Factors That Influence Employee Work Discipline at PT. Printec Perkasa I Tangerang

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Abstract: The issue of work discipline has become a major problem among employees at PT. Printec Perkasa I. This study investigated the direct impact of fingerprint attendance system integration, motivational factor, and leadership style on employee work discipline. The study used a quantitative descriptive approach, and data were gathered via a questionnaire distributed to 100 employees of PT. Printec Perkasa I. IBM SPSS 25 software was used to analyze the data. The outcomes revealed that the fingerprint attendance system had a favorable and significant impact on employee work discipline. The t-value was 9.042, which was higher than the t-table value of 1.98498, and the significance value was 0.000, which was less than 0.05. Work motivation influenced employee work discipline in a positive and significant way. The t-value was 3.668, which was higher than the t-table value of 1.98498, and the significance value was 0.000, which was less than 0.05. Leadership had a big and favorable impact on employee work discipline. The t-value was 2.055, which was higher than the t-table value of 1.98498, and the significance value was 0.000, which was less than 0.05. Finally, the research discovered that the fingerprint attendance system, job incentive, and leadership all had a positive and significant impact on employee work discipline. The F-value of 302.779 was higher than the F-table value of 2.70, and 0.000 was less than 0.05 for significance.

Keywords: Fingerprint Attendance System Integration, Motivational Factor, Leadership Style, Work Discipline, PT. Printec Perkasa

INTRODUCTION

In the current globalized world, the rapid advancement of technology has significantly impacted individuals' lives, prompting companies to prioritize strong work discipline among employees to maximize productivity. One effective solution is the integration of a fingerprint attendance system for efficient and accurate recording of employee attendance. However, motivational factors and leadership style also play crucial roles in fostering work discipline. Insufficient motivation and unsupportive leadership can lead to reduced enthusiasm and subpar performance. Therefore, this research aims to explore the relationship between fingerprint attendance system integration, motivational factors, leadership style, and employee work discipline to identify factors that enhance work discipline (Qomariah et al., 2022).

Work discipline involves consciously adhering to organizational rules and regulations, driven by internal motivation (Agustini, 2019). The integration of fingerprint attendance systems streamlines attendance recording by utilizing unique fingerprint characteristics, but challenges related to fingerprint detection errors have been observed at PT. Printec Perkasa I. Motivational factors significantly influence work discipline, and leadership style plays a vital role in cultivating a culture of strong work discipline (Martoyo, 2017).

Work discipline encompasses various aspects, including attendance recording, attitude and behavior, and a sense of responsibility (Sitopu, 2021). The integration of a fingerprint attendance system ensures accurate and secure attendance recording, enhancing work discipline (Samiaji, 2009). Motivational factors, such as a sense of responsibility, job performance, and recognition, are key to achieving organizational goals (Tahiri et al., 2022). Leadership style serves as a catalyst in motivating individuals, and effective leadership traits include motivation, communication proficiency, and control over subordinates (Nguyen et al., 2020).

This study aims to explore the relationships between fingerprint attendance system integration, motivational factors, leadership style, and work discipline by integrating Attribution Theory with previous findings. Attendance records at PT. Printec Perkasa I reveal varying levels of punctuality among different units, providing insights to improve work discipline. The study identifies issues including the ineffectiveness of the fingerprint attendance system, lack of employee motivation, weak leadership, low awareness of work discipline, and insufficient work efforts (Sanosra et al., 2022). The research objectives are to examine the impact of fingerprint attendance system integration, motivational factors, and leadership style on work discipline, and to provide valuable insights for enhancing work discipline in organizations(Nursaid et al., 2021).

This article begins with an introduction highlighting the significance of work discipline, fingerprint attendance system integration, motivational factors, and leadership style. It outlines the research methodology employed and presents the key findings, implications, and recommendations to enhance employee work discipline. The study aims to fill the research gap by examining the integrated effects of the aforementioned factors and provide valuable insights for organizations (Qomariah, 2012).

Several studies, including Mayamin (2023), Afriani (2021), and Salman (2020), have demonstrated a positive and significant impact of fingerprint attendance on work discipline. However, Maulidya (2021) suggests that fingerprint attendance does not significantly influence work discipline when examined separately. Rahmawati (2020) shows a positive impact of partial fingerprint attendance but lacks statistical significance. Motivation's influence on work discipline is affirmed by Saputra (2019) and challenged by Hasanah (2018), Larassaty (2021), and Rizal (2019). Putra (2022) establishes a significant and positive impact of work motivation on work discipline. Mendrofa (2021) highlights the positive influence of leadership, while Utameyasa (2023) finds no significant impact. Pasya (2023) identifies a positive and significant influence, Rakhmalina (2022) emphasizes the significant impact of leadership, and Dewi (2022) uncovers a negative and significant impact on work discipline. This study aims to address these gaps and contradictions.

Overall, this article provides a comprehensive overview of work discipline, fingerprint technology, motivational factors, leadership style, and their integration for achieving high productivity. It goes beyond surface-level explanations, presenting detailed insights through research methodology, findings, implications, and practical recommendations (Indarto et al., 2018).

METHOD

This study used a quantitative research methodology, as recommended by Sugiyono (2017). Quantitative research is a positivist approach to research that uses numerical data to test hypotheses. In this study, the target population was all employees at PT. Printec Perkasa I, totaling 100 individuals. A saturated sample technique, also known as a census, was used to collect data from all 100 employees.

In alignment with the study's objective of examining the impact of the integration of fingerprint attendance systems, motivational factors, and leadership styles on employee work discipline, a quantitative approach was employed. The target population for this research consisted of all employees at PT. Printec Perkasa I, totaling 100 individuals. As defined by Arikunto (2011), a sample is an accurate representation of

the population being studied. In this study, a saturated sample technique, also known as a census, was utilized due to the relatively small population size. Consequently, all 100 employees were included as samples, obviating the need to calculate a sample size using a formula.

A questionnaire was used to gather primary data. The questionnaire asked employees about their perceptions of the fingerprint attendance system integration, motivational factors, and leadership styles, and how these factors influenced their work discipline.

The Likert Scale was used in this study as a measurement tool to assess individuals' or groups' attitudes, opinions, and perceptions towards specific social phenomena. It was operationalized in the form of statements in the questionnaire. The Likert Scale served as a reference for formulating the research instrument, which included items in the form of statements or questions. Each answer on the Likert Scale was assigned a weight or scale, as described by Sugiyono (2018).

Table 1. The levels of the Likert Scale

No.	Answer	Weight
1	SS = Strongly Agree	5
2	S = Agree	4
3	R = Uncertain	3
4	TS = Disagree	2
5	STS = Strongly Disagree	1

RESULTS AND DISCUSSION

Normality testing is used to determine whether the dependent and independent variables in a regression model have a normal distribution. According to Ghozali (2018), one way to evaluate normality is by examining the scatter plot. The data points in a normal distribution ought to be evenly spaced all the way around the diagonal. If the data points are not evenly distributed, this may indicate that the assumption of normality is not met.
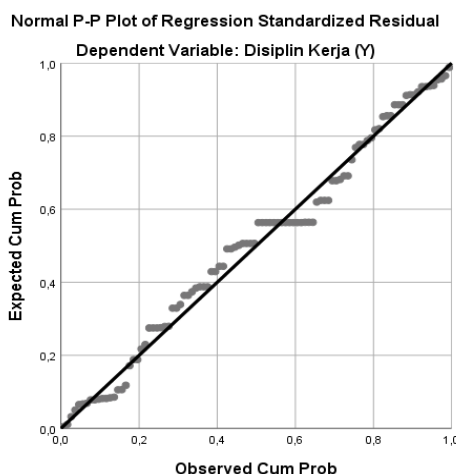

Figure 1. Normality Test
Source: SPSS 25 was used to process primary data in 2023.

As shown in figure 1, The regression model fits the established assumptions, suggesting that the data used in this study regression model has a normal distribution.

In regression models, multicollinearity is used to determine the presence of a significant correlation between independent variables. This is accomplished by analyzing the variance inflation factor (VIF), which should not exceed 10.0 or the tolerance should not be less than 0.10, as advised by Ghozali (2022).

Table 2. Multicollinearity Test

Coefficients^a							
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-,100	,675		-,148	,883		
	Absensi finger-print (X1)	,590	,065	,586	9,042	,000	,237	4,225
	Motivasi Kerja (X2)	,197	,054	,262	3,668	,000	,195	5,119
	Kepemimpinan (X3)	,111	,054	,145	2,055	,043	,199	5,034
a. Dependent Variable: Disiplin Kerja (Y)								

Source: SPSS 25 was used to process primary data in 2023.

The independent variables X1, X2, and X3 have variance inflation factors (VIFs) below 10.0 and tolerance values above 0.10. This indicates that there is no significant multicollinearity between these variables, as recommended by Ghozali (2022).

A test for heteroscedasticity was performed. to assess the level of heterogeneity in the research instruments. This test examines whether there is any noticeable pattern in the data points that would indicate the presence of heteroscedasticity. The presence of a systematic pattern would suggest the existence of heteroscedasticity, whereas randomly scattered points, particularly without a discernible pattern below 0 on the y-axis, would indicate the absence of heteroscedasticity.
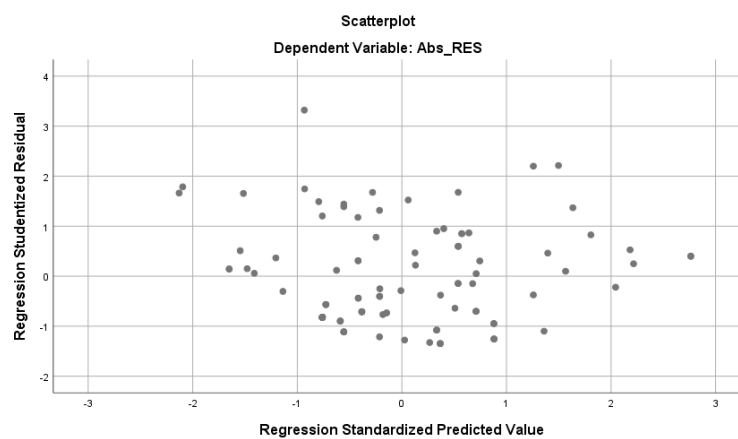

Figure 2. Heterocedasticity Test

Source: SPSS 25 was used to process primary data in 2023.

Figure 2's data points are randomly distributed with no discernable pattern, as can be seen by looking at the graph. On the Y-axis, the points are uniformly spaced above and below the number 0. This demonstrates that the data backs up the regression model's lack of heteroscedasticity.

Multiple Linier Regression

Multiple linear regression is a statistical method for analyzing the effects of numerous independent factors on a dependent variable. The authors of this study investigated the effects of three independent variables on the dependent variable, work discipline (Y), namely the integration of a fingerprint attendance system (X1), motivational factors (X2), and leadership style (X3). The resulting relationship model from the multiple linear regression analysis is provided in the table below after data processing.

Table 3. Multiple Linier Regression

Coefficients^{a}						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-,100	,675		-,148	,883
	Absensi fingerprint (X1)	,590	,065	,586	9,042	,000
	Motivasi Kerja (X2)	,197	,054	,262	3,668	,000
	Kepemimpinan (X3)	,111	,054	,145	2,055	,043
a. Dependent Variable: Disiplin Kerja (Y)						

Source: SPSS 25 was used to process primary data in 2023.

According to tabel 3, the results of the analysis conducted using SPSS (Statistical Program for Social Sciences) Version 25 are as follows:

$$Work\ discipline = -0.100 + 0.590X1 + 0.197X2 + 0.111X3$$

This equation shows that the independent variables (fingerprint attendance system integration, motivational factors, and leadership style) all have a positive impact on work discipline. This means that increasing any of these variables will lead to an increase in work discipline.

Partial test (T-test)

The null hypothesis (Ho) is rejected when the calculated value (t-statistic) surpasses the table value (t-table) in order to examine the impact of independent variables (X) on the dependent variable (Y). This demonstrates a statistically significant partial link between a dependent variable and an independent variable. The null hypothesis (Ho), on the other hand, is accepted if the calculated value (t-statistic) is less than the table value (t-table), indicating that an independent variable has no meaningful partial impact on the dependent variable. The results of the partial test (t-test) done in this inquiry are shown in the table below.

Table 4. Partial Test (T-Test)

Coefficients^{a}						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-,100	,675		-,148	,883
	Absensi fingerprint (X1)	,590	,065	,586	9,042	,000
	Motivasi Kerja (X2)	,197	,054	,262	3,668	,000
	Kepemimpinan (X3)	,111	,054	,145	2,055	,043
a. Dependent Variable: Disiplin Kerja (Y)						

Source: SPSS 25 was used to process primary data in 2023.

The Impact of the Fingerprint Attendance System Integration (X1) on Work Discipline (Y)

The data in Table 4 shows that there is a significant correlation between the integration of a fingerprint attendance system (X1) and work discipline (Y). The significance level of 0.000, which is less than the specified alpha value of 0.05, makes this clear. Additionally, the calculated t-value of 9.042 exceeds the critical t-table value (alpha/2;n-k-1) of 1.98498. These findings imply that the integration of a fingerprint attendance system (X1) influences work discipline (Y) in a favorable and statistically significant manner. Therefore, it can be concluded that improving the integration of a fingerprint attendance system, including both the hardware and software components, will contribute to an improvement in employee work discipline at PT. Printec Perkasa I. Based on these findings, the research hypothesis is supported, as a result of the alternative hypothesis (Ha)'s acceptance and the null hypothesis's (H0) rejection.

The Impact of Motivation Factor (X2) on Work Discipline (Y)

According to Table 3, the analysis shows that the Motivation Factor variable (X2) has a significant impact on Work Discipline (Y), with a significance level of 0.000, which is lower than the predetermined alpha value of 0.05. The estimated t-value, which is 3.668, is also higher than the critical t-table value, which is 1.98498. These results indicate that Work Discipline (Y) is positively and statistically significantly influenced by the Motivation Factor (X2). Therefore, it can be inferred that if the management of PT. Printec Perkasa I takes steps to improve employee motivation, it will lead to improvements in work discipline. These results lead to the conclusion that the research hypothesis is validated because the alternative hypothesis (Ha) is accepted and the null hypothesis (H0) is rejected.

The Impact of Leadership Style (X3) on Work Discipline (Y)

With a significance level of 0.043, which is lower than the predefined alpha value of 0.05, Table 3 shows that the Leadership Style (X3) variable has a significant impact on Work Discipline (Y). The estimated t-value of 2.055 also exceeds the critical t-table value of 1.98498. These results reveal that Work Discipline (Y) is positively and statistically significantly influenced by Leadership Style (X3). Therefore, it may be assumed that PT. Printec Perkasa I's leaders will see gains in employee work discipline if they strengthen their leadership qualities. These results support the research hypothesis, which is approved because the alternative hypothesis (Ha) is accepted and the null hypothesis (H0) is rejected.

Simultaneous test (F-test)

To evaluate if the combined effect of all independent variables in the model has a statistically significant impact on the dependent variable, the Simultaneous Test, sometimes referred to as the F-test, is utilized. Comparing the calculated F-value to the critical F-value found in the table allows for this (Ghozali, 2022).

Table 5. Simultaneous Test (F-Test)

ANOVAᵃ					
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	389,070	3	129,690	302,779	,000ᵇ
	Residual	41,120	96	,428		
	Total	430,190	99			
a. Dependent Variable: Disiplin Kerja (Y)						
b. Predictors: (Constant), Kepemimpinan (X3), Absensi *fingerprint* (X1), Motivasi Kerja (X2)						

Source: SPSS 25 was used to process primary data in 2023.

The study's findings demonstrated that the integration of the fingerprint attendance system (X1), motivating factors (X2), and leadership style (X3) had a favorable and statistically significant influence on employee work discipline. This means that improving the integration of the fingerprint attendance system, motivational factors, and leadership style at PT. Printec Perkasa I will result in an improvement in employee work discipline.

The computed F-value of 302.779 is higher than the threshold F-value of 2.70, allowing for the rejection of the null hypothesis (Ho). This indicates that there is a statistically significant association between the dependent variable (employee work discipline) and the three independent variables (X1, X2, and X3).

The significance level of 0.000 is less than the predetermined threshold of 0.05, which means that there is a very low probability that the results of the study are due to chance. This indicates that the study's findings are trustworthy and that conclusions about the population can be drawn from them.

The study's findings have significant significance for managers at PT. Printec Perkasa I. By improving the integration of the fingerprint attendance system, motivational factors, and leadership style, managers can improve employee work discipline. This will lead to a number of benefits for the organization, including increased productivity, improved customer service, and reduced costs.

The Coefficient of Determination Test (Adjusted R2)

The precise level of contribution made by the three independent variables (fingerprint attendance system integration, motivating factors, and leadership style) to the dependent variable (employee work discipline) is determined using the Adjusted R-squared test.

Table 6. The Coefficient of Determination Test (Adjusted R2)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,951[a]	,904	,901	,654
a. Predictors: (Constant), Kepemimpinan (X3), Absensi *fingerprint* (X1), Motivasi Kerja (X2)				

Source: SPSS 25 was used to process primary data in 2023.

According to Table 6, the Adjusted R-squared value of 0.901 indicates that the integration of the fingerprint attendance system, motivational factors, and leadership style collectively account for 90.1% of the variation in work discipline. This indicates that these three variables can account for 90.1% of the variation in work discipline. Other factors that were not taken into account in this study are responsible for the remaining 9.9% of the variation in work discipline.

Discussion of Research Findings

The research findings of this study examine the effects of the integration of a fingerprint attendance system, motivational factors, and leadership styles on employee work discipline at PT. Printec Perkasa I. The analysis revealed several significant insights.

First, a positive correlation was found between the integration of a fingerprint attendance system and employee work discipline. This indicates that the use of such a system positively impacts employees' adherence to work discipline. The results of earlier investigations by Setiawan et al. (2017) and Afriani et al. (2021) support this conclusion.

The study also revealed a strong and advantageous link between employee work discipline and motivational elements. Motivated employees exhibit higher levels of work discipline as they become more engaged, committed, and focused on their tasks. This finding is supported by previous studies by Mahardika et al. (2022), Trio Saputra (2019), and Pratama et al. (2016).

Third, the results demonstrated that the work discipline of employees is significantly and favorably impacted by leadership styles. Effective leadership plays a key role in shaping employee behavior and creating a culture of discipline. Leaders who provide clear expectations, guidance, and support contribute to higher levels of work discipline among employees. This finding is consistent with studies by Rahmat (2022), Dewi (2022), Sholeha (2022), and Romadhon (2022).

Furthermore, the simultaneous analysis revealed a significant and positive combined impact of the integration of a fingerprint attendance system, motivational factors, and leadership styles on employee work discipline. When these three factors are present and aligned, they collectively contribute to a higher level of work discipline within the organization. This finding is also supported by previous studies by Hafas (2020), Setiawan et al. (2017), Nugraha et al. (2020), Mahardika et al. (2022), and Rahmat (2022).

Overall, by highlighting the significance of elements like attendance systems, motivating variables, and leadership styles in influencing employee work discipline, these research findings add to the body of information already known in the subject.

CONCLUSION

To summarize, the research findings emphasize the importance of the integration of a fingerprint attendance system, motivational factors, and leadership styles in promoting employee work discipline at PT. Printec Perkasa I. These findings have practical implications for management, suggesting the implementation of strategies such as optimizing the attendance system, enhancing work motivation, and fostering effective leadership practices. By adopting these strategies, PT. Printec Perkasa I can improve work discipline, enhance employee performance, and ultimately increase overall organizational productivity.

Additionally, future researchers can build upon this study by conducting comparative research across different sectors or investigating additional factors that may influence the relationship between these variables. Additionally, incorporating qualitative research methods can provide deeper insights into employee perspectives and experiences related to the integration of a fingerprint attendance system, motivational factors, leadership styles, and their impact on work discipline.

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