Digital employee experience as a strategic driver of engagement and performance: Evidence from the airline industry

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Abstract: In the era of digital transformation, employees' digital experiences have become a critical determinant of organizational success; however, empirical research examining digital employee experience as a strategic resource driving engagement and performance remains limited, particularly in high-pressure service sectors such as the airline industry. Grounded in Social Cognitive Theory (SCT) and the Job Demands–Resources (JD–R) model, this study investigates the effects of digital employee experience and organizational culture on employee well-being and engagement, and subsequently on employee performance. Using a quantitative approach, data were collected from 308 employees of a national flag carrier airline operating in Indonesia across multiple directorates and analyzed using Structural Equation Modeling–Partial Least Squares (SEM–PLS). The structural model was specified as a Type I (reflective–reflective) higher-order construct (HOC) to capture construct multidimensionality. The findings reveal that digital employee experience and organizational culture significantly enhance employee well-being, which subsequently improves employee performance. However, digital employee experience does not significantly affect employee engagement, whereas organizational culture exerts a significant positive effect on engagement. Both well-being and engagement partially mediate these relationships, highlighting their pivotal roles.

1. Introduction

Digital transformation has fundamentally reshaped how employees interact with work, technology, and organizations, positioning digital employee experience as a critical determinant of organizational outcomes [1, 2]. In complex, technology-intensive sectors such as the airline industry, employees operate within digitally mediated environments that demand precision, safety, and continuous coordination [3]. The post-COVID-19 acceleration of digital tools, including digital training, automated scheduling, and virtual collaboration, has further intensified this reliance [4]. As airlines transition from crisis recovery to sustainable performance, balancing technological efficiency with employee engagement and well-being has become a strategic imperative [5].

Existing literature demonstrates that employee engagement and performance are driven by job resources that support motivation, well-being, and self-efficacy [6-8]. Recent studies conceptualize digital employee experience as a strategic resource that enhances usability, learning, and collaboration, thereby strengthening engagement and performance [2, 9]. Within the aviation sector, research has predominantly focused on customer experience and operational efficiency, with limited attention to employees' digital experiences [10, 11]. Consequently, empirical evidence on digital employee experience in high-demand airline contexts, particularly in emerging economies, remains scarce.

Despite extensive digital investment, organizations frequently experience inconsistent improvements in employee engagement and performance, indicating a critical disconnect between

technology adoption and human outcomes. Existing research on the digital employee experience remains fragmented, with mixed empirical findings and limited theoretical integration, often neglecting that the digital environment functions simultaneously as cognitive stimuli and job resources [2, 9]. This gap is consequential because, in safety-critical and service-intensive industries such as aviation, ineffective digital experiences can impair well-being, weaken engagement, and jeopardize operational reliability. Integrating social cognitive theory and the job demands–resources model is potentially able to explain how digital work environments translate into sustained engagement and performance.

The context of this study is a national flag carrier company in Indonesia, which has undergone extensive digital and organizational transformation in recent years [12]. In this industry, initiatives such as digital crew management, paperless cockpit documentation, HR self-service systems, and online learning platforms have significantly altered employees' daily work environments [13]. As a full-service airline operating under strict regulatory and operational standards, the organization provides a rich empirical setting to analyze how digital experiences influence employee motivation and performance. This context also addresses the underrepresentation of emerging-market data in global engagement and well-being research, adding cultural and organizational diversity to existing knowledge dominated by Western-centric studies.

This study is significant in advancing understanding of digital employee experience as a strategic driver of engagement and performance in technology-intensive service contexts. It offers originality by integrating Social Cognitive Theory and the Job Demands–Resources model to position digital employee experience as both a cognitive and motivational resource, and it is empirically tested in Indonesia's airline industry. The paper speaks to scholars of organizational behavior and digital work, while offering practical value to airline executives, HR leaders, and digital transformation managers by providing evidence-based insights for designing human-centered digital systems that enhance well-being, engagement, and sustainable performance.

2. Theoretical Framework

2.1. Social Cognitive Theory (SCT)

Social cognitive theory (SCT), introduced by Bandura [8], provides a foundational perspective on how human behaviour is shaped by reciprocal interactions among personal, behavioural, and environmental factors. Within organizational contexts, SCT posits that individuals do not merely react to environmental stimuli but actively interpret and learn from them through cognitive and social processes. This dynamic interplay, known as triadic reciprocal causation, implies that environmental conditions, such as workplace design or digital systems, influence behaviour indirectly through personal cognition, self-efficacy, and motivation [14, 15]. From this theoretical lens, digital transformation within organizations does not simply automate work but redefines the learning and behavioural landscape of employees [1, 9].

2.2. Job Demands–Resources (JD–R) Model

The Job Demands–Resources (JD–R) Model, introduced by Bakker and Demerouti [7], complements SCT by explaining how work characteristics influence motivation and well-being. The JD–R model categorizes all aspects of work into job demands (elements that require sustained effort and cause strain) and job resources (elements that help achieve goals, reduce demands, or stimulate growth). When job resources outweigh job demands, employees experience greater motivation and engagement, leading to improved performance and reduced burnout [16]. Digital systems that simplify tasks, facilitate learning, and provide instant access to information act as enablers of engagement by making work more efficient and rewarding [5]. Furthermore, the availability of supportive digital tools can mitigate job demands such as time pressure, information overload, or physical constraints, thereby safeguarding employee well-being [17, 18].

2.3. Digital Employee Experience

The concept of digital employee experience has emerged as an evolution of employee experience in response to digital transformation. It refers to the total perception employees have of their interactions with digital technologies, platforms, and tools that enable their work [1, 9]. According to SCT, digital employee experience influences behaviour by shaping employees' beliefs in their ability to use technology effectively (self-efficacy). A supportive digital environment strengthens confidence, learning, and adaptability [8, 15]. In the aviation industry, where technology permeates flight operations, maintenance, logistics, and passenger services, the digital employee experience is an essential enabler of operational excellence. In the airline industry, digital interfaces, from crew management applications to HR self-service systems, are not merely tools but integral parts of their daily workflow that shape engagement and performance outcomes.

2.4. Cultural Organization

Organizational culture refers to the values, norms, and practices within a company that shape how employees work and interact [19]. A strong organizational culture has been shown to enhance employee engagement by fostering a work environment in which employees feel valued and motivated [20]. Similarly, Brenyah and Obuobisa-Darko [21] reported a significant relationship between organizational culture and employee engagement, noting that organizations with supportive and collaborative cultures tend to exhibit higher engagement levels than those with hierarchical or bureaucratic structures. Furthermore, Rathi and Srivastava [22] highlighted that a positive organizational culture contributes to employee well-being, which in turn promotes higher job satisfaction, lower stress, and better mental health outcomes. These findings imply that organizational interventions emphasizing supportive work values, norms, and practices can be an effective strategy to strengthen employee engagement.

2.5. Employee Wellbeing

Employee well-being encompasses an individual's holistic sense of health, satisfaction, and functioning within the workplace, including physical, psychological, and social dimensions [23, 24]. Within the JD–R model, well-being is a critical outcome of the motivational process triggered by job resources. When employees have access to sufficient resources, such as supportive technologies, clear communication, and collaborative environments, their stress levels decrease, while positive affect and engagement increase [25]. From an SCT perspective, well-being emerges when individuals perceive alignment between their environment, personal capabilities, and work expectations. Positive digital experiences contribute to this alignment by reducing uncertainty and increasing perceived control over work demands. In digitalized organizations, well-being has become a key performance driver. Studies by da Costa and Loureiro [26] and Pratiwi and Davina [27] highlight that well-being mediates the relationship between technological adaptation and engagement. Employees who perceive digital tools as empowering are more likely to experience lower stress and greater fulfilment, enabling them to sustain engagement even under demanding conditions.

2.6. Employee Engagement

Employee engagement is defined as a positive, fulfilling, work-related state characterized by vigour, dedication, and absorption [28, 29]. It reflects the emotional and cognitive investment employees bring to their roles and is widely recognized as a predictor of productivity, retention, and organizational performance. Within the JD–R framework, engagement is the central mediating mechanism through which job resources, such as digital employee experience and well-being, translate into enhanced performance. Contemporary research extends this understanding by acknowledging that engagement is increasingly shaped by digital interactions. Studies by Moganadas and Goh [2] and Haddon [17] indicate that technology-mediated collaboration and real-time feedback systems enhance engagement by providing autonomy and recognition. However, excessive connectivity and digital overload may reduce

engagement if not managed properly [30]. Therefore, achieving engagement in digital workplaces requires a balance between technological efficiency and human-centred design.

2.7. Employee Performance

Employee performance represents the degree to which an employee effectively fulfils job responsibilities and contributes to organizational objectives [31]. According to the JD–R model, engaged employees are more likely to demonstrate proactive behaviour, persistence, and creativity, which translate into superior performance outcomes [29]. From the SCT lens, performance reflects learned behaviours and self-regulated effort guided by self-efficacy and feedback mechanisms [14]. In airline organizations, employee performance holds strategic significance because operational safety, customer satisfaction, and service quality are heavily dependent on individual reliability and engagement. Enhancing performance thus requires not only skill development but also psychological and digital enablers that sustain motivation. Collectively, these constructs form a coherent model in which digital employee experience acts as a strategic antecedent influencing employee wellbeing and engagement, which subsequently drives employee performance. The following section formulates hypotheses that operationalize these relationships.

This study synthesizes social cognitive theory and the job demands–resources model into a unified framework explaining how digital environments shape employee outcomes through psychological mechanisms (Figure 1). It provides a comprehensive basis for empirical testing in digital transformation in the context of a national aviation company in Indonesia.

2.8. Hypothesis Development

Digitalization has transformed the way employees interact with work, influencing not only efficiency but also psychological health. According to SCT, such environments enhance self-efficacy and positive affect, both of which are core drivers of well-being [8, 15]. Digital employee experience contributes to engagement by enhancing autonomy, instant feedback, and collaboration through digital platforms [2]. SCT posits that digital environments shape behavioural motivation through self-efficacy: employees who feel competent with technology are more likely to engage proactively in their tasks. Within the JD–R framework, digital employee experience functions as an intrinsic motivator, stimulating vigour, dedication, and absorption by enriching work processes [7]. Thus, it is expected to influence both employee well-being (by reducing stress and enhancing satisfaction) and employee engagement (by boosting motivation and involvement).

H_1: Digital employee experience has a positive and significant effect on employee well-being.

H_2: Digital employee experience has a positive and significant effect on employee engagement.

Organizational culture serves as a key resource within an organization, providing a support system, fostering equity, creating meaning, and ensuring psychological safety. According to the JDR model, a supportive culture can alleviate emotional and relational demands, such as conflict, uncertainty, and social pressure. At the same time, it enhances social resources like coworker support and effective leadership, which ultimately contribute to improved employee well-being [7, 16]. From an SCT perspective, culture acts as a framework of norms and social reinforcement that shapes employees' self-efficacy, outcome expectations, and social learning through organizational role models [14]. Research has established connections between organizational culture and various work behaviours and organizational outcomes [21], including a notable relationship with employee engagement. Recent studies have further linked organizational culture to elements of employee engagement and the conditions that foster it [19, 22].

H_3: Organizational culture has a positive and significant effect on employee well-being.

H_4: Organizational culture has a positive and significant effect on employee engagement.

Employee well-being provides the emotional energy that fuels engagement [32]. From an SCT viewpoint, positive affect enhances intrinsic motivation and perseverance, strengthening employees'

willingness to engage deeply in their tasks. Empirical studies have consistently shown that well-being predicts engagement across industries [26, 27]. Accordingly:

   H5: Employee well-being has a positive and significant effect on employee engagement.

When employees feel physically and psychologically well, they are more likely to invest cognitive and emotional resources into their work [24, 33]. Engaged employees exhibit higher energy, focus, and commitment, translating into superior individual and organizational outcomes [29, 34]. In the JD–R model, engagement serves as the motivational bridge linking job resources to performance. SCT similarly asserts that self-regulated, engaged individuals display stronger persistence and problem-solving behaviours [14]. In the airline industry, where task accuracy and coordination are critical, engagement contributes directly to safety, service quality, and efficiency [17]. Therefore:

   H6: Employee well-being has a positive and significant effect on employee performance.
   H7: Employee engagement has a positive and significant effect on employee performance.
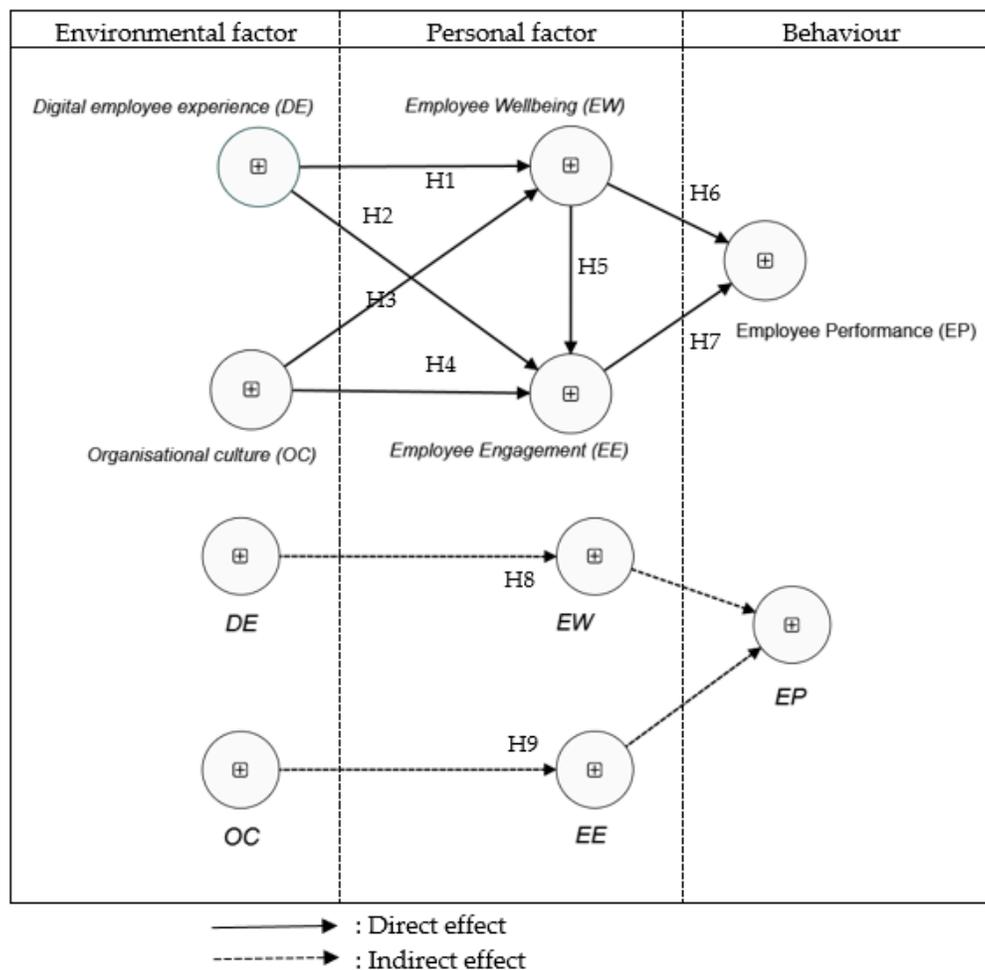
Figure 1.
Conceptual framework.

Beyond their direct effects, digital employee experience may also influence performance indirectly through its effects on well-being and engagement. A supportive digital environment enhances well-being, thereby increasing engagement and ultimately improving performance. This multi-stage mechanism integrates SCT's emphasis on environmental learning with JD–R's motivational process.

Prior studies by Gheidar and ShamiZanjani [9] and Moganadas and Goh [2] suggest that digital systems foster engagement and performance by promoting psychological comfort and satisfaction. Therefore, this study posits that well-being and engagement act as sequential mediators linking Digital employee experience to performance.

H₈: *Digital employee experience indirectly affects employee performance through employee well-being.*

H₉: *Organizational Culture indirectly affects employee performance through employee engagement.*

3. Materials and Methods

3.1. Research Design and Data Collection

This study adopts a quantitative explanatory research design testing causal relationships among digital employee experience, organizational culture, employee well-being, employee engagement, and employee performance. This research was conducted in Jakarta, Indonesia, using a cross-sectional survey design to collect data from employees of a national flag carrier airline operating in Indonesia. Data were collected using a self-administered online questionnaire, with respondents recruited via convenience sampling, between March and May 2025. Before distributing the questionnaire, a pilot test involving 30 employees was conducted to assess the clarity, reliability, and contextual relevance of the measurement items. Participation was voluntary, and respondents were informed about the research purpose, confidentiality, and data usage.

3.2. Sample and Population

From a total population of 1,341 employees at the central office in Jakarta, a sample of 340 respondents was obtained. Of these, 308 responses were deemed usable, representing six directorates (see Table 2). This sample size exceeds the minimum requirement for a 5% margin of error at a 95% confidence level (Krejcie and Morgan, 1970).

The survey respondents comprised 166 men (54%) and 142 women (46%). Regarding age distribution, 116 respondents (37.7%) were aged 22–33 years, 157 respondents (51.0%) were aged 34–45 years, and 35 respondents (11.4%) were aged 46–57 years. In terms of educational attainment, the majority of respondents held a bachelor's degree (221 individuals; 71.8%), followed by those with a master's degree (23 individuals; 23.1%). A smaller proportion of respondents had completed a diploma (13; 4.2%), whereas only a few had a high school qualification (3; 1.0%). With respect to employment status, 262 respondents (85%) were permanent employees, whereas 46 respondents (15%) were employed on a contract basis. Concerning job positions, the largest group consisted of staff members (147 respondents; 48%), followed by department heads (79; 26%), division heads (73; 24%), and group heads (9; 3%). The distribution of respondents by length of service indicated that 100 respondents (32.5%) had 0–7 years of service, 158 respondents (51.3%) had 8–15 years, 26 respondents (8.4%) had 16–23 years, 13 respondents (4.2%) had 24–31 years, and 11 respondents (3.6%) had 32–39 years of service

Table 1.
The representative sample in six directories of the company.

No.	Directories	Population (N)	Sample Size (n)
1	Engineering	99	23
2	Finance	112	26
3	Human Capital & Corporate Services	176	40
4	Commerce	575	132
5	Operation	245	56
6	Office of the CEO	134	31
Total		1,341	308

3.3. Measurement

The digital employee experience (DE) was measured using the framework of Gheidar and ShamiZanjani [9], comprising three dimensions: (i) digital training availability, (ii) technology accessibility, and (iii) ease of use of digital tools, each measured with three items. The organizational culture (OC) was adapted from Bauerle et al. [35] and was operationalized through five dimensions: (i) organizational values, (ii) inclusivity and diversity, (iii) leadership practices, (iv) social support among employees, and (v) cultural alignment with organizational strategy, each measured with three items. Employee well-being (EW) was measured using the multidimensional framework developed by Pradhan and Hati [36], consisting of four dimensions: (i) social well-being, (ii) psychological well-being, (iii) subjective well-being (each measured with three items), and (iv) workplace well-being (measured with four items). Employee engagement (EE) was measured based on the Utrecht Work Engagement Scale, developed by Schaufeli [16], comprising three dimensions: (i) vigour, (ii) dedication, and (iii) absorption, each measured with three items. Employee performance (EP) was measured using the framework proposed by Ramdani et al. [37] encompassing three dimensions: (i) task performance, (ii) contextual performance, and (iii) counterproductive work behaviour, each measured with three items.

3.4. Data Analysis

The hypotheses were tested by the Partial Least Squares-Structural Equation Modelling (PLS-SEM) technique using SmartPLS 4.1.06 software [38]. The evaluation of PLS-SEM referred to the procedures of Hair et al. [39], Hanafiah [40], and Sarstedt et al. [41]. The structural equation model developed in this study is a higher-order construct, commonly called a hierarchical component model (HCM), classified as Type I (reflective-reflective). This study uses the embedded two-stage approach of model evaluation approach, which is more widely used in management literature than repeated indicators [42-44]. This approach has two stages: the first is to evaluate the measurement model at the Lower Order Constructs (LOCs) level and to store the resulting construct scores. In the second stage, the construct scores produced in the first stage are used as a single-item indicator in evaluating the measurement model and structural model at the higher-order construct (HOC) level [42, 45].

4. Results

In the first stage of evaluation, we assess the measurement model for the LOCs. As shown in Table 2, all items have loadings above 0.70, indicating indicator reliability. All composite reliability (CR) values are greater than 0.70, supporting internal consistency reliability. All average variance extracted (AVE) values for the measured constructs exceed 0.50, establishing convergent validity. All heterotrait-monotrait ratio of correlations (HTMT) values are below 0.85, establishing discriminant validity and thus meaning that all reflective constructs exhibit stronger relationships with their own indicators than with those of any other construct in the PLS path model. The evaluation in this stage stores the construct scores provided by SmartPLS to be used as indicators for HOCs in the next stage (i.e., three construct scores for digital employee experience, five construct scores for organizational culture, four construct scores for employee wellbeing, three construct scores for employee engagement, and three construct scores for employee performance).

In the second stage of evaluation, we assess the measurement model for the HOCs. As seen in Table 3, all items demonstrate factor loadings above 0.70, indicating satisfactory indicator reliability. Convergent validity, internal consistency reliability, and discriminant validity (HTMT values outlined in Table 4) have all been met, thereby meeting the standard for evaluating model measurements at the HOC level. Subsequently, we assess the structural model for the HOCs. All VIF values are below the conservative threshold of 3.3, suggesting that multicollinearity is not a concern among the HOC indicators.

Table 2.
The outer model evaluation at the lower-order constructs (LOCs).

Latent Variable (LOCs)	Manifest Variable (items)	Indicator Reliability	Convergent Validity	Internal Consistency Reliability	Discriminant Validity
		Factor Loading	AVE	CR	HTMT
		>0.70	>0.50	>0.70	<0.85 (?)
DE1: Digital training availability	DE1.1	0.922			
	DE1.2	0.928	0.863	0.921	Yes
	DE1.3	0.936			
DE2: Technology accessibility.	DE2.1	0.847			
	DE2.2	0.856	0.668	0.763	Yes
	DE2.3	0.743			
DE3: Ease of use of digital tools	DE3.1	0.869			
	DE3.2	0.862	0.746	0.831	Yes
	DE3.3	0.861			
OC1: Organizational values	OC1.1	0.868			
	OC1.2	0.899	0.791	0.869	Yes
	OC1.3	0.901			
OC2: Inclusivity and diversity	OC2.1	0.778			
	OC2.2	0.867	0.705	0.792	Yes
	OC2.3	0.870			
OC3: Leadership practices	OC3.1	0.915			
	OC3.2	0.906	0.805	0.880	Yes
	OC3.3	0.870			
OC4: Social support among employees	OC4.1	0.864			
	OC4.2	0.931	0.812	0.888	Yes
	OC4.3	0.907			
OC5: Cultural alignment with organizational strategy	OC5.1	0.869			
	OC5.2	0.912	0.810	0.883	Yes
	OC5.3	0.919			
EW1: social wellbeing	EW1.1	0.916			
	EW1.2	0.924	0.839	0.904	Yes
	EW1.3	0.909			
EW2: Psychological well-being	EW2.1	0.782			
	EW2.2	0.838	0.668	0.757	Yes
	EW2.3	0.830			
EW3: Subjective well-being	EW3.1	0.815			
	EW3.2	0.893	0.682	0.776	Yes
	EW3.3	0.764			
EW4: Workplace well-being	EW4.1	0.845			
	EW4.2	0.871	0.669	0.854	Yes
	EW4.3	0.793			
	EW4.4	0.759			
EE1: Vigour	EE1.1	0.846			
	EE1.2	0.908	0.793	0.874	Yes
	EE1.3	0.916			
EE2: Dedication	EE2.1	0.884			
	EE2.2	0.920	0.781	0.862	Yes
	EE2.3	0.845			
EE3: Absorption	EE3.1	0.858			
	EE3.2	0.873	0.724	0.812	Yes
	EE3.3	0.821			
EP1: Task performance	EP1.1	0.856			
	EP1.2	0.880	0.7777	0.859	Yes
	EP1.3	0.907			
EP2: Contextual performance	EP2.1	0.863			
	EP2.2	0.890	0.763	0.845	Yes
	EP2.3	0.867			
EP3: Counterproductive work	EP3.1	0.827	0.734	0.822	Yes

Latent Variable (LOCs)	Manifest Variable (items)	Indicator Reliability	Convergent Validity	Internal Consistency Reliability	Discriminant Validity
		Factor Loading	AVE	CR	HTMT
		>0.70	>0.50	>0.70	<0.85 (?)
behaviour	EP3.2	0.873			
	EP3.3	0.869			

Table 3.
The outer model evaluation at the higher-order constructs (HOCs).

Latent variable (HOCs)	Manifest Variable (LOCs)	Indicator reliability	Convergent Validity	Internal Consistency Reliability	Discriminant Validity
		Factor Loading	*AVE*	*CR*	*HTMT*
		>0.70	*>0.50*	*>0.70*	*<0.85 (?)*
Digital employee experience (DE)	DE1	0.705			
	DE2	0.904	0.694	0.798	Yes
	DE3	0.877			
Organizational culture (OC)	OC1	0.846			
	OC2	0.847			
	OC3	0.769	0.685	0.890	Yes
	OC4	0.803			
	OC5	0.871			
Employee Well-being (EW)	EW1	0.833			
	EW2	0.859			
	EW3	0.888	0.749	0.892	Yes
	EW4	0.880			
Employee Engagement (EE)	EE1	0.889			
	EE2	0.899	0.703	0.828	Yes
	EE3	0.714			
Employee Performance (EP)	EP1	0.899			
	EP2	0.920	0.806	0.887	Yes
	EP3	0.874			

Table 4.
HTMT of Higher Order Constructs.

	DE	EE	EP	EW	OC
DE					
EE	0.508				
EP	0.437	0.845			
EW	0.596	0.878	0.663		
OC	0.646	0.757	0.606	0.847	

The results (Table 5) show that digital employee experience significantly affects employee well-being ($\beta = 0.130$, $p < 0.01$), but has no significant direct effect on employee engagement ($\beta = -0.010$, $p > 0.01$), thus supporting H1 and not supporting H2. Organizational culture exerts statistically significant direct effects on both employee well-being ($\beta = 0.658$, $p < 0.01$) and employee engagement ($\beta = 0.190$, $p < 0.01$), thus supporting H3 and H4. Employee well-being has a significant direct effect on employee engagement ($\beta = 0.612$, $\rho < 0.01$). The other findings show that employee well-being ($\beta = 0.103$, $\rho < 0.01$) and employee engagement ($\beta = 0.651$, $\rho < 0.01$) have a significant direct effect on employee performance, thus supporting H6 and H7. The parameters were estimated using a 95% percentile confidence interval obtained through bootstrapping with 10,000 subsamples in SmartPLS.

The results indicate significant indirect effects of digital employee experience on employee performance via employee well-being (β = 0.399, p < 0.01) and of organizational culture on employee performance via employee engagement (β = 0.124, p < 0.01), thereby supporting H8 and H9.

Table 5.
The structural model evaluation (direct and indirect effect).

Pathways	Path coefficient	CI			Significant (?)
		2.5%	97.5%	p-value	
Endogenous variable: employee wellbeing (R² = 0.581 CI [0.496;0.645])					
DE→EW	0.130	0.030	0.232	0.011	Yes
OC→EW	0.685	0.597	0.770	0.000	Yes
Endogenous variable: employee engagement (R² = 0.579 CI [0.430;0.620])					
DE→EE	–0.010	–0.008	0.045	0.829	No
OC→EE	0.190	0.078	0.304	0.001	Yes
EW→EE	0.612	0.503	0.732	0.000	Yes
Endogenous variable: employee performance (R² = 0.535 CI [0.493;0.655])					
EW→EP	0.103	0.496	0.725	0.041	Yes
EE→EP	0.651	0.542	0.758	0.000	Yes
Indirect effect of the endogenous variable, employee performance					
DE→EW→EP	0.399	–0.061	0.055	0.000	Yes
OC→ EE→EP	0.124	0.050	0.205	0.002	Yes

Note: DE = Digital employee experience; physical space; OC = Organizational culture; EW = Employee wellbeing; EE = Employee engagement; EP = Employee performance; CI= 95% bootstrap confidence interval.

In assessing the model's in-sample fit, we found that the R2 values of all endogenous variables, i.e., employee well-being, employee engagement, and employee performance, are 0.581, 0.579, and 0.535, respectively (Table 5; Figure 2). All values are more than 0.3, which is considered moderately acceptable for this study [46]. In assessing the model's ability to predict the target construct, or out-of-sample predictive power, we used the PLSpredict procedure of Shmueli et al. [47]. With 10 folds and 10 repetitions, all Q2predict values for all manifest variables are above zero (Table 6), indicating that the model has predictive relevance. Since the visual inspection of PLS-SEM errors suggests that the distribution is not highly non-symmetric, we use root mean square error (RMSE) values to compare PLS-SEM's model predictive power with the linear model (LM), as acknowledged by Shmueli et al. [47]. Seven out of ten indicators have smaller predictive errors for PLS-SEM-based prediction (Table 6), yielding medium predictive power.

Table 6.
Predictive power assessment for all manifest variables.

| Indicator	Q²$_{predict}$	RMSE$_{PLS}$	RMSE$_{LM}$	Δ RMSE$_{PLS-LM}$
EW1: Social wellbeing	0.403	0.775	0.724	0.051
EW2: Psychological wellbeing.	0.384	0.787	0.789	–0.002
EW3: Subjective well-being	0.375	0.793	0.810	–0.017
EW4: Workplace well-being	0.542	0.679	0.689	–0.010
EE1: Vigour	0.351	0.808	0.837	–0.029
EE2: Dedication	0.337	0.817	0.811	0.006
EE3: Absorption	0.163	0.917	0.937	–0.020
EP1: Task performance	0.198	0.898	0.905	–0.007
EP2: Contextual performance	0.285	0.849	0.838	0.011
EP3: Counterproductive work behaviour	0.227	0.882	0.896	–0.014
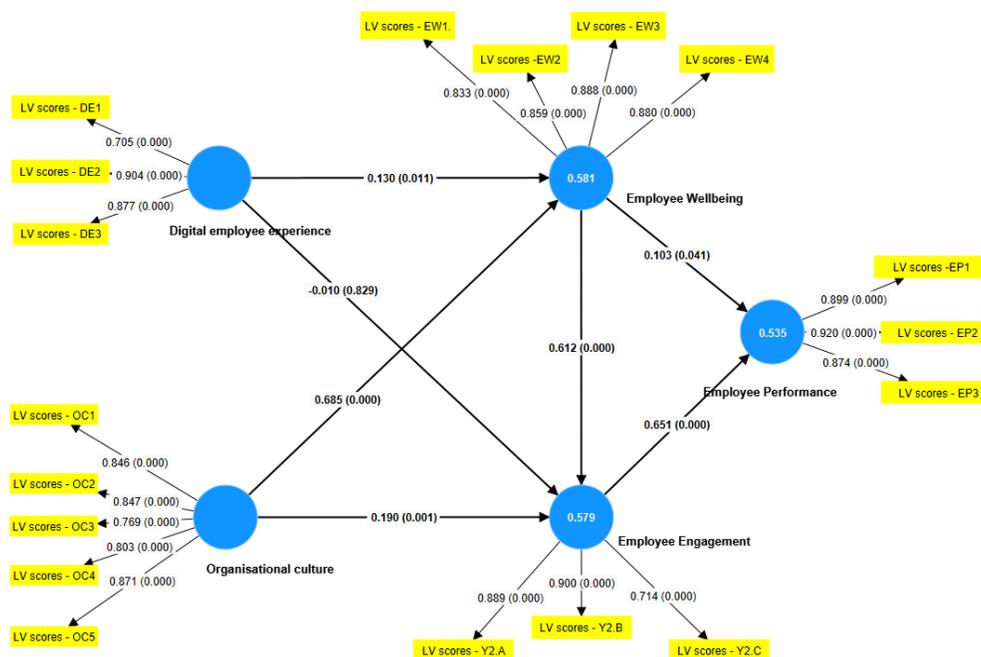
Figure 2.
Structural Model Evaluation of Higher Order Constructs.

5. Discussion

This study aimed to examine how digital employee experience and organizational culture function as strategic drivers of employee engagement and performance, with employee well-being serving as a key mediator. By integrating Social Cognitive Theory (SCT) and the Job Demands–Resources (JD–R) model, this approach provides a unified theoretical lens for explaining how digitally mediated work environments shape psychological and behavioural outcomes. Empirically tested within a national flag carrier airline operating in Indonesia, which is undergoing substantial digital and organizational transformation, the study addresses a critical gap in emerging-market evidence, where employee-centred digital experience remains underexplored.

Results show that digital employee experience significantly improves employee well-being (H1), but its direct effect on employee engagement is not significant (H2). Organizational culture positively affects both well-being (H3) and engagement (H4), supporting prior findings on the motivational and social reinforcement effects of supportive cultures [20-22]. Employee well-being significantly drives engagement (H5) and performance (H6), while engagement also enhances performance (H7), consistent with JD–R and SCT predictions [8, 34]. The non-significant direct effect of digital employee experience on engagement is consistent with previous research suggesting a sequential process, in which digital tools first strengthen psychological states before fostering behavioural investment [9]. Indirect effects confirm the mediating roles of well-being and engagement (H8–H9), highlighting cognitive–motivational pathways linking digital and cultural resources to performance outcomes.

The findings demonstrate that supportive digital systems and a strong organizational culture enhance engagement and well-being, which translate into superior performance, highlighting the dual cognitive and motivational role of digital resources. This contribution advances literature on employee experience, engagement, and performance in high-demand service contexts while offering actionable insights for human-centred digital workplace design. These findings have important theoretical and practical implications.

Theoretically, the study extends SCT and the JD–R framework by showing that digital employee experience and organizational culture act as both cognitive and motivational resources, influencing

well-being, engagement, and performance in high-demand, technology-intensive service contexts in the aviation industry. By providing empirical evidence from an emerging-market airline, the study also addresses the Western-centric bias in employee engagement and digital work literature [1, 2]. In practice, airline executives and HR leaders should implement human-centred digital interventions that improve usability, learning, and collaboration, and foster supportive organizational cultures, to enhance well-being, engagement, and performance. Strategic alignment of technology and culture can reduce burnout, foster psychological vitality, and achieve sustainable operational outcomes, underscoring the need for integrated digital and organizational strategies that balance efficiency with employee-centric design in modern workplaces.

5.1. Limitations and Future Research

Despite its contributions, this study has limitations. First, the cross-sectional design restricts causal inferences; longitudinal or experimental research could provide stronger evidence of temporal effects. Second, the study focuses on a single airline in Indonesia, which may limit generalizability to other industries or cultural contexts. Future research could examine multiple airlines or service sectors across emerging markets to enhance external validity. Third, while the study integrates SCT and JD–R frameworks, other theoretical perspectives, such as Self-Determination Theory or Motivational Theory, may further explain employee motivation and digital adoption.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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