

Digital Talent Strategies for Employee Retention: Mediation Analysis of Organizational Trust and Employee Engagement in the Context of Sustainable Development in Manufacturing Industries

Muhamad Ekhsan^{1*}, Yuan Badrianto², Suwandi Suwandi³

^{1,2,3}Universitas Pelita Bangsa

Corresponding Author : muhamad.ekhsan@pelitabangsa.ac.id

ARTICLE INFO

ABSTRACT

Received: 30 Dec 2024

Revised: 12 Feb 2025

Accepted: 26 Feb 2025

This study aims to analyze the impact of digital talent on employee retention, mediated by organizational trust and employee engagement in manufacturing companies in Indonesia. In the era of Industry 4.0, digital talent has become a critical asset for manufacturing companies in navigating digital transformation. This study employs a quantitative approach with a sample of 170 employees from manufacturing companies in the industrial area of West Java. Data were collected through an online questionnaire and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results indicate that digital talent has a positive and significant impact on employee retention, both directly and through the mediation of organizational trust and employee engagement. These findings underscore the importance of developing employees' digital competencies as an effective retention strategy. Organizational trust plays a crucial role in mediating the relationship between digital talent and employee retention, suggesting that investing in digital skill development also fosters trust in the organization's commitment. Employee engagement also emerges as a significant mediator, indicating that employees with strong digital skills tend to be more engaged in their work. The managerial implications of this study highlight the importance of a holistic strategy in managing digital talent, which includes skill development programs, creating a work environment that supports digital innovation, and reinforcing a transparent and adaptive organizational culture. By integrating digital talent development, enhancing organizational trust, and boosting employee engagement, manufacturing companies can improve employee retention and maintain a competitive edge in the face of digital era challenges

Keywords: Talent Digital, Organizational Trust, Employee Engagement, Employee Retention, Manufacturing.

INTRODUCTION

The era of digitalization has brought significant changes to various aspects of life, including the world of work. Advances in information and communication technology have transformed how companies operate and how employees perform their tasks. This phenomenon has been deeply examined by (Colbert et al., 2016), who explored how the digital workforce is reshaping the future workplace. In this context, digital talent, or individuals with high digital skills and abilities, has become a crucial asset for organizations. (Schwarz Müller et al., 2018) assert that digital talent plays a pivotal role in the digital transformation of organizations, particularly in terms of innovation, efficiency, and competitiveness.

The importance of digital talent is increasingly prominent in the manufacturing industry, which is continuously transforming to face the challenges of Industry 4.0. (Rojko, 2017) explains that Industry 4.0 requires manufacturing companies to adopt advanced technologies such as the Internet of Things (IoT), big data analytics, and artificial intelligence, necessitating a workforce with proficient digital skills. However, with the rising demand for digital talent,

issues related to employee retention have emerged. Many companies face difficulties in retaining their digital talent, as highlighted by (Deloitte, 2019) in their report on global human capital trends.

This phenomenon is becoming increasingly relevant given the significant costs associated with employee turnover, including recruitment, training, and lost productivity. (Hancock et al., 2013), in their meta-analysis on the costs of employee turnover, assert that losing talented employees can substantially impact organizational performance. Moreover, the loss of digital talent can hinder the pace of innovation and development of a company, especially in the manufacturing sector, which heavily relies on technology and efficient production processes.

The current phenomenon is the high turnover rate among digital talent. Data indicates that digital talent tends to be more mobile and open to new opportunities that offer career advancement and better compensation. This aligns with the findings of (Martins et al., 2019), who showed that IT professionals have a higher turnover rate compared to other professions. This phenomenon is not only occurring in high-tech companies but also in traditional sectors such as manufacturing, which are adapting to digitalization, as highlighted by (Kache & Seuring, 2017) in their study on digital transformation in the manufacturing industry.

Manufacturing companies in Indonesia, particularly in industrial areas like Cikarang, face significant challenges in retaining their digital talent. Several factors influencing this phenomenon include dissatisfaction with the work environment, lack of trust in management, and low levels of employee engagement and commitment. These findings are supported by (Alias et al., 2014), who identified determinants of turnover intention among IT professionals. In this context, it is important to understand how these factors influence digital talent's decision to stay or leave a company. (Seethamraju, 2018) emphasizes the importance of adopting a holistic approach to digital talent management to improve employee retention in the digital era.

(Mahmood et al., 2019), in their study on employee retention in the manufacturing industry, found that organizational trust plays a key role in influencing employees' decisions to stay with a company. Meanwhile, (Cooke et al., 2019) highlight the importance of employee engagement in the context of digital transformation in the manufacturing sector, where high employee engagement can increase commitment and loyalty to the organization. The research question this study aims to answer is how digital talent can be retained in manufacturing companies.

This research focuses on two main mediating factors, organizational trust and employee engagement, which are assumed to play significant roles in influencing employee retention decisions. The importance of organizational trust in the context of employee retention has been demonstrated by (Ertürk & Vurgun, 2015) in their research in the information technology sector. Meanwhile, (Saks, 2006) has demonstrated the crucial role of employee engagement in enhancing organizational commitment and reducing turnover intentions.

In the context of the manufacturing industry facing digital transformation, (J. Schneider et al., 2018) emphasize the importance of building trust and employee engagement to effectively manage organizational change. Furthermore, (Agarwal & Helfat, 2009) explain that in the digital era, organizations need to build dynamic capabilities, including the ability to retain and develop digital talent. This study aims to fill the gap in the literature by investigating how organizational trust and employee engagement serve as mediators in the relationship between digital talent management and employee retention in Indonesia's manufacturing sector.

Previous research has extensively discussed employee retention and the factors influencing it, such as compensation, work environment, and career development opportunities. This is reinforced by (Kossek et al., 2020) in their literature review on employee retention strategies. However, there remains a gap in the literature regarding the specific role of digital talent in the context of manufacturing companies. Most studies have focused more on technology companies or the service sector, as highlighted by (Colbert et al., 2016) in their study on the digital workforce. Meanwhile, research examining manufacturing companies in the context of digital talent remains relatively limited, although (Frank et al., 2019) have highlighted the importance of digital talent in the Industry 4.0 transformation.

Research on the role of organizational trust and employee engagement as mediators in the relationship between digital talent and employee retention is also scarce and (Saks, 2006) has examined the role of employee engagement in employee outcomes, studies that integrate these two factors in the context of digital talent in the manufacturing

industry are still limited. Both factors are believed to play a crucial role in retaining digital talent, especially in industries undergoing digital transformation like manufacturing. (P. Schneider, 2018) underscores the importance of building trust and employee engagement in facing digital transformation in the manufacturing industry, yet empirical research that comprehensively examines this relationship is still lacking.

There are several reasons why manufacturing companies were chosen as the subject of this study. First, the manufacturing industry is undergoing significant digital transformation. With the adoption of technologies such as the Internet of Things (IoT), artificial intelligence (AI), and automation, the need for digital talent has become crucial. This aligns with (Kagermann, 2015) findings, which emphasize the importance of digital talent in the implementation of Industry 4.0. Understanding how digital talent can be retained in this context is highly relevant. Second, the manufacturing sector is a major contributor to Indonesia's economy. Maintaining stability and increasing efficiency in this sector will positively impact national economic growth, as highlighted by (Rodrik, 2016) in his study on the role of manufacturing in economic development. Third, manufacturing companies face unique challenges in attracting and retaining digital talent. The work environment's characteristics, which differ from those in high-tech or service sectors, require specific approaches in human resource management. (Schnellbacher & Heidenreich, 2020) underscore the importance of adapting talent management strategies in the context of digital transformation in the manufacturing industry. Fourth, there is a gap in the literature discussing the retention of digital talent in manufacturing companies. This research aims to fill that gap and contribute to the development of theory and practice in human resource management in the manufacturing sector. (KIEL et al., 2017) highlight the lack of empirical research on human resource management in the context of Industry 4.0, particularly in developing countries.

(Sony & Naik, 2019) emphasize the importance of understanding the factors influencing the adoption of Industry 4.0 technologies in manufacturing companies, including human resource aspects. Meanwhile, (Frey & Osborne, 2017) show that digital transformation in the manufacturing sector will significantly impact job structures and skill requirements, stressing the importance of research on digital talent management in this sector.

To face the challenges of digitalization, manufacturing companies need to develop effective strategies to attract and retain digital talent. This is consistent with the findings of (Kache & Seuring, 2017), who emphasize the importance of digital talent management in the transformation of the manufacturing industry. This study seeks to explore the impact of digital talent on employee retention, considering the mediating role of organizational trust and employee engagement. (Saks, 2006) has demonstrated the importance of employee engagement in enhancing organizational commitment, while (Ertürk & Vurgun, 2015) highlight the crucial role of organizational trust in employee retention in the information technology sector.

The results of this study are expected to provide new insights for practitioners and academics in managing digital talent and supporting the sustainability and competitiveness of manufacturing companies in Indonesia. (J. Schneider et al., 2018) assert that effective talent management is a key factor in the success of digital transformation in the manufacturing industry. This research is also expected to offer practical recommendations for manufacturing companies in developing policies and practices that support digital talent retention, enhance organizational trust, and boost employee engagement. (Cooke et al., 2019) highlight the importance of a holistic approach in human resource management to address the challenges of the digital era. (Sony & Naik, 2020) emphasize that the success of Industry 4.0 implementation heavily depends on the readiness of human resources, including digital talent. Therefore, companies can be better prepared to face the challenges of the digital era and achieve long-term success. As noted by (Frank et al., 2019), manufacturing companies that successfully manage digital talent have a greater potential to achieve competitive advantage in the Industry 4.0 era.

THEORETICAL FRAMEWORK

In the era of Industry 4.0, digital talent has become a critical asset for organizations, particularly in the manufacturing sector undergoing digital transformation. Employees with proficient digital skills tend to hold higher value for the company and feel more confident in facing technological changes. (Colbert et al., 2016) assert that employees with strong digital competencies are better able to adapt to technological changes and contribute to company innovation. This can increase their desire to stay within the organization. (Soto-Acosta et al., 2018) So found that companies that

value and develop their employees' digital talent tend to have higher retention rates. Furthermore, (Kossek et al., 2020) highlight that employees with relevant digital skills tend to feel more secure in their jobs and have better career prospects, which in turn increases their desire to remain with the organization.

H1: Digital talent affects employee retention

Employees with high digital talent tend to feel more competent and confident in performing their tasks in the digital era. This can enhance their sense of engagement in their work, as they feel capable of making significant contributions to the organization's goals. (Saks, 2006) asserts that employees who feel competent in their roles are more likely to be engaged in their work. (Kane et al., 2019), in their study on organizational digital maturity, found that employees in more digitally mature companies tend to be more engaged and satisfied with their jobs. This indicates that digital talent not only enhances individual capabilities but also contributes to an organizational culture that fosters higher engagement.

H2: Digital talent affects employee engagement

Employees with strong digital talent tend to have higher trust in organizations that support the development of digital skills. They may view the organization as forward-thinking and committed to employee development. (Vanhala & Dietz, 2019) found that organizational investment in skill development, including digital skills, is positively correlated with increased organizational trust. (Pirson & Malhotra, 2011) highlight the importance of organizational competence in building trust. Organizations that actively develop their employees' digital talent can be perceived as competent in facing the challenges of the digital era, thus enhancing employee trust. Furthermore, (Sousa & Rocha, 2019) emphasize that in the context of Industry 4.0, employees with strong digital skills are more prepared to face changes and more engaged in the company's digital transformation initiatives. This not only increases their engagement but also boosts their trust in the organization's ability to compete in the digital era.

H3: Digital talent affects organizational trust

Employee engagement has long been recognized as a key factor in employee retention. Employees who are actively engaged in their work tend to have a stronger emotional attachment to the organization, which in turn increases their desire to stay. (Harter et al., 2016) found that high levels of engagement are positively correlated with employee retention and organizational performance. Furthermore, (Schaufeli, 2013) asserts that engaged employees tend to have a positive attitude toward their work and organization, reducing their intention to leave the company. (Bailey et al., 2017), in their literature review, confirm the positive relationship between employee engagement and the intention to stay within the organization. They highlight that engaged employees tend to be more satisfied with their jobs and have a higher commitment to the organization.

H4: Engagement affects employee retention

Organizational trust plays a crucial role in employee retention. Employees who trust their organization tend to feel more secure and valued, which can enhance their loyalty and desire to stay. (Dirks & Ferrin, 2002), in their meta-analysis, found that organizational trust has a positive impact on various work outcomes, including organizational commitment and intention to stay. (Ng & Feldman, 2015) further confirm that organizational trust contributes to increased employee retention, particularly in the context of organizational change. They emphasize that trust helps employees cope with uncertainty and maintain their connection to the organization during challenging times.

H5: Organizational trust affects employee retention

Digital talent can enhance employee engagement, which in turn affects employee retention. Employees with strong digital skills tend to feel more competent and confident in their roles, which can increase their engagement at work. (Sousa & Rocha, 2019) indicate that the development of digital skills can boost employee engagement, particularly in the context of Industry 4.0. (Saks & Gruman, 2014) assert that engagement can serve as a mechanism through which organizational practices, including skill development, influence employee retention. In this context, digital talent can be seen as a job resource that enhances engagement and ultimately retention.

H6: Digital talent affects employee retention mediated by employee engagement

The development of digital talent can enhance organizational trust, which in turn affects employee retention. Employees who feel that their organization supports the development of their digital skills tend to have higher levels of trust in the organization. (Vanhala & Ahteela, 2011) found that human resource management practices, including skill development, can enhance organizational trust. (Lee et al., 2018) further demonstrate that in the digital era, organizational trust becomes increasingly important in retaining employees. They emphasize that organizations trusted to manage digital transformation effectively tend to have higher employee retention rates.

H7: Digital talent affects employee retention mediated by organizational trust

RESEARCH METHODOLOGY

This study adopts a quantitative approach with a cross-sectional design to examine the impact of digital talent on employee retention, mediated by organizational trust and employee engagement in manufacturing companies in West Java. The research population consists of employees who have worked for at least one year in manufacturing companies located in the industrial area of West Java. A sample size of 170 respondents was determined using (Hair et al., 2010) formula, where the number of indicators is multiplied by 5-10. Data collection was conducted using a questionnaire distributed via Google Forms with a 5-point Likert scale. The research instruments were adapted from validated scales, including digital talent (Colbert et al., 2016), organizational trust (Mayer et al., 1995), and employee engagement (Schaufeli, 2013). Data analysis employed Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS software, which included the evaluation of the measurement model (outer model), structural model (inner model), and hypothesis testing, including mediation effects. The validity and reliability of the study were ensured through a pilot test, content validity testing, and confirmatory factor analysis. Research ethics were upheld by ensuring respondent confidentiality and obtaining informed consent. The limitations of the study include the cross-sectional design, potential common method bias, and limited generalizability to the context of manufacturing companies in West Java.

RESULTS AND DISCUSSION

Profil Respondent

Table 1. Respondent Profile

Item	Type	Respondent	Percentage (%)
Gender	Male	64	38%
	Female	106	62%
Education	Highschool	120	71%
	Undergraduate	45	26%
	Graduate	5	3%
Age	>20	15	9%
	20-25	118	69%
	26-35	21	12%
	<35	16	9%
Working Year	>2 Year	40	24%
	2-5 Year	92	54%
	5-10 Year	21	12%
	<10 Year	17	10%
Position	Manager	6	4%
	Staff	159	94%
	Supervisor	5	3%
Industrial Park	MM2100	72	42%
	EJIP	61	36%
	GIIC	37	22%
Domicile	Cikarang	109	64%
	Bekasi	46	27%

Karawang	10	6%
Jakarta	5	3%

Source: Output SmartPLS 3 (2024)

Table 1. Explaining the demographics of the respondents, the majority of respondents are women with a total of 62% while male respondents amount to 38%, in addition to the education of 71% of respondents from high school equivalent, 26% are bachelors 1 and 3% consist of master's graduates. In terms of age, the majority of respondents are from generation Y or millennials with vulnerable age 20-25 years as much as 69% with 54% work experience 2-5 years and the majority of positions are part of staff as much as 94% followed by managers 4% and supervisors 3%, then for the work area consists of respondents who work in the MM2100 industrial area as much as 42%, EJIP area 36% and GIIC area as much as 22%, respondents were spread out by domicile in Cikarang as much as 64%, Bekasi 27%, Karawang 6% and Jakarta 3%.

Hypothesis Test

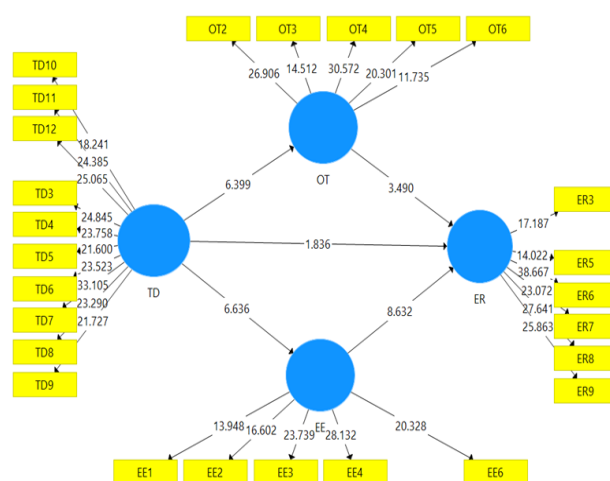


Figure 1. Hypothesis Test Results

Source : Research Results

Figure 1 illustrates the hypothesis test results using a structural equation model, depicting the relationships between Digital Talent (TD), Employee Engagement (EE), Organizational Trust (OT), and Employee Retention (ER) in the context of manufacturing companies. The diagram shows that Digital Talent has a relatively weak direct effect on Employee Retention (0.108), but stronger positive influences on Employee Engagement (0.456) and Organizational Trust (0.435). Employee Engagement demonstrates the strongest direct impact on Employee Retention (0.527), followed by Organizational Trust (0.286). The model also highlights two indirect paths: TD → EE → ER and TD → OT → ER, indicating the mediating roles of Employee Engagement and Organizational Trust in the relationship between Digital Talent and Employee Retention. These results suggest that while Digital Talent may not strongly influence Employee Retention directly, it has significant indirect effects through enhancing Employee Engagement and Organizational Trust, which in turn positively impact Employee Retention.

Path Coeficienst Test

Table 2. Path Coeficienst Test Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
EE -> ER	0,527	0,535	0,061	8,632	0,000
OT -> ER	0,286	0,286	0,082	3,490	0,001

TD -> EE	0,456	0,462	0,069	6,636	0,000
TD -> ER	0,108	0,103	0,059	1,836	0,067
TD -> OT	0,435	0,446	0,068	6,399	0,000

Source : Research Results

Table 2 presents the Path Coefficients Test results, providing statistical evidence for the relationships between the study's key variables. The results show that Employee Engagement (EE) has the strongest positive effect on Employee Retention (ER) with a coefficient of 0.527 ($p < 0.001$), followed by Digital Talent's (TD) impact on Employee Engagement (0.456, $p < 0.001$) and Organizational Trust (OT) (0.435, $p < 0.001$). Organizational Trust also significantly influences Employee Retention (0.286, $p = 0.001$). Notably, the direct effect of Digital Talent on Employee Retention is relatively weak (0.108) and marginally significant ($p = 0.067$). These findings suggest that while Digital Talent may not have a strong direct impact on Employee Retention, it significantly influences retention indirectly through its positive effects on Employee Engagement and Organizational Trust. The results underscore the importance of fostering employee engagement and building organizational trust as key strategies for retaining employees in the digital era, particularly in the manufacturing sector.

Indirect Effect Test

Table 3. Indirect Effect Test Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
TD -> EE -> ER	0,240	0,248	0,048	4,960	0,000
TD -> OT -> ER	0,125	0,127	0,041	3,067	0,002

Source : Research Results

Table 3 presents the Indirect Effect Test results, which examine the mediating roles of Employee Engagement (EE) and Organizational Trust (OT) in the relationship between Digital Talent (TD) and Employee Retention (ER). The results show two significant indirect effects. First, the path from Digital Talent through Employee Engagement to Employee Retention (TD → EE → ER) has a coefficient of 0.240 ($p < 0.001$), indicating a strong and significant mediating effect. Second, the path from Digital Talent through Organizational Trust to Employee Retention (TD → OT → ER) shows a coefficient of 0.125 ($p = 0.002$), also demonstrating a significant, albeit smaller, mediating effect. These findings suggest that both Employee Engagement and Organizational Trust play crucial roles in transmitting the influence of Digital Talent on Employee Retention. The stronger mediating effect of Employee Engagement implies that it may be a more potent mechanism through which digital talent development impacts employee retention in manufacturing companies. These results underscore the importance of considering these indirect pathways when designing strategies to retain digitally talented employees in the manufacturing sector.

DISCUSSION

The Relationship Between Digital Talent and Employee Retention

Digital talent has been shown to significantly contribute to employee retention in the manufacturing industry context. Employees' ability to adopt and utilize digital technology not only boosts productivity and innovation but also creates a higher sense of belonging and job satisfaction. This, in turn, encourages employees to stay longer within the organization. Mastery of digital skills makes employees feel more valuable and relevant in the era of industrial transformation, thus reducing the desire to seek opportunities elsewhere. Based on research results showing a positive impact of digital talent on employee retention, we can analyze this relationship by considering the profile of respondents and linking it to previous studies.

The respondent profile shows that the majority of employees (69%) are aged 20-25 years, which falls under the Millennial and Gen Z categories. This age group generally has a strong inclination towards digital technology and related skills. This aligns with (Colbert et al., 2016), who state that younger generations have higher digital capabilities and tend to adapt more easily to technological changes in the workplace. Additionally, data shows that 54% of respondents have worked for 2-5 years at their company. This duration indicates that they have sufficient experience to understand the company culture and engage in digital initiatives. This supports the findings of (Kossek et al., 2020), which state that employees with strong digital skills tend to have higher retention rates, especially if they feel that their skills are valued and can contribute to the company's innovation.

Interestingly, although 71% of respondents only have a high school education, they still show a connection between digital talent and employee retention. This may indicate that manufacturing companies in the industrial area have been successful in their efforts to train and develop their employees' digital skills. These findings are consistent with (Frank et al., 2019), who emphasize the importance of developing digital talent in the manufacturing industry to face the challenges of Industry 4.0, regardless of employees' formal educational background. With 94% of respondents at the staff level, this study's results indicate that the impact of digital talent on employee retention is not limited to managerial levels but is also highly relevant for operational level employees. This underscores the importance of inclusive digital talent development strategies at all organizational levels to enhance overall employee retention.

From a practical implication perspective, these findings highlight the importance of talent management strategies that focus on digital skill development across all organizational levels. Manufacturing companies need to implement comprehensive training and development programs to enhance employees' digital capabilities, regardless of their formal educational background. Additionally, performance management and reward systems need to be aligned to value and motivate the development of digital talent. Theoretically, this study enriches the human resource management literature by providing empirical evidence on the relationship between digital talent and employee retention in the manufacturing industry context in developing countries. These findings also support the integration of human capital theory and the resource-based view in understanding the strategic role of digital talent as a source of sustainable competitive advantage. Furthermore, this research opens the way for further exploration of the specific mechanisms through which digital talent influences employees' decisions to stay with an organization, as well as the moderating factors that might affect this relationship.

Digital Talent and Employee Engagement

Digital talent has been proven to significantly contribute to employee engagement in the context of the modern manufacturing industry. Employees with proficient digital skills tend to be more engaged in their work as they feel more competent and capable of meeting the challenges of the digitalization era. The ability to use digital technology not only enhances work efficiency but also opens opportunities for innovation and personal development, which in turn drives higher levels of engagement. Employees with digital talent feel more valuable to the organization and more prepared to face changes, thus increasing their sense of ownership and dedication to their work.

The analysis of respondent profiles provides interesting insights into the relationship between digital talent and employee engagement. The majority of respondents (69%) are aged 20-25 years, falling under the Millennial and Gen Z categories. This age group generally has a high affinity for digital technology and tends to be more easily involved in the company's digital initiatives. This is consistent with the study by (Schaufeli et al., 2019), which found that young employees with good digital skills tend to show higher levels of engagement, especially when they feel that their skills are recognized and optimally utilized by the organization.

Although 71% of respondents only have a high school education, the positive relationship between digital talent and employee engagement remains significant. This indicates that manufacturing companies have been successful in developing their employees' digital skills, regardless of their formal educational background. These findings are consistent with the research by (Ardito et al., 2019), which highlights the importance of developing digital talent in the manufacturing industry to increase employee engagement in digital transformation, even at the operational level. With 54% of respondents having worked for 2-5 years, these results show that developing digital talent can be an effective strategy for increasing engagement among relatively new employees in the organization. This underscores

the importance of sustainable digital skill development programs as part of long-term employee onboarding and retention strategies.

From a practical implication perspective, these findings highlight the importance of investing in digital talent development as a key strategy for enhancing employee engagement. Management needs to design comprehensive and inclusive training and development programs that focus not only on technical skills but also on soft skills that support digital adaptability. Additionally, companies need to create a work environment that encourages experimentation and digital innovation and integrates digital technology into daily work processes to enhance the relevance and application of employees' digital skills. Performance management and reward systems also need to be aligned to value employees' digital contributions, thereby strengthening the relationship between digital talent and employee engagement.

The Relationship Between Digital Talent and Organizational Trust

Digital talent has been shown to significantly contribute to organizational trust in the context of manufacturing industries undergoing digital transformation. Employees with strong digital skills tend to have higher levels of trust in their organization. This is due to the perception that companies that value and develop digital talent are seen as more transparent, innovative, and future-oriented. The ability to use and understand digital technology also increases employees' sense of security about their future in the company, as well as their confidence that the organization can compete and survive in the era of digital disruption.

The analysis of respondent profiles provides interesting insights into the relationship between digital talent and organizational trust. The majority of respondents (69%) are aged 20-25 years, falling under the Millennial and Gen Z categories. This age group generally has high expectations for the use of technology in the workplace and tends to trust organizations that demonstrate a commitment to digital innovation. This aligns with the research by (Khatri et al., 2019), which found that young employees with good digital skills tend to show higher levels of organizational trust, especially when they feel that the company supports the development of their digital competencies.

Although 71% of respondents only have a high school education, the positive relationship between digital talent and organizational trust remains significant. This indicates that manufacturing companies have been successful in building trust through the development of employees' digital skills, regardless of their formal educational background. These findings are consistent with the research by (Soto-Acosta et al., 2018), which highlights the importance of democratizing digital skills across all organizational levels to enhance employees' trust in the company's ability to face the challenges of Industry 4.0. With 54% of respondents having worked for 2-5 years, these results show that developing digital talent can be an effective strategy for building organizational trust at the early stages of employees' careers. (Vanhala & Dietz, 2019) in their research assert that company investment in employee skill development, especially skills relevant to industry trends like digitalization, is positively correlated with increased organizational trust.

From a practical implication perspective, these findings emphasize the importance of integrating digital talent development into organizational trust management strategies. Management needs to design transparent and inclusive digital skill development programs that focus not only on enhancing technical competencies but also on understanding how digital technology supports the company's vision and mission. Implementing internal communication systems that leverage digital platforms can enhance transparency and information accessibility, which in turn supports trust-building. Furthermore, companies need to adopt a leadership approach that supports and demonstrates digital competence. Leaders who understand and actively use digital technology tend to be more trusted by employees in the context of digital transformation. Additionally, companies should consider developing digital mentoring programs, where employees with strong digital talent can guide their colleagues, creating a culture of mutual trust and collaboration within the organization.

The Relationship Between Employee Engagement and Employee Retention

Employee engagement has been shown to significantly contribute to employee retention in the manufacturing industry. Employees who are actively engaged in their work tend to have a stronger emotional attachment to the organization, which in turn increases their desire to stay with the company. Engagement encourages employees to

find more meaning in their roles, enhancing their sense of belonging to the organization, and motivating them to contribute beyond expectations. This creates a positive cycle where engaged employees tend to be more productive, innovative, and loyal, thus reducing turnover and increasing retention.

The analysis of respondent profiles provides interesting insights into the relationship between employee engagement and employee retention. The majority of respondents (69%) are aged 20-25 years, falling under the Millennial and Gen Z categories. This age group generally seeks meaningful work and a supportive work environment for their personal development. This aligns with the study by (Coetzee & Stoltz, 2015), which found that engagement has a significant impact on the retention of young employees, especially when they feel that their work aligns with their personal values and career goals.

Although 71% of respondents only have a high school education, the positive relationship between employee engagement and employee retention remains significant. This indicates that manufacturing companies have successfully created a work environment that fosters engagement, regardless of employees' formal educational backgrounds. These findings are consistent with the research by (Bailey et al., 2017), which highlights the importance of inclusive management practices in enhancing employee engagement and retention across different educational levels.

With 54% of respondents having worked for 2-5 years, these results show that engagement plays a crucial role in retaining employees during the early to mid-stages of their careers. (Schaufeli et al., 2019), in their longitudinal study, affirm that employees who exhibit high levels of engagement during the early years of their careers tend to have higher retention rates in the long term.

From a practical implication perspective, these findings underscore the importance of human resource management strategies that focus on enhancing employee engagement as a tool for increasing employee retention. Furthermore, companies need to conduct regular engagement assessments and use the data to tailor their retention strategies. By understanding the factors that drive engagement in various employee segments, management can design more targeted and effective interventions to improve employee retention.

The Relationship Between Organizational Trust and Employee Retention

Organizational trust has been shown to significantly contribute to employee retention in the manufacturing industry. When employees have a high level of trust in their organization, they tend to have a stronger commitment and a greater desire to stay with the company. Organizational trust creates a positive work environment where employees feel safe, valued, and confident that their interests align with those of the company. This encourages employees to invest emotionally and professionally in the organization, which in turn enhances loyalty and reduces the desire to seek opportunities elsewhere.

The analysis of respondent profiles provides interesting insights into the relationship between organizational trust and employee retention. The majority of respondents (69%) are aged 20-25 years, falling under the Millennial and Gen Z categories. This age group generally values transparency, integrity, and fairness within organizations.

Although 71% of respondents only have a high school education, the positive relationship between organizational trust and employee retention remains significant. This indicates that manufacturing companies have been successful in building trust across all levels of employee education. These findings are consistent with the research by (Dirks & Ferrin, 2002), which highlights the importance of organizational trust in enhancing employee outcomes, including retention, regardless of formal educational background.

With 54% of respondents having worked for 2-5 years, these results show that organizational trust plays a crucial role in retaining employees during the early to mid-stages of their careers. (Vanhala et al., 2016), in their longitudinal study, affirm that developing organizational trust during the early years of employees' careers has a long-term impact on retention and organizational commitment.

From a practical implication perspective, these findings emphasize the importance of management strategies focused on building and maintaining organizational trust as a tool for enhancing employee retention. Furthermore, companies need to conduct regular assessments of organizational trust levels and use the data to adjust their

retention strategies. By understanding the factors that influence trust in various employee segments, management can design more targeted and effective interventions to improve employee retention.

The Relationship Between Digital Talent and Employee Retention Mediated by Employee Engagement

Digital talent has been shown to significantly contribute to employee retention through the mediation of employee engagement in the manufacturing industry context. Employees with strong digital skills tend to be more engaged in their work, which in turn increases their desire to stay with the organization. Digital capabilities not only enhance efficiency and productivity but also open opportunities for innovation and personal development, driving higher levels of engagement. Employees who feel that their digital skills are valued and optimally utilized by the organization tend to be more emotionally and professionally committed, thereby increasing their loyalty and retention.

The findings of this study are consistent with several previous studies. (Soto-Acosta et al., 2018) found that the development of digital talent has a positive impact on employee engagement, which ultimately contributes to increased employee retention in manufacturing companies adopting Industry 4.0 technologies. They emphasize that employees who feel competent in using digital technologies tend to be more involved in the innovation and decision-making processes, which strengthens their attachment to the organization. Similarly, (Colbert et al., 2016), in their study on the digital workforce, assert that strong digital skills enhance employees' ability to contribute significantly to organizational goals, which in turn increases their engagement and commitment. They also found that organizations that support the development of digital talent tend to have higher employee retention rates, especially among Millennials and Gen Z. Furthermore, a longitudinal study by (Deloitte, 2019) confirms that companies investing in the development of their employees' digital talent experience significant increases in employee engagement and retention. They highlight that employees who feel their organization supports their digital growth are more satisfied with their jobs and have a lower desire to leave the company.

From a practical implication perspective, these findings emphasize the importance of integrated talent management strategies that link digital skill development with increased employee engagement and retention. By implementing these strategies, companies can create a synergy between digital talent development, enhanced employee engagement, and improved employee retention, thereby positioning the organization for success in the competitive digital era.

The Relationship Between Digital Talent and Employee Retention Mediated by Organizational Trust

Digital talent has been shown to significantly contribute to employee retention through the mediation of organizational trust in the manufacturing industry context. Employees with strong digital skills tend to have higher levels of trust in their organization, which in turn increases their desire to stay with the company. Digital capabilities not only enhance individual competence but also reflect the organization's commitment to innovation and adaptation in the digital era, thereby building employees' trust in the company's vision and strategy.

The findings of this study are consistent with several previous studies. (Vanhala & Dietz, 2019) found that a company's investment in developing employees' digital skills positively correlates with increased organizational trust, which ultimately contributes to higher employee retention. (Soto-Acosta et al., 2018) assert that companies actively supporting the development of their employees' digital talent are seen as trustworthy and forward-looking organizations, enhancing employee loyalty. A study by (Khatri et al., 2019) confirms that employees with strong digital skills tend to have higher levels of organizational trust, especially when they feel that their skills are valued and optimally utilized.

From a practical implication perspective, these findings emphasize the importance of talent management strategies that link digital skill development with increased organizational trust and employee retention. Practical recommendations include implementing transparent and inclusive digital talent development programs, creating internal communication systems that leverage digital platforms to enhance transparency, adopting supportive leadership styles that demonstrate digital competence, and designing policies and practices that show the organization's commitment to technological advancement and employee well-being in the digital era. By implementing these strategies, companies can build strong trust between employees and the organization, create a

work environment that supports digital innovation, and ultimately increase the retention of key talent in the face of ongoing industrial transformation.

CONCLUSION, LIMITATION AND FUTURE RESEARCH

This study examines the impact of digital talent on employee retention, mediated by organizational trust and employee engagement in manufacturing companies. The analysis results show that digital talent has a positive and significant effect on employee retention, both directly and through the mediation of organizational trust and employee engagement. Employees with strong digital skills tend to have higher levels of trust in the organization and greater job engagement, which in turn increases their desire to stay with the company. Organizational trust is proven to play an important role in mediating the relationship between digital talent and employee retention, reflecting that investment in developing digital competencies not only enhances technical skills but also builds employee trust in the organization's commitment to facing the digital era. Meanwhile, employee engagement is also proven to be a significant mediator, indicating that employees with strong digital skills tend to be more engaged in their work and feel more valuable to the organization. These findings have important implications for the manufacturing industry facing digital transformation. Companies need to design comprehensive strategies that integrate digital talent development, enhance organizational trust, and increase employee engagement in efforts to improve employee retention. This includes implementing inclusive digital skill development programs, creating a work environment that encourages digital innovation and experimentation, and building an organizational culture that is transparent and supports employee growth in the Industry 4.0 era. Thus, manufacturing companies can enhance their competitiveness through effective digital talent retention, positioning themselves for success in meeting the challenges of sustainable industrial transformation.

ACKNOWLEDGMENT

Thank you to Universitas Pelita Bangsa for providing the opportunity to participate in regular fundamental grants and my gratitude also goes to the Directorate of Research, Technology, and Community Service, Directorate General of Higher Education, Research, and Technology of the Ministry of Education, Culture, Research, and Technology with contract number 054/SP2H/RT-MONO/LL4/2024; 006/7/KP.H/UPB/2024 for providing funding for this research activity, as well as respondents and human resources practitioners who have provided input related to employee retention in the manufacturing sector in West Java.

REFERENCES

- [1] Agarwal, R., & Helfat, C. E. (2009). Strategic Renewal of Organizations. *Organization Science*, 20(2), 281–293. <https://doi.org/10.1287/orsc.1090.0423>
- [2] Alias, N. E., Noor, N., & Hassan, R. (2014). Examining the mediating effect of employee engagement on the relationship between talent management practices and employee retention in the Information and Technology (IT) organizations in Malaysia. *Journal of Human Resources Management and Labor Studies*, 2(2), 227–242.
- [3] Ardito, L., Petruzzelli, A. M., Panniello, U., & Garavelli, A. C. (2019). Towards Industry 4.0. *Business Process Management Journal*, 25(2), 323–346. <https://doi.org/10.1108/BPMJ-04-2017-0088>
- [4] Bailey, C., Madden, A., Alfes, K., & Fletcher, L. (2017). The meaning, antecedents and outcomes of employee engagement: A narrative synthesis. *International Journal of Management Reviews*, 19(1), 31–53.
- [5] Coetzee, M., & Stoltz, E. (2015). Employees' satisfaction with retention factors: Exploring the role of career adaptability. *Journal of Vocational Behavior*, 89, 83–91. <https://doi.org/10.1016/j.jvb.2015.04.012>
- [6] Colbert, A., Yee, N., & George, G. (2016). The Digital Workforce and the Workplace of the Future. *Academy of Management Journal*, 59(3), 731–739. <https://doi.org/10.5465/amj.2016.4003>
- [7] Cooke, F. L., Xu, J., & Bian, H. (2019). The prospect of decent work, decent industrial relations and decent social relations in China: towards a multi-level and multi-disciplinary approach. *The International Journal of Human Resource Management*, 30(1), 122–155. <https://doi.org/10.1080/09585192.2018.1521461>
- [8] Deloitte. (2019). *Leading the social enterprise: Reinvent with a human focus*. Deloitte Global Human Capital Trends.
- [9] Dirks, K. T., & Ferrin, D. L. (2002). Trust in leadership: meta-analytic findings and implications for research

- and practice. *Journal of Applied Psychology*, 87(4), 611–628.
- [10] Ertürk, A., & Vurgun, L. (2015). Retention of IT professionals: Examining the influence of empowerment, social exchange, and trust. *Journal of Business Research*, 68(1), 34–46. <https://doi.org/https://doi.org/10.1016/j.jbusres.2014.05.010>
- [11] Frank, A. G., Dalenogare, L. S., & Ayala, N. F. (2019). Industry 4.0 technologies: Implementation patterns in manufacturing companies. *International Journal of Production Economics*, 210, 15–26. <https://doi.org/https://doi.org/10.1016/j.ijpe.2019.01.004>
- [12] Frey, C. B., & Osborne, M. A. (2017). The future of employment: How susceptible are jobs to computerisation? *Technological Forecasting and Social Change*, 114, 254–280. <https://doi.org/https://doi.org/10.1016/j.techfore.2016.08.019>
- [13] Hair, J. F., Anderson, R. E., Babin, B. J., & Black, W. C. (2010). *Multivariate Data Analysis Seventh Edition*. Pearson Prentice Hall.
- [14] Hancock, J. I., Allen, D. G., Bosco, F. A., McDaniel, K. R., & Pierce, C. A. (2013). Meta-Analytic Review of Employee Turnover as a Predictor of Firm Performance. *Journal of Management*, 39(3), 573–603. <https://doi.org/10.1177/0149206311424943>
- [15] Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2016). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology*, 87(2), 268–279.
- [16] Kache, F., & Seuring, S. (2017). Challenges and opportunities of digital information at the intersection of Big Data Analytics and supply chain management. *International Journal of Operations & Production Management*, 37(1), 10–36. <https://doi.org/10.1108/IJOPM-02-2015-0078>
- [17] Kagermann, H. (2015). *Change Through Digitization—Value Creation in the Age of Industry 4.0 BT - Management of Permanent Change* (H. Albach, H. Meffert, A. Pinkwart, & R. Reichwald (eds.); pp. 23–45). Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-05014-6_2
- [18] Kane, G. C., Phillips, A. N., Copulsky, J., & Andrus, G. (2019). How digital leadership is (n't) different. *MIT Sloan Management Review*, 60(3), 34–39.
- [19] Khatri, N., Gupta, V., & Varma, A. (2019). The Relationship Between HR Capabilities and Quality of Patient Care: The Mediating Role of Proactive Work Behaviors. *Human Resource Management*, 56(4), 673–691. <https://doi.org/https://doi.org/10.1002/hrm.21794>
- [20] KIEL, D., MÜLLER, J. M., ARNOLD, C., & VOIGT, K.-I. (2017). SUSTAINABLE INDUSTRIAL VALUE CREATION: BENEFITS AND CHALLENGES OF INDUSTRY 4.0. *International Journal of Innovation Management*, 21(08), 1740015. <https://doi.org/10.1142/S1363919617400151>
- [21] Kossek, E. E., Rosokha, L. M., & Leana, C. (2020). Work Schedule Patching in Health Care: Exploring Implementation Approaches. *Work and Occupations*, 47(2), 228–261. <https://doi.org/10.1177/0730888419841101>
- [22] Lee, M. C. C., Idris, M. A., & Tuckey, M. (2018). Supervisory coaching and performance feedback as mediators of the relationships between leadership styles, work engagement, and turnover intention. *Human Resource Development International*, 22(3), 257–282. <https://doi.org/10.1080/13678868.2018.1530170>
- [23] Mahmood, A., Akhtar, M. N., Talat, U., Shuai, C., & Hyatt, J. C. (2019). Specific HR practices and employee commitment: the mediating role of job satisfaction. *Employee Relations: The International Journal*, 41(3), 420–435.
- [24] Martins, L. B., Zerbini, T., & Medina, F. J. (2019). Impact of online training on behavioral transfer and job performance in a large organization. *Revista de Psicología Del Trabajo y de Las Organizaciones*, 35(1), 27–37.
- [25] Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review*, 20(3), 709–734.
- [26] Ng, T. W. H., & Feldman, D. C. (2015). Ethical leadership: meta-analytic evidence of criterion-related and incremental validity. *Journal of Applied Psychology*, 100(3), 948–965.
- [27] Pirson, M., & Malhotra, D. (2011). Foundations of organizational trust: What matters to different stakeholders? *Organization Science*, 22(4), 1087–1104.
- [28] Rodrik, D. (2016). Premature deindustrialization. *Journal of Economic Growth*, 21(1), 1–33. <https://doi.org/10.1007/s10887-015-9122-3>

- [29] Rojko, A. (2017). Industry 4.0 Concept: Background and Overview. *International Journal of Interactive Mobile Technologies (IJIM)*, 11(5), 77. <https://doi.org/10.3991/ijim.v11i5.7072>
- [30] Saks, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*, 21(7), 600–619. <https://doi.org/10.1108/02683940610690169>
- [31] Saks, A. M., & Gruman, J. A. (2014). What Do We Really Know About Employee Engagement? *Human Resource Development Quarterly*, 25(2), 155–182. <https://doi.org/10.1002/hrdq.21187>
- [32] Schaufeli, W. B. (2013). What is engagement. *Employee Engagement in Theory and Practice*, 15, 321.
- [33] Schaufeli, W. B., Shimazu, A., Hakanen, J., Salanova, M., & De Witte, H. (2019). An Ultra-Short Measure for Work Engagement. *European Journal of Psychological Assessment*, 34(6), 369–380. <https://doi.org/10.1027/1015-5759/a000430>
- [34] Schneider, J., Gaul, A. J., Neumann, C., Hogräfer, J., Wellßow, W., Schwan, M., & Schnettler, A. (2018). Asset management techniques. *International Journal of Electrical Power & Energy Systems*, 28(9), 610–618. <https://doi.org/https://doi.org/10.1016/j.ijepes.2006.03.007>
- [35] Schneider, P. (2018). Managerial challenges of Industry 4.0: an empirically backed research agenda for a nascent field. *Review of Managerial Science*, 12(3), 803–848. <https://doi.org/10.1007/s11846-018-0283-2>
- [36] Schnellbacher, B., & Heidenreich, S. (2020). The role of individual ambidexterity for organizational adaptability: A systematic review. *Technological Forecasting and Social Change*, 157(5), 1535–1561. <https://doi.org/10.1007/s10961-020-09781-x>
- [37] Schwarzmüller, T., Brosi, P., Duman, D., & Welp, I. M. (2018). How Does the Digital Transformation Affect Organizations? Key Themes of Change in Work Design and Leadership. *Management Review*, 29(2), 114–138.
- [38] Seethamraju, R. (2018). Adoption of Software as a Service (SaaS) Enterprise Resource Planning (ERP) Systems in Small and Medium Sized Enterprises (SMEs). *Information Systems Frontiers*, 20(1), 1–18. <https://doi.org/10.1007/s10796-014-9506-5>
- [39] Sony, M., & Naik, S. (2019). Key ingredients for evaluating Industry 4.0 readiness for organizations: a literature review. *Benchmarking: An International Journal*, 27(7), 2213–2232. <https://doi.org/10.1108/BIJ-09-2018-0284>
- [40] Sony, M., & Naik, S. (2020). Critical factors for the successful implementation of Industry 4.0: a review and future research direction. *Production Planning & Control*, 31(10), 799–815. <https://doi.org/10.1080/09537287.2019.1691278>
- [41] Soto-Acosta, P., Popa, S., & Martinez-Conesa, I. (2018). Information technology, knowledge management and environmental dynamism as drivers of innovation ambidexterity: a study in SMEs. *Journal of Knowledge Management*, 22(4), 824–849. <https://doi.org/10.1108/JKM-10-2017-0448>
- [42] Sousa, M. J., & Rocha, Á. (2019). Digital learning: Developing skills for digital transformation of organizations. *Future Generation Computer Systems*, 91, 327–334.
- [43] Vanhala, M., & Ahteela, R. (2011). The effect of HRM practices on impersonal organizational trust. *Management Research Review*, 34(8), 869–888. <https://doi.org/10.1108/01409171111152493>
- [44] Vanhala, M., & Dietz, G. (2019). How trust in one's employer moderates the relationship between HRM and engagement propensity. *The International Journal of Human Resource Management*, 30(17), 2418–2443. <https://doi.org/10.1080/00208825.2019.1565092>
- [45] Vanhala, M., Heilmann, P., & Salminen, H. (2016). Organizational Trust Dimensions as Antecedents of Organizational Commitment. *Knowledge and Process Management*, 23(1), 46–61. <https://doi.org/https://doi.org/10.1002/kpm.1497>