

The Effect of The Use of Fingerprint-Based Attendance and Discipline on The Work Commitment of Non-Civil Servants at The Muaro Jambi Education and Culture Office

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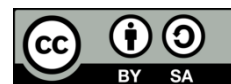
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ABSTRACT

This study aims to determine the influence of Fingerprint-Based Attendance and Discipline on the Work Commitment of Non-Civil Servants at the Muaro Jambi Education and Culture Office. This study uses a quantitative method and research data is obtained by distributing questionnaires to non-civil servants. The population in this study is Non-Civil Servants at the Muaro Jambi Education and Culture Office. The sample in this study is 50 Non-Civil Servants with a sampling technique using the total sampling technique. The results of this study show that: (1) There is an effect of Fingerprint-Based Attendance on Work Commitment. This is evidenced by the results of the t-test with a calculated t-value greater than the t-value of the table, which is $2.705 > 2.011$ with a percentage of 21.3%. Therefore, there is a significant influence between fingerprint-based attendance and employee work commitment, so H_0 is rejected and H_a is accepted. (2) There is an influence of work discipline on the employee's work commitment. This is evidenced by the results of the t-test with a calculated t-value greater than the t-value of the table, which is $2.472 > 2.052$ with a percentage of 11.3%. Therefore, there is a significant influence between work discipline and employee work commitment, so H_0 is rejected and H_a is accepted. (3) There is an influence of fingerprint-based attendance and discipline on employee work commitment. This is evidenced by the results of the F test with a calculated t-value greater than the t-value of the table, which is $4.653 > 3.18$ with a percentage of 12.8%, the remaining 87.2% is influenced by other variables that are not discussed in this study. Therefore, there is a significant influence between fingerprint-based attendance, work discipline and employee work commitment, so H_0 is rejected and H_a is accepted.



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INTRODUCTION

In Government Regulation (PP) Number 49 of 2018 concerning the Management of Government Employees with Employment Agreements or PP PPPK Management in article 96: reads "Honorary Personnel or as non-civil servants in Government agencies carry out their duties for the longest time until 2023,"

In an agency, there are several important factors that can create an advanced agency, one of which is its human resources. A person who works or has the ability to be developed and is an important asset who works to achieve the goals of an agency. However, in its implementation, sometimes problems arise related to human resources in an agency, so that it will affect the performance of employees. Therefore, supervisory actions need to be carried out on employees so that the goals of an agency can be achieved. In carrying out supervision, one of the ways that an agency can do is to monitor the employee attendance list. Currently, many institutions have used a more modern system in recording attendance to achieve the goals of an agency in improving employee work discipline.

As contained in the Muaro Jambi Education and Culture Office, before using the fingerprint-based attendance system in the Office, the Office still uses a manual attendance system, namely with a signature in the attendance notebook. By using manual attendance, there are several positive impacts, namely employees can fill in the attendance list even though there are obstacles to power outages, they also only use a pen and the negative impact is that if employees do not arrive on time, they can still fill out the attendance list and also on the operator who inputs attendance data for longer because the operator has to input employee attendance data one by one every day. After using fingerprint-based attendance, the positive impact is that the time to fill out the attendance list has been determined, namely at 7.30 to 09.00 (morning absence) and 16.00 to 17.00 (afternoon absence), if the employee passes the deadline, the employee is declared absent on that day, it can improve employee discipline, besides that also by using fingerprint-based attendance, it saves more time to be absent just by sticking a finger on the machine fingerprint sensor while the negative impact is that employees cannot be present if there is a problem with electricity and also if there is a problem with the fingerprint sensor that cannot input data.

In line with Rivai's thinking (2011) states that work discipline is a tool used by superiors to communicate with employees so that they are willing to change their behavior and as an effort to increase awareness and willingness to fulfill all regulations in the workplace. Discipline is an attitude of willingness and willingness of a person to obey and obey the norms and regulations that apply around him. Good employee or employee discipline will accelerate the agency's goals, while declining discipline will become a barrier and slow down the achievement of the agency's goals. The discipline is an effort to instill values or coercion so that the subject has the ability to obey a rule. Meanwhile, the discipline of Non-Civil Servants is the ability of Non-Civil Servants to obey obligations and avoid prohibitions specified in laws and regulations or official regulations which if not obeyed or violated will be punished. Therefore, discipline will greatly affect the employee's work commitment. According to Rivai (2005) that "employee work commitment is a situation where an employee takes sides with a certain organization and its goals and intends to maintain its membership in that organization. Commitment is an attitude and behavior that encourages

each other. Employees who are committed to their work, will show positive behavior and attitude towards their institution, employees will have the soul to continue to defend their work, try to improve achievements, and have a certain belief to help realize the goals of the agency. In other words, the employee's work commitment to his work is the employee's loyalty to his work, besides that an employee will foster loyalty and encourage employee involvement in making various decisions. Therefore, commitment will create a sense of belonging for employees towards the agency. It is expected to run well so as to achieve the success and welfare of the agency in the long term.

Based on initial observations that have been carried out on June 15, 2022, the total number of Non-Civil Servants at the Muaro Jambi Education and Culture Office is 50 Non-Civil Servants. There are several problems that the author wants to raise and encounter in the field, namely (1) How much does the effectiveness of fingerprint attendance affect the discipline of non-civil servant personnel (2) fingerprint attendance machine sensors that are slow to identify data.

Based on the topics that have been described regarding the use of fingerprint attendance and discipline of non-civil servants which of course affects work commitment, and is very influential for an agency if there is a problem of discipline in the employees in it. It can also reduce the work effectiveness of the employees themselves, so the author is interested in raising this research into a scientific research with the title *The Effect of the Use of Fingerprint-Based Attendance and Discipline on the Work Commitment of Non-Civil Servants at the Muaro Jambi Education and Culture Office*

THEORETICAL STUDIES

Work Commitment

Robbins and Judge (2013), employee work commitment is a situation in which an employee has a strong desire to maintain membership in the company. This is not about career path, salary and others, but the comfort and deep feeling of working in the company. Mathis and Jackson (2006) Work commitment is a degree where employees are willing to fully believe, accept the company's goals and are willing to stay and will not leave the company for a long time.

Work commitment is a person's commitment to the institution where they work. A person's commitment to the agency is one of the guarantees to maintain the continuity of the agency. In their research, Porter and Steers Luthans (2006) showed that high commitment has an effect on high levels of performance. In addition, a person who has a high level of commitment to his or her organization tends to stay as a member for a relatively long time.

Rivai (2006), employee work commitment is a situation where an employee takes sides with a certain agency and its goals and intends to maintain its membership in that agency. So the involvement of an employee in his work is actively not passive.

From some of the opinions of the experts above, it can be concluded that a person has a high work commitment if an employee gets such a deep feeling and comfort to work in the agency, then the employee will stay and will not leave the agency for a long period of time

Fingerprint-Based Attendance

Faisal 2006, in Prihatinta & Wiwoho 2017, The application of technology to the attendance system or in this case, fingerprint attendance is an attendance machine that uses fingerprints, where each person's fingerprints are not the same. In addition, the process carried out produces a report quickly and precisely. Using this fingerprint scan-based attendance system is the right and correct action in building a good agency performance, because employee work discipline is one of the requirements that must be met by the agency to achieve its goals. Therefore, the fingerprint attendance system is one of the media or tools to discipline employees. The role of the fingerprint attendance system to discipline real employees has been started since the 1970s by at least ten major countries in Europe. In America, the use of the fingerprint attendance system began in 1901. Although initially the fingerprint attendance system was not used for attendance identification but the American government used it to overcome double wages for workers in America, at least this system was able to eliminate fraud. In the current era, the fingerprint attendance system brings efficiency to government agencies because it saves time, effort, and at the same time ensures security. Many studies have been conducted regarding the effect of fingerprint attendance on employee discipline.

According to Cahyana (2006:26), recording employee attendance is one of the important factors in human resource management. In-depth and detailed information about the presence of an employee can determine a person's work performance, salary or wages, productivity, and progress of a general agency. Then, a conventional employee attendance recording tool requires a lot of intervention from employees in the human resource administration department as well as the honesty of employees whose attendance is being recorded. This often provides opportunities for manipulation of attendance data if supervision is not carried out properly. In a government agency, they are usually still not used to using technology. They are more familiar with the manual system, but the manual system is no longer suitable to meet the needs of the agency. Original management technology is one way to improve work effectiveness by improving work discipline by using fingerprint attendance. Fingerprints are the strokes found at the tip of the skin of the fingers. Fingerprints function to provide greater friction so that the fingers can hold objects tighter.

Work Discipline

Siswanto (2001), Discipline is an attitude of respect, appreciation, obedience and obedience to applicable regulations, both written and unwritten and able to carry them out and not avoid receiving sanctions if they violate the duties and authorities given to them. Sutrisno (2019), discipline shows a condition or attitude of respect that exists in employees towards agency regulations and regulations. Keith Davis in Mangkunegara (2020) stated that "Discipline is management action to enforce organizational standards" can be interpreted as work discipline as the implementation of management to strengthen organizational guidelines.

Singodimedjo in Sutrisno (2019), discipline is the willingness and willingness of a person to obey and obey the norms that apply around him and employee discipline greatly affects the

goals of the agency. Nadeak (2020), one way to increase employee work productivity is to have good work discipline.

Hasibuan in Rizki and Suprajang (2017), work discipline is an operative use of human resource management which is important for the employee's work performance to be higher, and good work discipline is certainly the duties and authority given to him.

It can be concluded from some of the expert opinions above that work discipline is a tool used by superiors to communicate with employees so that they are willing to change a behavior and as an effort to increase a person's awareness and willingness to obey all agency regulations and applicable social norms, as well as discipline is a behavior that must be instilled in oneself in order to create good performance in doing good work at work or anywhere. The discussion of employee discipline in human resource management departs from the view that no human being is perfect, free from mistakes and mistakes. Therefore, each agency needs to have various provisions that must be obeyed by its members, standards that must be met. Discipline is a management action to encourage the members of the organization to fulfill these various provisions.

METHODS

In this study, the author uses a quantitative approach because it aims to see the influence between the variables used in the study. This quantitative approach examines the facts that have occurred and the data and all information are expressed in the form of numbers, with statistical analysis. Cresweel (2010) stated that, "the quantitative approach is the measurement of quantitative data and objective statistics through scientific calculations derived from a sample of people or residents who are asked to answer a number of questions about the survey to determine the frequency and percentage of their responses". To determine the sample size, a sample size calculator was used, resulting in a total of 278 respondents. This ensures adequate power to detect significant relationships and generalize the findings to the larger population. The calculation was based on parameters such as the expected population size, margin of error, confidence level, and response distribution.

FINDINGS AND DISCUSSION

Findings

The Effect of Fingerprint-Based Attendance on Work Commitment at the Muaro Jambi Education and Culture Office. Based on the results of this research, it is shown that there is a significant influence of fingerprint-based attendance (X1) on Work Commitment (Y) so that H_a is accepted and H_o is rejected. This can be proven through the results of the t-test analysis with the help of SPSS 26.0 for windows which shows the fingerprint-based attendance value on work commitment, which is 2.705, while the t-value of the table is 2.011, so the result is obtained that $t_{\text{calculates}} > t_{\text{table}}$ is $2.705 > 2.011$. This proves that the fingerprint-based attendance variable (X1) partially has a positive and significant effect on work commitment (Y).

The Effect of Work Discipline on the Work Commitment of Non-Civil Servants at the Muaro Jambi Education and Culture Office Based on the results of this study, it was shown that there was a significant influence of work discipline (X2) on Work Commitment (Y) so

that H_a was accepted and H_o was rejected. This can be proven through the results of the analysis of the t-test with the help of SPSS 26.0 for windows which shows the value of work discipline to work commitment, which is 2.472 while the t-value of the table is 2.010, then the result is obtained that $t_{\text{calculated}} > t_{\text{table}}$, which is $2.472 > 2.010$. This proves that the work discipline variable (X_2) partially has a positive and significant effect on work commitment (Y).

The Effect of Fingerprint-Based Attendance and Work Discipline on the Work Commitment of Non-Civil Servants at the Muaro Jambi Education and Culture Office. Based on the results of hypothesis testing, it was concluded that fingerprint-based attendance and work discipline have a significant influence together on the work commitment of Non-Civil Servant employees at the Muaro Jambi Education and Culture Office. This can be proven through the results of the analysis of the F test with the help of SPSS 26.0 for windows which shows the value of attendance and work discipline towards the work commitment of Non-Civil Servant employees, which is 4.653 with the F value of the table is 3.19 so that the F value is calculated $>$ the F_{table} or $4.653 > 3.19$ and the significance level is $0.019 < 0.05$. And based on the results of the determination coefficient test, the R Square figure was obtained of 0.128 or 12.8%. This shows that there is a joint influence between fingerprint-based attendance variables and work discipline by 12.8%, the remaining 87.2% is influenced by other variables that are not discussed in this study..

Discussion

Based on the results of this research, it is shown that there is a significant influence of fingerprint-based attendance (X_1) on Work Commitment (Y) so that H_a is accepted and H_o is rejected. This can be proven through the results of the t-test analysis with the help of SPSS 26.0 for windows which shows the fingerprint-based attendance value on work commitment, which is 2.705, while the t-value of the table is 2.011, so the result is obtained that $t_{\text{calculated}} > t_{\text{table}}$ is $2.705 > 2.011$. This proves that the fingerprint-based attendance variable (X_1) partially has a positive and significant effect on work commitment (Y).

Based on the results of the determination coefficient test X_1 to Y , the R Square figure was obtained at 0.213 or 21.3%. This means that it can be concluded that the magnitude of the influence between fingerprint-based attendance (X_1) on work commitment (Y) is 21.3%. This is in line with previous research conducted by Muhammad Asman (2021) whose research results showed that the variable of the implementation of Fingerprint Attendance had a positive but not significant influence while the variable of work discipline had a positive and significant influence on employee performance at the Bungo Regency Regional Financial and Asset Management Agency. It can be seen that the Partial Significance Test (t-test) and the determination coefficient of the R Square value of 0.061 or 61.0% can be explained by the two independent variables of 61.0% while the remaining 39.0% is influenced by other factors that are not studied.

The Effect of Work Discipline on the Work Commitment of Non-Civil Servants at the Muaro Jambi Education and Culture Office Based on the results of this study, it was shown that there was a significant influence of work discipline (X_2) on Work Commitment (Y) so that H_a was accepted and H_o was rejected. This can be proven through the results of the

analysis of the t-test with the help of SPSS 26.0 for windows which shows the value of work discipline to work commitment, which is 2.472 while the t-value of the table is 2.010, then the result is obtained that $t_{\text{calculated}} > t_{\text{table}}$, which is $2.472 > 2.010$. This proves that the work discipline variable (X2) partially has a positive and significant effect on work commitment (Y).

Based on the results of the X2 determination coefficient test for Y, the R Square figure was obtained of 0.128 or 12.8%. This means that it can be concluded that the influence between work discipline (X2) and work commitment (Y) is 12.8%. This is in line with previous research conducted by Ashariana, et al. (2022 120-125) whose research results showed that there was a positive and significant influence of commitment and work discipline on the performance of employees of the Jennepono Regency Public Works and Spatial Planning Office, with the formulation of the linear equation $Y = 3.544 + 0.356X_1 + 0.590X_2$. R Square of 0.910 which means that employee performance is influenced by commitment and work discipline by 91%. From this study, the researcher concluded that the variables of commitment and work discipline must be considered and improved to produce good employee productivity or performance so that organizational goals are achieved. Based on the results of data processing, it was found that work discipline has an effect on work commitment at the Muaro Jambi Education and Culture Office. The better the work discipline of the employees, the better the work commitment of the employees in the agency.

The Effect of Fingerprint-Based Attendance and Work Discipline on the Work Commitment of Non-Civil Servants at the Muaro Jambi Education and Culture Office. Based on the results of hypothesis testing, it was concluded that fingerprint-based attendance and work discipline have a significant influence together on the work commitment of Non-Civil Servant employees at the Muaro Jambi Education and Culture Office. This can be proven through the results of the analysis of the F test with the help of SPSS 26.0 for windows which shows the value of attendance and work discipline towards the work commitment of Non-Civil Servant employees, which is 4.653 with the F value of the table is 3.19 so that the F value is calculated $> t_{\text{table}}$ or $4.653 > 3.19$ and the significance level is $0.019 < 0.05$. And based on the results of the determination coefficient test, the R Square figure was obtained of 0.128 or 12.8%. This shows that there is a joint influence between fingerprint-based attendance variables and work discipline by 12.8%, the remaining 87.2% is influenced by other variables that are not discussed in this study.

Based on the results of this research, it is proven that there is a significant influence of fingerprint-based attendance (X1) on Work Commitment (Y) so that H_a is accepted and H_0 is rejected. This can be proven through the results of t-test analysis with the help of SPSS 26.0 for Windows which shows the value of fingerprint-based attendance on work commitment of 2,705, while the t-table value is 2,011. So, the results obtained are $t_{\text{count}} > t_{\text{table}}$, namely $2,705 > 2,011$. This proves that the fingerprint-based attendance variable (X1) partially has a positive and significant influence on work commitment (Y).

The results of this study are in line with research by Ezema et al. (2015) which shows that a fingerprint-based attendance management system is effective in increasing work discipline and employee commitment. In addition, research by Ikuomola (2015) also shows that fingerprint-based authentication systems have a positive impact on time and attendance management, which in turn increases employee work commitment.

Based on the results of the coefficient of determination test X1 against Y, the R Square value was obtained at 0.213 or 21.3%. This means that it can be concluded that the magnitude of the influence between fingerprint-based attendance (X1) on work commitment (Y) is 21.3%. This is in line with research by Ikani et al. (2022) who found that the use of a fingerprint-based attendance system can increase the efficiency and accuracy of attendance data, which ultimately contributes to increasing employee work commitment.

The Influence of Work Discipline on Non-PNS Work Commitment at the Muaro Jambi Education and Culture Service

Based on the results of this research, it is proven that there is a significant influence of work discipline (X2) on Work Commitment (Y) so that H_a is accepted and H_o is rejected. This can be proven through the results of the t-test analysis with the help of SPSS 26.0 for Windows which shows that the value of work discipline on work commitment is 2,472, while the t-table value is 2,010. So, the results obtained are $t\text{-count} > t\text{-table}$, namely $2,472 > 2,010$. This proves that the work discipline variable (X2) partially has a positive and significant influence on work commitment (Y).

Based on the test results of the coefficient of determination X2 against Y, the R Square value was obtained at 0.128 or 12.8%. This means that it can be concluded that the influence of work discipline (X2) on work commitment (Y) is 12.8%. This is in line with research by Arifeny and Astuti (2024) which shows that fingerprint-based supervision and attendance are dominant factors in improving work discipline. Hamdani and Hidayati's research (2023) also found that the implementation of fingerprint attendance at SD Muhammadiyah 7 Bandung City increased employee work discipline significantly.

The Influence of Fingerprint-Based Attendance and Work Discipline on Non-PNS Work Commitment at the Muaro Jambi Education and Culture Service

Based on the results of hypothesis testing, it was concluded that fingerprint-based attendance and work discipline together had a significant influence on the work commitment of Non-PNS employees at the Muaro Jambi Education and Culture Service. This can be proven through the results of the F-test analysis with the help of SPSS 26.0 for Windows which shows that the value of absenteeism and work discipline on the work commitment of Non-PNS employees is 4.653 with an F table value of 3.19 so that $F\text{ count} > F\text{ table}$ is $4.653 > 3.19$ and the level significance of $0.019 < 0.05$. And based on the

results of the coefficient of determination test, an R Square value of 0.128 or 12.8% was obtained. This shows that there is a joint influence between fingerprint-based attendance variables and work discipline of 12.8%, while the remaining 87.2% is influenced by other variables not discussed in this research. Research by Mrisha (2022) also shows that biometric fingerprint technology has a positive impact on organizational performance by increasing employee attendance and discipline. In addition, research by Ekowati et al. (2024) found that employee performance evaluation using fingerprint attendance provided more accurate and reliable results, which contributed to increased work commitment.

Based on the results of hypothesis testing, it was concluded that fingerprint-based attendance had a significant influence on the work commitment of non-PNS employees at the Muaro Jambi Education and Culture Service.

This is proven through F-test analysis with the help of SPSS 26.0 for Windows which shows that the value of fingerprint-based attendance on work commitment of Non-PNS employees is 4,653 with an F table value of 3.19 so that $F_{\text{count}} > F_{\text{table}}$, namely $4,653 > 3.19$ and a significance level of $0.019 < 0.05$. Apart from that, the coefficient of determination test results show an R Square value of 0.128 or 12.8%. This shows that fingerprint-based attendance influences 12.8% of work commitment, while the remaining 87.2% is influenced by other variables not discussed in this study. These results are in line with research conducted by Ezema et al. (2015), which states that a fingerprint-based attendance management system is effective in increasing work discipline and employee commitment. This research is also supported by the findings of Ikuomola (2015) which shows that a fingerprint-based authentication system improves time and attendance management, which ultimately has a positive impact on employee work commitment. Furthermore, research by Ikani et al. (2022) found that implementing a fingerprint-based attendance system increased the efficiency and accuracy of attendance data, which then contributed to increasing employee work commitment. This system has also been proven to reduce fraud rates and increase the accuracy of attendance reporting, as shown by Olasupo et al. (2022). Research by Arifeny and Astuti (2024) confirms that fingerprint-based supervision and attendance are the dominant factors in improving work discipline. Good work discipline is one of the main determinants of increasing work commitment, which in turn will improve overall organizational performance. Hamdani and Hidayati (2023) also found that the implementation of fingerprint attendance at SD Muhammadiyah 7 Bandung City increased employee work discipline significantly. They stated that the use of this technology not only increases attendance but also encourages employees to be more responsible and motivated to perform better. Overall, empirical evidence from various studies supports the finding that fingerprint-based attendance has a positive and significant influence on employee work commitment. With increased work attendance and discipline, employee work commitment also increases, which ultimately contributes to achieving organizational goal

CONCLUSION AND IMPLICATIONS

The results of this research indicate a significant influence of fingerprint-based attendance on the work commitment of Non-Civil Servant employees at the Muaro Jambi Education and Culture Office. The statistical analysis revealed that the fingerprint-based attendance variable has an R Square value of 0.213 with a significance level of 0.012 ($p < 0.05$), demonstrating its strong impact on work commitment. Similarly, the work discipline variable also shows a significant effect on work commitment, with an R Square value of 0.113 and a significance level of 0.017 ($p < 0.05$). When combined, both variables collectively influence work commitment, as indicated by an R Square value of 0.4653 and a significance level of 0.019 ($p < 0.05$). These findings align with previous studies by Ezema et al. (2015) and Ikuomola (2015), which highlighted the effectiveness of fingerprint-based attendance systems in enhancing employee discipline and commitment.

The theoretical implications of this study underscore the importance of both fingerprint-based attendance and work discipline in fostering high levels of work commitment among Non-Civil Servants. Effective implementation of these systems and practices can lead to significant improvements in employee performance and organizational outcomes. This is consistent with the findings of Ikani et al. (2022) and Arifeny and Astuti (2024), who emphasized the role of advanced attendance systems and supervisory mechanisms in enhancing work discipline and commitment.

Practically, the results provide valuable insights for the Muaro Jambi Education and Culture Office. The implementation of fingerprint-based attendance systems and stringent work discipline policies can serve as strategic tools to boost work commitment among Non-Civil Servants. This can subsequently lead to improved employee performance and overall organizational efficiency. This practical implication is supported by Hamdani and Hidayati (2023), who found that biometric attendance systems significantly enhance employee discipline and responsibility.

Future research should delve deeper into identifying the specific types of fingerprint-based attendance systems that are most effective in increasing work commitment. Additionally, it is essential to explore various work discipline practices that can further support and enhance employee commitment. This direction for future research is crucial for developing more targeted and effective strategies for improving work commitment.

For Non-Civil Servants, it is imperative to adhere strictly to the attendance policies and maintain high levels of discipline. By doing so, they can contribute significantly to their own work commitment and the overall success of the Muaro Jambi Education and Culture Office. These findings and suggestions align with the broader literature, such as studies by Mrisha (2022) and Ekowati et al. (2024), which highlight the positive impact of disciplined attendance practices on organizational performance.

In conclusion, the combined influence of fingerprint-based attendance and work discipline on work commitment is substantial and highlights the need for ongoing improvements in these areas. By focusing on these factors, the Muaro Jambi Education and Culture Office can achieve better work commitment and enhance its organizational performance. These findings contribute to the broader understanding of how technological advancements in attendance systems and effective disciplinary practices can positively impact employee commitment and organizational success.

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