills, knowledge, and competencies are a form of organizational capital that can increase productivity and a company's competitive advantage. According to Becker (1993), organizational investment in skill development through training, education, and work experience will result in an improvement in the quality of individual and organizational performance as a whole. Thus, job skills are seen as a strategic asset that is able to increase the effectiveness of the company's operations.

In addition to work skills, work discipline is also an important factor in determining the quality of employee performance. Work discipline is a form of individual compliance with rules, procedures, operational standards, and organizational norms. In a manufacturing environment, work discipline is indispensable to maintain the stability of the production process, reduce work errors, and improve operational efficiency. Disciplined employees will show high responsibility, adhere to work schedules, and carry out tasks according to the procedures set by the company. The work discipline variables in this study are adapted from Erbasi A and Dumus S (2023), which include preventive discipline, constructive discipline, and corrective discipline.

The work discipline in this study is explained through Organizational Behavior Theory developed by Stephen P. Robbins and Timothy A. Judge (2019). Organizational behavior theory explains that individual behavior in an organization is influenced by the structure, culture, and work system that prevails in the company. In this perspective, work discipline is understood as normative behavior that helps organizations maintain stability, coordination, and operational effectiveness (Dipotmodjo et al., 2025; Riu et al., 2026). Employees who have high discipline will be better able to maintain the quality of work and reduce the potential for procedural deviations that can hinder the achievement of organizational goals.

Another factor that also affects employee performance is work motivation. Work motivation is an internal and external drive that affects an individual's intensity, direction, and perseverance in carrying out work. Work motivation is very important in a high-pressure work environment such as the manufacturing industry, because motivation determines the enthusiasm, commitment, and psychological resilience of employees in the face of operational demands. This study uses the Self-Determination Theory approach from Kotera et al. (2022), which includes intrinsic motivation, integrated regulation, identified regulation, introjective regulation, external regulation, and motivation.

Theoretically, the work motivation in this study is strengthened by the Expectancy Theory developed by Victor H. Vroom. This theory explains that individuals will be motivated to work hard if they believe that the effort made will result in good performance, that performance earns an award, and that the award has meaningful value for them. Thus, work motivation is not only influenced by internal drives, but also by perceptions of opportunities to earn rewards from the organization.

In this study, rewards were positioned as a moderation variable that strengthened the relationship between job skills, work discipline, and work motivation to employee performance. A reward scheme is a reward system given by organizations to strengthen desired work behavior, both in financial and non-financial form. Fair, transparent, and performance-based rewards will increase self-esteem, strengthen motivation, and encourage employees to maintain their best work performance. The reward variables were measured based on the controlling meaning and informative meaning indicators developed by Thibault Landry et al. (2022).

The main theoretical foundation that explains this relationship is Frederick Herzberg's Two-Factor Theory. This theory distinguishes motivating factors and hygiene factors in shaping job satisfaction and performance. Skills and motivation are positioned as motivating factors that encourage achievement and self-development, while rewards and discipline are seen as hygiene factors that maintain stability and comfort at work. In addition, Reinforcement Theory from B. F. Skinner explained that work behavior can be strengthened through giving rewards as a form of positive reinforcement. Thus, rewards serve not only as an administrative reward tool, but also as a psychological mechanism that reinforces productive behavior and improves employee performance on an ongoing basis.

2. RESEARCH METHODS

This study uses a quantitative approach with the type of explanatory research which aims to explain the causal relationship between work skills, work discipline, and work motivation on employee performance with the reward scheme as a moderation variable. The quantitative approach was chosen because this study focuses on hypothesis testing through statistical analysis to obtain generalizations of relationships between variables in an objective and measurable manner. According to John W. Creswell (2018), quantitative research is an effective method to test theories through variable measurement and numerical data analysis using statistical procedures. This research was conducted on BU17 employees of PT. Tjiwi Kimia Paper Factory Tbk., which is a process-based production unit with work characteristics

that require technical skills, operational discipline, and high work motivation.

The population in this study is all employees of BU17 PT. Tjiwi Kimia Paper Factory Tbk. which totals 379 people. The sample was determined using the purposive sampling technique, which is a sampling technique based on certain criteria that are in accordance with the purpose of the research. Respondents' criteria included permanent employees who have worked for at least one year and are directly involved in production operational activities. Based on the Slovin formula with an error rate of 5%, the number of samples used was 192 respondents. The purposive sampling technique was chosen because it is considered to be able to produce data that is more relevant and representative of the characteristics of the research population (Sugiyono, 2022).

Data collection was carried out using a questionnaire instrument with a five-point Likert scale, ranging from a score of 1 (strongly disagree) to a score of 5 (strongly agree). The research instrument was adapted from several international journals that have been tested for validity and reliability. Employee performance variables were measured using task performance, contextual performance, and counterproductive work behavior indicators developed by Koopmans et al. (2024). The work skill variables were adapted from van Laar et al. (2019), which include information management, communication, collaboration, critical thinking, creativity, and problem-solving. The work discipline variables use preventive, constructive, and corrective discipline indicators from Erbasi A and Dumus S (2023). Furthermore, work motivation was measured based on the Self-Determination Theory approach from Kotera et al. (2022), while the reward variable was measured using the concepts of controlling meaning and informative meaning from Thibault Landry et al. (2022).

The data analysis technique in this study uses Structural Equation Modeling–Partial Least Square (SEM-PLS) with the help of SmartPLS 4.0 software. The SEM-PLS method was chosen because it is able to analyze the simultaneous relationships between latent variables, test the moderation model, and is suitable for use in studies with complex models and data that are not always normally distributed (Hair et al., 2021). The analysis was carried out through two main stages, namely the outer model and the inner model. The outer model is used to test the validity and reliability of instruments through convergent validity, discriminant validity, composite reliability, and Cronbach's Alpha. Meanwhile, the inner model was used to test the relationship between variables, the determination coefficient (R^2), predictive relevance (Q^2), effect size (f^2), and hypothesis testing through bootstrapping with a significance level of 5%.

In addition, this study also examines the effect of reward scheme moderation on the relationship between job skills, work discipline, and work motivation on employee performance using the interaction effect approach in SEM-PLS. This approach is used to determine the extent to which rewards are able to strengthen or weaken the influence of independent variables on dependent variables. According to Joseph F. Hair et al. (2021), SEM-PLS is very effective in organizational behavior research and human resource management because it is able to comprehensively explain predictive relationships in research models that are moderation and mediation. Thus, this research method is expected to be able to provide accurate, valid, and relevant analysis results in explaining the influence of work skills, work discipline, and work

motivation on employee performance with rewards as a moderation variable in BU17 PT. Tjiwi Kimia Paper Factory Tbk.

The conceptual model in this study can be described in the form of a measurement model based on Partial Least Squares Structural Equation Modeling (PLS-SEM) as follows:

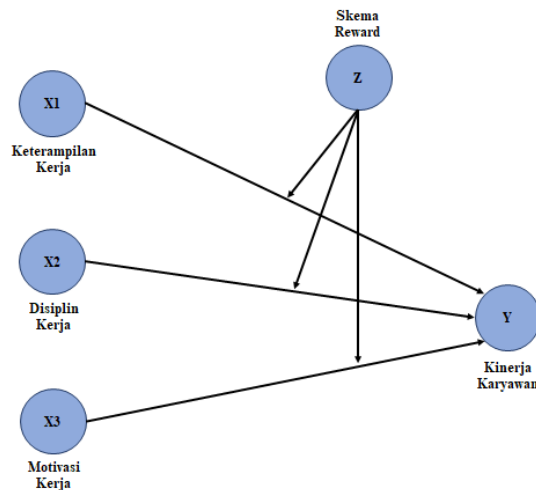


Image 1 Conceptual Framework

This model will be tested using the SEM-PLS approach through SmartPLS 4.0 software, as this method is able to handle multivariate models with high complexity and moderate sample sizes. In addition, PLS-SEM is also suitable for testing the direct influence and moderation between latent variables measured through reflective indicators (Hair et al., 2021; Henseler et al., 2015). Furthermore, the hypothesis in this study is described as follows:

- H1: There is a Positive and Significant Influence of Work Skills on Employee Performance
- H2: There is a Positive and Significant Influence of Work Discipline on Employee Performance
- H3: There is a positive and significant influence of work motivation on employee performance
- H4: There is a Positive and Significant Influence of the Reward Scheme on Employee Performance
- H5: There is a Positive and Significant Influence of Job Skills on Moderated Employee Performance
- H6: There is a Positive and Significant Influence of Work Discipline on Employee Performance Moderated by the Reward Scheme
- H7: There is a Positive and Significant Influence of Work Motivation on Employee Performance, Both Partially and Fully Moderated by the Reward Scheme

3. RESULTS AND DISCUSSION

Yes	Respondent Characteristics	Categories	Frequency (N)	Percentage (%)
1	Employment Status	Internal Employees	192	100%
		External Employees	0	0%
		Total	192	100%
2	Length of Service	≥ 6 Months	192	100%
		< 6 Months	0	0%
		Total	192	100%
3	Reward Scheme Views in the Last 3 Months	Exposure to the Reward Scheme	192	100%
		No Reward Exposure	0	0%
		Total	192	100%
4	Ownership of Measurable Performance KPIs	Have Measurable Performance KPIs	192	100%
		Lacking KPIs	0	0%
		Total	192	100%
5	Leave Status/Outside Assignment	Not on Leave/Outside Assignment	192	100%
		On Leave/Outside Assignment	0	0%
		Total	192	100%
6	Employee Employment Status	Units with Formal Performance Evaluation	192	100%
		Lack of Formal	0	0%

Evaluation		
Total	192	100%

Based on the table above, all respondents in this study totaled 192 people and all were internal employees of PT Pabrik Kertas Tjiwi Kimia, Tbk. All respondents also had a minimum working period of six months, had been exposed to the company's reward scheme in the last three months, had measurable performance KPIs, were not undergoing long leave or long-term external assignments, and worked in units that implemented a formal performance evaluation system. This condition shows the characteristics of the respondents who are homogeneous and in accordance with the methodological needs of the research, so that the data obtained is considered representative to illustrate the relationship between work skills, work discipline, work motivation, reward schemes, and employee performance in the work environment of PT Pabrik Kertas Tjiwi Kimia, Tbk.

4.2 Evaluation of Measurement Model (outer model)

Variable	Item	Loading Factor	Cronbach's Alpha	Composite Reliability (CR)	AVE
Job Skills (X1)	KK1	0.943	0.913	0.915	0.699
	KK2	0.810			
	KK3	0.868			
	CD4	0.778			
	KK5	0.788			
	KK6	0.817			
Work Discipline (X2)	DK1	0.823	0.792	0.795	0.706
	DK2	0.846			
	DK3	0.852			
Work Motivation (x3)	MK1	0.795	0.899	0.899	0.664
	MK2	0.829			
	MK3	0.778			
	MK4	0.842			
	MK5	0.797			
	MK6	0.847			
Reward Scheme (M)	SR1	0.840	0.689	0.714	0.761
	SR2	0.903			
Employee Performance (Y)	K1	0.787	0.740	0.743	0.658
	K2	0.803			
	K3	0.842			

Based on the results of the outer model test, all indicators on the variables of work skills, work discipline, work motivation, reward schemes, and employee performance have a loading factor value above 0.70. This value shows that all indicators are able to represent the variable construct well and are declared valid. The highest loading factor value was found in the KK1 indicator of 0.943, while the lowest value was found in the MK3 indicator of 0.778. In addition, the results of the Average Variance Extracted (AVE) test showed that all variables had values above 0.50, namely work skills of 0.699, work discipline of 0.706, work motivation of 0.664, reward scheme of 0.761, and employee performance of 0.658. This indicates that all constructs meet the convergent validity criteria and are able to explain the variance of the indicators well.

The results of the reliability test also showed that all research variables had a good level of internal consistency. The work skill variable had a Composite Reliability value of 0.915 and Cronbach's Alpha of 0.913, while the work discipline had a Composite Reliability value of 0.795 and Cronbach's Alpha of 0.792. The work motivation variable obtained a Composite Reliability and Cronbach's Alpha value of 0.899, while the reward scheme had a Composite Reliability value of 0.714 and Cronbach's Alpha of 0.689. Furthermore, the employee performance variable has a Composite Reliability value of 0.743 and Cronbach's Alpha of 0.740. Overall, the Composite Reliability and Cronbach's Alpha values on all variables have met the reliability criteria, so that the research instrument is declared reliable and suitable for use in future research analysis.

4.3 Evaluation of Structural Models (Inner Model)

		R Square
Employee Performance (Y)		0.840

Based on the results of the internal model test, the R-Square value on the employee performance variable was 0.840. This value shows that work skills, work discipline, work motivation, and reward schemes as moderation variables are able to explain the variation in employee performance by 84.0%, while the remaining 16.0% is explained by other variables outside the research model. According to Joseph F. Hair et al. (2021), an R-Square value of 0.75 or more indicates that the research model has strong (substantial) predictive capabilities. Thus, the structural model in this study has a very good level of explanatory ability, so that the relationship between work skills, work discipline, work motivation, and reward schemes to employee performance can be said to be relevant and able to explain the research phenomenon strongly in the work environment of PT Pabrik Kertas Tjiwi Kimia, Tbk.

Table 4.13 Results f2

Variable	F-Square
X1.KK -> Y.K	0.074
X2.DK -> Y.K	0.063
X3.MK -> Y.K	0.030
Z.SR -> Y.K	0.020
Z.SR x X1.KK -> Y.K	0.007
Z.SR x X2.DK -> Y.K	0.004
Z.SR x X3.MK -> Y.K	0.001

Based on the results of the effect size (f-square) test, the variable of work skill (X1) on employee performance (Y) has an f-square value of 0.074, while work discipline (X2) on employee performance has a value of 0.063. This value shows that both variables have an influence in the small to close to medium category on employee performance. Meanwhile, work motivation (X3) on employee performance had an f-square value of 0.030, which showed a relatively small influence on the study's structural model. According to Joseph F. Hair et al. (2021), the f-square value of 0.02 is categorized as small, 0.15 medium, and 0.35 large. Thus, work skills are an independent variable that has the most dominant influence contribution compared to other variables in explaining changes in employee performance.

In the moderation variable, the reward scheme (Z.SR) on employee performance has an f-square value of 0.020, which shows that the direct influence of rewards on performance is in a small category but still has a contribution in the research model. This shows that the existence of a reward system in the organization still plays a role in improving employee work performance, even though the direct contribution is not too large. This condition indicates that the improvement in employee performance is not only influenced by the reward factor alone, but also by internal factors such as skills, discipline, and work motivation possessed by individuals.

Furthermore, the results of the moderation interaction test showed an f-square value in the relationship between reward moderation to work skill and performance of 0.007, reward moderation to work discipline and performance of 0.004, and reward moderation to work motivation and performance of 0.001. All of these values fall under the category of small effect sizes, thus showing the effect of reward moderation in strengthening the relationship between variables is relatively weak. Nevertheless, the existence of rewards still makes an additional contribution to strengthening the relationship between independent variables to employee performance. Thus, the reward scheme in this study functions more as a supporting factor than as the main factor that dominantly strengthens the influence of work skills, work discipline, and work motivation on employee performance.

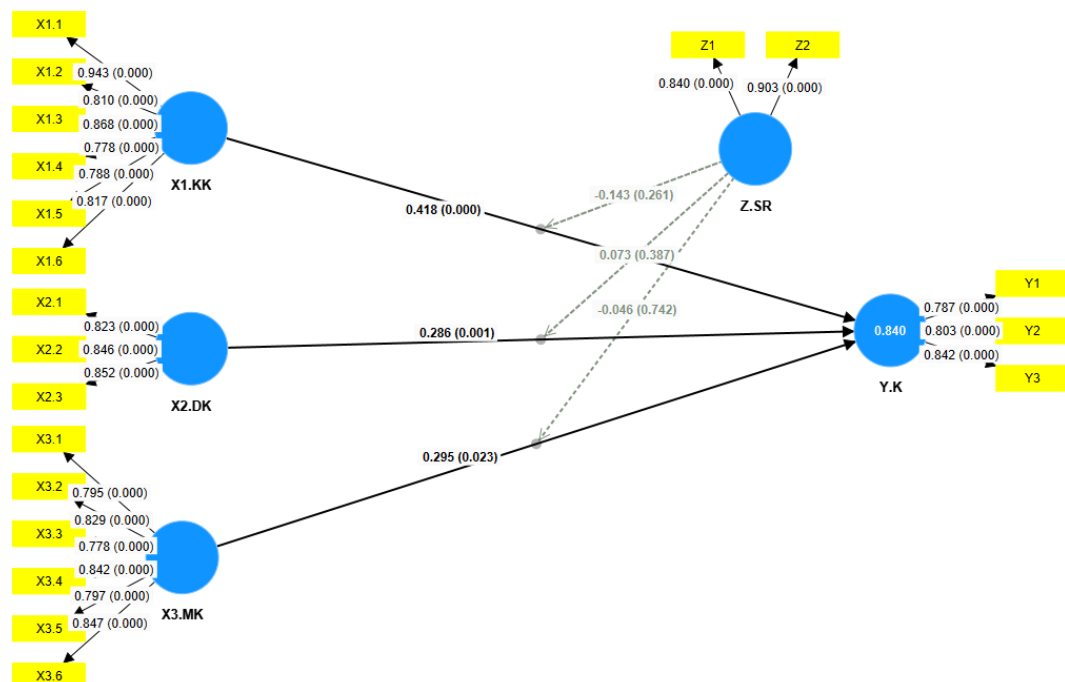


Figure 2. Output model PLS SEM Algorithm

Source: Processed by researchers in 2025

4.5 Hypothesis Testing

Hypothesis tests were carried out to find out whether the relationships between latent variables in the structural model are statistically significant. The test was conducted using the bootstrapping method on SmartPLS 4.1.1.4 with a significance level of 0.05. The decision to

accept or reject the hypothesis is determined based on T-statistical values (>1.96) and P-values (<0.05). Test results are shown in Table 9

Table 9. Path Coefficient Bootstrapping

Independe nt Variables	Moderati on Variables	Depende nt Variable	Path Coefficien t (β)	P- Value	Remarks
Job Skills (KK)		Employee Performance (K)	0.41 8	0.00 0	Significant
Work Discipline (DK)		Employee Performance (K)	0.28 6	0.00 1	Significant
Work Motivation (MK)		Employee Performance (K)	0.29 5	0.02 3	Significant
	Reward Scheme (SR)	Employee Performance (K)	- 0.131	0.03 8	Significant
Job Skills (KK)	Reward Scheme (SR)	Employee Performance (K)	- 0.143	0.26 1	Insignifica nt
Work Discipline (DK)	Reward Scheme (SR)	Employee Performance (K)	0.07 3	0.38 7	Insignifica nt
Work Motivation (MK)	Reward Scheme (SR)	Employee Performance (K)	- 0.046	0.74 2	Insignifica nt

Source: Processed by researchers in 2026

H1; Positive and Significant Influence of Job Skills on Employee Performance at PT Pabrik Kertas Tjiwi Kimia Tbk

The discussion on the influence of job skills on employee performance at PT Pabrik Kertas Tjiwi Kimia Tbk needs to be understood contextually based on the operational reality of the paper manufacturing industry which is technology-intensive, process-intensive, and quality-oriented. Job skills are not only limited to basic technical skills, but include mastery of high-capacity production machines, understanding the production process flow (*pulping–pressing–drying*), and the ability to troubleshoot quickly and accurately when disturbances occur. In practice in the field, highly skilled employees are able to operate machines precisely, reduce downtime, and maintain consistency of product quality according to industry standards. This emphasizes that job skills have a direct relationship with daily operational performance and are a key factor in improving employee performance. These findings are in line with the research of Putra and Sudibya (2020) which shows that improving technical and non-technical skills contributes to work efficiency and output quality in the manufacturing sector.

Within PT Tjiwi Kimia, job skills are also closely related to the ability to adapt to industrial technological developments, including automation and digitalization of production systems. Employees who have high competence tend to understand digital-based control

systems faster, are able to read production parameters accurately, and are responsive to changes in operational standards. This shows that job skills are dynamic and continue to evolve along with industry transformation. Research by Sari et al. (2021) strengthens these findings by stating that job skills not only increase individual productivity, but also strengthen the adaptive ability of the workforce in facing the industrial era 4.0. Thus, the company's investment in training and competency development is an important strategy to maintain optimal employee performance.

Empirically in the field, work skills also contribute to the effectiveness of teamwork. The paper production process involves coordination across units, so the quality of individual skills will affect collective performance. Skilled employees not only complete their tasks effectively, but are also able to support colleagues, share knowledge, and maintain the continuity of the production process. This condition is in line with the findings of Nugraha and Raharjo (2021) which stated that organizations with high levels of workforce skills tend to have better team productivity, especially when supported by a collaborative work system.

From a theoretical perspective, the relationship between job skills and employee performance can be explained through the Human Capital Theory put forward by Gary Becker (1993), which places skills as a form of investment that increases the productive value of individuals. In addition, in the framework of the Resource-Based View (RBV) by Jay Barney (1991), specific and hard-to-replicate job skills are the source of an organization's competitive advantage. In the context of PT Tjiwi Kimia, the mastery of high technical skills allows the company to improve production efficiency, maintain product quality, and maintain competitiveness in the global market.

Nevertheless, empirical findings in various studies show that job skills do not always have optimal impact without the support of other organizational factors. Research by Hassan and Ibrahim (2019) shows that work skills do not have a significant effect on performance when they are not supported by motivation and a conducive work environment. A similar thing was also found by Widodo (2022) who emphasized that without an integrated reward and performance management system, high skills are not always directly proportional to performance improvement. This condition is relevant to the dynamics in the field, where employees need recognition, fairness, and organizational support to maximize the potential of their skills.

Overall, work skills have proven to be the main determinant in shaping employee performance at PT Pabrik Kertas Tjiwi Kimia Tbk, especially due to its industry characteristics that demand high precision, efficiency, and reliability. Skills management through continuous training, strengthening technical competencies, and integration with operational needs will have a significant impact on performance improvement. In the face of modern industrial transformation, companies need to develop skills not only in technical aspects, but also in adaptive, digital, and collaborative capabilities in order to be able to maintain a competitive advantage in a sustainable manner.

H2; The Positive and Significant Influence of Work Discipline on Employee Performance at PT Pabrik Kertas Tjiwi Kimia, Tbk

The discussion on the influence of work discipline on employee performance at PT Pabrik Kertas Tjiwi Kimia, Tbk needs to be understood contextually by considering the operational characteristics of industries that implement continuous production processes. In this work environment, discipline is not only related to compliance with formal rules, but also includes consistency in carrying out work procedures, punctuality, and the ability to maintain

the stability of the production process. In the field, discipline is reflected in the operator's compliance with standard operating procedures (SOPs), the use of work tools according to safety standards, and the accuracy in carrying out the production schedule that has been set. Disciplined employees tend to be able to maintain a stable work rhythm, reduce operational errors, and ensure product quality is maintained. This emphasizes that work discipline has a direct contribution to the effectiveness and efficiency of employee performance, as also emphasized by Rivai and Sagala (2019) who stated that discipline is a reflection of individual awareness in complying with organizational rules in order to achieve optimal performance.

In practice at PT Tjiwi Kimia, work discipline is strengthened through a structured control system, such as the use of digital attendance, real-time production line supervision, and target-based performance evaluation. This implementation creates a scalable and standardized work environment, so that every employee has clarity regarding the work expectations that must be achieved. This finding is in line with the research of Rahmawati and Nugroho (2020) which shows that work discipline is able to form systematic work habits, increase responsibility, and encourage the achievement of work targets consistently. In addition, the study by Widyaningsih and Santoso (2021) also emphasized that work discipline plays a role as an effective behavior control mechanism in suppressing work errors and improving the quality of output in the manufacturing sector.

Theoretically, the relationship between work discipline and performance can be explained through the Goal-Setting Theory developed by Edwin Locke and Gary Latham, which emphasizes that disciplinary behavior helps individuals direct actions consistently toward the achievement of predetermined goals. In an organizational context, discipline serves as a self-control mechanism that ensures that every work activity remains aligned with production targets and quality standards. In addition, in the perspective of Behavioral Management Theory, which was widely developed by Stephen Robbins and Timothy Judge, work discipline is formed through a system of reinforcement in the form of rewards and sanctions that are applied consistently, thereby encouraging the internalization of expected work behavior.

However, empirical reality shows that the application of work discipline does not always have a positive impact if it is done excessively or disproportionately. Research by Arifin and Suryadi (2021) found that discipline that is too rigid can cause psychological pressure and reduce employee morale. A similar thing is also expressed by Chen et al. (2019), who state that too strict control can hinder individual creativity and initiative. In the context of an industry such as PT Tjiwi Kimia, this condition is important to pay attention to because even though the production process is standardized, there is still room for adaptation and quick response to operational dynamics. Therefore, work discipline needs to be implemented in an adaptive and humanist manner, not just as a rigid control tool.

The dialectic between supportive and contradictory findings suggests that the effectiveness of work discipline is strongly influenced by the organizational management system. In the case of PT Tjiwi Kimia, work discipline proved effective because it was integrated with a performance-based reward system and good organizational communication. Research by Prasetyo and Andini (2022) confirms that work discipline has an optimal impact on performance when supported by a fair and transparent reward system. In addition, the role of leadership is also a key factor, as expressed by Susanti and Harahap (2020), who stated that discipline will be more effective if accompanied by open communication and participatory leadership.

Overall, work discipline at PT Pabrik Kertas Tjiwi Kimia, Tbk not only functions as a tool for operational control, but also as a mechanism for forming a performance-oriented work culture. With a balanced application of control, rewards, and communication, work discipline is able to improve the consistency of work behavior, reduce production errors, and strengthen employee productivity in a sustainable manner. In the face of modern industrial challenges, companies need to continue to maintain a balance between rule rigor and managerial flexibility so that work discipline remains a driving factor, not an obstacle, of employee performance.

H3; Positive and Significant Influence of Work Motivation on Employee Performance at PT Pabrik Kertas Tjiwi Kimia, Tbk

The discussion about the influence of work motivation on employee performance at PT Pabrik Kertas Tjiwi Kimia, Tbk needs to be understood by looking at the operational dynamics of the manufacturing industry which demands high consistency, precision, and durability. In this context, work motivation acts as a psychological energy that encourages employees to stay focused, responsible, and oriented towards achieving production targets. In the field, work motivation is reflected in the seriousness of employees in carrying out their duties, willingness to work according to quality standards, and commitment to maintaining the continuity of the production process. Highly motivated employees tend to be more proactive, able to work under target pressure, and show diligence in completing work, thus having a direct impact on performance improvement. This is in line with the views of Stephen Robbins and Timothy Judge (2020) who affirm that motivation determines the direction, intensity, and perseverance of individual behavior in achieving organizational goals.

In practice at PT Tjiwi Kimia, work motivation comes not only from external factors such as incentives and compensation, but also from internal factors such as a sense of responsibility, pride in work, and a desire to develop. A structured work environment with a clear target system encourages employees to have achievement-oriented behavior. In addition, career development opportunities, ongoing training, and recognition of performance also strengthen employee work motivation. These findings are consistent with research by Dewi and Astuti (2021) which shows that intrinsic motivations such as the need for achievement and responsibility have a significant influence on increased productivity. Research by Tamba and Harsono (2020) also confirms that motivated employees tend to have higher organizational loyalty and commitment, which ultimately impacts performance.

Theoretically, this relationship can be explained through the Expectancy Theory put forward by Victor Vroom, which states that individuals will be motivated when they believe that the effort put in will result in good performance and be followed by valuable results. In the context of PT Tjiwi Kimia, when employees see a clear relationship between efforts, target achievements, and awards received, work motivation will increase significantly. In addition, the Self-Determination Theory developed by Edward Deci and Richard Ryan emphasizes that motivation that comes from within, such as the need for competence, autonomy, and social connectedness, has a stronger and more sustainable influence on performance than external motivation alone.

However, empirical reality shows that work motivation does not always have a positive impact if it is not supported by a fair and conducive organizational system. Wibowo and Cahyani (2020) research found that high work pressure and excessive target load can weaken the influence of motivation on performance. The same thing is also expressed by Mensah and Tawiah (2021), who stated that the incentive system is ineffective if it is not supported by transparent performance evaluation. In the context of the manufacturing industry such as PT

Tjiwi Kimia, this condition is important because high production demands have the potential to cause fatigue if not balanced with a reward system and a supportive work environment.

The dialectic between supportive and contradictory findings suggests that the effectiveness of work motivation depends heavily on how the organization manages intrinsic and extrinsic factors in a balanced manner. At PT Tjiwi Kimia, work motivation has proven to be effective because it is supported by a combination of a performance-based reward system, career development opportunities, and a competitive yet collaborative work environment. Research by Santosa and Riyanto (2022) confirms that the performance-based motivation approach accompanied by a recognition system can significantly improve employee performance.

In addition, the motivation for work in this company is also multidimensional, including financial and non-financial rewards. Employees are not only motivated by bonuses or benefits, but also by appreciation, trust, and opportunities to grow. This is in line with the findings of Marylène Gagné and Edward Deci (2019) who show that organizations that are able to foster intrinsic motivation through recognition and empowerment will produce more productive and innovative employees.

Overall, work motivation has proven to be a key factor in improving employee performance at PT Pabrik Kertas Tjiwi Kimia, Tbk. In a work environment that demands high consistency, motivation serves as the main driver that maintains employee enthusiasm, perseverance, and work quality. Therefore, companies need to continue to manage their work motivation strategically by balancing intrinsic and extrinsic aspects, so as to be able to create sustainable performance while increasing organizational competitiveness in the midst of the dynamics of the modern manufacturing industry.

H4; The Negative and Significant Influence of the Reward Scheme on Employee Performance at PT Pabrik Kertas Tjiwi Kimia, Tbk

The discussion on the influence of the reward scheme on employee performance at PT Pabrik Kertas Tjiwi Kimia, Tbk shows dynamics that are not completely linear, where in the context of this research the direction of the relationship is found to be negative but significant. Empirically in the field, this condition can occur when the reward system implemented is not fully aligned with the perception of fairness, employee needs, and job characteristics in the manufacturing environment. In operational practice, employees who feel that the reward system is disproportionate—both in terms of size, transparency, and its relationship to performance—tend to experience a decrease in motivation, and can even trigger apathy towards work targets. This indicates that rewards do not always function as a performance driver, but in certain conditions can actually be a factor that decreases performance if not managed properly.

At PT Tjiwi Kimia, which has a sustainable and target-based production system, the effectiveness of the reward scheme is highly dependent on the suitability between individual contributions and awards received. When employees see an imbalance between effort and reward, there is a potential for perceived inequity that can have an impact on a decrease in work commitments. In this situation, employees may continue to carry out their duties formally, but do not show the extra discretionary effort that is usually a driver of performance improvement. This phenomenon is in line with John Stacey Adams' view that individuals will compare their input and output ratios with others, and imbalances in that comparison can lead to dissatisfaction and decreased performance.

Theoretically, these findings can also be explained through the perspective of the crowding-out effect in motivation, where improper external rewards weaken employees' intrinsic motivation. In the framework of Self-Determination Theory, Edward Deci and Richard

Ryan explain that intrinsic motivation can decrease when individuals feel controlled by external incentives that do not give autonomy or meaning to work. In the context of the manufacturing industry such as PT Tjiwi Kimia, where work tends to be routine and standardized, rewards that are only output-oriented without considering the psychological aspects of employees can reduce their sense of belonging to work, thus negatively impacting performance.

These findings are also supported by several empirical studies. A study by Mensah and Tawiah (2021) shows that a financial-based reward system does not always improve performance if it is not accompanied by transparency and fairness in evaluation. In addition, Wibowo's research (2022) revealed that rewards that are not integrated with the performance appraisal system can actually cause demotivation and internal conflicts between employees. In the context of PT Tjiwi Kimia, this condition can arise if rewards are given in aggregate or do not consider specific individual contributions, so that employees feel that their efforts are not fairly rewarded.

However, it is important to understand that the negative influence of reward schemes does not mean that rewards are not needed, but rather indicate inaccuracies in design and implementation. Gagné's (2019) research confirms that rewards will be effective in improving performance if they are designed fairly, transparently, and are able to strengthen intrinsic motivation, rather than just being an external control tool. Therefore, companies need to ensure that the reward system is not only results-based, but also takes into account processes, individual contributions, as well as non-financial aspects such as recognition and appreciation.

In the context of PT Pabrik Kertas Tjiwi Kimia, these findings provide important managerial implications. Companies need to evaluate the existing reward system, especially in terms of distribution fairness, transparency of assessment criteria, and direct linkage to individual performance. The integration between financial and non-financial rewards, as well as the awarding of rewards that are more personalized and based on real contributions, can be a strategy to restore the reward function as a driver of performance. Thus, the reward scheme is no longer a factor that decreases performance, but transforms into a strategic instrument in increasing productivity and employee engagement in a sustainable manner.

H5; Negative and Insignificant Effects of Work Skills on Employee Performance Moderated by the Reward Scheme at PT Pabrik Kertas Tjiwi Kimia, Tbk

A discussion of the role of reward scheme moderation in the relationship between work skills and employee performance at PT Pabrik Kertas Tjiwi Kimia, Tbk shows that the effect of the interaction formed is negative and insignificant. These findings indicate that the existence of reward schemes is not able to strengthen the relationship between job skills and employee performance, and even tends to weaken the relationship even though it is statistically meaningless. In the context of operations in the field, it can be understood that job skills are an inherent and competency-based factor, so that their contribution to performance is determined more by technical ability and work experience than by external factors such as rewards.

In PT Tjiwi Kimia which has a standardized production system and is based on strict procedures, employees who have high skills are still able to show optimal performance even without the reinforcement of the reward system. This shows that job skills serve as a relatively independent core driver of performance. However, when reward schemes are integrated as a moderation variable, inconsistencies in their design or implementation can actually lead to less positive perceptions. Employees who already have high competence may not be too dependent on external rewards, so the existence of rewards does not improve their performance, and even

in some conditions it can lead to the perception that the rewards given are not proportional to the contributions that have been made.

Theoretically, this phenomenon can be explained through the Self-Determination Theory put forward by Edward Deci and Richard Ryan, which states that individuals with high competence tend to be driven by intrinsic motivation. When intrinsic motivation is strong, interventions in the form of inappropriate external rewards can actually cause a crowding-out effect, namely a weakening of internal motivation at work. In this context, skilled employees may be more motivated by job challenges, personal achievements, and professional recognition than by mere material incentives.

In addition, in the perspective of Equity Theory by John Stacey Adams, the mismatch between skill contribution and reward received can give rise to perceptions of injustice. If employees with high skills feel that the reward system does not reflect their level of competence, then rewards will not serve as a performance booster. This may explain why the role of reward scheme moderation is not significant in the relationship.

These findings are also supported by empirical research, such as the study by Hassan and Ibrahim (2019) which shows that job skills are not always influenced by the reward system in improving performance, especially when employees already have a high level of competence. Another study by Gagné (2019) also confirms that external rewards have a limited impact on individuals who already have strong intrinsic motivations, so they are not always able to strengthen the relationship between ability and performance.

In the context of PT Pabrik Kertas Tjiwi Kimia, these findings provide an implication that job skills management should be focused on developing competencies through training, work experience, and technical capacity building, not solely through reward mechanisms. Meanwhile, the reward system needs to be designed more specifically and differentially to be able to provide added value, especially for employees with different skill levels. Thus, rewards can serve as a complement, rather than a main factor in encouraging the performance of employees who already have high skills.

H6; Positive and Insignificant Effects of Work Discipline on Employee Performance Moderated by the Reward Scheme at PT Pabrik Kertas Tjiwi Kimia, Tbk

A discussion of the role of reward scheme moderation in the relationship between work discipline and employee performance at PT Pabrik Kertas Tjiwi Kimia, Tbk shows that the effect of the interaction formed is positive but not significant. These findings indicate that the existence of reward schemes tends to strengthen the relationship between work discipline and employee performance, but the influence is not yet strong enough to have a statistically significant impact. In the context of operations in the field, work discipline has become part of the organization's internal control system that is inherent through work procedures, operational standards, and strict supervision mechanisms, so that its contribution to performance does not depend too much on the existence of rewards as a reinforcing factor.

In PT Tjiwi Kimia which implements a sustainable production system, work discipline is reflected in compliance with work schedules, consistency in implementing SOPs, and responsibility for maintaining the stability of the production process. Disciplined employees are still able to show good performance due to the demands of a structured work system and continuous supervision. In this condition, reward schemes can indeed provide additional encouragement, but they are more of a supporting factor than a key factor that strengthens the relationship between discipline and performance. This explains why the direction of the influence is positive, but not significant.

Theoretically, this phenomenon can be explained through the Behavioral Reinforcement Theory put forward by B. F. Skinner, which states that behavior can be reinforced through the provision of rewards. However, in the context of organizations with already high levels of discipline and internalization, external reinforcement does not always result in significant behavioral improvements. In addition, in the perspective of Goal-Setting Theory by Edwin Locke and Gary Latham, discipline helps individuals stay focused on the goals that have been set, so that performance can be achieved without having to rely directly on additional rewards.

Empirically, several studies have also shown similar results. The study of Prasetyo and Andini (2022) found that rewards only have a limited additional influence on disciplinary behavior if the discipline system is already running well. Another study by Susanti and Harahap (2020) confirms that the effectiveness of work discipline is more influenced by leadership factors and organizational culture than by external incentives alone. This shows that reward is not the main determinant in strengthening the relationship between work discipline and performance.

However, although not significant, the positive direction of influence suggests that reward schemes still have the potential to increase the effectiveness of work discipline if designed more precisely. In practice at PT Tjiwi Kimia, there may be conditions where rewards are not fully integrated with work discipline indicators, or have not been able to provide a clear differentiation between high-disciplined and low-disciplined employees. As a result, rewards have not been able to become a strong behavioral driver in strengthening the relationship.

Overall, these findings show that work discipline is a relatively independent factor in influencing employee performance, while reward schemes only play a role as a suboptimal supporting factor. The managerial implication is that companies need to evaluate reward design to be more aligned with discipline indicators, for example by providing rewards based on compliance with SOPs, punctuality, and work consistency. Thus, rewards are not only a symbol of appreciation, but also able to function as a more effective strengthening mechanism in improving employee performance in a sustainable manner.

H7; Negative and insignificant effects of work motivation on Employee Performance moderated by the Reward Scheme at PT Pabrik Kertas Tjiwi Kimia, Tbk

A discussion of the role of reward scheme moderation in the relationship between work motivation and employee performance at PT Pabrik Kertas Tjiwi Kimia, Tbk shows that the effect of the interaction formed is negative and insignificant. These findings indicate that the existence of reward schemes is not able to strengthen the relationship between work motivation and employee performance, and even tends to weaken the relationship even though it does not have a statistically significant impact. In the context of operations in the field, this condition shows that work motivation, especially those that are intrinsically more dominant in driving performance compared to the additional influence of external rewards.

Within PT Tjiwi Kimia, employee work motivation is formed from internal factors such as a sense of responsibility, the need for achievement, and commitment to work. In a production system that demands high consistency, employees who have strong intrinsic motivation still show optimal performance without relying on the reward system. However, when external rewards are introduced as a moderation factor, inconsistencies in their design or implementation can have counterproductive effects. Employees may view rewards as a form of external control that reduces the meaning of the job, so that intrinsic motivation that was previously strong becomes weakened.

Theoretically, this phenomenon can be explained through the Self-Determination Theory put forward by Edward Deci and Richard Ryan, which states that intrinsic motivation can be impaired by improper external interventions, especially if the individual feels that they have lost autonomy at work. This effect is known as the crowding-out effect, where external rewards actually lower an individual's internal drive. In this context, employees who were initially motivated by job satisfaction or personal achievement may experience a decline in morale when the focus of work shifts to simply chasing incentives.

In addition, in the perspective of Expectancy Theory by Victor Vroom, rewards will be effective in improving performance if there is a clear relationship between effort, performance, and results. When the reward system is not transparent or does not reflect the real contribution of employees, then these expectations are not formed strongly, so rewards fail to function as motivation boosters. This condition may explain why the role of reward scheme moderation in the relationship between work motivation and performance is insignificant.

These findings are also supported by empirical research, such as the study of Mensah and Tawiah (2021) which show that rewards do not necessarily improve performance if they are not supported by a fair evaluation system. Another study by Wibowo and Cahyani (2020) also found that work motivation can lose its influence on performance when employees face high work pressure and a disproportionate reward system. This is relevant to the condition of the manufacturing industry that has high production targets, where inappropriate rewards can cause psychological fatigue and reduce the effectiveness of work motivation.

Overall, these findings suggest that work motivation is a strong factor in influencing employee performance, but the role of reward schemes as moderators has not been able to strengthen these relationships, and even tends to weaken. The managerial implication is that companies need to design a reward system that is not only results-oriented, but also able to support employees' intrinsic motivations, for example through recognition, empowerment, and clarity of career paths. Thus, rewards can function as a synergistic reinforcement, not as a factor that actually reduces the effectiveness of work motivation in improving employee performance.

4. CONCLUSION

Based on the results of the research that has been conducted using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach, it can be concluded that work skills, work discipline, and work motivation have a positive and significant influence on employee performance at BU17 PT Pabrik Kertas Tjiwi Kimia, Tbk. These findings show that increasing technical competence, compliance with work rules, and motivational motivation of employees are able to increase effectiveness and productivity work in real life. On the other hand, reward schemes have been shown to have a negative and significant effect on employee performance, which indicates that the reward system implemented by the company is not fully in accordance with the perception of fairness and employee expectations. In addition, the results of the study show that reward schemes have not been able to significantly moderate the relationship between job skills, work discipline, and work motivation to employee performance. Thus, skills, discipline, and motivation remain dominant factors in shaping performance, while rewards function more as a supporting factor that is not optimal in strengthening the relationship between these variables.

Research implications

Theoretically, this study strengthens the relevance of Expectancy Theory, Equity Theory, and Reinforcement Theory in explaining the relationship between personal factors and reward

systems on employee performance. This research also expands the study of human resource management, especially regarding the role of rewards as a mechanism to strengthen work behavior in the context of the manufacturing industry. Practically, the results of the study provide strategic input for the management of PT Pabrik Kertas Tjiwi Kimia Tbk in developing a more effective human resource development policy, especially in strengthening competence, discipline, motivation, and performance-based reward systems. Meanwhile, in terms of policy, this study shows the importance of industrial companies building a reward system that not only functions as a compensation tool, but also as an instrument to form a productive, fair, and performance-oriented work culture.

Suggestions

Based on the results of the research, companies are advised to strengthen job skills development through competency-based training, internal certification, and improving employees' technological adaptability to optimize work productivity. In addition, companies need to strengthen the work discipline system through the implementation of objective and transparent data-based evaluations, so as to create a more orderly and accountable work culture. From the motivation aspect, it is recommended that companies not only focus on financial awards, but also pay attention to non-financial awards such as job recognition, career development opportunities, and a supportive work environment. Furthermore, the reward scheme needs to be evaluated and redesigned to be more fair, adaptive, and in accordance with the real contribution of employees so that it can increase the perception of organizational fairness. Further research is also suggested to add other variables such as transformational leadership, organizational culture, job satisfaction, or psychological well-being in order for the research model to be more comprehensive in explaining the factors that affect employee performance.

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