The Influence of The Implementation of the Attendance Face Recognition System and Punishment on the Discipline of Employees of the Social Service of Palembang City

Artiyas Nur'an Najmi[1], Siti Komariah Hildayanti[2], Emilda[3]

[1,2,3] Faculty of Economics/Management, Indo Global Mandiri University, Indonesia

A R T I C L E   I N F O

ABSTRACT

This study aims to determine the effect of face recognition system attendance and punishment on the work discipline of Palembang City Social Service employees. The research method used is a quantitative research method, with a population of all PNS employees at the Palembang City Social Service Office totaling 39 employees. Data collection techniques were carried out by interviews and questionnaires. The data analysis technique used SPSS version 26. The results showed that the t-count variable for applying face recognition attendance (X_1)) was 2.465 with a significant value of 0.019 <0.05, so it could be concluded that partially there was a significant effect between facial recognition attendance on employee work discipline at the Palembang City Social Service. For the punishment variable (X_2) it shows that the tcount is 2.410 with a significant value of 0.021 <0.05, which means that partially there is a significant influence between punishment on employee work discipline at the Palembang City Social Service. The results of testing the F test hypothesis obtained a significant value of 0.001 <0.05, so the hypothesis was accepted, it could be interpreted that the presence of face recognition and punishment simultaneously had a significant effect on employee work discipline at the Social Services Office of Palembang City by 48.1%.

Corresponding Author:

Artiyas Nur'an Najmi
Faculty of Economics/Management,
Indo Global Mandiri University,
Jl. Jend. Sudirman No.Km.4 No. 62, 20 Ilir D. IV, Kec. Ilir Tim. I, Kota Palembang, Sumatera Selatan 30129, Indonesia
Email: artiyasnur@gmail.com

1. INTRODUCTION

Human resources (HR) is one of the most important factors that cannot even be separated from an organization, both institutions and companies (Susan, 2019). For this reason, HR must be managed properly so that it can increase the effectiveness and efficiency of the organization through

work discipline, good work discipline reflects the responsibility of an employee. The better the employee discipline, the greater the chance of realizing organizational goals (Andriani & Ramadhani, 2023). To improve discipline, a tool or technology is needed as a supervisor so that employees are even better at improving work discipline such as using attendance. According to Yuningrum (2014), the better the employee discipline, the better the work results achieved.

Face recognition is a scheme or way of attendance that is carried out using facial recognition or matching faces that have been previously recorded into a system, how to use face recognition attendance, namely employees only stand facing their faces on the monitor and the attendance machine will record the attendance of employees automatically, this method is classified as more effective and much more time-saving, so as to optimize employee discipline (Darmansah, 2021). To maintain employee performance, it is necessary to enforce rules and regulations by providing strict punishment for violators. In general, it can be said that the high and low level of employee discipline can be influenced by several things, including good regulations in the form of punishment and the effective use of attendance tools in the office (Sutrisno, 2009). Punishment plays an important role in maintaining employee discipline with increasingly severe punishment that will make employees more afraid of breaking the rules, it will also reduce employee attitudes and indisciplinary behavior (Hasibuan, 2007).

The phenomenon of problems related to civil servant employee discipline also occurs in the Palembang City Social Service where employees are still found such as arriving late, leaving work after lunch, and not coming to work for unclear reasons. According to the results of interviews with several employees of the Palembang City Social Service, so far the attendance system used such as manual attendance is not appropriate for implementation because it has many weaknesses for fraud such as being able to do absenteeism or data manipulation, while fingerprint attendance is considered less practical where errors often occur due to changes in fingerprints due to small wounds or due to dirty sensors, and can be a medium for spreading the Covid -19 virus. This makes it difficult to assess employee discipline through attendance and punish employees who commit violations in accordance with the Regulation of the State Personnel Agency of the Republic of Indonesia Article 9 Number 5 of 2020 concerning Procedures for Granting, Withholding, and Terminating Payment of Employee Performance Allowances within the State Personnel Agency. Based on the background of the

of the level of discipline of employees of the Palembang City Social Service related to the influence of attendance face recognition and punishment on employee discipline, the researcher is interested in conducting research with the title "**The Effect of the Implementation of the Face Recognition Attendance System and Punishment on Employee Discipline of the Palembang City Social Service**". This study aims to determine whether there is an effect of the application of the face recognition attendance system and punishment on the discipline of Palembang City Social Service employees.

2.   RESEARCH METHOD

The type of research conducted by researchers is a quantitative method, in this study the techniques used to collect data are questionnaire, interview, and survey methods. Collecting research data, distributed to respondents via offline using a questionnaire. The data needed is in the form of respondents' answers (assessments) to questions or statements in the questionnaire distributed The population in this study took objects at the Palembang City Social Service office. The Social Service is an element of implementing government affairs in the social sector which has the task of assisting the Mayor in carrying out affairs in the social sector and assisting tasks, one of whose functions is to carry out government affairs and public services engaged in regional development planning, research and development. The object of this research is all employees in the Palembang City Social Service Office, totaling 39 employees. The Likert scale is used to measure the attitudes, opinions, and perceptions of a person or group of people about social phenomena. The scale that is often used in preparing questionnaires is the Likert scale, which is a scale containing five levels of answer preferences with options 1 (strongly disagree) to 5 (strongly agree). Research hypothesis testing for the hypothesis test used in this study is the t-test and F-test. This study aims

to determine whether there is an effect of the application of the face recognition attendance system and punishment on discipline.

Table 1. Measurement Indicators of Research Variables

Variable	Dimensions and Indicators	Source
Absensi face recognition (X1)	1. Convenience 2. Safety 3. Time Effectiveness	Ngantung et al. (2014)
Punishment (X2)	1. Notification 2. Reprimand/Warning 3. Punishment	Meyrina (2017)
Employee discipline (Y)	1. Preventive Discipline 2. Corrective Discipline 3. Progressive Discipline	Sinambela (2017)

3.   RESULTS AND DISCUSSIONS

The number of respondents with an age range between 30-39 years were 6 respondents (15.38%), age 40-49 were 15 respondents (38.46%), and age 50-59 were 18 respondents (46.2%). The number of male respondents was 17 respondents (43.59%) and female respondents were 22 respondents (56.41%). The number of respondents with the latest education S1 as many as 17 respondents (43.59%) and S2 as many as 22 respondents (56.41%). length of service of respondents 1-5 years as many as 2 respondents (5.13%), 6-10 years as many as 3 respondents (7.69%), > 10 years as many as 34 respondents (87.18%).

3.1 Validity and Reliability Testing

a.   Validity Test

Based on Table. 2 comparison between r-count and r-table peryantaan shows r-count> r-table (0.316) with the lowest value of 0.367 and the highest of 0.884. So all of the variable statements above are declared valid and meet the requirements for measuring the variable application of face recognition attendance.

Table 2. Validity of the Face Recognition Attendance Implementation Variable

Statement	r-count	r-table	Description
$X_1.1$	0,778	0,316	Valid
$X_1.2$	0,748	0,316	Valid
$X_1.3$	0,662	0,316	Valid
$X_1.4$	0,813	0,316	Valid
$X_1.5$	0,730	0,316	Valid
$X_1.6$	0,693	0,316	Valid
$X_1.7$	0,832	0,316	Valid
$X_1.8$	0,884	0,316	Valid
$X_1.9$	0,796	0,316	Valid
$X_1.10$	0,803	0,316	Valid
$X_1.11$	0,367	0,316	Valid

Source: Data Processed SPSS v 26 (2023)

Based on Table.3, the comparison between r-count and r-table shows r-count> r-table (0.316) with the lowest and highest values of 0.597 and 0.858. Then all the variable statements above are declared valid and meet the requirements of the punishment variable measuring instrument.

Table 3. Validity of Punishment Variable

Statement	r-count	r-table	Description
$X_2.1$	0,631	0,316	Valid
$X_2.2$	0,597	0,316	Valid
$X_2.3$	0,782	0,316	Valid

X$_2$.4	0,858	0,316	Valid
X$_2$.5	0,745	0,316	Valid
X$_2$.6	0,844	0,316	Valid

Source: Data Processed SPSS v 26 (2023)

Based on Table. 4 comparison between r-count and r-table per question shows r-count> r-table (0.316) with the lowest value of 0.736 and the highest of 0.928. So, all the variable statements above are declared valid and meet the requirements for measuring work discipline variables.

Table 4. Validity of Work Discipline Variable

Statement	r-count	r-table	Description
Y.1	0,867	0,316	Valid
Y.2	0,736	0,316	Valid
Y.3	0,866	0,316	Valid
Y.4	0,928	0,316	Valid
Y.5	0, 905	0,316	Valid

Source: Data Processed SPSS v 26 (2023)

b.   Reliability Test

Based on Table.5, the Cronbach's alpha value of all variables is greater than 0.70 so it can be concluded that the indicators or questionnaires used in the variable application of attendance face recognition and punishment on work discipline are all said to be reliable and can be trusted as variable measuring instruments.

Table 5. Reliability Test Results

Variable	Cronbach's Alpha	Reliability Standard	Description
Absensi Face Recognition	0,888	0,7	Reliabel
Punishment	0,815	0,7	Reliabel
Work Discipline	0,900	0,7	Reliabel

Source: Data Processed SPSS v 26 (2023)

c.   Normality Test

Based on Table.6 shows that Asymp sig(2-tailed) 0.078 which means greater than 0.05, the data in the variable abscessni face recognition, punishment, work discipline is normally distributed.

Table 6. One-Sample Kolmogorov - Smir

			Unstandardized Residual
N			39
Normal Parameters[a,b]	Mean		.0000000
	Std. Deviation		1.70767978
Most Extreme Differences	Absolute		.133
	Positive		.133
	Negative		-.083
Test Statistic			.133
Asymp. Sig. (2-tailed)[c]			.078
Monte Carlo Sig. (2-tailed)[d]	Sig.		.077
	99% Confidence Interval	Lower Bound	.070
		Upper Bound	.083

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 926214481.

Source: Data Processed SPSS v 26 (2023)

Based on the data in Table 6, where the regression analysis results are obtained :

1. The constant value of 6.058 means that if the variables X_1 and X_2 are zero, then the variable Y will be equal to 6.058. So it can be concluded that without the variables X_1 and X_2, the variable Y will be = 6.058 and show positive results.
2. The variable of face recognition attendance application affects work discipline by 0.182 or has a positive effect, which means that if the face recognition application variable increases by 1, then work discipline will increase by 0.182.
3. The punishment variable affects work discipline by 0.288 or has a positive effect, which means that if the punishment variable increases by 1, work discipline will increase by 0.288.

3.2 Hypothesis Testing
a. Partial Test (t-test)

Table 7. T-test

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1	(Constant)	6.058	2.881		2.103	.043		
	Punishment	.288	.120	.378	2.410	.021	.586	1.707
	Face Recognition	.182	.074	.387	2.465	.019	.586	1.707

a. Dependent Variable: Disiplin Kerja

Source: Data Processed SPSS v 26 (2023)

In Table 7, it is known that the significant value of the application of face recognition attendance (X_1) on work discipline (Y) is 0.019 < 0.05 and the t-count value is 2.465 > t-table 2.028 so it can be concluded that H_1 is accepted, which means that the application of face recognition attendance (X_1) has a significant effect on work discipline (Y) in Palembang City Social Service employees.

The significance value for the punishment variable (X_2) on work discipline (Y) is 0.021 < 0.05 and the t-count value is 2.410 > 2.028 so it can be concluded that H_2 is accepted which means that the application of attendance punishment (X_2) has a significant effect on work discipline (Y) in Palembang City Social Service employees.

b. Simultaneous Test (F-test)

Table 8. F-test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	102.621	2	51.311	16.669	<,001[b]
	Residual	110.814	36	3.078		
	Total	213.436	38			

a. Dependent Variable: Disiplin Kerja

b. Predictors: (Constant), Face Recognition, Punishment

Source: Data Processed SPSS v 26 (2023)

Based on Table 8 above, the F-count value of 16.669 is greater than the F-table of 3.25. This can be strengthened by a significant F of 0.01 < 0.05, then H_3 is accepted. This shows that there is a significant influence between the variables of the application of face recognition attendance and punishment simultaneously on the work discipline of Palembang City Social Service employees.

3.3 Discussions
a. The Effect of Face Recognition Attendance on Work Discipline

Based on the partial test results, it is known that the significant value of the X_1 variable affects the Y variable by 0.019 < 0.05 and the value of the t-count value is 2.465 > t-table 2.028, at a correlation coefficient of 0.568 so it can be concluded that the X_1 variable has a positive effect on

variable Y. This means that there is a significant influence between the application of face recognition attendance and the work discipline of employees of the Palembang City Social Service, so H_1 is accepted, the independent variable, namely the application of face recognition attendance, has a significant influence on work discipline. This means that the better the application of face recognition attendance perceived by employees at the Palembang City Social Service, the employee discipline at work will also increase.

Attendance is the activity of recording employee attendance, recording employee attendance is one of the important factors in human resource management because it is related to employee discipline (Faisal, 2006). With an accurate and systematized attendance, it can provide complete information to leaders and staff related to employee discipline. If the application of the face recognition attendance system is more effective, it makes employees more afraid because they feel supervised in terms of working hours (Wilyadewi, 2022). Based on descriptive analysis, it is known that the respondents' assessment of the application of face recognition attendance is good, where the indicator that has the highest value is on time, where employees will come on time because face recognition attendance has been automatically scheduled.

The results of this study are in line with previous research, Nurmayanti, et.al (2022), Anjeli (2022), and Emelda (2019) which state that there is a significant influence between the variable attendance face recognition on work discipline.

b. The Effect of Punishment on Work Discipline

Based on the results of the individual test, it is known that the significant value of the X_2 variable affects the Y variable by 0.010 less than 0.05 and at the calculated t value of 2.715 more than 2.028, and at a correlation coefficient of 0.693 so it can be concluded that the X_2 variable has a positive effect on the Y variable. This means that there is a significant influence between punishment and work discipline, then H_2 is accepted, the independent variable, namely the application of punishment, has a significant effect on work discipline. This means that the more severe the punishment felt by employees at the Palembang City Social Service, the employee discipline at work will also increase.

The results of this study indicate that punishment can have a deterrent effect on employees, where the more severe the punishment, the more afraid of breaking the rules (Hasibuan, 2005) so that employee discipline can be realized. Based on descriptive analysis, it is known that respondents' assessment of the application of punishment is good, where the indicator that has the highest score is punishment, because employees feel that giving punishment to them is worth the mistakes made. The Palembang City Social Service has implemented regulations in accordance with the Regulation of the State Personnel Agency of the Republic of Indonesia Article 9 Number 5 of 2020 concerning Procedures for Granting, Withholding, and Terminating Payment of Employee Performance Allowances within the State Personnel Agency and Government Regulation of the Republic of Indonesia Number 94 of 2021 Article 1 Paragraph 4 concerning the discipline of the State Civil Apparatus. This provides encouragement for employees because every violation they commit has consequences in the form of punishment, so employees who have high work discipline will get different income from employees who do not have high work discipline.

The results of this study are the same as previous research by Nugraha (2020), Anjeli (2022), and Emelda (2019) which state that punishment has a positive effect on employee work discipline.

c. The Effect of Face Recognition and Punishment Attendance on Work Discipline

Based on the results obtained from the F test, the F-count of 16.669 is greater than the F table of 3.25 so it can be concluded that the application of attendance face recognition and punishment has a positive effect on work discipline. At a significant level of 0.001 less than 0.05, H_3 is accepted, the independent variable, namely the application of attendance face recognition and punishment, has a significant effect simultaneously on the dependent variable, namely work discipline, which is 48% and the rest is influenced by other variables not examined and shown to be 51.9%. For example, goals and abilities, leadership examples, rewards, justice, waskar, firmness, and human relations.

According to KBBI, discipline is a form of obedience or compliance with regulations, one of the benchmarks of discipline, according to Thoha (2005: 76) the presence and return of employees on time according to the specified schedule. According to Hasibuan (2002), there are several factors that can affect the level of work discipline, including punishment. The better the implementation of attendance, it can be a measuring tool for giving punishment to enforce employee discipline (Emelda,

2019). The results of this study are in line with previous research, Anjeli (2022) and Emelda (2019) concluded that the electronic attendance variable (X_1) and the punishment variable (X_2) together or simultaneously have a significant effect on work discipline (Y).

4.   CONCLUSION

Based on the results and data analysis that has been described, it can be concluded there is a positive influence of face recognition attendance on employee work discipline at the Palembang City Social Service which can be seen from the significant value of the application of face recognition attendance (X_1) on work discipline (Y) of 0.019 <0.05 and the t-count value of 2.465> t-table 2.028 so it can be concluded that H_1 is accepted which means that the application of face recognition attendance (X_1) has a significant effect on work discipline (Y) in Palembang City Social Service employees. There is a positive influence of punishment on employee work discipline at the Palembang City Social Service which can be seen from the significance for the punishment variable (X_2) on work discipline (Y) is 0.021 < 0.05 and the t-count value is 2.410> 2.028 so it can be concluded that H_2 is accepted which means the application of attendance punishment (X_2) has a significant effect on work discipline (Y) in Palembang City Social Service employees. There is a joint or simultaneous influence between face recognition and punishment attendance on employee work discipline at the Palembang City Social Service, amounting to 48.1% with a significant F of 0.001 < 0.05 and the value of F-count> F table 3.25 then H_3 is accepted. This shows that there is a significant influence between the variables of the application of face recognition attendance and punishment simultaneously on the work discipline of employees of the Palembang City Social Service.

REFERENCES
Anam, M. K. (2020). 82 Metode Eigenface/Principle Component Analysis (PCA) Untuk Identifikasi Wajah Manusia.

Andriani, D., & Ramadhani, R. R. (2023). Pengaruh Kepemimpinan Transformasional, Lingkungan Kerja Dan Insentif Terhadap Disiplin Kerja Pada Koperasi Serba Usaha Tunas Setia Baru Kabupaten Pasuruan. *Jurnal Ilmiah Manajemen dan Kewirausahaan*, *2*(1), 1-11.

Andriani, D., & Ramadhani, R. R. (2023). Pengaruh Kepemimpinan Transformasional, Lingkungan Kerja Dan Insentif Terhadap Disiplin Kerja Pada Koperasi Serba Usaha Tunas Setia Baru Kabupaten Pasuruan. *Jurnal Ilmiah Manajemen dan Kewirausahaan*, *2*(1), 1-11.

Berliana Anjeli. (2022). Pengaruh Penerapan *Fingerprint* dan Sanksi Hukuman Terhadap Disiplin Kerja Pegawai Pada Badan Pengembangan Sumber daya Manusia Daerah (BPSDMD) Provinsi Sumatera Selatan, *Skripsi,* (Palembang: Universitas Indo Global Mandiri).

Darmansyah, D., & Ariska, N. (2021). Kampus Merdeka dan Pertanian Berkelanjutan Berbasis Pemberdayaan Masyarakat. *BEST PRACTICE.*

Eko Nugroho. (2019). Biometrika Mengenal sistem identifikasi Masa Depan. Yogyakarta: Andi offset, 17.

Emelda, E. (2019). Pengaruh Absensi Fingerprint dan Sanksi Hukuman Terhadap Disiplin Kerja Pegawai Pada Dinas Perdagangan Provinsi Sumatera Selatan. *Jurnal Media Wahana Ekonomika*, *15*(4), 14-21.

Makturidi, M. G., Rusyana, A. Y., & Ahyani, H. (2022). Analisis Deterministik Kausal Secara Sosial Yang Menyebabkan Pertanggungjawaban Pidana Di Era 4.0. *PAMALI: Pattimura Magister Law Review*, *2*(1), 17-42.

Meyrina, S. A., & Susana, R. (2017). Pelaksanaan Reward Dan Punishment Terhadap Kinerja Pegawai Di Lingkungan Kementerian Hukum Dan HAM. *Jurnal Ilmiah Kebijakan Hukum*, *11*(2), 139-157.

Meyrina, S. A., & Susana, R. (2017). Pelaksanaan Reward Dan Punishment Terhadap Kinerja Pegawai Di Lingkungan Kementerian Hukum Dan HAM. *Jurnal Ilmiah Kebijakan Hukum*, *11*(2), 139-157.

Ngantung, K.A. et al., 2014. Desain dan Implementasi Sistem Absensi Fingerprint di Jaringan Kampus dan Terintegrasi Dengan Sistem Informasi Terpadu UNSRAT.

Nurmayanti, A., Frendika, R., & Assyofa, A. R. (2022, July). Pengaruh Absensi Elektronik (Face Recognition) dan Pengawasan terhadap Disiplin Kerja Pegawai di Balai Besar Pengembangan Pasar Kerja dan Perluasan Kesempatan Kerja Lembang. In *Bandung Conference Series: Business and Management* (Vol. 2, No. 2, pp. 909-917).

Pemerintah Indonesia. (2021). Peraturan Pemerintah Nomor 94 Tahun 2021 Tentang Disiplin Pegawai Negri Sipil (Lembaga Negara Republik Indonesia Tahun 2021 Nomor 202 Tambahan Lembaran Negara Repunlik Indonesia Nomor 6718).

Pemerintah Indonesia.(2020). Peraturan Badan Kepegawaian Negara Republik Indonesia Pasal 9 Nomor 5 Tahun 2020 Tentang Tata Cara Pemberian, Pemotongan, Dan Penghentian Pembayaran Tunjangan Kinerja Pegawai Di Lingkungan Badan Kepegawaian Negara.

Ramadhanti, R., & Meiriki, A. (2022). Analisis Faktor-Faktor Yang Mempengaruhi Kinerja Aparatur Sipil Negara Pada Dinas Sosial Pemberdayaan Masayrakat Dan Desa Kabupaten Kuantan Singingi. *Yudabbiru Jurnal Administrasi Negara*, *4*(1), 36-45.

Sinambela, L., P. (2017). Manajemen Sumber Daya Manusia. Cetakan ke. edited by S.(Editor) and R. D. (Editor). Jakarta: Bumi Aksara.

Subiantoro, S., & Sardiarinto, S. (2018). Perancangan Sistem Absensi Pegawai Berbasis Web Studi Kasus: Kantor Kecamatan Purwodadi. *Swabumi (Suara Wawasan Sukabumi): Ilmu Komputer, Manajemen, dan Sosial*, *6*(2).

Yuningrum, H. (2014). Dampak Ekonomi Dari Penerapan Sistem Biometrik Di Kalangan PNS Perguruan Tinggi Islam Negeri. *Economica: Jurnal Ekonomi Islam*, *5*(1), 37-60.