TRANSPUBLIKA
Precise. Resilience. Felicitous.

Jurnal Ekonomi Kreatif dan Manajemen Bisnis Digital
https://transpublika.co.id/ojs/index.php/JEKOMBITAL
Online ISSN 2961-8428

https://doi.org/10.55047/jekombital.v4i3.1172

Original Article

The Influence of Human-AI Collaboration and Digital Competence on Generation Z Job Satisfaction

Umban Adi Jaya[1*], Indarta Priyana[2], Fauzan Manafi Albar[3], Amna Mawardi[4], Ade Nurhayati Kusumadewi[5]

[1]Universitas Sains Indonesia, Bekasi, Indonesia
[2]Universitas Informatika dan Bisnis Indonesia, Bandung, Indonesia
[3]Universitas Raharja, Tangerang, Indonesia
[4,5]Universitas Islam DR KHEZ Muttaqien, Purwakarta, Indonesia
Email: [1)] umban.adi@lecturer.sains.ac.id

Received : 08 April - 2026
Accepted : 24 May - 2026
Published online : 26 May - 2026

Abstract

The proliferation of digital technology and the preponderance of Generation Z within the occupational sphere are compelling organisations to acclimatise by assimilating artificial intelligence (AI) and augmenting digital proficiency. This inquiry aims to scrutinise the sway of Human-AI Collaboration and Digital Competence upon Job Satisfaction amongst Generation Z cohorts. The investigative paradigm employed is a quantitative disposition utilising survey instrumentation encompassing 100 Generation Z respondents handpicked via purposive sampling. Empirical data were garnered through a questionnaire harnessing a five-tiered Likert gradation and subsequently interrogated via multiple linear regression through SPSS. The culminating findings corroborate that Human-AI Collaboration exerts an affirmative and consequential bearing upon Job Satisfaction, yielding a t-value of 7.156, whilst Digital Competence similarly manifests an affirmative and substantial repercussion with a t-value of 6.403. Concurrently, both exogenous variables wielded a momentous bearing upon Job Satisfaction, producing an F-value of 269.701 at a significance threshold of < 0.001. The coefficient of determination of 0.904 substantiates that 90.4% of the fluctuation in Job Satisfaction is explicable through Human-AI Collaboration and Digital Competence in tandem. These findings suggest that collaboration between humans and AI technology, coupled with high digital competence, can enhance Generation Z's job satisfaction. Hence, organisations need to optimise the use of AI technology and enhance employees' digital competence to create a more productive and satisfying work environment.

Keywords: Digital Competence, Generation Z, Human-AI Collaboration, Job Satisfaction.

1. Introduction

Prevailing global demographic trajectories intimate that the contemporary occupational landscape is progressively commandeered by younger generational cohorts, most conspicuously Generation Z and millennials. Empirical data emanating from the Mercer Research Centre (2024) substantiates that Generation Z, those begotten after 1996, constitutes approximately 25% of the aggregate global populace, whilst millennials account for 23%. Concomitantly, prognostications pertaining to labour force apportionment in the United States postulate that by 2031, Generation Z shall encapsulate roughly 31% of the totality of the workforce, a consequential escalation from a mere 15% recorded in 2022. Globally, Generation Z is estimated to comprise around 32% of the world's population and is set to become one of the largest generational groups entering the workforce (Ali et al., 2024;

Anshori & Akbar, 2025). This makes Generation Z a key group that will shape the dynamics of organisations in the future.

Rapid technological development, particularly through artificial intelligence (AI), has transformed modern workplaces by reshaping how tasks are performed and how humans interact with technology (Malik et al., 2022; Perera, 2025). In the context of Industry 5.0. AI is increasingly positioned as a collaborative partner rather than a replacement for human labor, emphasizing human-centric work environments (Azzahra & Ridzki, 2025). This paradigm highlights that technology is not only used to enhance efficiency and productivity, but also to support human well-being in the workplace through human-centricity, resilience, and sustainability (Hendri, 2025).

In this context, the concept of collaboration between humans and artificial intelligence, or Human-AI Collaboration, is becoming increasingly relevant in the modern workplace (Atoyebi & Sopuru, 2025). This collaboration enables humans to leverage the analytical capabilities and automation offered by AI technology to improve work effectiveness, whilst humans continue to play a role in creativity, decision-making, and contextual understanding. This integration is believed to create more efficient work processes whilst improving the quality of work outcomes (Akinnagbe, 2024).

Supplementary to collaboration with AI technology, another cardinal determinant governing an individual's adeptness in traversing the vicissitudes of digital transformation is digital competence. Digital competence alludes to an individual's propensity to harness digital technology efficaciously in buttressing occupational productivity, encompassing proficiencies in the stewardship of data, the utilisation of sophisticated software, and the apprehension of nascent technological advancements that perpetually redefine the contemporary vocational milieu (Pham & Vu, 2022; Wulandari et al., 2025). Digital competence is not limited to technical skills; it also encompasses the ability to manage information strategically so as to provide added value to the organisation. In the era of digital transformation, this competence has become one of the key skills required by the workforce to remain relevant and competitive.

The precipitous advancement of information and communication technology has concomitantly engendered a heightened cognisance of the indispensability of digital competence permeating a multitude of vocational and institutional sectors. Numerous studies and policy documents emphasise that digital skills are not only required by the workforce in the technology sector, but have also become essential skills for a wide range of professions in the digital age (Manalu, 2025a). Consequently, organisations must ensure that their human resources possess adequate digital skills to adapt to ever-evolving technological changes.

Human resources represent a strategic asset for organisations in achieving their objectives. The quality and competencies of employees have a direct impact on organisational performance effectiveness (Idris et al., 2020). Therefore, organisations are required to create a work environment that not only enhances performance but also supports employee job satisfaction (K. M. H. Putri & Werdini, 2026; M. A. Putri, 2026). Job satisfaction refers to an individual’s attitude toward their work, reflecting the degree of alignment between expectations and the rewards or compensation received (Hanura & Suratman, 2025). High levels of job satisfaction are associated with increased motivation, productivity, and employee loyalty toward the organisation.

Generation Z, as a generation that has grown up in the digital age, possesses characteristics that differ from previous generations. They are known as digital natives who possess a high ability to adapt to technology, are more open to innovation, and have a creative and flexible mindset (Prasetyo et al., 2024). Furthermore, Generation Z manifests a propensity to gravitate toward vocational pursuits that proffer auspicious avenues for professional

advancement, embody substantive purposefulness, and furnish an equitable equilibrium between occupational obligations and personal life (Lodo et al., 2025). These distinguishing proclivities render Generation Z considerably more amenable and attuned to technology-predicated occupational milieus and digitally-mediated collaborative endeavours.

From the Resource-Based View (RBV) perspective, employees' capabilities and skills are strategic resources that can generate organisational competitive advantage (Umamy et al., 2025). In this context, digital competence and the ability to collaborate with artificial intelligence (AI) are critical resources that contribute to both individual and organisational performance. Thus, examining the influence of Human-AI Collaboration and digital competence on job satisfaction, particularly among Generation Z, is vital (Manalu, 2025a).

However, although previous studies have examined AI and digital competence in relation to organisational performance, limited research has specifically investigated their impact on employee job satisfaction, particularly among Generation Z. This indicates a clear research gap regarding how Human-AI Collaboration and digital competence jointly influence job satisfaction in a younger, digitally native workforce. Accordingly, this study aims to analyse the effect of Human-AI Collaboration and Digital Competence on Job Satisfaction among Generation Z employees, contributing to a more context-specific understanding of workplace dynamics in the era of digital transformation.

However, empirical findings regarding the effects of Human-AI Collaboration and digital competence on job-related outcomes remain inconsistent. Some studies suggest that AI integration enhances efficiency and job satisfaction by reducing workload and supporting decision-making processes (Akinnagbe, 2024; Atoyebi & Sopuru, 2025). Conversely, other studies report that AI adoption may reduce employee autonomy and increase technostress, which can negatively affect job satisfaction (Malik et al., 2022). Similarly, digital competence has been found to improve work adaptability, yet it does not always directly lead to higher job satisfaction without supportive organizational conditions (Wulandari et al., 2025). These inconsistencies indicate that the relationship between these variables is not straightforward and requires further investigation.

Moreover, most previous studies have examined these relationships in general employee populations, with limited focus on Generation Z. Given their unique digital nativity and expectations toward technology-driven workplaces, the effects of Human-AI Collaboration and digital competence may manifest differently in this generational cohort.

2. Literature Review

2.1. Human-AI Collaboration and Job Satisfaction

The rapid proliferation of artificial intelligence (AI) has fundamentally reconfigured contemporary work practices by embedding technology across a wide spectrum of organisational functions. Within the broader paradigm of Industry 5.0, AI is no longer construed as a supplanter of the human workforce, but rather as a synergistic partner capable of augmenting efficiency, bolstering productivity, and refining the calibre of decision-making. Human-AI Collaboration, in this regard, denotes the cooperative interplay between human agents and AI systems in the purposeful and effective accomplishment of work-related tasks. This collaboration enables AI to perform automated and analytical tasks, whilst humans continue to play a role in creativity, empathy, and contextual decision-making.

Research by Bolli and Pusterla (2022) and Hemmer et al. (2023) explains that the integration of AI into the workplace can improve work efficiency and support employees' decision-making processes. In addition, research by Maulana and Yunus (2025) found that

the use of generative AI in the workplace has a positive correlation with job satisfaction, as it helps to complete tasks more quickly and flexibly. Research by Zahs and Schmodde (2025) also shows that collaborative designs involving both humans and AI, which preserve the creative role of humans, are capable of enhancing user satisfaction at work.

For Generation Z, who have grown up as digital natives, the presence of AI in the workplace tends to be viewed as a supportive tool that helps make work more flexible, innovative and efficient. Consequently, the better the collaboration between humans and AI in the workplace, the higher the level of job satisfaction felt by Generation Z employees. Based on the above, the following hypothesis is formulated:

H1: Human-AI collaboration has a positive and significant effect on job satisfaction among Generation Z.

2.2. Digital Competence and Job Satisfaction

The notion of digital competence encapsulates an individual's capacity to harness digital technology adeptly, spanning the ability to curate and manage information, engage in digital communication, navigate technology-based predicaments, and acclimatise to the ever-evolving digital landscape. In the contemporary epoch of digital transformation, digital competence has emerged as an indispensable proficiency, given that virtually all organisational undertakings are now underpinned by and contingent upon digital technology.

Several studies have shown that digital competence has a positive correlation with job satisfaction. Research by Manalu (2025b) found that digital competence has a significant impact on job satisfaction, as individuals with high digital competence tend to adapt more easily to technological changes and the demands of their work. The study by Manalu (2025a) also shows that digital competence can improve comfort and work efficiency, thereby having a positive impact on employee job satisfaction. Furthermore, research Estrada and Sánchez-Bayón (2025) found a positive correlation between digital competence and job happiness in the digital economy.

For Generation Z, digital competence assumes particular salience, given that this cohort is intrinsically intertwined with the pervasive use of digital technology in their quotidian lives. Individuals endowed with robust digital competence tend to exhibit greater self-assurance in discharging their professional responsibilities, acclimatise more readily to technology-driven work systems, and demonstrate a heightened capacity to attenuate work-related stress precipitated by digital transformation. It therefore follows that the higher an individual's digital competence, the more pronounced their perceived job satisfaction. Predicated upon this reasoning, the research hypothesis is formulated as follows:

H2: Digital competence has a positive and significant effect on job satisfaction among Generation Z.

3. Methods

3.1. Research Design

This study adopts a quantitative approach, employing a survey method to examine the bearing of Human-AI Collaboration and Digital Competence on Job Satisfaction among Generation Z. The quantitative approach was deemed apposite, as it facilitates the objective mensuration of inter-variable relationships through rigorous statistical analysis. The investigation was conducted within the Jababeka industrial estate, Bekasi Regency, with the research population encompassing Generation Z individuals born between 1997 and 2012 who are presently employed and routinely utilise digital technology in the execution of their

professional duties. The requisite sample size was ascertained through the application of the Slovin formula, with a margin of error set at 10%, culminating in a final sample of 100 respondents. The sampling technique employed purposive sampling, with respondents meeting the criteria of belonging to Generation Z, being in active employment, and using digital technology in their work environment.

3.2. Operationalisation of Variables

Data procurement was carried out by means of an online questionnaire employing a five-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree. The Human-AI Collaboration variable was operationalised through a constellation of indicators encompassing the efficacy of AI utilisation in the workplace, the fluency of interaction with AI systems, AI-mediated support in decision-making, the abatement of routine task burdens, and the tangible benefits of AI in augmenting overall work productivity. The Digital Competence variable was measured through the ability to use digital applications, manage information and data, engage in digital communication, solve technology-based problems, and adapt to technological changes. Meanwhile, the Job Satisfaction variable was measured through satisfaction with the working environment, workload, career development opportunities, work flexibility, and overall job satisfaction.

3.3. Validity and Reliability of the Instrument

The research instruments were developed through judicious adaptation from antecedent studies pertinent to the context of digital transformation and technology-driven work environments. To safeguard the integrity and rigour of the instruments, validity assessments were undertaken employing Pearson's Product-Moment correlation, whereby an item is adjudged valid when the r value surpasses the r table value at a significance threshold of 0.05. Complementing this, a reliability examination was conducted utilising the Cronbach's Alpha coefficient, with the stipulation that an alpha value exceeding 0.70 is indicative of commendable internal consistency, thereby rendering the instrument apposite for deployment in empirical research.

3.4. Data Analysis Techniques

Data analysis was executed utilising SPSS version 31. The analytical procedure encompassed a sequence of methodical stages, including validity and reliability assessments, classical assumption diagnostics, comprising tests for normality, multicollinearity, and heteroscedasticity, and ultimately, multiple linear regression analysis to ascertain the magnitude and directionality of the influence exerted by Human-AI Collaboration and Digital Competence on Job Satisfaction among Generation Z.

4. Results and Discussion

4.1. Research Results

The respondents in this study comprised 100 individuals drawn from Generation Z. Predicated upon the results of the administered questionnaire, the demographic characteristics of the respondents were delineated across several salient dimensions, encompassing gender, age, and educational attainment. The preponderance of respondents fell within the Generation Z age bracket and were found to actively and habitually engage with digital technology in their quotidian activities. This substantiates the pertinence of the selected respondents to the overarching research objective, which is centrally concerned with

elucidating the interrelationship between Human-AI Collaboration, Digital Competence, and Job Satisfaction among Generation Z.

4.1.1. Validity Test

Validity corroboration was undertaken to ascertain whether each declarative statement enshrined within the questionnaire possessed the requisite aptitude to accurately mensyrate the designated research variable. Validity examination was effectuated through the deployment of Pearson's product-moment correlation coefficient via the SPSS programme. A statement was adjudicated as tenable and meritorious provided the r-value surpassed the r-table value at a significance threshold of 0.05. The consolidated outcomes of the validity assessment for all three variables (Human-AI Collaboration, Digital Competence, and Job Satisfaction) are systematically presented in Table 1 below.

Table 1. Validity Test for the Variables Human-AI Collaboration, Digital Competence and Job Satisfaction

Variables	Question Item	R value	R table	Description
Human-AI Collaboration	X1.1	0.641	0.1966	Valid
	X1.2	0.436		Valid
	X1.3	0.607		Valid
	X1.4	0.540		Valid
	X1.5	0.610		Valid
	X1.6	0.591		Valid
	X1.7	0.471		Valid
	X1.8	0.627		Valid
	X1.9	0.522		Valid
	X1.10	0.624		Valid
	X1.11	0.713		Valid
	X1.12	0.471		Valid
	X1.13	0.487		Valid
	X1.14	0.499		Valid
	X1.15	0.501		Valid
Digital Competence	X2.1	0.675	0.1966	Valid
	X2.2	0.589		Valid
	X2.3	0.400		Valid
	X2.4	0.423		Valid
	X2.5	0.641		Valid
	X2.6	0.645		Valid
	X2.7	0.492		Valid
	X2.8	0.575		Valid
	X2.9	0.497		Valid
	X2.10	0.595		Valid
	X2.11	0.448		Valid
	X2.12	0.477		Valid
	X2.13	0.595		Valid
	X2.14	0.478		Valid
	X2.15	0.481		Valid
Job Satisfaction	Y.1	0.652	0.1966	Valid
	Y.2	0.598		Valid
	Y.3	0.595		Valid
	Y.4	0.694		Valid
	Y.5	0.596		Valid
	Y.6	0.596		Valid
	Y.7	0.458		Valid
	Y.8	0.479		Valid
	Y.9	0.549		Valid
	Y.10	0.527		Valid

Source: Data analysed by the researcher using SPSS 31, 2026

Predicated upon the corroborative outcomes delineated in Table 1, all constituent items encompassing the Human-AI Collaboration, Digital Competence, and Job Satisfaction variables yield r-value that surpass their corresponding r-table values; it may therefore be unequivocally concluded that all items enshrined within the questionnaire are validated and aptly befitting for deployment as a research instrument.

4.1.2. Reliability Test

A reliability assessment was undertaken to ascertain the consistency and dependability of the research instrument in mensyrating the variables under scrutiny. This examination harnessed the Cronbach's Alpha methodology with the auxiliary facilitation of SPSS software. A variable is deemed to possess requisite dependability provided its Cronbach's Alpha coefficient surpasses the stipulated threshold of 0.70. The ensuing outcomes of the reliability examination for all pertinent variables are systematically tabulated and presented in Table 2 below.

Table 2. Reliability Test Result

Variable	Cronbach's Alpha	Critical Limit	Description
Human-AI Collaboration	0.886	0.70	Reliable
Digital Competence	0.897	0.70	Reliable
Job Satisfaction	0.778	0.70	Reliable

Source: Data analysed by the researcher using SPSS 31, 2026

The reliability corroboration outcomes delineated in Table 2 substantiate that all variables encompassed within this investigation yield Cronbach's Alpha coefficients surpassing the 0.70 threshold. It may therefore be unequivocally concluded that the research instrument possesses a commendable degree of dependability and is aptly befitting for deployment in subsequent analytical scrutiny.

4.1.3. Normality test

A normality test was conducted to determine whether the data embedded within the regression model conform to a normal distribution. In this study, the Kolmogorov-Smirnov test was enlisted as the diagnostic instrument to evaluate the distributional properties of the data. The data were considered to satisfy the normality assumption provided that the resultant significance value transcended the prescribed threshold of 0.05. The comprehensive outcomes of the normality examination are systematically rendered and presented in Table 3 below.

Table 3. Normality Test Result

One-Sample Kolmogorov-Smirnov Test

			Unstandardized Residual
N			100
Normal Parameters[a,b]	Mean		0.0000000
	Std. Deviation		1.89164820
Most Extreme Differences	Absolute		0.080
	Positive		0.053
	Negative		-0.080
Test Statistic			0.080
Asymp. Sig. (2-tailed)[c]			0.149
Monte Carlo Sig. (2-tailed)[d]	Sig.		0.118
	99% Confidence Interval	Lower Bound	0.110
		Upper Bound	0.126

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 2000000.

Source: Data analysed by the researcher using SPSS 31, 2026

Looking at the corroborative outcomes delineated in Table 3, a significance value of 0.149 was obtained, which demonstrably surpasses the stipulated threshold of 0.05. It may therefore be unequivocally concluded that the empirical data encompassed within this investigation conform to a normal distributional pattern and satisfactorily fulfil the prerequisite assumption of normality inherent within regression analysis.

4.1.4. Multicollinearity Test

A multicollinearity examination was done to ascertain whether a substantive intercorrelation existed amongst the exogenous variables enshrined within the regression model. This assessment harnessed the Tolerance and Variance Inflation Factor (VIF) magnitudes as diagnostic instruments. The regression model was adjudicated as being emancipated from multicollinearity provided the Tolerance value surpassed 0.10 whilst the VIF coefficient remained beneath the stipulated threshold of 10. The resultant outcomes of the multicollinearity diagnostic are delineated and systematically presented in Table 4 below.

Table 4. Multicollinearity Test Result

Variables	Tolerance	VIF	Criteria
Human-AI Collaboration (X1)	0.132	8.578	No multicollinearity
Digital Competence (X2)	0.132	8.578	No multicollinearity

Source: Data analysed by the researcher using SPSS 31, 2025

The corroborative outcomes reveal that the Human-AI Collaboration variable yields a Tolerance magnitude of 0.132 and a VIF coefficient of 8.578, whilst the Digital Competence variable manifests a Tolerance magnitude of 0.133 and a VIF coefficient of 8.578. Given that all Tolerance values demonstrably surpass 0.10 and all VIF coefficients remain beneath the stipulated threshold of 10. it may be unequivocally concluded that no discernible vestiges of multicollinearity pervade the regression model. This substantiates that the exogenous variables encompassed within this investigation do not harbour excessively robust interrelationships amongst themselves, connoting that the regression model is aptly befitting for deployment in subsequent analytical scrutiny.

4.1.5. Heteroscedasticity Test

The heteroscedasticity examination aims to ascertain whether discernible heteroscedastic aberrations pervade the residuals of the regression model. The visual depiction of the residual dispersion pattern, as generated through the scatterplot approach, is correspondingly illustrated in Figure 1 below.

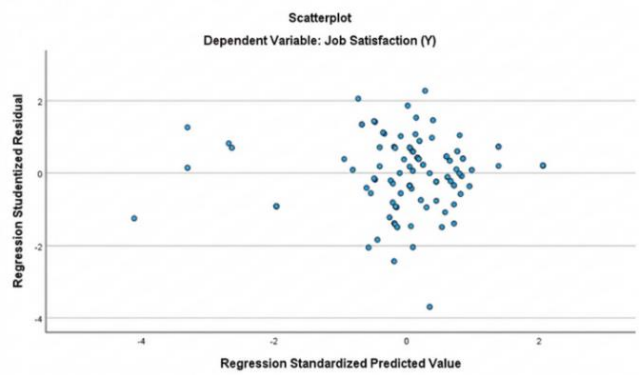

Figure 1. Scatter plot

Source: Data processed by the researcher using SPSS 31, 2026

Looking at the culminating outcomes of the scatterplot interrogation, it is discernible that the data points are stochastically disseminated and do not coalesce into any discernible or systematic configuration. This substantiates that the regression model is demonstrably emancipated from any heteroscedastic aberrations within its residual distribution. The corroborating outcomes of the Glejser diagnostic test are rendered and presented in Table 5 below.

Table 5. Results of the Glejser Test

Coefficients[a]

Model		(Unstandardized Coefficients)		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Constant	4.246	1.970		3.348	0.001
	Human-AI Collaboration	-0.028	0.044	-0.179	-0.651	0.617
	Digital Competence	0.376	0.044	-0.011	-0.040	0.978

a. Dependent Variable: ABSRES

Source: Data processed by the researcher using SPSS 31, 2026

Supplementary to the aforementioned, the culminating outcomes of the Glejser diagnostic corroboration divulge that the significance magnitude pertaining to the Human-AI Collaboration variable registers at 0.617, whilst the Digital Competence variable yields 0.978, both of which demonstrably transcend the stipulated threshold of 0.05. It may therefore be incontrovertibly ascertained that the exogenous variables harbour no consequential sway upon the absolute residual magnitudes, connoting that the regression model enshrined within this investigation is comprehensively exonerated from the encumbrance of heteroscedasticity.

4.1.6. Multiple Linear Regression Test

Multiple linear regression analysis was employed to quantify the extent to which the independent variables exert their influence upon the dependent variable. In the ambit of this study, Job Satisfaction serves as the dependent variable, whilst Human-AI Collaboration and Digital Competence collectively constitute the independent variables whose explanatory bearing on the outcome is subjected to empirical scrutiny. The consolidated outcomes of the multiple linear regression analysis are comprehensively delineated and systematically presented in Table 6 below.

Table 6. Multiple Linear Regression Test Result

Coefficients[a]

Model		(Unstandardized Coefficients)		Standardized Coefficients	t	Sig.	Collinearity Statistic	
		B	Std. Error	Beta			Tolerance	VIF
1	Constant	5.852	1.549		3.131	0.002		
	Human-AI Collaboration	0.221	0.016	0.345	3,156	0.002	0.132	7.5
	Digital Competence	0.376	0.070	0.590	5,403	<0.001	0.132	7.5

a. Dependent Variable: Job Saticfaction (Y)

Source: Data processed by the researcher using SPSS 31, 2026

Based on the analysis results, the multiple linear regression equation obtained is Y = 5.852 + 0.221 X1 + 0.376 X2. This equation indicates that Job Satisfaction is influenced by Human-AI Collaboration and Digital Competence. The constant value of 5.852 indicates the level of Job Satisfaction when both independent variables are set to zero. The regression coefficient of 0.221 for the Human-AI Collaboration variable indicates that a one-unit increase in this variable will increase Job Satisfaction by 0.221. Meanwhile, the coefficient of 0.376 for the Digital Competence variable indicates that a one-unit increase in digital competence will increase Job Satisfaction by 0.376. This suggests that Digital Competence has a greater influence than Human-AI Collaboration in enhancing Job Satisfaction.

4.1.7. Partial Model Validity Test (t-test)

The t-test was deployed to ascertain the discrete, partial effect of each independent variable upon the dependent variable. Hypothesis testing was correspondingly executed at a significance level of 0.05. The ensuing outcomes of the t-test, encapsulating the partial influence of each exogenous variable upon Job Satisfaction, are systematically tabulated and presented in Table 7 below.

Table 7. Results of the t-test

Variables	T-value		T table	Description
Human-AI Collaboration (X1)	7,156	>	1,985	Influential
Digital Competence (X2)	6,403	>	1,985	Influential

Source: Data processed by the researcher using SPSS 31, 2026

The corroborative outcomes reveal that the Human-AI Collaboration variable yields a t-value of 7.156, which demonstrably surpasses the stipulated critical t-value of 1.985; the inaugural hypothesis (H1) is therefore unequivocally substantiated. This intimates that Human-AI Collaboration exerts a consequential and discernible bearing upon Job Satisfaction. Concomitantly, the Digital Competence variable yields a t-value of 6.403, which likewise transcends the t-table value of 1.985, whereupon the subsequent hypothesis (H2) is correspondingly corroborated. It may therefore be incontrovertibly concluded that Digital Competence similarly exerts a momentous and tangible repercussion upon Job Satisfaction.

4.1.8. Simultaneous Model Goodness-of-Fit Test (F-Test)

An F-test corroboration was effectuated to ascertain whether the exogenous variables, in their collective totality, exert a consequential bearing upon the endogenous variable enshrined within the regression model. This diagnostic examination was executed at a stipulated significance threshold of 0.05. The culminating outcomes of the F-test, encapsulating the simultaneous and collective influence of Human-AI Collaboration and Digital Competence upon Job Satisfaction, are comprehensively delineated and systematically rendered in Table 8 below.

Table 8. Results of the F-test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1962.655	2	986.328	269.701	<,001[b]
	Residual	354.255	97	3.652		
	Total	2316.910	99			

a. Dependent Variable: Job Satisfaction (Y)
b. Predictors: (Constant), Digital Competence (X2), Human-AI Collaboration (X1)
Source: Data analysed by the researcher using SPSS 31, 2026

Predicated upon the corroborative outcomes, an F-value of 269.701 was obtained, which demonstrably surpasses the stipulated F-table value of 3.09, concomitantly yielding a p-value of < 0.001, which conspicuously falls beneath the threshold of 0.05. These culminating findings substantiate that the regression model deployed within this investigation attains statistical consequentiality. It may therefore be incontrovertibly concluded that the variables Human-AI Collaboration and Digital Competence, in their conjunctive capacity, exert a momentous and discernible bearing upon Job Satisfaction.

4.1.9. Coefficient of Determination

The coefficient of determination is harnessed to ascertain the magnitude to which the exogenous variables are capable of elucidating the endogenous variable enshrined within the investigative model. The pertinent outcomes are systematically rendered and presented in Table 9 below.

Table 9. Coefficient of Determination

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.920[a]	.887	.904	1.911

a. Predictors: (Constant), Digital Competence (X2), Human-AI Collaboration (X1)
b. Dependent Variable: Job Satisfaction (Y)

Source: Data processed by the researcher using SPSS 31, 2025

The coefficient of determination is harnessed to ascertain the magnitude to which the exogenous variables are capable of elucidating the endogenous variable enshrined within the investigative model. Predicated upon the analytical outcomes delineated in the Model Summary tabulation, an Adjusted R-Square magnitude of 0.904 was obtained. This substantiates that the variables Human-AI Collaboration and Digital Competence are competently capable of explicating 90.4% of the fluctuation pervading the Job Satisfaction variable. Concomitantly, the residual 9.6% is attributable to extraneous determinants residing beyond the purview of the variables scrutinised within the confines of this investigation.

4.2. Discussion

The research findings divulge that Human-AI Collaboration exerts a positive and significant impact on job satisfaction. These findings fortify the prevailing conceptualisation within the Industry 4.0 and 5.0 era, which repositions artificial intelligence as a synergistic collaborator for humans, rather than a supplanter of the workforce. Consonant with the findings of Malik et al. (2023) and Akinnagbe (2024), the assimilation of AI into professional work has demonstrated a discernible capacity to elevate efficiency, bolster productivity, and refine the calibre of employees' decision-making. Corroborating this trajectory, Perera (2024) further posits that the confluence of human and AI collaboration can amplify job satisfaction by alleviating the encumbrance of routine workloads and augmenting individuals' strategic agency within the organisational hierarchy.

In the context of Generation Z, these findings are particularly relevant given this generation’s adaptability to technology and familiarity with digital systems (Prasetyo et al., 2024). These findings are also supported by Hendri (2025), who states that the ability to collaborate with AI is a key competency for Generation Z employees in navigating the Industry 5.0 era, which is oriented towards human-centricity. Thus, the higher the level of human-AI collaboration in the workplace, the higher the level of job satisfaction experienced by employees.

However, the positive impact of human-AI collaboration on job satisfaction also needs to be viewed more critically. Whilst the use of AI can improve efficiency and reduce routine tasks, over-reliance on AI systems has the potential to reduce employees' autonomy and increase psychological pressure due to the demands of adapting to technology. This indicates that the successful implementation of AI in the workplace is determined not only by technological sophistication, but also by organisational readiness, training support, and a work design that remains human-centred. In the context of Generation Z, AI tends to be perceived more positively as this generation has a higher level of familiarity with digital technology compared to previous generations. However, without adequate organisational support, the use of AI can also lead to technostress and anxiety regarding job security.

Furthermore, the empirical outcomes of this investigation corroborate that Digital Competence exerts a statistically significant and affirmative influence upon Job Satisfaction. This finding is consonant with the scholarly contributions of Wulandari et al. (2025) and Manalu (2025), who postulate that digital competence constitutes an indispensable determinant in augmenting occupational satisfaction and performative efficacy amongst organisational personnel. Individuals endowed with a superior degree of digital competence demonstrate a conspicuously heightened propensity to acclimatise to technological vicissitudes, thereby ameliorating vocationally-induced psychological encumbrances and fortifying their epistemic self-efficacy in the proficient consummation of designated occupational obligations.

In addition, Pham and Vu (2022) emphasise that digitalisation within organisations demands individuals' ability to manage information and technology effectively to create added value. This indicates that digital competence is not merely about technical skills, but also strategic capabilities in utilising technology. In the context of this study, Generation Z members with high digital competence tend to experience a more positive work experience as they are able to optimally utilise technology to support their work.

These findings suggest that digital competence functions not only as a technical skill but also as a psychological resource that enhances employees' self-confidence and adaptability within a digital work environment. Individuals with high digital competence tend to view technological change as an opportunity rather than a threat, and are therefore better able to adapt to digital transformation in the workplace. However, the impact of digital competence on job satisfaction is also significantly influenced by the organisational context. In organisations with poor digital infrastructure or limited technological support, an individual's digital competence may not necessarily optimise job satisfaction. Consequently, organisations continue to play a vital role in creating a supportive digital work ecosystem.

Simultaneously, Human-AI Collaboration and Digital Competence exert a significant influence on Job Satisfaction, contributing 90.4%. This finding aligns with the Resource-Based View (RBV) perspective, which states that individual capabilities and skills are strategic resources capable of creating competitive advantage (Umamy et al., 2025). In this regard, the ability to collaborate with AI and digital competence become vital assets that not only enhance individual performance but also improve the quality of the work experience.

From the perspective of the Resource-Based View (RBV), digital competencies and the ability to collaborate with AI can be categorised as intangible resources that are difficult for other organisations to replicate. These capabilities not only contribute to increased work productivity but also to the organisation's ability to adapt to technological change on an ongoing basis. Consequently, an organisation's investment in developing digital competencies and implementing human-centred AI can serve as a long-term strategy to enhance both employee satisfaction and the organisation's competitiveness.

These research results also support the findings of Anshori and Akbar (2025), which indicate that the adoption of AI can enhance job satisfaction through increased productivity and work efficiency. Thus, the combination of technological competence (digital competence) and the utilisation of technology (Human-AI Collaboration) is a key factor in fostering job satisfaction in the era of digital transformation.

The coefficient of determination of 90.4% indicates that Human-AI Collaboration and Digital Competence have a very strong ability to explain variations in Job Satisfaction among Generation Z respondents. However, this very high value also needs to be analysed critically, as there may be interrelated perceptions between variables in a highly digitally-oriented work environment. Furthermore, the characteristics of the respondents—the majority of whom are from Generation Z and work in technology-based industries—may strengthen the relationships between the research variables. Therefore, the results of this study must be interpreted with caution and cannot yet be broadly generalised to all industrial sectors or other generational groups.

Although this study demonstrates a significant relationship between the variables, it remains limited to testing the direct influence between Human-AI Collaboration, Digital Competence, and Job Satisfaction. Other factors such as organisational culture, leadership style, work-life balance, and technostress also have the potential to influence job satisfaction in a digital work environment. Therefore, further research is recommended to develop a research model by adding mediating or moderating variables to gain a more comprehensive understanding of the dynamics of job satisfaction in the era of digital transformation.

The implications of this research suggest that organisations need to develop strategies focused on enhancing employees' digital competence and optimising the use of AI in work processes. Furthermore, organisations must foster a work environment that supports harmonious collaboration between humans and technology, thereby enhancing the well-being and job satisfaction of employees, particularly Generation Z.

5. Conclusion

This study endeavoured to scrutinise the influence of Human-AI Collaboration and Digital Competence on Job Satisfaction among Generation Z. The empirical results corroborate that both variables exert a positive and significant effect on job satisfaction. These findings intimate that an individual's propensity to collaborate seamlessly with AI technology, coupled with their mastery of digital competencies, constitutes an indispensable determinant in engendering a gratifying and affirmative work experience for Generation Z amidst the relentlessly evolving era of digital transformation. Furthermore, this study indicates that Generation Z tends to require a work environment that is technology-adaptive, flexible, and supportive of digital competence development. Consequently, organisations need to balance technological readiness with human resource development to ensure that AI implementation not only boosts productivity but also supports employee well-being and job satisfaction.

Based on the research findings, organisations are advised to increase investment in the development of employees' digital skills through training, workshops, and continuous learning programmes. Furthermore, the implementation of AI should be directed as a tool to support work, helping to improve the effectiveness and quality of work, rather than entirely replacing the role of humans. For human resource management, talent management strategies tailored to the characteristics of Generation Z are required, such as creating a flexible, technology-driven work environment and providing opportunities for continuous self-development. Meanwhile, Generation Z employees are expected to continuously improve their digital skills

to adapt to the increasingly rapid pace of technological development. Further research is recommended to include other variables that may influence job satisfaction, such as organisational culture, work-life balance, technostress, and job insecurity. Furthermore, qualitative or mixed-methods approaches could be employed to gain a deeper understanding of individuals' experiences when interacting with AI technology in the workplace.

This study has several limitations. Firstly, the research was conducted only on Generation Z respondents in the Jababeka industrial area, Bekasi Regency, so the results cannot yet be widely generalised to different populations. Secondly, the sample size was limited to 100 respondents, so it does not fully represent a larger population. Thirdly, this study utilised only two independent variables, Human-AI Collaboration and Digital Competence, meaning there are other factors outside the research model that may influence Job Satisfaction. Furthermore, data collection via a questionnaire based on respondents' perceptions allows for subjectivity in responses. The quantitative approach employed also fails to explore individual experiences regarding interactions with AI technology in the workplace in greater depth.

6. References

Akinnagbe, O. B. (2024). Human-AI collaboration: Enhancing productivity and decision-making. *International Journal of Education, Management, and Technology*, *2*(3), 387–417. https://doi.org/10.58578/ijemt.v2i3.4209

Ali, H., Li, M., & Qiu, X. (2024). Examination of HRM practices in relation to the retention of Chinese Gen Z employees. *Humanities and Social Sciences Communications*, *11*(1), 1–12. https://doi.org/10.1057/s41599-023-02472-6

Anshori, M. I., & Akbar, A. (2025). The Impact of Artificial Intelligence Adoption on Job Satisfaction and Productivity of Healthcare Workers in Hospitals. *Jurnal Ilmiah Manajemen Kesatuan*, *13*(6), 5901–5912. https://doi.org/10.37641/jimkes.v13i6.4321

Atoyebi, T. A., & Sopuru, J. (2025). Humanizing AI in Service Workplaces: Exploring Supervisor Support as a Moderator in HPWSs. *Sustainability*, *17*(17), 7892. https://doi.org/10.3390/su17177892

Azzahra, A., & Ridzki, M. M. (2025). Human-AI Collaboration in Small Enterprises: Balancing Automation and Human Input. *Return: Study of Management, Economic and Bussines*, *4*(12), 926–940. https://doi.org/10.57096/return.v4i12.443

Bolli, T., & Pusterla, F. (2022). Decomposing the effects of digitalization on workers' job satisfaction. *International Review of Economics*, *69*(2), 263–300. https://doi.org/10.1007/s12232-022-00392-6

Estrada, J. M. C., & Sánchez-Bayón, A. (2025). Workplace Happiness in the Reality of Ecuador's Digital Economy. *Revista CEA*, *11*(27), 1–19. https://doi.org/10.22430/24223182.3348

Hanura, C. R., & Suratman, M. (2025). Pengaruh Budaya Organisasi Dan Lingkungan Kerja Terhadap Kepuasan Kerja Aparatur Sipil Negara (ASN) Generasi Z Di Lingkungan Pemerintah Kabupaten Bandung. *Journal of Syntax Literate*, *10*(2), 1453. https://doi.org/10.36418/syntax-literate.v10i2.52298

Hemmer, P., Westphal, M., Schemmer, M., Vetter, S., Vössing, M., & Satzger, G. (2023). Human-AI collaboration: the effect of AI delegation on human task performance and task satisfaction. *Proceedings of the 28th International Conference on Intelligent User Interfaces*, 453–463. https://doi.org/10.1145/3581641.3584052

Hendri, H. (2025). Strategi Pengembangan Human-Ai Collaboration Skills Karyawan Generasi Z Di Era Industri 5.0, Studi Kasus: PT. Jaya Agung. *JIMP: Jurnal Ilmiah Manajemen Profetik*, *3*(2), 119–126. https://doi.org/10.55182/jimp.v3i2.613

Idris, I., Adi, K. R., Soetjipto, B. E., & Supriyanto, A. S. (2020). The mediating role of job satisfaction on compensation, work environment, and employee performance: Evidence from Indonesia. *Entrepreneurship and Sustainability Issues*, *8*(2), 735. https://doi.org/10.9770/jesi.2020.8.2(44)

Lodo, L. T., Manafe, H. A., Seran, P., Niha, S. S., & Perseveranda, M. E. (2025). Faktor-Faktor Pendukung Keberhasilan Model Kerja Gig Economy pada Generasi Milenial dan Generasi Z di Kota Kupang. *Jurnal Transformasi Pendidikan Berkelanjutan*, *6*(3), 178–194. https://ejurnals.com/ojs/index.php/jtpb/article/view/3116

Malik, N., Tripathi, S. N., Kar, A. K., & Gupta, S. (2022). Impact of artificial intelligence on employees working in industry 4.0 led organizations. *International Journal of Manpower*, *43*(2), 334–354. https://doi.org/10.1108/IJM-03-2021-0173

Manalu, N. C. (2025a). Digital Competence, Social Capital and Emotional Intelligence on Teacher Performance with Job Satisfaction as Intervening Variables. *JPI (Jurnal Pendidikan Indonesia)*, *14*(2), 393–403. https://doi.org/10.23887/jpi-undiksha.v14i2.85541

Manalu, N. C. (2025b). The effect of digital competence, social capital, emotional intelligence on teacher performance through job satisfaction. *Jurnal Ilmiah Manajemen Kesatuan*, *13*(3), 1455–1468. https://doi.org/10.37641/jimkes.v13i3.3270

Maulana, B. F., & Yunus, E. N. (2025). The Pengaruh Penggunaan Artificial Intelligence (AI) terhadap Tingkat Produktivitas Karyawan dengan Kelompok Generasi sebagai Variabel Moderasi. *Journal of Emerging Business Management and Entrepreneurship Studies*, *5*(2), 173–185. https://doi.org/10.34149/jebmes.v5i2.239

Perera, K. (2025). Influence on Employee Productivity and Job Satisfaction in the Dynamics of Human-AI Collaboration in Modern Work Environments Among Service Sector Organizations in Sri Lanka. *International Journal of Contemporary Business Research*, *3*(2), 279–302. https://doi.org/10.4038/ijcbr.v3i2.25

Pham, Q. H., & Vu, K. P. (2022). Digitalization in small and medium enterprise: a parsimonious model of digitalization of accounting information for sustainable innovation ecosystem value generation. *Asia Pacific Journal of Innovation and Entrepreneurship*, *16*(1), 2–37. https://doi.org/10.1108/apjie-02-2022-0013

Prasetyo, R. H., Asbari, M., & Putri, S. A. (2024). Mendidik generasi z: Tantangan dan strategi di era digital. *Journal of Information Systems and Management (JISMA)*, *3*(1), 10–13. https://doi.org/10.4444/jisma.v3i1.743

Putri, K. M. H., & Werdini, Y. E. (2026). Artificial intelligence adoption, job insecurity, and psychological resilience: Challenges for employee adaptation in future work environments. *International Journal of Issue Science*, *2*(1), 1–8. https://doi.org/10.71364/ijiss.v1i5.12

Putri, M. A. (2026). Pengaruh Work Life Balance dan Stres Kerja terhadap Kinerja melalui Kepuasan Kerja Karyawan Generasi Z di Kota Semarang. *RIGGS Journal of Artificial Intelligence and Digital Business*, *5*(1), 5140–5147. https://doi.org/10.31004/riggs.v5i1.6874

Umamy, S. H., Laili, J., & Saibah, S. (2025). Menjembatani Kompetensi Digital dan Kinerja Tendik Gen Z di UnmuhJember melalui Etika Kerja. *Jurnal Ecodemica: Jurnal Ekonomi, Manajemen, Dan Bisnis*, *9*(1), 1–15. https://doi.org/10.31294/ecodemica.v9i1.11871

Wulandari, F. A., Hamid, R. S., & Ikbal, M. (2025). Role Of Digital Competence, Digital Culture, Individual Experience, In Increasing Job Satisfaction And Employee Performance At Bumn Banks In Palopo City. *BIMA Journal (Business, Management, & Accounting Journal)*, *6*(1), 627–642. https://doi.org/10.37638/bima.6.1.627-642

Zahs, D., & Schmodde, L. (2025). Would You Rather Work with ChatGPT or a Human Coworker? Exploring Their Impact on Job Satisfaction. *Academy of Management Proceedings*, *2025*(1), 14200. https://doi.org/10.5465/AMPROC.2025.14200abstract