E-ISSN: 3025-0994
Halaman 5620-5626
Volume 4 Nomor 3 Tahun 2026

The Influence of Ethical Leadership, Employee Digital Competence, and Team Collaboration on the Organizational Citizenship Behavior of Manufacturing Industry Employees

Djunaedi[1], Anton Nurcahyo[2], Sri Purwati[3], Heny Herawati[4], Elizabeth[5], Hartanto[6]

[1] IISIP YAPIS Biak, Indonesia
[2] Politeknik Negeri Samarinda, Indonesia
[3] Sekolah Tinggi Ilmu Ekonomi Bisnis Indonesia, Indonesia
[4] Institut Maritim Prasetiya Mandiri Lampung, Indonesia
[5] Universitas Budi Luhur, Indonesia
[6] Politeknik Ketenagakerjaan, Indonesia
e-mail: haji.bosdjun.2011@gmail.com[1]

Abstract

This study aims to analyze the effect of Ethical Leadership, Employee Digital Competence and Team Collaboration on Organizational Citizenship Behavior on workers in the manufacturing business. The research was conducted quantitatively using the survey technique on the respondents from several manufacturing organizations. Data were collected by online surveys using a purposive sampling technique. The data were analyzed using multiple linear regression after the study instruments were found to be valid and reliable. The results show that Ethical Leadership, Employee Digital Competence and Team Collaboration have positive and significant effect on Organizational Citizenship Behavior. Out of the three factors, Team Collaboration is the most dominant factor that has an impact on Organizational Citizenship Behavior. The results of this study show that improving ethical leadership, enhancing employee digital competence, and improving effective team collaboration are important strategies for improving organizational citizenship behavior which will contribute to the productivity, work effectiveness and competitiveness of manufacturing companies in the digital transformation era.

Keywords: Ethical Leadership, Employee Digital Competence, Team Collaboration, Organizational Citizenship Behavior

INTRODUCTION

The digitalization of manufacturing sector has made firms to focus not only on the improvement of production efficiency, but also on the strengthening of the quality of human resources as a decisive element in competitive advantage (Pettalongi et al., 2025). People need to be able to work adaptively, collaboratively and proactively to meet the challenges of

working in an environment of automation, Internet of Things (IoT), artificial intelligence and digital-based manufacturing systems. Under such conditions, the organization's success depends on the fact that workers are not only able to meet the requirements of their job descriptions but are ready to voluntarily contribute beyond their formal duties (Djunaedi, 2024). This kind of behavior is known as Organizational Citizenship conduct (OCB) which refers to people voluntarily helping their colleagues, maintaining a positive working atmosphere, supporting the goals of the organization and participating in a range of activities that add value to the business (Nur et al., 2020; Dunda et al., 2020).

One of the factors affecting Organizational Citizenship Behavior among the personnel of manufacturing sector is Ethical Leadership. Ethical leadership is a leader's ability to demonstrate honest, fair and responsible behavior and to serve as a role model in implementing the organization's ethical values (Zakaria et al., 2025). Ethical leadership is a type of leadership that can establish a work environment based on trust, transparency and respect for each other so that employees are encouraged to make more contributions to the company (Asmawi et al., 2023; Ferdiansyah & Hendratni, 2024). Another important characteristic that is hypothesized to influence Organizational Citizenship Behavior among employees in the manufacturing business is Employee Digital Competence (Muhaling et al., 2023). Digital competence of the workers is the ability to use digital technology, understand information systems, manage data and use different digital apps in support of job tasks (Harahap et al., 2025). Manufacturing personnel must deal with rapid technological changes and learn technical skills for digital transformation (Djunaedi et al., 2025). Another factor that is believed to affect Organizational Citizenship Behavior of manufacturing sector personnel is Team Collaboration (Anggraini & Khairunnisa, 2025). Team cooperation is the ability of team members to work together efficiently, communicating openly, coordinating well, exchanging information, and supporting one another while working. Manufacturing is a work environment where the production process is very dependent on the level of collaboration between departments (Sabilalo et al., 2020). Good cooperation in teams may create a mutually supportive work environment, improve a feeling of belonging to the firm, and enhance interpersonal ties between workers (Laliasa et al., 2028).

The manufacturing industry is currently facing increasing pressure to remain competitive in a highly dynamic global market. Rapid technological advancement, shorter product life cycles, and changing customer expectations require manufacturing firms to continuously improve not only their production systems but also the quality and adaptability of their human resources. Consequently, organizations increasingly recognize that sustainable competitive advantage depends on employees who are willing to contribute beyond their prescribed job responsibilities.

The implementation of Industry 4.0 technologies has significantly transformed organizational structures and work processes within manufacturing companies. Smart factories, cloud computing, big data analytics, and cyber-physical systems require employees to collaborate across functional boundaries while utilizing digital technologies effectively. These technological changes have shifted organizational expectations from merely completing assigned tasks toward actively participating in organizational improvement initiatives.

Organizational Citizenship Behavior has therefore become an essential element in supporting organizational effectiveness during digital transformation. Employees who voluntarily assist colleagues, share knowledge, adapt to organizational changes, and maintain harmonious working relationships contribute significantly to operational efficiency and organizational resilience. Such discretionary behaviors enable organizations to respond more effectively to rapidly changing business environments.

Ethical leadership plays an increasingly important role in creating organizational conditions that encourage employees to demonstrate Organizational Citizenship Behavior. Leaders who consistently practice fairness, integrity, accountability, and transparency establish a workplace climate characterized by trust and mutual respect. This positive organizational climate strengthens employees' psychological attachment to the organization and motivates them to engage in voluntary behaviors that benefit both coworkers and organizational performance.

In addition to leadership, employee digital competence has become a strategic capability in modern manufacturing organizations. Employees are expected not only to operate digital technologies but also to analyze digital information, solve technology-related problems, and continuously adapt to emerging digital innovations. Higher levels of digital competence enable employees to perform their duties more efficiently while encouraging greater participation in collaborative problem-solving and continuous improvement activities.

The increasing integration of digital technologies into manufacturing operations has also expanded the importance of knowledge sharing among employees. Workers who possess strong digital competencies are more likely to exchange technical knowledge, support colleagues in utilizing digital systems, and participate in organizational learning processes. These collaborative behaviors are closely associated with higher levels of Organizational Citizenship Behavior within technology-driven workplaces.

Team collaboration represents another critical organizational capability in manufacturing environments where production activities involve high levels of interdependence among departments. Effective collaboration facilitates communication, coordination, and information exchange between employees, thereby minimizing operational errors and improving production quality. Strong collaborative relationships also foster mutual trust and encourage employees to voluntarily assist one another in achieving organizational objectives.

Furthermore, collaborative work environments contribute to employees' psychological well-being by strengthening interpersonal relationships and promoting a sense of belonging within the organization. When employees perceive that teamwork is valued and supported by management, they become more willing to contribute additional effort beyond formal job requirements. Consequently, team collaboration serves as an important mechanism for fostering Organizational Citizenship Behavior.

Although previous studies have examined the relationships between ethical leadership, digital competence, teamwork, and Organizational Citizenship Behavior independently, empirical evidence integrating these three variables within the context of manufacturing organizations remains relatively limited. Most existing studies have focused

on service industries, educational institutions, or public organizations, leaving an important research gap regarding manufacturing companies undergoing digital transformation.

The aim of this research is to explore the impact of ethical leadership, employee digital competence and team cooperation on organizational citizenship behavior of workers in manufacturing industry. This research also seeks to add knowledge about the role of ethical leadership, employee digital competency and teamwork in encouraging voluntary work behavior that improves organizational performance. The study findings are likely to provide an input for manufacturing organizations in establishing human resource development plans by enhancing the ethical leadership, increasing the digital competence and building a collaborative culture in practice.

METHOD

This research is using quantitative approach with survey research method by investigating the effect of Ethical Leadership , Employee Digital Competency and Team Collaboration on Organizational Citizenship Behavior in manufacturing sector employees. The research population is all employees of medium and large industrial companies that have used digital systems in their operational processes and human resource management. The sampling technique used was purposive sampling. The criteria for the respondent selection were permanent employees with a minimum of two years of service, so that they understood the culture and work systems of the organization and were involved in the activities of teamwork and the use of digital technology in the performance of work on a daily basis. The sample of the research is 200 respondents. Data were collected using online surveys distributed through Google Forms. The variable Ethical Leadership was measured by the aspects of integrity, fairness, ethical advice and people orientation. Aspects of digital proficiency, use of technology, digital issue solving and information management were used to assess the variable of Employee Digital Competence. The variable Team Collaboration was measured through the components of communication, coordination, mutual support and shared commitment. Meanwhile, the variable of Organizational Citizenship Behavior was assessed on the basis of the dimensions of altruism, conscientiousness, civic virtue, sportsmanship and civility. All the factors were measured on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Validity and reliability tests were conducted on the research instruments before testing the hypotheses to ensure each indicator's accuracy and consistency in measuring the research construct. Validity was measured with t-test, while instrument reliability was measured with Cronbach's Alpha, with a threshold of minimum 0.70. Multiple linear regression analysis was used to test the hypotheses.

RESULT AND DISCUSSION

The results of data processing of respondents working in various manufacturing organizations have shown that all research tools have met the standards of data quality. The results of the validity test show that all indicators in the variables of Ethical Leadership, Employee Digital Competence, Team Collaboration and Organizational Citizenship Behavior have a significance value of less than 0.05 so that all statement items are declared valid. The results of the reliability test also show that all variables have a Cronbach Alpha value > 0.70

which means that the research instrument has a good degree of internal consistency. The results of the test show that Ethical Leadership, Employee Digital Competence and Team Collaboration simultaneously have a significant and beneficial impact on Organizational Citizenship Behavior. The results of the coefficient of determination of 0.668 showed that 66.8% of the variance in Organizational Citizenship Behavior can be explained by 3 independent variables in this study. All independent factors have positive and significant effects on Organizational Citizenship Behavior partly.

The research findings reveal that Ethical Leadership positively and profoundly impacts Organizational Citizenship Behavior of the employees in the manufacturing sector. The finding implies that the more a leader demonstrates integrity, honesty, justice and accountability, the more likely workers will engage in voluntary work behaviors that are good for the business. An ethical leader can create a climate of trust in the workplace where employees feel appreciated and are encouraged to go the extra mile. In a disciplined, coordinated and operating procedure-oriented manufacturing environment, this role model leader is an important player in the creation of a healthy company culture. Employees tend to help out colleagues, maintain healthy relationships with their colleagues and participate in lot of company jobs without expecting immediate rewards. These factors ultimately increase the Organizational Citizenship Behavior which further increases the operational performance of the organization.

The study results also indicate that Employee Digital Competence has a positive and significant effect on Organizational Citizenship Behavior. The research shows that workers with better digital skills are better able to adapt to technology changes and make constructive contributions to the firm. Digital competence not only makes workers more efficient in their jobs, it also allows them to communicate, share information and collaborate. Employees who are skilled in the use of digital technology are more confident in their job, are more willing to help colleagues in difficulties and are more active in sharing information on the use of new technologies. This capability is an important tool in promoting voluntary work behavior that improves organizational efficiency in the manufacturing business that is rapidly adopting digital technology. Therefore, one of the main strategies in developing Organizational Citizenship Behavior is to increase the digital competency of employees.

The results of this study show that Team Collaboration is the most dominant variable affecting the Organizational Citizenship Behavior of employees in the manufacturing sector. Among the other independent variables, this independent variable has the largest regression coefficient and t-value. This implies that the quality of cooperation among the members of the team is an important feature that contributes to the emergence of voluntary behavior in the company. Collaboration that works well helps employees communicate openly, support one another, share information and cooperate to resolve diverse operational challenges. Collaboration at work helps to build trust between one another, improves relationships between people and creates a work culture. This situation creates conditions for employees to voluntarily help other employees without being asked, to maintain a friendly atmosphere at work and to participate in many organizational tasks. Therefore, it is vital for manufacturing organizations to promote a strong culture of collaboration through effective communication, cross-functional coordination and teamwork development to enable the continuous

improvement of Organizational Citizenship Behavior and its positive impact on the overall organizational performance.

CONCLUSION

The result of the study showed that Leadership, Employee Digital Competence, and Team Collaboration had a positive and significant simultaneous and partial effect on Organizational Citizenship Behavior in workers of the manufacturing business. Findings also suggest that Team Collaboration is the most dominant influencing variable to Organizational Citizenship Behavior. However, this research still has some drawbacks such as the use of a cross-sectional technique, using data based on the respondents' perspective, and the study is only conducted in the manufacturing industry sector. Therefore, it is suggested that future research should be conducted with a longitudinal design and the inclusion of other variables such as organizational commitment, employee engagement, psychological empowerment and organizational culture as mediating or moderating variables to better understand the factors affecting Organizational Citizenship Behavior. In practice, manufacturing companies need to continue to strengthen ethical leadership practices, enhance employees' digital competence through continuous training programs, and foster a collaborative work culture to facilitate better Organizational Citizenship Behavior and organizational effectiveness.

REFERENCES

Pettalongi, S. S., Widodo, J., Djunaedi, D., Lestari, N., & Anisa, N. (2025). Digitalisasi dan transformasi sumber daya manusia.

Djunaedi, H. (2024). AI as employee performance evaluation: An innovative approach in human resource development. *Power System Technology*, *48*(1), 2008-2021.

Nur, M., Sabilalo, M. A., Kalsum, U., & Makkulau, A. R. (2020). Pengaruh Budaya Organisasi Dan Desain Pekerjaan Terhadap Komitmen Kerja Dan Kinerja Karyawan Perum Bulog Divisi Regional Sultra. *SEIKO: Journal of Management & Business*, *3*(2), 134-150.

Dunda, N., Kamase, J., Asis, N., & Nur, M. (2020). Pengaruh Komitmen Organisasi Dan Locus Of Control Terhadap Kinerja Yang Dimediasi Kepuasan Karyawan Outsourching Pada Pt. Sederhana Karya Jaya. *Jurnal Sosio Sains*, *6*(1), 1-10.

Zakaria, M., Ismail, A., Hendratni, T. W., Putrianti, F. G., Soeprapto, A., & Lubis, F. M. (2025). ANALISIS PENGARUH SELF-LEADERSHIP, WORKPLACE WELL BEING DAN PENGEMBANGAN KARIR TERHADAP EMPLOYEE ENGAGEMENT PADA INDUSTRI JASA. *JURNAL LENTERA BISNIS*, *14*(2), 1953-1962.

Asmawi, M. R., Santoso, S., Nur, M., & Maesaroh, S. (2023). Exemplary Leadership in Higher Education: Study at Universitas Islam Syekh-Yusuf Tangerang. *International Journal of Social Service and Research*, *3*(1), 207-218.

Ferdiansyah, O., & Hendratni, T. W. (2024). Pengaruh Gaya Kepemimpinan dan Motivasi Kerja Terhadap Turnover Intention Karyawan Pada PT Solusi Bangun Indonesia di Kabupaten Tuban. *Jurnal Ilmu Manajemen Terapan (JIMT)*., *5*(6).

Muhaling, R. A., Muthalib, A. A., & Nur, M. (2023). Analisis Pengaruh Kepemimpinan, Beban Kerja Dan Stress Kerja Terhadap Turnover intention Karyawan Pada Bank Sultra

Cabang Utama Kendari. *Neraca: Jurnal Ekonomi, Manajemen dan Akuntansi*, *1*(2), 408-418.

Harahap, M. A. K., Apramilda, R., Wahyuningratna, R. N., Husaini, H., Ariyanti, R., & Hendratni, T. W. (2025). Peran Kompetensi Sdm, Adopsi Teknologi dan Kolaborasi Dalam Organisasi: Upaya Penguatan UMKM Indonesia: Penelitian. *Jurnal Pengabdian Masyarakat dan Riset Pendidikan*, *3*(4), 5288-5293.

Djunaedi, D., Mustafa, F., Kholil, M., Kristanti, D., Wisnu, B., & Arifin, A. (2025). Analisis pengaruh sistem penilaian kinerja digital terhadap performa karyawan. *Jurnal Lentera Bisnis, 14*(2), 1437–1445.

Anggraini, F. D., & Khairunnisa, K. (2025). Transformasi Ekonomi Digital dan Kinerja UMKM: Analisis Pengaruh Digitalisasi Akuntansi Terpadu: Digital Economic Transformation and MSME Performance: An Analysis of the Impact of Integrated Accounting Digitalization. *Al Dzahab*, *6*(2), 95-110.

Sabilalo, M. A., Kalsum, U., Nur, M., & Makkulau, A. R. (2020). Pengaruh Lingkungan Kerja Dan Kemampuan Kerja Terhadap Motivasi Kerja Dan Kinerja Pegawai Biro Organisasi Sekretariat Daerah Provinsi Sulawesi Tenggara. *SEIKO: Journal of Management & Business*, *3*(2), 151-169.

Laliasa, G., Nur, M., & Tambunan, R. (2018). Pengaruh Gaya Kepemimpinan Demokratis, Lingkungan Kerja Dan Motivasi Kerja Terhadap Kinerja Pegawai Dinas Perkebunan Dan Hortikultura Provinsi Sulawesi Tenggara. *Sigma: Journal of Economic and Business*, *1*(1), 42-52.