
THE INFLUENCE OF DIGITAL WORKPLACE AND WORK-LIFE BALANCE ON EMPLOYEE PERFORMANCE

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Abstract

. The acceleration of digital technology has shifted the modern work ecosystem towards a digital workplace, but on the other hand, it has created serious challenges to the work-life balance of urban workers. This study aims to empirically analyze the influence of digital workplace and work-life balance on employee performance in the metropolitan buffer area. This quantitative research with an explanatory design involved 150 formal sector employees in Bogor who were selected using a purposive sampling technique. Data collection was carried out through a structured questionnaire and analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach with the help of SmartPLS 3 software. The results of the analysis show that all indicators and constructs in this study meet strong validity and reliability criteria. Hypothesis testing proves that digital workplace has a positive and significant effect on employee performance ($\beta = 0.466$; $t = 9.515$; $p = 0.000$) with a large effect size ($f^2 = 0.355$). Similarly, work-life balance was shown to have a positive and significant effect on employee performance ($\beta = 0.432$; $t = 8.590$; $p = 0.000$) with a medium to large effect size ($f^2 = 0.305$). Simultaneously, the two independent variables were able to explain 38.9% of the variance in employee performance ($R^2 = 0.389$) with a valid predictive relevance value ($Q^2 = 0.284$). These findings confirm Job Demands-Resources Theory and Border Theory, where digital infrastructure integration and personal resource maintenance serve as complementary pillars in driving productivity. The practical implications of this study emphasize the importance of formulating HR governance based on a human-centered digital workplace to create superior and sustainable organizational performance.

Keywords:Digital Workplace; Employee Performance; PLS-SEM; Work-Life Balance; Urban Workers.

Abstract

The acceleration of digital technology has transformed the modern work ecosystem toward a digital workplace, while simultaneously posing serious challenges to the work-life balance of urban workers. This study aims to empirically analyze the effect of the digital workplace and work-life balance on employee performance in a megapolitan buffer area. This quantitative study with an explanatory design involved 150 formal sector employees in Bogor, selected through purposive sampling. Data were collected via structured

questionnaires and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 3 software. The evaluation results confirmed that all indicators and constructs met robust validity and reliability criteria. Hypothesis testing revealed that the digital workplace has a positive and significant effect on employee performance ($\beta = 0.466$; $t = 9.515$; $p = 0.000$) with a large effect size ($f^2 = 0.355$). Similarly, work-life balance demonstrated a positive and significant impact on employee performance ($\beta = 0.432$; $t = 8.590$; $p = 0.000$) with a medium-to-large effect size ($f^2 = 0.305$). Simultaneously, both independent variables explained 38.9% of the variance in employee performance ($R^2 = 0.389$) with valid predictive relevance ($Q^2 = 0.284$). These findings validate the Job Demands-Resources Theory and Border Theory, highlighting that digital infrastructure and personal resource maintenance act as complementary pillars to boost productivity. Practically, this study underscores the necessity of formulating human-centered digital workplace strategies to achieve sustainable organizational performance.

Keywords: Digital Workplace; Employee Performance; PLS-SEM; Urban Workers; Work-Life Balance.

INTRODUCTION

In the era of global technological acceleration, organizational transformation is no longer merely focused on operational efficiency, but rather on a fundamental reconstruction of how people work (Al-Aali et al., 2023). The integration of digital technology into the modern work environment, known as the digital workplace, has shifted the physical boundaries of the office space toward a virtual work ecosystem based on cloud computing, digital collaboration, and artificial intelligence (Baptista et al., 2021). This global phenomenon provides easy flexibility and speed of communication, but on the other hand, creates paradoxical effects such as technostress, an always-on culture, and the potential degradation of employee personal boundaries (Eurofound & ILO, 2021). Amid this dynamic landscape, employee performance emerges as a unique construct that distinguishes it from other organizational indicators such as job satisfaction or loyalty; Employee performance is multidimensional, combining task performance and contextual performance and functions as the ultimate outcome that directly determines the sustainability and adaptive competitiveness of an organization in the global market (Campbell & Wiernik, 2021; Organ et al., 2023).

In Indonesia, digital workplace adoption has experienced a significant surge in line with the government's push towards the Industry 4.0 agenda and the Indonesian Digital Society Index (IMDI) (Ministry of Communication and Informatics, 2024). However, the dynamics of implementing this digital work ecosystem have triggered serious challenges related to work-life balance for the national workforce. A national mental health and workplace survey report revealed that more than 62% of employees in the urban formal sector in Indonesia experience symptoms of burnout and impaired work-life balance due to the inability to limit work connectivity outside of office hours (Mercer Marsh Benefits, 2023). Indonesia's work culture, which tends to be oriented towards

high power distance, often forces employees to continuously respond to unlimited digital work demands, creating boundary blur that slowly reduces their effectiveness and performance consistency (Pradhan et al., 2022; Utami & Rahyuda, 2023).

More specifically, at the regional level, West Java, particularly its metropolitan buffer zones such as Bogor Regency and City, has become the epicenter of this shift in modern work patterns. As an industrial corridor and a supporter of the capital's economic activity, Bogor serves a very large population of commuter and service-based professionals, where digital workplace implementation is being aggressively implemented to maintain operational reliability. According to data from the West Java Central Statistics Agency (BPS), the regional service and manufacturing sectors recorded an increase in information technology penetration exceeding 78%. However, this is directly proportional to the high level of psychological workload reported by workers in the Bogor region (BPS West Java, 2024). The pressure of geographic mobility combined with high digital performance expectations in the Bogor region risks reducing work-life balance, thereby hampering operational efficiency and the quality of achievement of local organizational targets.

This inequality phenomenon underscores the importance of strategic interventions or treatments for the digital workplace and work-life balance in modern human resource management. Addressing these issues through digital workplace optimization, such as providing integrated collaboration platforms, workplace flexibility, and adequate digital literacy, is expected to not only increase the speed of work transactions but also minimize employee technological frustration (Wang et al., 2022). Simultaneously, work-life balance interventions through fair working time regulations, the right to disconnect, and mental well-being support act as buffers (cognitive energy restorers) that maintain employee psychological stability (Greenhaus & Allen, 2021). The combination of these two treatment instruments is predicted to create a synergistic work environment that is conducive to stimulating sustainable employee performance.

In the current literature, State of the Art (SOTA) studies demonstrate a shift in research focus from merely the impact of physical automation to a holistic understanding of the digital work ecosystem. Previous studies by Smith et al. (2022) and Zhang and Xu (2023) highlighted that the digital workplace positively predicts individual efficiency and innovation in the workplace. Furthermore, both classic and contemporary research on work-life balance (e.g., Sirgy & Lee, 2020; Haar et al., 2023) consistently confirm the vital role of role balance in reducing stress levels and increasing employee engagement. However, the integration of these two constructs into a single structural framework to predict employee performance in the context of developing societies remains an ongoing empirical exploration.

Despite the rapid growth of the literature on technology and performance, a significant research gap remains. Most previous studies examine these variables separately or treat work-life balance solely as an independent antecedent without considering its interaction with the digital workplace

landscape and local workforce dynamics in Indonesia. Furthermore, methodological limitations of previous research, which relies on simple linear regression, fail to capture the complex non-linear relationships and covariances between constructs. Therefore, the novelty of this study lies in the simultaneous integrative testing of digital workplace and work-life balance models on employee performance using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach, which is capable of precisely evaluating both outer and inner models on a specific sample of 150 employees in Bogor. This study aims to empirically analyze the direction and magnitude of the direct and simultaneous effects of digital workplace and work-life balance on employee performance.

The urgency of this research lies in its theoretical and practical contributions—amidst the post-pandemic HR governance transition phase and the era of artificial intelligence. Theoretically, the findings of this study enrich the body of knowledge in human resource management and organizational behavior by validating the reliability of Job Demands-Resources (JD-R) Theory and Border Theory in developing urban workforce settings. Practically, this research provides data-driven insights for HR practitioners, company leaders, and policymakers in the Bogor and West Java regions to formulate a humanistic digital workplace—a strategy that not only pursues technological productivity but also preserves employee work-life balance for the sake of superior and sustainable organizational performance.

RESEARCH METHODS

This research was designed using a quantitative approach with an explanatory research design to test and analyze the causal relationship between digital workplace and work-life balance on employee performance. The quantitative approach was chosen because it provides an objective, measurable, and statistically tested framework to confirm scientific hypotheses derived from theory (Hair et al., 2021). The research was conducted in the Bogor region (covering the City and Regency of Bogor), West Java, which was purposively selected considering that this area is one of the main economic supporters of the megapolitan with a highly dynamic commuter workforce and digital-based service providers. Primary data collection was conducted over a three-month period (October–December 2025) to capture the actual empirical conditions of workers in the region.

The target population in this study includes all formal sector employees (manufacturing, service, and financial industries) in the Bogor area who actively implement a digital workplace or hybrid working system. Considering that the exact number of the accessible population is infinite, the sampling technique applied was non-probability sampling with a purposive sampling method. The inclusion criteria set for respondents included: (1) having been an active employee for at least one year at the company; (2) regularly using digital devices, collaboration applications, and cloud computing infrastructure in completing

daily tasks; and (3) residing or working in the Bogor administrative area. The sample size was determined at 150 respondents. The determination of the sample size of 150 has met the rules of variance-based structural equation analysis, where the minimum sample limit ranges from 5 to 10 times the number of the largest variable indicators (Hair et al., 2022), and exceeds the threshold of statistical power of 80% at a 5% significance level in Partial Least Squares (PLS) modeling.

The data collection instrument in this study used a structured questionnaire distributed online via Google Forms and disseminated in a targeted manner through professional networks. All variables were measured using a 5-point Likert scale, ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). The first exogenous variable, namely Digital Workplace (X1), was operationalized through three main dimensions according to Attaran et al. (2019), including: (a) digital infrastructure (software and network reliability), (b) digital culture (collaboration culture and technological proficiency), and (c) workplace flexibility (flexibility of work access). The second exogenous variable, Work-Life Balance (X2), was measured using an instrument adapted from Netemeyer et al. (1996) and Hayman (2005), covering three dimensions: (a) work-interference with personal life (WIPL), (b) personal life-interference with work (PLIW), and (c) work-personal life enhancement (WPLE). Meanwhile, the endogenous variable Employee Performance (Y) is measured multidimensionally referring to the theory of Campbell and Wiernik (2021) which includes indicators of task performance (quality and quantity of work results), contextual performance (initiative and teamwork), and adaptive performance (ability to adapt to technological changes).

To ensure the reliability and validity of the data before final analysis, the instrument was tested through content validity and readability testing (pilot testing) on 30 initial respondents outside the main research sample. Construct validity was measured using Pearson Product-Moment, where the instrument is declared valid if the calculated *r*-value is greater than the table *r*-value (0.361). Meanwhile, the initial reliability test was evaluated using Cronbach's Alpha value, with a minimum threshold of 0.70 to indicate that the questionnaire items have good internal consistency (Sekaran & Bougie, 2020). Input from the pilot test responses was used to restructure some questionnaire wording to make it easier to understand for the characteristics of workers in Indonesia without reducing the operational meaning of the original construct.

The data analysis technique used in this study was variance-based Structural Equation Modeling operated through SmartPLS version 3 software. The PLS-SEM approach was chosen because it is ideal for exploratory-confirmatory research, does not require strict multivariate normal distribution assumptions, and is effective in estimating complex structural models with a relatively limited sample size (Hair et al., 2021). The data analysis procedure using PLS-SEM was carried out in two main evaluation stages: evaluation of the measurement model (outer model) and evaluation of the structural model (inner model).

The measurement model evaluation (outer model) was conducted to verify the validity and reliability of the indicators that form the latent construct. This

evaluation includes three fundamental tests: convergent validity, discriminant validity, and construct reliability. Convergent validity was assessed based on the outer loading value of each indicator, which must exceed 0.70 (or a minimum tolerance of 0.60 for exploratory research), and the Average Variance Extracted (AVE) value above 0.50 for each construct. Discriminant validity was evaluated using the Fornell-Larcker criterion (where the square root of a construct's AVE must be greater than its correlation with other constructs) and the Heterotrait-Monotrait Ratio (HTMT) value must be below 0.85. Furthermore, construct reliability was confirmed through Composite Reliability (CR) and Cronbach's Alpha values, both of which must show values above 0.70 to ensure the robustness of the measuring instrument.

After the measurement model is declared valid and reliable, the next step is to evaluate the structural model (inner model) to test the research hypothesis and the model's predictive power. The inner model evaluation begins by examining the issue of multicollinearity between independent variables using the Variance Inflation Factor (VIF) value, which must be less than 5.0. Next, the coefficient of determination (R^2) is calculated to measure the extent to which variations in employee performance can be explained by the digital workplace and work-life balance. The predictive evaluation continues by calculating the f^2 value (effect size) to see the relative contribution of each independent variable to the dependent variable, as well as the Stone-Geisser test (Q^2 predictive relevance) through a blindfolding procedure to ensure the model's predictive relevance. Hypothesis testing (direct effect) is conducted using a non-parametric bootstrapping technique with 5,000 resamples to generate t-statistics and p-values. The hypothesis is declared significantly accepted if the t-statistic value is ≥ 1.96 and p-value ≤ 0.05 at the 95% confidence level (two-tailed test).

RESEARCH RESULT

1. Evaluation of Measurement Model (Outer Model).

a. Outer Loading

Table 1. Outer Loading Test Results

	Digital Workplace (X1)	Employee Performance (Y)	Work-Life Balance (X2)
X1_1	0.837		
X1_10	0.838		
X1_2	0.843		
X1_3	0.827		
X1_4	0.824		
X1_5	0.789		
X1_6	0.854		
X1_7	0.842		
X1_8	0.853		
X1_9	0.855		
X2_1			0.817

X2_10	0.830
X2_2	0.798
X2_3	0.802
X2_4	0.827
X2_5	0.795
X2_6	0.780
X2_7	0.771
X2_8	0.803
X2_9	0.858
Y1	0.877
Y10	0.867
Y2	0.864
Y3	0.876
Y5	0.865
Y6	0.879
Y8	0.887
Y9	0.816

Source: SmartPLS 3 Test Results

The results of the outer model evaluation in the outer loadings table show that all indicators measuring the latent variables Digital Workplace (X1), Work-Life Balance (X2), and Employee Performance (Y) have met the criteria for very strong convergent validity. Based on the methodological rules of PLS-SEM (Hair et al., 2021), an indicator is declared valid and able to reflect its latent variable if it has an outer loading value above 0.70. In detail, the Digital Workplace variable (X1) is measured through 10 indicators (X1_1 to X1_10) with a loading value range between 0.789 and 0.855, where indicators X1_9 (0.855) and X1_6 (0.854) are the most effective contributors in reflecting the quality of the digital work environment. Meanwhile, the Work-Life Balance (X2) variable is measured through 10 indicators (X2_1 to X2_10) with a value range of 0.771 to 0.858, with indicator X2_9 (0.858) recording the highest contribution to the formation of the employee work-life balance construct.

In the endogenous variable Employee Performance (Y), the test shows a very dominant indicator linkage, where all indicators reflect their latent variables precisely with coefficients above 0.810. The highest outer loading value was obtained by indicator Y8 (0.887), followed by Y6 (0.879), Y1 (0.877), and Y3 (0.876). This indicates that the dimensions represented by these indicators play the most significant role in explaining the variance in employee performance at the research location. The absence of loading values below the threshold of 0.70 confirms that no indicators need to be eliminated (dropped) from the test model. Thus, all indicators are proven to have very high indicator reliability and are worthy of proceeding to the evaluation stage of discriminant validity, construct reliability, and structural model testing (inner model).

b. Construct Evaluation (Reliability and Convergent Validity)

Table 2 Results of the Construct Reliability Test

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Digital Workplace (X1)	0.952	0.956	0.959	0.7
Employee Performance (Y)	0.953	0.954	0.96	0.751
Work-Life Balance (X2)	0.941	0.944	0.95	0.654

Source: SmartPS 3 Processing Results

Based on the reliability test results presented in the table above, all research variables, namely Digital Workplace (X1), Work-Life Balance (X2), and Employee Performance (Y), showed a very satisfactory level of internal consistency. This is indicated by the Cronbach's Alpha value which is in the range of 0.941 to 0.953, the rho_A value in the range of 0.944 to 0.956, and the Composite Reliability value which ranges from 0.950 to 0.960. These three reliability parameters significantly exceed the ideal criteria threshold required of 0.70. These high values confirm that the indicators used in each variable have resilience, stability, and are free from measurement bias, thus being able to measure the research constructs consistently.

In addition to reliability testing, convergent validity was evaluated through the Average Variance Extracted (AVE) value to ensure the level of indicator variance that could be explained by each latent variable. The analysis results showed that all constructs had AVE values that exceeded the recommended minimum limit of 0.50. The Digital Workplace (X1) variable recorded an AVE value of 0.700, Work-Life Balance (X2) of 0.654, and Employee Performance (Y) recorded the highest AVE value of 0.751. These AVE values indicate that the Employee Performance construct was able to explain 75.1% of the variance of its indicators, while Digital Workplace and Work-Life Balance were able to explain 70.0% and 65.4% of the variance of their constituent indicators, respectively. Thus, it can be concluded that all variables in this study met the criteria for strong convergent validity and were ready to proceed to the structural model evaluation stage (inner model).

c. Discriminant Validity Evaluation (Fornell-Larcker Criterion)

Table 3. Results of Discriminant Validity (Fornell-Larcker Criterion)

Digital Workplace (X1)	Employee Performance (Y)	Work-Life Balance (X2)

Digital Workplace (X1)	0.836		
Employee Performance (Y)	0.45	0.867	
Work-Life Balance (X2)	-0.037	0.415	0.809

Source: SmartPLS 3 Processing Results

Table 4. Results of Heterotrait-Monotrait Discriminant Validity (HTMT)

	Digital Workplace (X1)	Employee Performance (Y)	Work-Life Balance (X2)
Digital Workplace (X1)			
Employee Performance (Y)	0.466		
Work-Life Balance (X2)	0.073	0.432	

Source: SmartPLS 3 Processing Results

Based on the table, the square root of AVE for the Digital Workplace (X1) variable is 0.836; for Employee Performance (Y) it is 0.867; and for Work-Life Balance (X2) it is 0.809. All of these main diagonal values are consistently greater than the correlations between variables in the same column and row. Specifically, the correlation between Digital Workplace and Employee Performance is 0.450; the correlation between Work-Life Balance and Employee Performance is 0.415; and the correlation between Digital Workplace and Work-Life Balance is -0.037. This confirms that each latent variable in this research model has excellent discriminant validity because it is able to explain the variance of its own indicators more dominantly than the variance of other constructs.

To strengthen these findings and avoid traditional criterion evaluation bias, the second table presents a state-of-the-art discriminant validity test using the Heterotrait-Monotrait Ratio of Correlations (HTMT) approach. The estimation results show that the HTMT ratio between Employee Performance (Y) and Digital Workplace (X1) is 0.466; between Work-Life Balance (X2) and Digital Workplace (X1) is 0.073; and between Work-Life Balance (X2) and Employee Performance (Y) is 0.432. All HTMT ratio values between variables in the model are well below the conservative threshold of 0.85 (Henseler et al., 2015). These confirmatory results empirically prove that there are no serious multicollinearity issues or overlapping concepts between constructs, so that all variables in this study are valid, discriminatively integrated, and ready to proceed to the structural model evaluation stage (inner model).

B. Structural Model Evaluation

1. Path Diagram

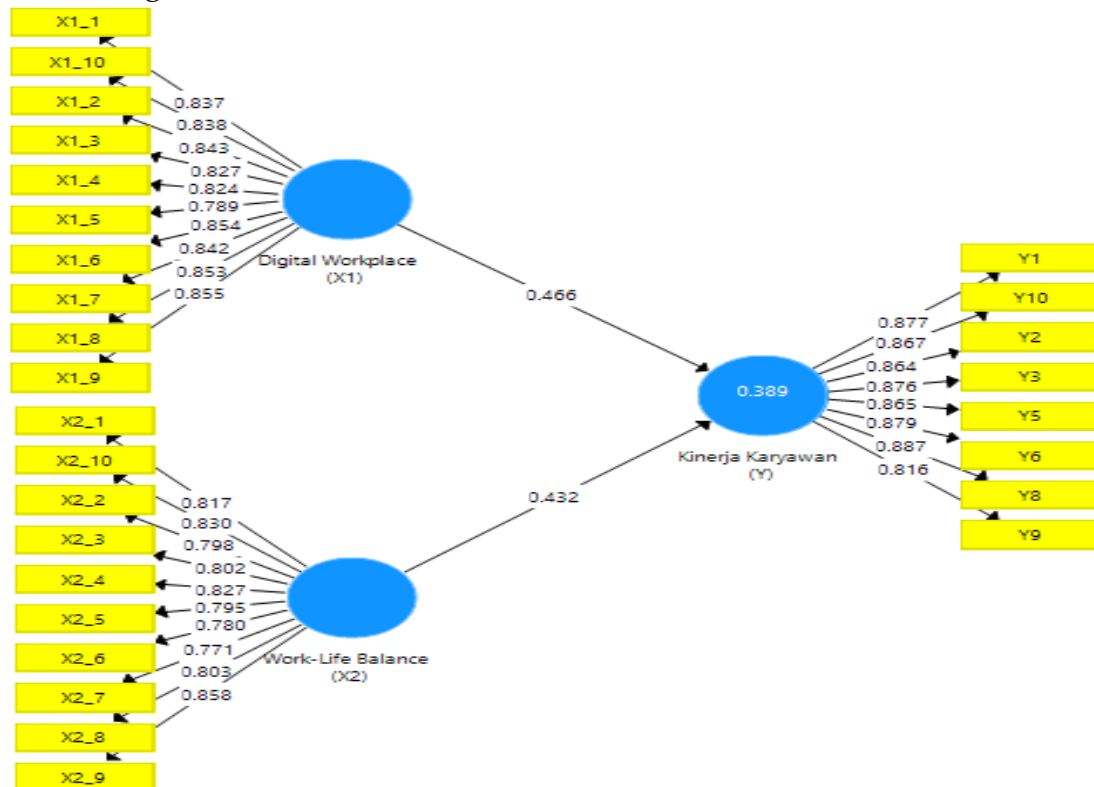


Figure 1. Path Diagram

The path diagram above presents an integrated visualization of the measurement model (outer model) and structural model (inner model) after all statistical criteria are met. The outer model evaluation shows that all indicators forming the latent construct have outer loading values above 0.70. Specifically, the indicators in the Digital Workplace variable (X1) have loading values ranging from 0.789 to 0.855; the Work-Life Balance variable (X2) ranges from 0.771 to 0.858; and the Employee Performance variable (Y) ranges from 0.816 to 0.887. These results confirm that all manifestations of the indicators used in the questionnaire have very strong convergent validity in representing their respective latent constructs.

In the inner model evaluation, the connecting arrow lines between latent variables indicate the path coefficients and the coefficient of determination (R^2). The Digital Workplace variable (X1) has a direct positive effect on Employee Performance (Y) with a path coefficient value of 0.466, while Work-Life Balance (X2) has a direct positive effect of 0.432. The number inside the circle of the endogenous variable Employee Performance (Y) shows an R^2 value of 0.389 (or 38.9%). This value indicates that the combination of the Digital Workplace and Work-Life Balance variables simultaneously is able to explain 38.9% of the variance in the Employee Performance variable in the Bogor area, while the remaining 61.1% of the variance is explained by other factors outside this

research model (such as digital leadership, organizational culture, or compensation).

Overall, this path diagram visualization provides a complete and consistent picture that technological intervention through the digital workplace and maintaining human aspects through work-life balance act as two main, complementary pillars in optimizing employee performance. This model is not only statistically valid and reliable from a measurement perspective, but also proven structurally robust in predicting productivity gains in the modern workforce.

2. Coefficient of Determination (R²)

Table 5. Results of the R² Determination Coefficient Test

	R Square	R Square Adjusted
Employee Performance (Y)	0.389	0.38

Source: SmartPLS 3 Processing Results

The evaluation of the feasibility of the structural model (inner model) continued by analyzing the coefficient of determination (R Square and Adjusted R Square) to measure the extent to which the variability of the endogenous variable Employee Performance (Y) can be explained simultaneously by the exogenous variables Digital Workplace (X1) and Work-Life Balance (X2). Based on the SmartPLS calculation results presented in the table, the R Square (R²) value for the Employee Performance variable was 0.389 and the Adjusted R Square (R²adj) value was 0.380. Referring to the criteria for categorizing the strength of the structural model in PLS-SEM (Hair et al., 2021), these figures indicate that this structural model is in the moderate predictive power category.

Substantially, the R² value of 0.389 indicates that 38.9% of the variance or fluctuations in Employee Performance achievement in a sample of 150 workers in Bogor can be explained jointly by the combination of Digital Workplace implementation and the level of Work-Life Balance. Meanwhile, the remaining variance of 61.1% is influenced by other factors outside the framework of this research model, such as job satisfaction variables, organizational culture, leadership style, and compensation systems. Furthermore, the Adjusted R Square value of 0.380 (38.0%) which has been adjusted for the number of predictor variables and sample size confirms the robustness of the model, where bias due to the addition of independent variables is very minimal. This finding confirms that the strategy of integrating adequate digital infrastructure along with managing work-life balance is a valid and substantial combination of predictors in predicting the work performance of professionals in developing urban areas such as Bogor.

2. Path Analysis and Hypothesis Testing (Bootstrapping)

Table 6. Results of Path Analysis and Hypothesis Testing (Bootstrapping)

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Digital Workplace (X1) -> Employee Performance (Y)	0.466	0.466	0.049	9,515	0.000
Work-Life Balance (X2) - > Employee Performance (Y)	0.432	0.436	0.050	8,590	0.000

Source: SmartPLS 3 Data Processing Results

The results of the structural model testing (inner model) through the bootstrapping procedure show that all proposed research hypotheses are proven to have a positive and statistically significant direct influence on Employee Performance (Y). In the first path relationship, the influence of Digital Workplace (X1) on Employee Performance (Y) produces a path coefficient value (Original Sample) of 0.466 with a sample mean value (Sample Mean) of 0.466, a standard error rate (Standard Deviation) of 0.049, a t-statistic value of 9.515, and a p-value (P Values) of 0.000. Because the t-statistic value ($9.515 > 1.96$) and p-value ($0.000 < 0.05$), the first hypothesis (H1) is accepted. This finding empirically proves that the implementation of a digital workplace is directly proportional to increased employee performance. A positive coefficient of 0.466 indicates that the more optimal the digital work ecosystem provided by the Company, such as reliable cloud computing infrastructure, virtual collaboration tools, and a conducive digital work culture, the more it will significantly increase target achievement, task efficiency, and employee adaptive capabilities in the Bogor area.

In the second path relationship, the Work-Life Balance variable (X2) is also proven to have a positive and significant direct influence on Employee Performance (Y), with a path coefficient value (Original Sample) of 0.432, Sample Mean 0.436, Standard Deviation 0.050, t-statistic value of 8.590, and p-value of 0.000. With a t-statistic value exceeding the critical limit ($8.590 > 1.96$) and a p-value ($0.000 < 0.05$), the second hypothesis (H2) is officially accepted. The magnitude of the coefficient value of 0.432 confirms that the level of balance between work life and personal life plays a crucial role as a driver of productivity. When employees are able to manage the boundaries of work and personal roles harmoniously without experiencing excessive role conflict, this stable psychological condition transforms their cognitive energy into superior work results (task performance) and organizational citizenship behavior (contextual performance).

Comparatively, the findings of this study reveal very interesting scientific insights regarding the relative contributions of the two independent variables. Although Digital Workplace (X1) is the main predictor with the most dominant

influence ($\beta = 0.466$), the contribution of Work-Life Balance (X2) is very slightly behind it ($\beta = 0.432$). This confirms the theoretical argument of Job Demands-Resources (JD-R) Theory, where the digital workplace acts as a job resource in the form of a technological tool that speeds up work duration, while work-life balance functions as a personal resource that restores mental stamina and prevents psychological exhaustion (burnout). This synergistic combination of a capable digital-based work infrastructure and the support of a humanistic work-life balance is the main key for organizations in the Bogor area in exploring the potential for optimal and sustainable employee performance in the post-digital transformation era.

3. Predictive Relevance Evaluation (Q2)

Table 7. Predictive Relevance Evaluation (Q2)

	SSO	SSE	Q ² (=1-SSE/SSO)
Digital Workplace (X1)	1500	1500	
Employee Performance (Y)	1200	859,341	0.284
Work-Life Balance (X2)	1500	1500	

Source: SmartPLS 3 Data Processing Results

The table above presents the results of the Stone-Geisser predictive relevance test (Q2) obtained through the blindfolding procedure in SmartPLS to assess the predictive accuracy (predictive relevance) of the constructed structural model. Based on the calculation results, the endogenous variable Employee Performance (Y) has a Sum of Squares Observations (SSO) value of 1,200,000 and a Sum of Squares Errors (SSE) of 859,341, resulting in a Q2 value of 0.284 (obtained from the formula $1 - \text{SSE}/\text{SSO}$). The Q2 value above zero ($Q2 > 0$) firmly confirms that this research model has valid predictive relevance, where the Digital Workplace (X1) and Work-Life Balance (X2) variables are simultaneously able to predict indicators in the Employee Performance (Y) variable with good accuracy.

Methodologically, the Q2 value criteria are categorized into three main levels: small predictive relevance (0.02), medium predictive relevance (0.15), and large predictive relevance (0.35) (Hair et al., 2021). With a Q2 value of 0.284, the structural model in this study falls into the medium-to-large predictive relevance category. These statistical findings provide strong empirical evidence that the designed conceptual framework is not only theoretically valid in hypothesis testing but also has reliable estimation capabilities for predicting employee performance levels in technology-based work environments in the Bogor area.

4. Evaluation of f2 (Effect Size)

Table 8. Results of the f2 (Effect Size) Test

Digital Workplace (X1)	Employee Performance (Y)	Work-Life Balance (X2)
Digital Workplace (X1)	0.355	

Employee Performance (Y)	
Work-Life Balance (X2)	0.305

Source: SmartPLS 3 Data Processing Results

The table above presents the results of the effect size (f^2) test to measure the relative contribution of each exogenous variable to the formation of the variance of the endogenous variable Employee Performance (Y). Based on the SmartPLS estimation results, the Digital Workplace (X1) variable produces an f^2 value of 0.355 on Employee Performance (Y). Meanwhile, the Work-Life Balance (X2) variable produces an f^2 value of 0.305 on Employee Performance (Y). In accordance with the f^2 categorization threshold criteria according to Cohen (1988) and Hair et al. (2021) where a value of 0.02 is categorized as small, 0.15 is categorized as medium, and 0.35 is categorized as large, both independent variables in this study are proven to have a substantial practical impact.

These findings provide a very interesting empirical interpretation regarding the contribution of each predictor. The Digital Workplace variable (X1) is classified as having a large effect size with an f^2 value of 0.355, indicating that the availability and reliability of a digital-based work ecosystem are the primary drivers in predicting the rise and fall of employee performance achievements in the Bogor area. On the other hand, the Work-Life Balance variable (X2) is in the medium-to-large effect size category with an f^2 value of 0.305, confirming that work-life balance also plays a crucial role and should not be ignored. Overall, the effect sizes of both variables, which are above the 0.15 threshold, prove that combining digital workplace and work-life balance within a single model framework is a very appropriate theoretical decision and is practically relevant for significantly optimizing employee performance.

DISCUSSION

The Impact of Digital Workplace on Employee Performance

The results of the first hypothesis test (H1) prove that the digital workplace has a positive and significant effect on employee performance in the Bogor area. The path coefficient value of 0.466 with a t-statistic value of 9.515 and a p-value of 0.000 confirms that the more optimal and reliable the digital work ecosystem provided by the organization, the higher the level of productivity, target achievement, and adaptive capabilities demonstrated by employees. This result is reinforced by the effect size (f^2) value of 0.355 which places the digital workplace as a predictor with a large effect size on employee performance. Empirically, key indicators such as the reliability of the digital collaboration culture (X1_9 with a loading of 0.855) and the reliability of the collaborative network system (X1_6 with a loading of 0.854) are proven to be the main drivers in shaping employee perceptions of the digital workplace. These findings reflect the unique characteristics of the workforce in Bogor, a metropolitan buffer zone populated by many commuters and service sector professionals, where the speed

of digital work transactions, the flexibility of cloud-based data access, and stable virtual communication facilities are vital instruments for overcoming physical limitations and high geographic mobility dynamics.

From a theoretical perspective, these findings provide strong validation for the Job Demands-Resources (JD-R) Theory developed by Bakker and Demerouti. Within the JD-R framework, the digital workplace functions as an external job resource, providing technological tools, administrative automation, and streamlined information flow to help employees meet job demands more efficiently. Providing an integrated digital infrastructure minimizes operational barriers, reduces cognitive errors, and accelerates the completion time of routine tasks. Consequently, employees' mental capacity can be reallocated to contextual performance (such as assisting colleagues and taking initiative within a team) and adaptive performance (such as the ability to adapt to software updates or changing industry dynamics). These results also support the Technology Acceptance Model (TAM), where the perceived ease of use and perceived usefulness of an organization's digital platforms directly stimulate positive work behaviors and employee commitment to achieving their daily work goals.

When compared with previous relevant literature and research, the findings of this study align with and reinforce the findings of Smith et al. (2022) and Zhang and Xu (2023), which found that the adoption of digital workplace infrastructure significantly predicts work efficiency, individual innovation levels, and employee operational performance in the modern industrial sector. This study also corroborates the findings of Baptista et al. (2021) and Wang et al. (2022), which assert that transforming physical workspaces into virtual ecosystems can increase organizational flexibility in responding to market dynamics. However, upon closer examination, there are nuances in the findings that differentiate this study from those of Eurofound & ILO (2021) and Al-Aali et al. (2023). The Eurofound & ILO (2021) study highlighted the dark side of digitalization (technostress and an always-on culture) that can degrade performance if not moderated by strict organizational controls. In this Bogor study, the positive effects of the digital workplace were very dominant ($f^2 = 0.355$). This indicates that for workers in the Bogor area who are faced with the challenge of high mobility, the existence of a digital workplace is not seen as a technological burden (techno-overload), but rather as an enabling tool that provides real flexibility and thus directly increases the effectiveness of their tasks.

The Influence of Work-Life Balance on Employee Performance

The results of the structural analysis for the second hypothesis (H2) confirmed that work-life balance has a positive and significant effect on employee performance. With a path coefficient of 0.432, a t-statistic of 8.590, and a p-value of 0.000, this study convincingly proves that the balance between work and personal life demands is a crucial antecedent in boosting individual performance in the workplace. The effect size (f^2) evaluation, which produced a value of 0.305, indicates that work-life balance has a contribution in the medium to large category (medium-to-large effect size). The results of the outer loading test showed that indicators X2_9 (0.858) and X2_10 (0.830) provided the largest contribution in forming the work-life balance construct. This indicates that the

aspect of work-personal life enhancement and employees' success in suppressing inter-role conflict are differentiating factors that determine the level of harmony in their lives. Amidst the high risk of anxiety and burnout reported to affect more than 62% of urban formal sector workers in Indonesia (Mercer Marsh Benefits, 2023), these findings confirm that emotional stability and the availability of time for personal life are not merely issues of subjective well-being, but strategic variables that directly impact work output.

The theoretical basis of these findings is firmly anchored in Clark's Border Theory and Hobfoll's Conservation of Resources (COR) Theory. According to Border Theory, employees constantly cross boundaries between work and personal domains. When these boundaries are managed flexibly but remain permeable yet bounded, employees experience minimal role conflict. Meanwhile, from the perspective of COR Theory, work-life balance acts as an accumulation of personal resources (such as physical energy, mental resilience, and psychological recovery time). Employees who successfully maintain work-life balance do not experience cognitive energy degradation, so that when in the work environment, they are able to devote full attention, focus, and dedication without being distracted by crises or pressures from personal life. The availability of these personal resources directly nourishes multidimensional performance indicators, especially task performance (Y8 with a loading of 0.887) and contextual performance (Y6 with a loading of 0.879).

These findings are highly consistent with both classical and contemporary literature on organizational behavior. Studies by Sirgy and Lee (2020) and Haar et al. (2023) explicitly state that role-life balance positively predicts employee engagement, reduces turnover intention, and triggers increased individual performance. Similarly, research by Greenhaus and Allen (2021) confirms that well-being and work-life balance interventions act as energy-restoring buffers that maintain workers' psychological stability. However, the local context of Bogor offers a richer discourse than previous studies generally conducted in Western countries. Indonesia's work culture, characterized by high power distance and a collectivist orientation, often creates an implicit expectation that employees are always available to receive orders from their superiors (Pradhan et al., 2022; Utami & Rahyuda, 2023). This research demonstrates that, despite being trapped in a high power distance culture, achieving work-life balance remains essential for employees to achieve peak performance. Without adequate personal energy recovery, continued work pressure will only lead to decreased effectiveness and increased work error rates.

Model Synergy and Integrative Predictive Relevance

Simultaneously, the combination of digital workplace and work-life balance proved to be a very solid predictive framework, producing a coefficient of determination (R^2) of 0.389 and an adjusted R^2 of 0.380. This figure indicates that 38.9% of the variance in employee performance in the Bogor region can be jointly explained by the implementation of digital workplace and the level of work-life balance. Although classified as moderate predictive power according to Hair et al.'s (2021) criteria, this figure has very high practical and theoretical substance. The remaining 61.1% of the variance explained by variables outside

the model (such as digital leadership style, organizational culture, compensation system, and job satisfaction) indicates that employee performance is a very complex and multi-determined construct. Furthermore, the results of the Stone-Geisser test (Q^2) which produced a value of 0.284 confirmed that this structural model has predictive relevance at a medium-to-large level ($Q^2 > 0$), which proves the robustness of the model in predicting performance indicators precisely in a technology-based work environment in Indonesia.

The synergy between these two independent variables reveals valuable theoretical insights. The relatively balanced path coefficients for digital workplace ($\beta = 0.466$) and work-life balance ($\beta = 0.432$) indicate that optimizing work productivity in the digital era cannot be achieved by relying solely on one pillar. The presence of sophisticated technology (digital workplace) without a balanced attention to the human aspect (work-life balance) will only create a pseudo-productivity trap, where work speed is initially fueled by technology but is gradually destroyed by employee burnout and mental exhaustion. Conversely, providing flexibility and work-life balance facilities without the support of reliable digital infrastructure will trigger technological frustration and operational inefficiency. Therefore, the combination of digital workplace as a provider of technological tools (job resources) and work-life balance as a maintainer of mental capacity (personal resources) creates a mutually complementary effect.

The key novelty of this research lies in the empirical verification of the integrative model using PLS-SEM methodology on a specific sample of developing communities experiencing a post-pandemic hybrid work transition. Unlike the majority of previous studies that tested these variables separately using simple linear regression analysis that fails to capture measurement error, this study evaluates all constructs simultaneously through a systemic approach. These findings address the research gap regarding how the digital work ecosystem and work-life balance interact to determine performance in developing urban areas like Bogor. Practically, this research offers strategic implications for HR managers and organizational leaders in West Java: future HR governance formulations must be oriented toward creating a human-centered digital workplace. This strategy requires organizations to not only invest budgets in adopting collaborative software licenses and cloud systems but also develop supporting regulations such as establishing the right to disconnect, limiting virtual work communication hours, and establishing a structured mental wellness program. This integrative approach will ensure employee performance that is not only quantitatively high but also superior and sustainable in the long term.

CONCLUSION

Based on the results of the structural analysis and the discussion outlined, this study concludes that digital workplace and work-life balance are empirically proven to act as determining antecedents that have a positive and significant influence on improving employee performance in the Bogor area. The implementation of a reliable and integrated digital workplace provides a

dominant contribution in driving productivity, accuracy of task completion, and employee adaptive capabilities. The reliability of the collaborative network system and the formation of an efficient digital culture are proven to be key driving factors that simplify operational workflows, minimize geographic barriers for commuter workers in the metropolitan buffer zone, and accelerate the achievement of organizational targets.

In line with this, work-life balance has been shown to have a nearly equal and significant influence on sustaining employee performance. Employees' success in mitigating inter-role conflict and creating enrichment between their work and personal lives (work-personal life enhancement) is key to maintaining their emotional stability and cognitive capacity. Fulfilling psychological recovery time and work-life balance act as an accumulation of personal resources that prevent burnout, allowing employees to maintain focus, dedication, and high work engagement.

Simultaneously, the integration of digital workplace as a job resource and work-life balance as a personal resource forms a solid predictive framework for explaining employee performance variance with strong predictive relevance. These findings emphasize that optimizing work productivity in the era of digital transformation cannot be achieved in isolation. The provision of sophisticated technological infrastructure must be aligned with humanistic HR management policies to create employee performance that is not only quantitatively high but also superior and sustainable.

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