



THE EFFECT OF DIGITAL ATTENDANCE AND JOB SATISFACTION ON EMPLOYEE WORK PRODUCTIVITY AT PT PUTRATAMA SATYA BHAKTI BEKASI

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ABSTRACT

This study aims to determine the effect of digital attendance and job satisfaction on employee productivity. The background of this research is based on the importance of utilizing technology in attendance systems and the role of job satisfaction in supporting employee performance. This study used a quantitative approach with a survey method. The number of respondents was 40 employees selected through purposive sampling. The data analysis technique used was multiple linear regression with SPSS.

The results showed that, partially, digital attendance had a positive and significant effect on employee productivity, and that job satisfaction also had a significant effect on productivity. Simultaneously, digital attendance and job satisfaction also had a significant effect on employee productivity. The coefficient of determination of 0.657 indicates that 65.7% of the variation in employee productivity can be explained by these two variables, while the remainder is influenced by other factors outside this study. This finding reinforces the results of previous research and supports the theory that technology implementation and job satisfaction are important factors in increasing employee productivity.

Keywords: *digital attendance, job satisfaction, productivity.*

I. INTRODUCTION

A. Research Background

The rapid development of information technology has encouraged many companies to adopt digital systems for human resource management, including employee attendance systems. One widely implemented innovation is digital attendance, which replaces manual methods such as signatures in attendance books or conventional fingerprint machines. This system is expected to improve administrative efficiency, attendance data accuracy, and work discipline, ultimately impacting employee productivity.

PT Putratama Satya Bhakti, a security outsourcing company, began implementing a digital attendance system in early 2023 as part of its efforts to improve the performance and professionalism of its security personnel. However, based on initial observations and interviews with HR, it was

discovered that the system's implementation has not yet had a fully positive impact on security officer productivity. Some employees complained about the digital attendance system being too strict and the lack of recognition for their heavy workload in the field, which impacts their overall job satisfaction.

According to Robbins and Judge (2021), job satisfaction is a positive feeling toward work that arises from an individual's evaluation of various aspects of their job. Judge et al. (2020) added that job satisfaction directly influences employee motivation and performance. Employees who are satisfied with their work environment and systems will be more enthusiastic and productive in carrying out their duties. On the other hand, Huang et al. (2022) emphasize that implementing digital attendance can improve discipline and administrative efficiency if supported by a positive work culture. Otherwise, this system can actually create stress and resistance among employees. In the context of productivity, Mathis and Jackson (2021) state that work productivity is a measure of employee efficiency in completing work according to set targets, which is influenced by internal factors such as job satisfaction and external factors such as the work management system.

Interviews with the HR department of PT Putratama Satya Bhakti indicate that some employees still feel burdened by the digital attendance system, particularly regarding time discipline. Furthermore, some employees complain of a lack of appreciation for their performance, which impacts overall morale and job satisfaction.

The phenomenon at PT Putratama Satya Bhakti demonstrates a discrepancy between the expectations of implementing a digital attendance system and actual results in the field. Based on internal company data for the period January to March 2025, the average employee attendance rate ranged from 87% to 92%. However, work performance data shows a fluctuating productivity trend, reaching 88% in January, rising to 91% in February, and then dropping to 86% in March. This suggests that high attendance rates through a digital system do not necessarily guarantee increased work productivity, particularly for security officers who work under operational pressure and long hours. In other words, physical presence is insufficient without adequate job satisfaction.

Several previous studies have examined the relationship between attendance and work productivity, as well as between job satisfaction and individual performance. However, few studies have examined the simultaneous influence of digital attendance and job satisfaction on productivity, particularly in the context of outsourced security services in Indonesia. Furthermore, there is limited research using quantitative data combining actual attendance recaps and field employee performance data. Therefore, this research is important to fill this gap and provide a practical contribution for PT Putratama Satya Bhakti in formulating policies to increase productivity through improving the attendance system and managing employee job satisfaction.

B. Research Formulation

Based on the background and problem identification presented above, the research questions are as follows:

1. Does digital attendance significantly impact employee productivity at PT Putratama Satya Bhakti?

2. Does job satisfaction significantly impact employee productivity at PT Putratama Satya Bhakti?
3. Do digital attendance and job satisfaction simultaneously impact employee productivity at PT Putratama Satya Bhakti?

C. Research Objectives

1. Analyze the impact of digital attendance on employee productivity at PT Putratama Satya Bhakti.
2. Analyze the impact of job satisfaction on employee productivity at PT Putratama Satya Bhakti.
3. Analyze the simultaneous impact of digital attendance and job satisfaction on employee productivity at PT Putratama Satya Bhakti.

II. LITERATURE REVIEW

A. Digital Attendance

Digital attendance is an innovation in attendance systems that utilizes information technology to automatically record, monitor, and manage attendance data in real time. According to Santoso and Putri (2021), digital attendance is an information technology-based attendance recording system used to improve efficiency and accuracy in employee or student attendance management. Meanwhile, Wibowo (2020) defines digital attendance as a modern method of recording attendance using electronic devices such as smartphones, fingerprints, RFID, or web-based applications integrated with personnel information systems.

Furthermore, according to Hidayat and Prasetya (2022), digital attendance functions not only as an attendance recording tool but also as an attendance data management system that can provide automatic reports and support managerial decision-making. Handayani (2023) also emphasizes that digital attendance allows for efficient, transparent, and accessible attendance recording from various locations, especially in the context of remote work or online learning. Similarly, Ramadhani and Siregar (2024) state that digital attendance systems can improve discipline and accountability because they are based on actual, automatically recorded data.

Based on expert opinion over the past five years, it can be concluded that digital attendance is an information technology-based attendance recording system that enables automatic, efficient, accurate, and real-time attendance monitoring. This system supports increased work efficiency, data transparency, and attendance accountability in various fields, both in education and business organizations.

B. Job Satisfaction

Job satisfaction is an important concept in human resource management and organizational behavior, and has been defined by various experts in recent years. According to Robbins and Judge (2020), job satisfaction is a person's positive feelings about their job arising from an evaluation of the job's characteristics. A similar view is expressed by Luthans (2021), who defines job satisfaction as a pleasant or positive emotional state that arises from an assessment of one's work or work experiences.

Meanwhile, Mangkunegara (2022) emphasizes that job satisfaction is a favorable or unfavorable feeling experienced by employees regarding their work, which is related to attitudes or emotional responses to various aspects of the job. Greenberg and Baron (2020) define job satisfaction as an individual's attitude toward their job, reflecting the extent to which the job meets the employee's expectations, values, and needs. Similarly, Gibson et al. (2021) state that job satisfaction reflects the degree to which an individual feels positive or negative about various aspects of their job, such as the work environment, pay, social relationships, and opportunities for development.

Based on expert opinion over the past five years, it can be concluded that job satisfaction is a positive psychological and emotional state that arises from an individual's assessment of various aspects of their job. This satisfaction is influenced not only by the content of the job itself, but also by factors such as the work environment, social relationships, rewards received, and the extent to which the job meets the individual's needs and expectations. Thus, job satisfaction plays a significant role in shaping employee performance, loyalty, and well-being.

C. Work Productivity

Work productivity is a measure of an individual's or group's efficiency and effectiveness in completing assigned tasks, both in terms of quantity and quality. According to Sutanto and Riyadi (2020), work productivity is an employee's ability to produce maximum output with minimal input within a specific timeframe. This reflects high work efficiency. Meanwhile, Nurhayati (2021) states that work productivity is the level of success an individual achieves in optimally performing their tasks, based on standards set by the organization.

Another opinion is expressed by Pratama and Lestari (2022), who explain that work productivity is a combination of work results achieved and the effective use of available time, energy, and resources. This aligns with Hakim's (2023) opinion, which states that work productivity is an important indicator in assessing individual and organizational performance as a whole because it reflects a tangible contribution to achieving goals. Finally, according to Kurniawan and Wulandari (2024), work productivity relates not only to the quantity of work output, but also to the quality, timeliness, and discipline of its implementation.

From various expert opinions over the past five years, it can be concluded that work productivity is a measure of the extent to which an individual is able to produce quality output efficiently, on time, and in accordance with organizational goals. Work productivity is influenced by factors such as individual ability, motivation, work environment, time management, and organizational support. The higher the work productivity, the greater the contribution to achieving organizational performance.

III. RESEARCH METHODOLOGY

A. Research Types

This research uses quantitative methods with descriptive and correlational approaches. Quantitative methods were chosen because this study aims to measure and analyze numerical data obtained from respondents.

Quantitative data allows researchers to objectively examine the relationships and influences between variables using statistical analysis. In this study, data were collected through a questionnaire containing closed-ended questions so that the results could be processed quantitatively.

The descriptive approach was used to systematically describe the conditions of the variables studied: digital attendance, job satisfaction, and employee productivity at PT Putratama Satya Bhakti. With this approach, researchers can obtain a general overview of the level of digital attendance, job satisfaction, and employee productivity based on the data obtained. In addition to describing the conditions of the variables, this study also aims to examine the relationship and influence between the independent variables, namely digital attendance and job satisfaction, on the dependent variable, namely work productivity. The correlational approach allows researchers to determine whether there is a significant relationship and the extent of the influence of the two variables on employee productivity using statistical analysis such as multiple linear regression.

B. Population and Sample

A population is the entire object or subject that is the focus of a research. In this study, the population consists of all 40 employees of PT Putratama Satya Bhakti who use the digital attendance system. A sample is a part or subset of the population that will be used as the object of data collection in the research.

Because the population in this study is relatively small, namely only 40 people, the researcher chose to use a total sampling technique. The total sampling technique means that all members of the population are used as research samples. Thus, all 40 employees were used as respondents to provide data.

C. Location and Subject

This research was conducted at PT Putratama Satya Bhakti, located in Bekasi, West Java. This location was chosen based on the consideration that the company has implemented a digital attendance system and has an organizational structure that allows for the measurement of employee job satisfaction and productivity.

The research period lasted three months, from February to May 2025. In February, the researchers conducted a preparatory phase, which included developing research instruments, applying for research permits, and coordinating with the company. Data collection was conducted in April 2025 by distributing questionnaires to employee respondents. Meanwhile, May was used for data analysis, drawing conclusions, and compiling the overall research report.

With this planned research implementation over a period of time, it is hoped that the results will reflect actual conditions in the field and provide a comprehensive picture of the influence of digital attendance and job satisfaction on employee productivity at PT Putratama Satya Bhakti.

IV. RESEARCH RESULT

A. Hypotesis Test

1. The Influence of Digital Attendance on Work Productivity

a. Correlation Coefficients Test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.804 ^a	.647	.638	1.966

a. Predictors: (Constant), ABSENSI_DIGITAL

b. Dependent Variable: PRODUKTIVITAS

The correlation coefficient (R) value of 0.804 indicates a very strong relationship between the Digital Attendance variable (X1) and Productivity (Y). When compared to the interpretation of the Pearson correlation coefficient value, the R value in the range of 0.80 – 1.000 is included in the category of a very strong relationship. This means that the better the implementation of digital attendance in the work environment, the more likely it is followed by an increase in employee productivity. This relationship is also positive, meaning that an increase in the digital attendance variable will be followed by an increase in the productivity variable. Thus, it can be concluded that digital attendance plays an important role in supporting employee productivity.

b. Determination Coefficient Test

Based on the Model Summary output, the coefficient of determination (R Square) is 0.647. This means that 64.7% of the variation or change in the Productivity variable (Y) can be explained by the Digital Attendance variable (X1). In other words, the contribution of Digital Attendance to the increase or decrease in employee productivity is 64.7%, while the remaining 35.3% is explained by other factors outside this research model.

This relatively high R Square value indicates that the regression model has strong explanatory power, so Digital Attendance can be considered a significant factor in influencing employee productivity in the research environment.

c. T-Test

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	5.077	4.492		1.130	.266
ABSENSI_DIGITAL	.879	.105	.804	8.345	.000

a. Dependent Variable: PRODUKTIVITAS

Based on the results of the t-test in the coefficients table, it is known that the calculated t-value for the Digital Attendance variable is 8.345, while the t-table value at a significance level of 5% ($\alpha = 0.05$) and a sample size of 40 is 2.206. Because the calculated t (8.345) > t-table (2.206) and the significance value of 0.000 < 0.05, it can be concluded that the Digital Attendance variable has a positive and significant effect on employee productivity. This means that the better the use of digital attendance is implemented, the more it will be followed by an increase in

employee work productivity. These results indicate that partially, digital attendance makes a real contribution in explaining variations in employee productivity.

2. The Influence of Job Satisfaction on Productivity

a. Correlation Coefficients Test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.839 ^a	.704	.696	1.800

a. Predictors: (Constant), KEPUASAN_KERJA

b. Dependent Variable: PRODUKTIVITAS

Based on the Model Summary output, a correlation coefficient (R) of 0.839 was obtained. This value indicates a very strong relationship between Job Satisfaction (X2) and Productivity (Y). Referring to Pearson's correlation interpretation guidelines, an R value in the range of 0.80–1.00 is categorized as a very strong relationship.

This means that the higher the job satisfaction experienced by employees, the higher their work productivity. This relationship is positive, indicating a parallel direction between the two variables.

b. Determination Coefficient Test

The coefficient of determination (R Square) shown in the table is 0.704. This figure means that 70.4% of the variation in the Productivity variable can be explained by the Job Satisfaction variable (X2). In other words, job satisfaction contributes 70.4% to explaining changes or increases in employee productivity.

Meanwhile, the remaining 29.6% is explained by other variables outside this model. This indicates that Job Satisfaction is a very dominant factor influencing productivity, although other factors may also influence it.

c. T-Test

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	6.728	3.772		1.784	.082
KEPUASAN_KERJA	.853	.090	.839	9.505	.000

a. Dependent Variable: PRODUKTIVITAS

Based on the t-test results in Table, the calculated t-value is 9.505, while the t-table value at a significance level of 5% with a sample size of 40 is 2.206. Since the calculated t-value (9.505) > t-table (2.206) and the significance value (Sig.) = 0.000 < 0.05, it can be concluded that the Job Satisfaction variable has a positive and significant effect on employee productivity. This means that partially, job satisfaction has a real effect on productivity. The higher the level of job satisfaction felt by employees, the higher their work productivity will be. These results reinforce the importance of the role of job satisfaction in improving employee performance in an organizational environment.

3. The Influence of Digital Attendance and Job Satisfaction on Productivity

a. Correlation Coefficients Test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.877 ^a	.769	.756	1.613

a. Predictors: (Constant), KEPUASAN_KERJA, ABSENSI_DIGITAL

b. Dependent Variable: PRODUKTIVITAS

Based on the output in Table, a correlation coefficient (R) value of 0.877 was obtained. This value indicates a very strong relationship between the two independent variables, Job Satisfaction and Digital Attendance, and the dependent variable, Productivity.

Referring to the interpretation of the Pearson correlation coefficient, an R value in the range of 0.80–1.00 is considered a very strong relationship. This means that both independent variables simultaneously have a very strong relationship with changes in the productivity variable.

Therefore, the higher the level of job satisfaction and the better the implementation of digital attendance, the higher the level of employee productivity. The relationship indicated by this R value is positive, indicating a parallel direction between the variables.

b. Determination Coefficient Test

The R-square value in Table 4.12 is 0.769. This means that 76.9% of the variation in the Productivity variable can be jointly explained by two independent variables: Job Satisfaction and Digital Attendance. In other words, the combined contribution of these two variables to employee productivity is significant.

Meanwhile, the remaining 23.1% is explained by factors outside the model that were not examined in this study. This high R-square value indicates that the regression model used has excellent predictive ability, as most of the variation in productivity is successfully explained by job satisfaction and digital attendance.

c. F-Test

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	319.694	2	159.847	61.428	.000 ^b
Residual	96.281	37	2.602		
Total	415.975	39			

a. Dependent Variable: PRODUKTIVITAS

b. Predictors: (Constant), KEPUASAN_KERJA, ABSENSI_DIGITAL

The F test is used to determine whether the independent variables simultaneously (together) have a significant effect on the dependent variable. Based on the ANOVA output in Table 4.13:

- Calculated F value = 61.428
- Table F value = 3.25 (with $df_1 = 2$ and $df_2 = 37$ at a 5% significance level)
- Sig. value = $0.000 < 0.05$

Because the calculated F (61.428) $>$ F table (3.25) and the significance value < 0.05 , it can be concluded that:

Digital Attendance and Job Satisfaction simultaneously have a significant effect on employee productivity. In other words, the regression model used in this study is suitable for predicting productivity variables, because both independent variables simultaneously have a significant effect on the dependent variable.

B. Discussion

1. The Influence of Digital Attendance on Productivity

The analysis results show that digital attendance has a positive and significant effect on productivity, with a regression coefficient of 0.879, a calculated t-value of $8.345 >$ t-table of 2.206, and a significance value of $0.000 < 0.05$. This means that the better the implementation of a digital attendance system, the more likely employee productivity is to increase.

According to Widodo and Sari (2021), a digital-based attendance system creates efficiency in work time management, increases employee accountability, and facilitates attendance monitoring, which directly impacts performance. This convenience leads to more disciplined employee attendance and optimal utilization of work time, ultimately driving increased productivity.

A similar study by Yuliani and Hamid (2022) found that the use of a mobile application-based digital attendance system significantly increases productivity by providing transparency, time control, and a greater sense of responsibility for employees.

2. The Influence of Work Satisfaction on Productivity

The results of a simple regression test indicate that job satisfaction has a positive and significant effect on productivity, with a regression coefficient of 0.853, a calculated t-value of $9.505 >$ t-table of 2.206, and a significance value of $0.000 < 0.05$. This means that the higher an employee's job satisfaction, the higher their work productivity.

According to Arifin and Lestari (2020), job satisfaction reflects a positive psychological state that arises when employees feel that their needs and expectations regarding their work are met, such as a comfortable work environment, recognition for work results, and harmonious working relationships. This satisfaction encourages employees to be more enthusiastic, loyal, and motivated to complete their work productively.

This aligns with the results of research by Pratiwi & Nugroho (2023), which concluded that there is a significant relationship between job satisfaction and employee productivity in the public sector. Satisfied employees tend to perform better and are able to optimally complete work targets.

3. The Influence of Digital Attendance Work Satisfaction on Productivity

Based on the results of a multiple linear regression analysis, it was found that Digital Attendance and Job Satisfaction simultaneously had a significant effect on Productivity, with a calculated F-value of $61.428 > F\text{-table } 3.25$, and a significance level of $0.000 < 0.05$. The coefficient of determination (R-square) was 0.769, meaning that 76.9% of the variation in productivity can be explained by these two variables.

According to Hakim and Rachmawati (2021), organizational technological factors, such as digital attendance systems, and internal psychological factors, such as job satisfaction, play a significant role in increasing employee productivity. The availability of digital work tools and satisfactory working conditions can create a conducive work environment and encourage work effectiveness.

Research by Mulyadi and Putra (2023) also shows that the integration of modern personnel technology and high levels of job satisfaction can significantly contribute to productivity, particularly in public service agencies. The combination of the two helps employees work efficiently, purposefully, and motivated.

V. CLOSURE

A. Conclusion

Based on the results of the multiple linear regression analysis and statistical tests, it can be concluded that:

1. Digital attendance has a positive and significant effect on productivity. The t-test results show a significance value of $0.003 (<0.05)$ and a coefficient value of 0.430. This means that better implementation of digital attendance will increase employee productivity.
2. Job satisfaction also has a positive and significant effect on productivity. This is indicated by a significance value of $0.000 (<0.05)$ and a coefficient value of 0.548, indicating that increased job satisfaction will lead to higher productivity.
3. Simultaneously, digital attendance and job satisfaction have a significant effect on productivity, as seen in the F-test, with a calculated F-value of 61.428, greater than the F-table of 3.25, and a significance value of 0.000. The R-square value of 0.769 indicates that 76.9% of the variation in productivity can be explained by these two variables.

B. Suggestion

Based on these findings and implications, the following are recommended:

1. Improve the digital attendance system: Agencies need to ensure that the digital attendance system they use is stable, easily accessible, and integrated with the personnel management system.
2. Strengthen job satisfaction programs: Regular evaluations of factors influencing job satisfaction, such as workload, employee relationships, and reward policies, are necessary.
3. Continuous human resource development: Training and competency development are needed to support work effectiveness and readiness for digital changes in the workplace.
4. Further research: To broaden understanding, further research is recommended

by adding other variables such as work motivation, leadership style, or organizational culture.

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