

THE INFLUENCE OF TECHNOSTRESS AND HUMANISTIC HUMAN RESOURCE MANAGEMENT PRACTICES ON EMPLOYEE PERFORMANCE IN A DIGITAL WORK ENVIRONMENT

Nurhasan^{1*}, Herdian Farisi²

hasandhega71@gmail.com*

Medika Suherman University, Indonesia^{1,2}

Accepted: September 2, 2026	Reviewed: September 3, 2026	Published: September 30, 2026
--------------------------------	--------------------------------	----------------------------------

Abstract

This study aims to examine the influence of Technostress and Humanistic Human Resource Management (HRM) Practices on Employee Performance in a digital work environment. Using a quantitative approach with an associative design and a survey of 56 employees who work using digital systems or applications in work. Data were analyzed using multiple linear regression. The test results showed that Technostress had a regression coefficient of 0.147 with a t-value of 1.634 and a significance of 0.108, so that its partial influence on Employee Performance was not significant. On the other hand, Humanistic HRM Practice had a regression coefficient of 0.447, t of 2.987, and a significance of 0.004, thus having a positive and significant effect on Employee Performance. Simultaneously, the two variables resulted in an F of 5.991 with a significance of 0.005. The R Square value of 0.184 and the Adjusted R Square of 0.154 showed that the model explained 18.4% variation in Employee Performance, while after adjustment it was 15.4%. These results show that in the study sample, human-oriented HRM practices have a more pronounced role partially in explaining performance compared to Technostress.

Keywords: Digital Work Environment; Employee Performance; Humanistic HRM Practices; Technostress.



By Authors

This work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/).

1. Introduction

Digitalization has changed the way employees carry out work, communicate, and access information. The use of various digital platforms can increase connectivity and flexibility, but at the same time it can present the negative side in the form of technostress, overload, distraction, and excessive use of technology. Marsh et al. (2022) through an integrative review of 194 studies, show that the negative side of digital work includes technostress and various forms of digital burden related to the employee work experience.

Technostress refers to the stress related to the use of information and communication technology. Tarafdar et al. (2007) show that technostress is related to role stress and productivity, while Ragu-Nathan et al. (2008) developed the concept of technostress creators which includes techno-overload, techno-invasion, techno-complexity, techno-insecurity, and techno-uncertainty. More recent studies also confirm that technostress has diverse dimensions and the consequences can differ according to the context of the work and the form of technology used (Sanjeeva Kumar, 2024).

On the other hand, digital transformation requires not only attention to technology, but also to how organizations treat employees. Huang et al. (2026) developed a Humanistic HRM framework for digital transformation that places employee dignity, well-being, and the common good as key dimensions. The framework is relevant to the organization's need to ensure that digitalization does not eliminate human considerations in decision-making and work management.

The relationship between digital demands and organizational resources can be understood through Job Demands–Resources (JD-R) theory. Bakker et al. (2023) explained that job demands and job resources are two important components that can shape work experiences and outcomes. In this study, Technostress is positioned as a demand related to the use of technology, while Humanistic HRM Practice is positioned as a form of human-oriented organizational resources.

Rosyid and Wulansari (2026) research on Generation Z employees shows that there is a significant negative influence of technostress on performance and the role of training moderation and creative self-efficacy. These findings provide an empirical basis for the importance of examining the relationship between technostress and performance in a broader context. This study further examines Technostress and Humanistic HRM Practices simultaneously on Employee Performance in the digital work environment. Based on this background, this study aims to: (1) test the influence of Technostress on Employee Performance; (2) test the influence of Humanistic HRM Practices on Employee Performance; and (3) test the influence of Technostress and Humanistic HRM Practices simultaneously on Employee Performance.

2. Literature Review

2.1 Technostress and Employee Performance

Technostress is a pressure that arises in the use of information and communication technology. Tarafdar et al. (2007) identified that technology can be a source of stress through various demands and showed the relationship between technostress and productivity. Ragu-Nathan et al. (2008) developed a measurement of technostress creators through techno-overload, techno-invasion, techno-complexity, techno-insecurity, and techno-uncertainty. In the context of digital work, technological demands can be part of job demands. The JD-R perspective explains that job demands require certain efforts and resources from workers, while job resources can help workers face these demands (Bakker et al. 2023). Based on this framework and the empirical evidence of Rosyid and Wulansari (2026), this study proposes:

H1: Technostress affects Employee Performance.

2.2 Humanistic HRM Practices and Employee Performance

Humanistic HRM was developed as an approach that places humans at the center of human resource management in digital transformation. Huang et al. (2026) conceptualized it through three main dimensions, namely dignity-facilitating HRM, well-being-enhancing HRM, and common-good-enabling HRM. The approach emphasizes the protection of dignity, welfare, and common interests when organizations face technological and AI developments. In this study, Humanistic HRM Practices are understood through practices related to the protection of privacy and autonomy, human involvement in decisions, meaningful work, psychological support, and equitable access to training. Conceptually, the practice can be seen as an organizational resource that helps employees carry out their work in a digital environment. Therefore, the second hypothesis is:

H2: Humanistic HRM Practice Has a Positive Effect on Employee Performance

2.3 Humanistic HRM Practices and Employee Performance

Technostress and Humanistic HRM Practices represent two different sides of digital working conditions. Technostress describes the demands that arise from the use of technology, while Humanistic HRM Practices represent human-oriented organizational support and practices. In accordance with JD-R theory, job demands and resources can be present simultaneously in shaping the work experience (Bakker et al., 2023). On that basis, simultaneous hypotheses are formulated as follows:

H3: Technostress and Humanistic HRM Practices Simultaneously Affect Employee Performance.

3. Research Method

The study used a quantitative approach with an associative design. Data was obtained through questionnaires to employees working in a digital work environment. Based on the statistical output used in the study, the number of samples analyzed was 56 respondents. The respondent criteria in the research design were active employees who use digital systems or applications as a routine part of their work. Using three variables, namely Technostress (X1), Humanistic HRM Practices (X2), and Employee Performance (Y). Technostress refers to techno-overload, techno-invasion, techno-complexity, techno-insecurity, and techno-uncertainty (Ragu-Nathan et al., 2008; Tarafdar et al., 2007). Humanistic HRM Practices refer to the framework of Huang et al. (2026), while Employee Performance refers to the concepts of individual work performance and adaptive/proactive behavior (Griffin et al., 2007; Koopmans et al., 2014).

The instrument uses a five-point Likert scale. The initial design contains five items for each variable. However, the validity test results available in the output show five items for Technostress and Employee Performance, while the available Humanistic HRM Practice output table shows only three items. Because raw data or complete output for item X2 is not available in the results document, the number of items X2 is not reconstructed or assumed in this article. The data were analyzed using multiple linear regression with the model $Y = \alpha + \beta_1X_1 + \beta_2X_2 + e$. The tests included the determination coefficient, the F test for simultaneous influence, and the t test for partial influence. The significance decision used $\alpha = 0.05$. The results reported in this article follow the numbers available in the statistical output and there are no changes to the values of the coefficient, t, F, or significance.

4. Results and Discussion

4.1 Respondent Characteristics.

The analysis involved 56 respondents who work in a digital work environment. All 56 respondents answered Yes to the screening question on whether their daily work involves digital devices, work applications, or AI-based technology. The characteristics of the respondents in terms of gender, age group, length of employment, job field, are presented in Table 1.

Table 1. Respondent Characteristics

Characteristic	Category	Frequency (n)	Percentage (%)
Gender	Male	34	60.7
	Female	22	39.3
	Total	56	100.0
Age group	< 20 years	6	10.7
	20–30 years	24	42.9
	31–40 years	20	35.7
	41–50 years	5	8.9
	> 50 years	1	1.8
	Total	56	100.0

Characteristic	Category	Frequency (n)	Percentage (%)
Length of employment	< 1 year	13	23.2
	1–3 years	17	30.4
	3–5 years	7	12.5
	> 5 years	19	33.9
	Total	56	100.0
Job field	Education	11	19.6
	Retail / shops	10	17.9
	Manufacturing / industry	6	10.7
	Marketing / sales	5	8.9
	Food and beverage / culinary	3	5.4
	Finance / banking	3	5.4
	Health	3	5.4
	Construction / building materials	3	5.4
	Automotive	3	5.4
	Others / unspecified	3	5.4
	Services	2	3.6
	Technology	2	3.6
	Logistics / warehouse	1	1.8
	Livestock	1	1.8
	Total	56	100.0

Source: Data Processed (2026)

Regarding gender, male respondents numbered 34 out of the total 56 (60.7%), while female respondents numbered 22 (39.3%). In terms of age groups, the largest proportion consisted of individuals aged 20–30 years (24 respondents; 42.9%), followed by the 31–40 age group (20 respondents; 35.7%). Respondents under the age of 20 numbered 6 (10.7%), the 41–50 age group comprised 5 respondents (8.9%), and only 1 respondent (1.8%) was over 50 years old. Overall, respondents aged 20–40 accounted for 44 individuals (78.6%).

Regarding tenure, the largest group consisted of those who had worked for more than five years (19 respondents; 33.9%), followed by those with 1–3 years of experience (17 respondents; 30.4%) and those with less than one year of experience (13 respondents; 23.2%). The smallest group comprised those who had worked for 3–5 years (7 respondents; 12.5%). Thus, the total number of respondents with at least one year of work experience was 43 (76.8%).

The respondents' fields of work were classified into 14 categories. Education (11 respondents; 19.6%) and retail/trade (10 respondents; 17.9%) were the most common fields, accounting for a total of 21 respondents (37.5%). These were followed by manufacturing/industry (6 respondents; 10.7%) and marketing/sales (5 respondents; 8.9%). Six categories had three respondents each (5.4%). The services and technology sectors each account for two respondents (3.6%), while the logistics/warehousing and livestock sectors each account for one respondent (1.8%).

4.2 Instrument Test Results

The results of the validity test showed that five Technostress items had a calculated r value between 0.583 to 0.726 and were declared valid based on the r of table 0.2632. For Humanistic HRM Practice, the available output displayed three items with a calculated r of 0.590; 0,862; and 0.885. For Employee Performance, five items had a calculated r of 0.639 to 0.762. The reliability results showed Cronbach's Alpha of 0.667 for Technostress, 0.697 for Humanistic HRM Practices, and 0.744 for Employee Performance. All of these values were above the critical value of 0.60 used in the research output.

Table 2. Reliabilitas

Variabel	Cronbach's Alpha	Remarks
Technostress (X1)	0,667	Reliabel
Humanistic HRM Practices (X2)	0,697	Reliabel
Employee Performance (Y)	0,744	Reliabel

Source: Data Processed (2026)

4.3 Multiple Linear Regression Analysis

Multiple linear regression was used to test the influence of Technostress and Humanistic HRM Practices on Employee Performance. The output results showed a constant of 13.128, a Technostress coefficient of 0.147, and a coefficient of Humanistic HRM Practice of 0.447.

Table 2. Linear Regression Analysis

Variabel	B	Std. Error	Beta	t	Sig.
Constant	13,128	2,114	—	6,209	0,000
Technostress (X1)	0,147	0,090	0,203	1,634	0,108
Humanistic HRM Practices (X2)	0,447	0,150	0,371	2,987	0,004

Source: Data Processed (2026)

The regression equations obtained are:

$$Y = 13,128 + 0,147X1 + 0,447X2 + e$$

The Technostress coefficient is positive at 0.147, while the Humanistic HRM Practice coefficient is positive at 0.447. However, the statistical significance is determined based on the Sig. Test results show that Technostress is not partially significant because $\text{Sig. } 0.108 > 0.05$. Humanistic HRM Practice is significant because $\text{Sig. } 0.004 < 0.05$.

4.4 Coefficient of Determination

The Summary model yields an R of 0.429, an R Square of 0.184, an Adjusted R Square of 0.154, and a Standard Error of the Estimate of 2.565. An R Square value of 0.184 means that 18.4% of the variation in Employee Performance in the model can be

explained together by Technostress and Humanistic HRM Practices. The Adjusted R Square of 0.154 indicates that after adjusting for the number of predictors and sample sizes, the proportion of variation described by the model is 15.4%. In contrast, 81.6% based on R Square or 84.6% based on Adjusted R Square is outside the variation described by the model. Factors outside of the model cannot be identified as specific variables because they were not tested in the study.

4.5 F Test: Simultaneous Influence

The results of the F test showed an F value of 5.991 with a Sig. value of 0.005. Because $0.005 < 0.05$, the regression model was simultaneously significant. Thus, Technostress and Humanistic HRM Practices together had a statistically significant influence on Employee Performance in the research model.

4.6 Hypothesis Testing

Table 4. Linear Regression Analysis

Hipotesis	Statement	Results
H1	Technostress affects employee performance.	$t = 1,634$; Sig. = 0,108
H2	Humanistic HRM practices have a positive effect on employee performance.	$t = 2,987$; Sig. = 0,004
H3	Technostress and humanistic HRM practices simultaneously affect employee performance.	$F = 5,991$; Sig. = 0,005

Source: Data Processed (2026)

4.7 The Effect of Technostress on Employee Performance.

The results of the hypothesis test (H1) showed that technostress did not have a partially significant influence on employee performance in the digital work environment. This was proven by the acquisition of a t-value of 1.634 with a significance level of 0.108. Because the significance value was greater than the critical limit of probability ($\alpha = 0.05$). This means that the high or low technological pressure or technostress felt by the respondents in this study did not necessarily change, decrease or increase their performance level statistically.

These results at first glance seem to contradict the traditional assumption that technostress such as information overload, invasion of privacy, and system complexity will directly reduce productivity. Several previous studies, such as those conducted by Tarafdar et al. (2007) and Rosyid and Wulansari (2026), have indeed found a significant negative relationship between technostress and employee performance or productivity. However, the empirical results in this study show a different reality. There are several rational and theoretical explanations why technostress was found to not significantly affect performance:

1. The Multidimensional Nature of Technostress

Kumar (2024) explained that the literature on technostress covers various dimensions and outputs, so the impact is not always the same and identical in every work context. The psychological condition of workers in responding to technological pressure varies greatly. For some employees, the pressure from using digital systems may be considered a distraction, but not to the extent that they hinder the main operational tasks that are indicators of their performance.

2. The Effect of Job Demands Offset by Adaptation

Within the framework of Job Demands–Resources (JD-R) Theory, technostress is positioned as a form of job demands or job demands that drain mental energy (Bakker et al., 2023). However, these demands do not always lead to a decrease in performance if employees have good adaptation. Employees who have become accustomed to using digital platforms on a daily basis, as experienced by the majority of the study respondents, who have a routine with digital devices, may have developed resilience and certain technical abilities. As a result, even though they complain about the burden, time invasion, or complexity of techno-overload, techno-invasion, techno-complexity system updates, their core performance persists (Ragu-Nathan et al., 2008).

3. Presence of More Dominant Resources (HRM Practice)

The evidence that technostress is not partially significant can also be understood by looking at the findings of the H2 Hypothesis, where Humanistic HRM Practices have been shown to have a very significant effect on performance (Sig. 0.004). This is in line with the principle of balance in the JD-R Theory (Bakker et al., 2023). When the organization provides adequate resources such as psychological support, protection of autonomy, provision of access to training, and respect for human dignity (Huang et al., 2026). These resources will be a buffer or buffer from the negative impact of technostress. Employees are still able to maintain or even improve their performance because they feel supported by a humanistic-oriented human resource approach. The absence of a significant influence of technostress in this study does not mean that this phenomenon is not important. Rather, these results confirm that in a workplace that transitions to digitalization, employees' response to technological demands is highly dependent on how well the organization facilitates the needs and human values of its employees.

4.8 The Effect of Humanistic HRM Practices on Employee Performance.

The results of the regression test show that the Humanistic HRM Practice has a positive and significant influence on Employee Performance. This is evidenced by a positive regression coefficient of 0.447, a t-value of 2.987, and a significance level of 0.004 less than 0.05. Essentially, the more a company implements human resource management practices that humanize workers, the higher the level of performance produced by employees in the digital work environment. These results are in line with the latest conceptual developments regarding Humanistic HRM. In the era of digital transformation and the massive use of artificial intelligence (AI), the traditional approach that views workers as mere factors in the production of numbers and efficiency is starting

to be abandoned. Huang et al. (2026) introduced the Humanistic HRM framework which consists of three main pillars: dignity-facilitating, well-being-enhancing, and enabling common-good-enabling. This humanistic approach places intrinsic values, welfare, and human development above economic goals or profit encouragement.

In the context of JD-R Theory Bakker et al. (2023), Humanistic HRM Practices function as essential job resources. These resources, such as empathetic leadership, autonomy, equitable access to training, and protection of worker data privacy, not only meet the basic psychological needs of employees, but also trigger intrinsic motivation. This aligns with previous findings emphasizing that empowering human resources through digital literacy programs and adequate organizational support is an essential strategy for overcoming the challenges of digital disruption (Rosyadi et al. 2025). Huang et al. (2026) found that organizations that integrate digital flexibility with humanistic principles are able to reduce digital fatigue and significantly increase employee engagement and sustainable performance. In contrast, the adoption of technology without a humanization tends to lead to de-humanization that erodes work motivation. Therefore, the significance found in this study confirms that technology should remain placed as an instrument to enrich human capacity in the workplace, not as a means of exploitation. The presence of humanist HRM practices ensures employees feel valued, heard, and safe, which is ultimately expressed through superior performance.

4.9 The Simultaneous Influence of Technostress and Humanistic HRM Practices on Employee Performance.

The simultaneous significance test (F Test) resulted in an F value of 5.991 with a significance level of 0.005 (less than 0.05), which indicates that the overall research model is feasible and the third hypothesis (H3) is accepted. This means that, together, the dynamics between technostress (as a form of work demand) and Humanistic HRM Practices (as a form of work resources) are able to predict and influence variations in the level of Employee Performance in the digital era. An R² value of 0.184 informs that 18.4% of performance is influenced by the interaction of the two variables, while the rest is determined by other determinants that are not studied. This simultaneous significance provides a solid empirical basis for a complete empirical view of the digital work ecosystem. In the lens of the work ecosystem, employees are not dealing with the elements of work separately. They face the constant updating of application systems, the demands of speed, and the complexity of features (digital demands), while at the same time they also feel the level of organizational justice, psychological support, and autonomy provided by management (organizational resources).

A study by Manippi et al. (2026) expands the Job Demands-Resources Model specifically to this scope with the concept of techno-recovery. Their study shows that although technostress acts as a job demand that can drain energy, the presence of job resources (such as HR strategic practices) can act as a buffer that transforms the stress experience into a recovery cycle that maintains the performance and work engagement of both technical and non-technical staff. In the simultaneous framework of this study,

although the pressures caused by digital innovation (technostress) independently proved to be incapable of lowering performance (referring to the insignificant H1 findings), its presence in the company environment is still real. It is the combination and co-existence of Humanistic HRM Practices that creates a balance. Resilient employee performance in the era of disruption is formed from a balanced orchestration between advances in technological capabilities that spur adaptation, calibrated with ethical human resource governance, empowering, and maintaining the limits of workers' mental sanity.

5. Conclusion and Suggestions

Based on the results of the analysis, Technostress did not have a significant effect on Employee Performance because the t-value was 1.634 and Sig. was 0.108. Humanistic HRM Practice had a positive and significant effect on Employee Performance with a coefficient of 0.447, t of 2.987, and Sig. of 0.004. Simultaneously, Technostress and Humanistic HRM Practice had a significant effect on Employee Performance with an F of 5.991 and Sig. of 0.005. The model produced an R Square of 0.184 and an Adjusted R Square of 0.154.

The results suggest that in this study sample, Humanistic HRM Practices provide evidence of significant partial influence, whereas Technostress does not. Since the R Square value indicates that most of the variation in Employee Performance is outside the model, subsequent research can consider other relevant variables. Follow-up research can also use larger samples and more comprehensive model testing to gain a stronger understanding of the relationship between digital demands, HRM practices, and performance.

6. References

- Bakker, A. B., Demerouti, E., & Sanz-Vergel, A. (2023). Job Demands–Resources Theory: Ten Years Later. *Annual Review of Organizational Psychology and Organizational Behavior*, 10(1), 25–53. <https://doi.org/10.1146/annurev-orgpsych-120920-053933>
- Griffin, M. A., Neal, A., & Parker, S. K. (2007). A new model of work role performance: Positive behavior in uncertain and interdependent contexts. *Academy of Management Journal*, 50(2), 327–347.
- Huang, B. (Eva), Kang, H., Zur, E., & Liang, L. H. (2026). Humanistic human resource management for digital transformation: Addressing the challenges of AI advancement in the workplace. *Human Resource Management Review*, 36(3), 101151. <https://doi.org/10.1016/j.hrmr.2026.101151>
- Koopmans, L., Bernaards, C. M., Hildebrandt, V. H., De Vet, H. C. W., & Van Der Beek, A. J. (2014). Construct validity of the individual work performance questionnaire. *Journal of Occupational and Environmental Medicine*, 56(3), 331–337.
- M. Usman Rosyid, & Nury Ariani Wulansari. (2026). Can Generation Z Cope with Technostress? The Moderating Roles of Training and Creative Self-Efficacy. *Jurnal Manajemen Motivasi*, 22(1), 3544–3556. <https://doi.org/10.29406/jmm.v22i1.9220>
- Manippi, W. A., M. Nursaid, Muhajir, & Meri Hariratuljannah. (2026). From

- Technostress to Techno-Recovery: Strategic HRM Job Resources to Reduce Digital Burnout in the JD-R Model. *International Journal of Economics (IJE)*, 5(1 SE-Articles), 141–151. <https://doi.org/10.55299/ijec.v5i1.1836>
- Marsh, E., Vallejos, E. P., & Spence, A. (2022). The digital workplace and its dark side: An integrative review. *Computers in Human Behavior*, 128, 107118. <https://doi.org/10.1016/j.chb.2021.107118>
- Ragu-Nathan, T. S., Tarafdar, M., Ragu-Nathan, B. S., & Tu, Q. (2008). The Consequences of Technostress for End Users in Organizations: Conceptual Development and Empirical Validation. *Information Systems Research*, 19(4), 417–433. <https://doi.org/10.1287/isre.1070.0165>
- Rosyadi, M. A., Farisi, H., & Safitri, A. (2025). PEMBERDAYAAN SUMBER DAYA MANUSIA DALAM PENGEMBANGAN UMKM PARIWISATA DI PURWOKERTO: TANTANGAN DAN STRATEGI UNTUK ERA DIGITAL. *JURNAL DINAMIKA SOSIAL DAN SAINS*, 2(2), 521–533. <https://jurnalsentral.com/index.php/jdss>
- Rosyadi, M. A., Farisi, H., & Safitri, A. (2025). Pemberdayaan sumber daya manusia dalam pengembangan UMKM pariwisata di Purwokerto: Tantangan dan strategi untuk era digital. *Jurnal Dinamika Sosial Dan Sains*, 2(2), 521-533.
- Rosyid, M. U., & Wulansari, N. A. (2026). *Can Generation Z Cope with Technostress? The Moderating Roles of Training and Creative Self-Efficacy*. 22, 3544–3556. <https://doi.org/10.29406/jmm.v22i1.9220>
- Sanjeeva Kumar, P. (2024). TECHNOSTRESS: A comprehensive literature review on dimensions, impacts, and management strategies. *Computers in Human Behavior Reports*, 16(August 2023), 100475. <https://doi.org/10.1016/j.chbr.2024.100475>
- Tarafdar, M., Tu, Q., Ragu-Nathan, B. S., & Ragu-Nathan, T. S. (2007). The Impact of Technostress on Role Stress and Productivity. *Journal of Management Information Systems*, 24(1), 301–328. <https://doi.org/10.2753/MIS0742-1222240109>