

Digital Transformation, HR Upskilling, and Digital Performance: The Moderating Role of Individual Readiness

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ABSTRACT

Digital transformation has become essential for competitiveness; however, its effectiveness depends on employees' digital competencies and readiness for change. This study examines the effects of digital transformation and HR upskilling on employees' digital performance and investigates the moderating role of individual readiness in the hospitality industry in Bali, Indonesia. A quantitative explanatory approach was employed using survey data collected from 200 hospitality employees. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results indicate that digital transformation significantly improves digital performance ($b = 0.412$, $p < 0.001$), while HR upskilling also has a positive and significant effect ($b = 0.356$, $p < 0.001$). Furthermore, individual readiness strengthens the relationship between digital transformation and digital performance ($b = 0.167$, $p = 0.009$) as well as the relationship between HR upskilling and digital performance ($b = 0.142$, $p = 0.035$). These findings highlight that technological investment should be accompanied by continuous competency development and employee readiness to maximize digital performance, while offering theoretical and managerial insights for effective digital transformation strategies in hospitality organizations.

Keywords: Digital Performance; Digital Transformation; Hospitality Industry; HR Upskilling; Individual Readiness

JEL Classification: M12, M15, M54, O33

INTRODUCTION

The rapid advancement of digital technologies has fundamentally transformed business operations across industries, making digital transformation a strategic priority for organizations seeking to enhance competitiveness and long-term sustainability. Digital transformation extends beyond the adoption of new technologies; it involves the integration of digital capabilities into organizational strategies, operational processes, and employee activities to create greater value and improve organizational performance (Jia et al., 2024). In the hospitality industry, where service quality, operational efficiency, and customer experience are closely interconnected, digital transformation has become increasingly important in responding to evolving customer expectations and market competition. Hotels, villas, restaurants, and tourism service providers are progressively adopting digital reservation systems, cloud-based property management systems, mobile applications, self-service technologies, artificial intelligence, and customer relationship management platforms to improve service delivery and operational effectiveness (Shebeen et al., 2024).

The successful implementation of digital technologies depends on employees' ability to utilize them effectively, making digital performance a key indicator of organizational success. Consequently, digital performance has emerged as an essential indicator of organizational success in the digital era because it reflects employees' capability to perform work efficiently through digital technologies while supporting organizational innovation and service quality (Komala & Firdaus, 2023). Organizations with strong employee digital capabilities are more adaptive and competitive.

Despite the increasing adoption of digital technologies, reports indicate that many organizations continue to experience a digital capability gap between implemented technologies and employees' ability to utilize those technologies effectively (Mollah et al., 2024). This phenomenon frequently occurs because digital transformation initiatives are implemented without proportional investment in developing employee competencies (Jamil, 2024). In the hospitality sector, this challenge becomes even more critical because service delivery depends heavily on employees' interactions with guests through technology-enabled systems (Binsar et al., 2024).

To address this challenge, HR upskilling has become an increasingly important organizational strategy. HR upskilling enables employees to acquire new digital competencies, improve technological proficiency, and adapt to continuously changing digital work environments (Gkika et al., 2025; Jara-Amézaga, 2023). Continuous training programs not only improve employees' technical knowledge but also strengthen their confidence in utilizing digital technologies to perform daily operational tasks. Consequently, organizations investing simultaneously in digital technologies and employee competency development are more likely to achieve superior digital performance.

However, previous studies have also demonstrated that technological investment and employee training alone are insufficient to guarantee successful digital transformation. Employees frequently respond differently to organizational change depending on their psychological readiness to accept, support, and engage with new technologies (Hendijani & Jaszus, 2024; Siddiqui et al., 2024). Employees who are psychologically prepared for change generally exhibit higher motivation to learn, lower resistance to technological innovation, and greater willingness to modify established work routines (Putra et al., 2026). Conversely, employees with low readiness often experience technological anxiety, resistance to change, and limited utilization of newly implemented

digital systems, thereby reducing the effectiveness of organizational digital transformation initiatives.

Existing literature has extensively examined digital transformation, HR competency development, and organizational performance across manufacturing, banking, healthcare, and technology-intensive industries. Nevertheless, empirical evidence focusing specifically on the hospitality industry remains relatively limited, particularly in developing economies such as Indonesia (Alshagawi & Mabkhot, 2024; Gana et al., 2024). More importantly, the moderating role of individual readiness has received relatively little empirical attention despite growing recognition that employees' psychological readiness may substantially influence the effectiveness of digital transformation initiatives (Hasani et al., 2024; Martadiani et al., 2026; Sultana et al., 2025).

Three research gaps remain: limited integration of digital transformation and HR upskilling, limited focus on digital performance in hospitality, and limited evidence on the moderating role of individual readiness. Accordingly, this study aims to examine the direct effects of digital transformation and HR upskilling on employee digital performance while simultaneously investigating the moderating role of individual readiness within hospitality organizations in Bali, Indonesia. Unlike previous studies that have generally examined these variables independently, this research integrates technological, human resource, and behavioral perspectives into a single conceptual model. Therefore, the study offers theoretical contributions by extending the literature on digital transformation through the inclusion of individual readiness as a moderating mechanism, while providing practical contributions for hospitality managers in designing integrated digital transformation strategies that simultaneously strengthen technological capability, employee competencies, and organizational readiness for sustainable digital performance.

LITERATURE REVIEW

Underpinning Theory

This study is grounded in the Technology–Organization–Environment (TOE) Framework, Human Capital Theory, and Readiness for Change Theory. These complementary theoretical perspectives provide a comprehensive explanation of how technological capability, human resource development, and employees' psychological readiness collectively influence digital performance in organizations.

The TOE Framework, proposed by Tornatzky and Fleischer (1990), explains that successful digital transformation is determined by the interaction of technological capability, organizational readiness, and environmental conditions. Within organizations, digital transformation is not merely the adoption of advanced technologies but also the capability to integrate digital systems into business processes, organizational routines, and strategic decision-making. Consequently, organizations require adequate technological infrastructure, supportive organizational resources, and an enabling environment to maximize the benefits of digital transformation.

Human Capital Theory, introduced by Becker (1964), argues that investments in employees' knowledge, skills, competencies, and training increase individual productivity and organizational performance. The theory views employees as strategic assets whose capabilities are enhanced through training and development. Therefore, Human Capital Theory provides an appropriate theoretical foundation for explaining the positive relationship between HR upskilling and digital performance.

Complementing these perspectives, Readiness for Change Theory emphasizes that employees' psychological readiness significantly determines the success of organizational change initiatives. Individual readiness reflects employees' beliefs, motivation, confidence, and willingness to adopt new technologies and modify existing work practices. Employees with higher readiness generally demonstrate greater acceptance of innovation, stronger learning motivation, and better adaptability to organizational change. Consequently, individual readiness strengthens the effectiveness of both digital transformation and HR upskilling in improving digital performance.

Collectively, these three theoretical perspectives provide a robust conceptual foundation for this study. The TOE Framework explains the organizational and technological dimensions of digital transformation, Human Capital Theory explains the importance of competency development through HR upskilling, and Readiness for Change Theory explains employees' psychological preparedness to embrace digital change. Together, these theories support the proposed relationships among digital transformation, HR upskilling, individual readiness, and digital performance in the hospitality industry.

Digital Transformation

Digital transformation refers to the strategic integration of digital technologies into organizational processes, business models, and service delivery to improve operational effectiveness and organizational competitiveness (Li et al., 2023). It extends beyond technology adoption by fundamentally changing how organizations create value through digital innovation, automation, cloud computing, artificial intelligence, and data-driven decision-making (Jia et al., 2024).

Within the hospitality industry, digital transformation has become increasingly important because hotels, restaurants, and tourism businesses rely heavily on information systems to manage reservations, customer relationships, operational activities, and service quality. Digital technologies enable organizations to improve customer experience, accelerate service delivery, reduce operational costs, and enhance decision-making. Consequently, successful digital transformation contributes directly to organizational competitiveness and employees' ability to perform digital-based tasks efficiently (Mollah et al., 2024).

HR Upskilling

HR upskilling refers to continuous competency development activities that improve employees' knowledge, skills, and capabilities in responding to changing job requirements, particularly those associated with digital technologies (Lee & Hallak, 2020). Unlike traditional training, HR upskilling focuses on equipping employees with new competencies required to operate digital systems, analyze digital information, and collaborate effectively in technology-driven work environments.

Organizations increasingly recognize HR upskilling as a strategic investment because technological infrastructure alone cannot generate superior organizational performance without employees possessing adequate competencies. In the hospitality sector, upskilling programs commonly include digital reservation systems, customer relationship management applications, digital marketing platforms, cloud collaboration technologies, and cybersecurity awareness. These initiatives enable employees to improve work efficiency, reduce operational errors, and provide better customer service, thereby contributing to higher digital performance (Sarala et al., 2025).

Digital Performance

Digital performance represents employees' capability to utilize digital technologies effectively in completing work tasks, communicating, collaborating, solving problems, and supporting organizational objectives (Setia et al., 2013). Digital performance has become a strategic indicator because organizational success increasingly depends on employees' ability to integrate digital technologies into daily operational activities (Sitiari et al., 2026).

Employees demonstrating strong digital performance are generally characterized by high digital literacy, effective utilization of organizational information systems, rapid adaptation to technological changes, and greater productivity. Within hospitality organizations, digital performance contributes significantly to service quality, operational efficiency, customer satisfaction, and organizational competitiveness (Gontur et al., 2023).

Individual Readiness

Individual readiness refers to employees' psychological preparedness to accept, support, and participate in organizational change, particularly technology-related transformation (Hasani et al., 2024). It encompasses employees' confidence, motivation, willingness to learn, and belief that organizational change will produce beneficial outcomes.

Previous studies suggest that employees possessing higher readiness exhibit stronger acceptance of technological innovation, lower resistance to change, and greater motivation to improve their competencies (Sultana et al., 2025). Conversely, insufficient readiness frequently leads to technological anxiety, resistance, and ineffective utilization of organizational digital systems. Therefore, individual readiness is expected to strengthen the influence of digital transformation and HR upskilling on employee digital performance.

Hypotheses Development

Digital Transformation and Digital Performance

Digital transformation has become a strategic organizational capability that enables firms to redesign business processes, improve operational efficiency, and create superior customer value through the integration of digital technologies. Rather than representing the simple adoption of information technology, digital transformation involves comprehensive organizational changes in business models, work processes, and decision-making practices supported by digital innovation (Li et al., 2023). In the hospitality industry, digital transformation includes the implementation of cloud-based property management systems, digital reservation platforms, customer relationship management (CRM), mobile applications, artificial intelligence, and integrated communication systems that enhance service quality and operational effectiveness (Jia et al., 2024).

The successful implementation of digital transformation provides employees with greater access to information, facilitates collaboration, automates routine tasks, and improves organizational responsiveness. These improvements enable employees to perform digital-based tasks more accurately, efficiently, and productively, thereby strengthening employee digital performance (Komala & Firdaus, 2023). Previous empirical studies have consistently reported that organizations implementing digital transformation demonstrate higher employee productivity, stronger innovation capability, and improved organizational performance because digital technologies support faster decision-making and knowledge sharing (Hanandeh et al., 2024; Mollah et al., 2024).

Within hospitality organizations, where customer service quality largely depends on employees' ability to utilize digital systems, digital transformation is expected to play an even more critical role. Employees who are supported by integrated digital technologies can deliver faster services, improve communication with guests, reduce operational errors, and enhance overall service experiences. Therefore, digital transformation is expected to positively influence employee digital performance.

H1: Digital transformation has a positive and significant effect on employee digital performance.

HR Upskilling and Digital Performance

Human resource upskilling refers to continuous organizational efforts to enhance employees' knowledge, technical competencies, and digital capabilities to meet evolving job requirements. As digital technologies continue to transform organizational operations, employees are expected to acquire new competencies that enable them to operate digital systems effectively and adapt to rapidly changing technological environments (Lee & Hallak, 2020). HR upskilling, therefore, becomes an essential organizational strategy to ensure that technological investments generate optimal organizational benefits.

Previous studies have demonstrated that training programs focusing on digital competencies improve employees' confidence, technological proficiency, problem-solving ability, and work efficiency (Sarala et al., 2025). Employees who continuously participate in digital competency development programs are generally more capable of utilizing organizational information systems, digital communication platforms, and technology-based operational applications. Consequently, organizations investing in employee competency development tend to experience higher digital capability and superior organizational performance (Gkika et al., 2025).

Within the hospitality industry, HR upskilling includes training related to digital reservation systems, customer relationship management applications, digital marketing platforms, cloud-based collaboration systems, and data security practices. These competencies enable employees to provide faster services, improve operational accuracy, and respond more effectively to customers' needs. Accordingly, HR upskilling is expected to improve employee digital performance.

H2: HR upskilling has a positive and significant effect on employee digital performance.

Individual Readiness as a Moderator of Digital Transformation and Digital Performance

Although digital transformation provides organizations with advanced technological capabilities, its effectiveness ultimately depends on employees' willingness and readiness to adopt technological change. Readiness for Change Theory suggests that employees possessing higher psychological readiness demonstrate stronger acceptance of innovation, greater learning motivation, and lower resistance to organizational change (Hasani et al., 2024). Consequently, technological investments are more likely to produce positive outcomes when employees are psychologically prepared to utilize newly implemented systems.

Employees with high levels of individual readiness tend to perceive digital transformation as an opportunity for personal development rather than a threat to existing work practices. They are more willing to learn new technologies, experiment with digital applications, and integrate digital systems into their daily work activities. Conversely,

employees with lower readiness frequently experience uncertainty, technological anxiety, and resistance that reduce the effectiveness of digital transformation initiatives (Sultana et al., 2025).

Therefore, individual readiness is expected to strengthen the positive influence of digital transformation on employee digital performance because psychologically prepared employees can maximize the benefits provided by organizational digital technologies.

H3: Individual readiness positively moderates the effect of digital transformation on digital performance.

Individual Readiness as a Moderator of HR Upskilling and Digital Performance

The effectiveness of HR upskilling programs also depends on employees' readiness to learn, accept feedback, and continuously develop their competencies. Employees who demonstrate higher readiness generally possess stronger intrinsic motivation to participate in training activities, apply newly acquired knowledge, and improve their work performance. Consequently, training programs are expected to produce greater improvements in digital performance among employees with higher readiness.

Previous studies have suggested that psychological readiness facilitates learning effectiveness because employees become more actively engaged in competency development activities and are more willing to apply new knowledge in workplace settings (Hasani et al., 2024; Sultana et al., 2025). In contrast, employees with low readiness may participate in training programs without fully adopting newly acquired competencies into their daily work practices. As a result, organizational investments in HR upskilling may not generate optimal performance improvements.

Within hospitality organizations, where continuous adaptation to technological innovation is essential for maintaining service quality, employees' readiness becomes an important condition determining the effectiveness of competency development programs. Therefore, individual readiness is expected to strengthen the positive relationship between HR upskilling and employee digital performance.

H4: Individual readiness positively moderates the effect of HR upskilling on digital performance.

Conceptual Framework

Based on the TOE Framework and Readiness for Change Theory, this study proposes a conceptual framework to explain the relationships among digital transformation, HR upskilling, individual readiness, and employee digital performance in the hospitality industry. The framework assumes that organizational digital performance is influenced by both technological capability and human resource capability. Digital transformation represents the organization's technological capability to integrate digital technologies into business operations, while HR upskilling reflects organizational efforts to continuously develop employees' digital competencies. Both variables are expected to directly improve employee digital performance by enabling employees to utilize digital technologies more effectively in performing their daily tasks.

In addition to these direct relationships, this study incorporates individual readiness as a moderating variable. Individual readiness reflects employees' psychological preparedness, confidence, motivation, and willingness to accept and implement technological changes within the organization. Employees with higher levels of readiness are expected to maximize the benefits of digital transformation and HR upskilling

programs because they are more willing to adopt new technologies, continuously develop their competencies, and integrate digital systems into their work activities. Consequently, individual readiness is expected to strengthen the positive influence of digital transformation and HR upskilling on employee digital performance.

Accordingly, the proposed conceptual framework consists of two exogenous variables, namely digital transformation and HR upskilling, one endogenous variable, namely digital performance, and one moderating variable, namely individual readiness. The direct relationships are represented by H1 and H2, while the moderating effects of individual readiness are represented by H3 and H4. Figure 1 illustrates the proposed conceptual framework of this study.

Figure 1. Research Concept Framework

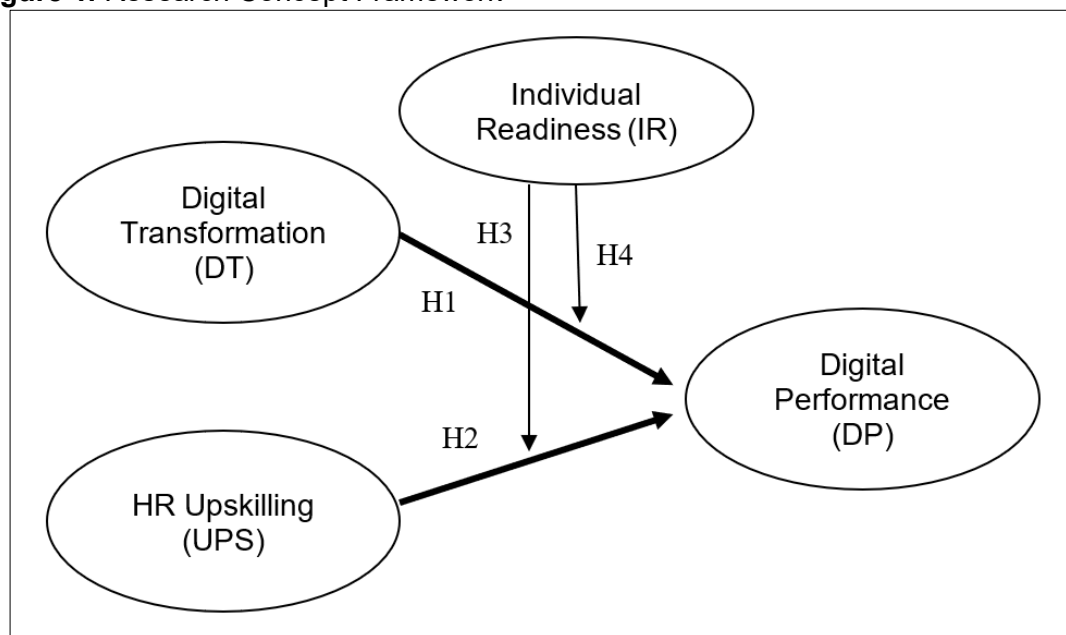


Figure 1 presents the proposed conceptual framework in which Digital Transformation and HR Upskilling directly influence Digital Performance, while Individual Readiness moderates both relationships.

RESEARCH METHOD

Research Design

This study employed a quantitative research approach using an explanatory research design to examine the causal relationships among digital transformation, HR upskilling, individual readiness, and employee digital performance in the hospitality industry. An explanatory approach was considered appropriate because the primary objective of this study was to test the proposed hypotheses and examine the moderating effect of individual readiness on the relationships between digital transformation, HR upskilling, and digital performance. Data were collected through a cross-sectional survey using a structured questionnaire administered to employees working in hospitality organizations in Bali. The questionnaire consisted of closed-ended questions measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The constructs and measurement indicators were adapted from previously validated studies and modified to fit the context of the hospitality industry.

Population and Sample

The population of this study comprised employees working in hotels, villas, restaurants, and other hospitality organizations operating in Bali that had implemented digital technologies in their daily business operations. Since not all members of the population met the objectives of this research, purposive sampling was employed as the sampling technique. Respondents were selected based on several criteria, including being permanent or contract employees, having worked in the organization for at least six months, actively utilizing digital technologies or digital information systems in their daily work, and having participated in organizational digital training or HR upskilling programs. A total of 200 respondents were considered adequate because the proposed PLS-SEM model contains four latent constructs and one moderating effect, with fewer than 30 indicators. According to [Hair et al. \(2021\)](#), such a model requires approximately 150–200 observations to achieve sufficient statistical power (power > 0.80) and stable parameter estimation. Therefore, the sample of 200 respondents is appropriate for estimating both the direct and moderating relationships proposed in this study.

Data Collection

Primary data were collected using a structured questionnaire distributed both online through Google Forms and offline to employees working in hospitality organizations across Bali. Before large-scale distribution, the questionnaire was reviewed to ensure content validity and clarity of measurement items. The questionnaire consisted of four constructs: Digital Transformation, HR Upskilling, Individual Readiness, and Digital Performance. Each construct was measured using multiple indicators adapted from previous studies and evaluated using a five-point Likert scale ranging from strongly disagree to strongly agree.

Variable Measurement

Digital Transformation was measured using indicators reflecting the extent of digital technology implementation, digital system integration, accessibility of digital information, and organizational digital support adopted from [Lazzeretti et al. \(2025\)](#), [Li et al. \(2023\)](#), and [Mollah et al. \(2024\)](#). HR Upskilling was measured through indicators assessing the frequency of digital training, effectiveness of training programs, relevance of acquired competencies, and improvement of employees' digital skills following training based on [Gkika et al. \(2025\)](#), [Lee & Hallak \(2020\)](#), and [Sarala et al. \(2025\)](#). Individual Readiness was measured using indicators representing employees' confidence in organizational change, psychological readiness, willingness to learn digital technologies, and acceptance of new working methods, adapted from [Hasani et al. \(2024\)](#) and [Sultana et al. \(2025\)](#). Digital Performance was measured using indicators related to employees' capability to utilize digital technologies, perform technology-based tasks efficiently, collaborate through digital platforms, and improve work effectiveness following [Gontur et al. \(2023\)](#), [Mushi \(2024\)](#), and [Setia et al. \(2013\)](#).

Data Analysis Techniques

The collected data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS software because this analytical technique is appropriate for simultaneously examining multiple relationships among latent variables and assessing moderating effects. The analysis began with descriptive statistics to summarize respondents' demographic characteristics and describe the distribution of responses for each research variable. Subsequently, the measurement model (outer model) was evaluated by examining indicator reliability, convergent validity, discriminant validity, and internal consistency reliability through loading factors, Average Variance Extracted (AVE), Composite Reliability (CR), Cronbach's Alpha, the Heterotrait–Monotrait Ratio (HTMT), and the Fornell–Larcker criterion.

After confirming that the measurement model satisfied the recommended validity and reliability thresholds, the structural model (inner model) was evaluated. The structural analysis examined the direct effects of Digital Transformation and HR Upskilling on Digital Performance, as well as the moderating effects of Individual Readiness. Hypothesis testing was conducted using the bootstrapping procedure by evaluating path coefficients (β), t-statistics, and p-values. In addition, the explanatory power and predictive capability of the proposed model were assessed through the coefficient of determination (R^2), predictive relevance (Q^2), effect size (f^2), and the Standardized Root Mean Square Residual (SRMR). The moderating role of Individual Readiness was analyzed using the interaction-term approach implemented in SmartPLS to determine whether psychological readiness strengthened the relationships between Digital Transformation, HR Upskilling, and Digital Performance.

RESULTS

Respondents' Demographic Profile

A total of 200 employees working in hotels, villas, restaurants, and other hospitality organizations in Bali participated in this study. The respondents represented organizations that had implemented digital technologies in their daily operations. Most respondents had more than one year of work experience and regularly utilized digital systems in carrying out operational activities. The demographic profile of respondents is presented in Table 1.

Table 1. Respondents' Demographic Profile

Item	Characteristics	Frequency (n)	Percentage (%)
Gender	Male	118	59
	Female	82	41
Age	20–30 years	74	37
	31–40 years	88	44
	>40 years	38	19
Education	Diploma	63	31.5
	Bachelor	115	57.5
	Master	22	11
Working Experience	6–12 months	31	15.5
	1–3 years	97	48.5
	>3 years	72	36

Table 1 shows that the majority of respondents were male (59%), aged between 31 and 40 years (44%), held a bachelor's degree (57.5%), and had between one and three years of working experience (48.5%). These characteristics indicate that most respondents possessed adequate experience and digital exposure to evaluate digital transformation and HR upskilling practices within their organizations.

Measurement Model (Outer Model)

Table 2. Convergent Validity and Reliability

Construct	Loading	AVE	CR	Cronbach Alpha
Digital Transformation	0.744–0.891	0.682	0.914	0.883
HR Upskilling	0.735–0.902	0.694	0.920	0.891
Individual Readiness	0.751–0.914	0.718	0.927	0.903
Digital Performance	0.762–0.908	0.704	0.923	0.896

Table 2 shows that all indicator loadings exceeded the recommended threshold of 0.70, indicating satisfactory indicator reliability. Furthermore, the AVE values were greater than 0.50, confirming convergent validity. CR and Cronbach's Alpha values were also above 0.70 for all constructs, demonstrating strong internal consistency reliability.

Model Strength

Table 3. Discriminant Validity (HTMT)

Construct	DT	UPS	IR	DP
DT	—			
UPS	0.643	—		
IR	0.511	0.573	—	
DP	0.688	0.671	0.584	—

Table 3 shows that all HTMT values were below the recommended threshold of 0.85, indicating satisfactory discriminant validity. Therefore, each construct is empirically distinct from the others and measures different conceptual domains.

Table 4. Fornell–Larcker Criterion

Construct	DT	UPS	IR	DP
DT	0.826			
UPS	0.643	0.833		
IR	0.511	0.573	0.847	
DP	0.688	0.671	0.584	0.839

Table 4 shows that the square root of the AVE for each construct is greater than its correlations with other constructs, thereby satisfying the Fornell–Larcker criterion and further confirming discriminant validity.

Structural Model

Table 5. Model Strength

Variable	Value
R ² Digital Performance	0.647
Q ²	0.452
SRMR	0.064

Table 5 shows that the coefficient of determination (R²) for Digital Performance is 0.647, indicating that Digital Transformation, HR Upskilling, and Individual Readiness jointly explain 64.7% of the variance in Digital Performance. Moreover, the Q² value of 0.452 confirms that the structural model possesses satisfactory predictive relevance, while the SRMR value of 0.064 indicates an acceptable model fit.

Table 6. Hypothesis Testing

Hypothesis and Analysis Path	Coefficient (β)	t-statistics	p-values	Decision
H1 DT $\rightarrow$ DP	0.412	6.287	0.000	Supported
H2 UPS $\rightarrow$ DP	0.356	5.144	0.000	Supported
H3 DT $\times$ IR $\rightarrow$ DP	0.167	2.621	0.009	Supported
H4 UPS $\times$ IR $\rightarrow$ DP	0.142	2.115	0.035	Supported

Table 6 shows that all proposed hypotheses are supported. Digital Transformation has a positive and significant effect on Digital Performance ($\beta = 0.412$, $p < 0.001$), supporting H1. HR Upskilling also positively influences Digital Performance ($\beta = 0.356$, $p < 0.001$), supporting H2. Furthermore, Individual Readiness significantly moderates the relationship between Digital Transformation and Digital Performance ($\beta = 0.167$, $p =$

0.009), as well as the relationship between HR Upskilling and Digital Performance ($\beta = 0.142$, $p = 0.035$). These findings indicate that employees' psychological readiness strengthens the effectiveness of digital transformation and competency development initiatives in improving digital performance.

DISCUSSION

The Effect of Digital Transformation on Digital Performance

The results indicate that digital transformation has a positive and significant effect on employee digital performance ($\beta = 0.412$, $p < 0.001$). Therefore, H1 is supported. These findings suggest that the implementation of digital technologies enables employees to perform their work more efficiently, accurately, and collaboratively through integrated digital systems. Digital transformation facilitates faster information exchange, streamlines operational processes, and improves communication among employees, ultimately enhancing digital performance within hospitality organizations.

These findings are consistent with the TOE Framework, which emphasizes that technological capability serves as a critical organizational resource for improving operational effectiveness. By integrating digital technologies into daily business operations, organizations provide employees with the necessary infrastructure to perform digital-based tasks more productively.

The findings are also consistent with previous studies conducted by [Jia et al. \(2024\)](#), [Lazzeretti et al. \(2025\)](#), [Li et al. \(2023\)](#), and [Mollah et al. \(2024\)](#), which reported that digital transformation significantly enhances employee productivity and organizational performance. Within the hospitality industry, digital reservation systems, customer relationship management platforms, and integrated operational technologies improve service quality while increasing employees' digital capabilities. Therefore, organizations should continuously invest in digital transformation initiatives to strengthen employee digital performance and maintain a sustainable competitive advantage.

The Effect of HR Upskilling on Digital Performance

The empirical findings demonstrate that HR upskilling positively and significantly influences employee digital performance ($\beta = 0.356$, $p < 0.001$). Therefore, H2 is supported. This result indicates that continuous competency development enables employees to acquire the digital knowledge and technical skills necessary to utilize organizational technologies effectively. Employees who regularly participate in digital training programs become more competent in operating digital systems and adapting to technological changes.

From the perspective of Human Capital Theory, investments in employee competency development increase organizational capability because employees become more productive and capable of responding to technological innovation. Consequently, HR upskilling represents a strategic organizational investment that supports successful digital transformation.

These findings corroborate previous studies by [Gkika et al. \(2025\)](#), [Lee & Hallak \(2020\)](#), and [Sarala et al. \(2025\)](#), which concluded that competency development significantly improves employees' digital capability and work performance. In hospitality organizations, continuous digital training contributes to better customer service, higher operational efficiency, and improved organizational competitiveness.

The Moderating Role of Individual Readiness on the Relationship between Digital Transformation and Digital Performance

The findings reveal that individual readiness significantly strengthens the positive relationship between digital transformation and employee digital performance ($\beta = 0.167$, $p = 0.009$). Therefore, H3 is supported. This finding suggests that employees who possess higher levels of psychological readiness are more capable of maximizing the benefits of organizational digital transformation. They are more willing to adopt new technologies, modify existing work practices, and continuously improve their digital competencies.

Readiness for Change Theory argues that employees' beliefs, confidence, and motivation determine the effectiveness of organizational change initiatives. Even when organizations invest substantially in digital technologies, the expected performance improvements may not be fully realized if employees are reluctant to embrace technological change.

These findings are consistent with [Hasani et al. \(2024\)](#), [Sitiari et al. \(2026\)](#), and [Sultana et al. \(2025\)](#), who found that psychological readiness significantly enhances employees' acceptance of innovation and organizational change. Within the hospitality industry, employees who demonstrate higher readiness are more likely to utilize digital reservation systems, customer relationship management platforms, and operational technologies effectively, thereby maximizing digital performance.

The Moderating Role of Individual Readiness on the Relationship between HR Upskilling and Digital Performance

The results further demonstrate that individual readiness positively moderates the relationship between HR upskilling and digital performance ($\beta = 0.142$, $p = 0.035$). Therefore, H4 is supported. This finding indicates that employees with greater readiness derive more benefits from competency development programs because they are more motivated to learn, apply newly acquired knowledge, and continuously improve their digital capabilities.

Psychologically prepared employees tend to actively engage in organizational training programs, resulting in more effective knowledge transfer and stronger behavioral changes following competency development activities. Consequently, HR upskilling generates greater improvements in digital performance when employees demonstrate high readiness for organizational change.

These findings support previous research by [Hasani et al. \(2024\)](#) and [Sultana et al. \(2025\)](#), which emphasized that readiness enhances employees' learning effectiveness and technology adoption. Therefore, hospitality organizations should integrate competency development initiatives with organizational change management strategies that strengthen employees' psychological readiness, ensuring that investments in HR upskilling produce sustainable improvements in digital performance.

Research Implications

Theoretical Implications

This study contributes to the literature on digital transformation by demonstrating that digital transformation and HR upskilling are complementary organizational capabilities that jointly improve employee digital performance. While previous studies have generally examined these variables independently, this research integrates both constructs within a single conceptual framework and confirms their simultaneous contribution to digital performance in the hospitality industry. Another important theoretical contribution is the

incorporation of Individual Readiness as a moderating variable. The findings demonstrate that employees' psychological readiness strengthens the effectiveness of both digital transformation and HR upskilling initiatives. This result extends the TOE Framework by emphasizing that technological capability alone is insufficient to generate superior organizational outcomes without employees' readiness to adopt organizational change.

Furthermore, this study enriches Readiness for Change Theory by providing empirical evidence that employees' willingness, confidence, and motivation to embrace technological innovation significantly determine the effectiveness of digital transformation programs. Consequently, the study offers a more comprehensive explanation of digital performance by integrating technological, organizational, and behavioral perspectives within a single research model.

Practical Implications

The findings provide several practical implications for managers in hospitality organizations. First, organizations should continue investing in digital transformation initiatives by implementing integrated digital technologies that support operational efficiency, customer service, and internal communication. Such investments should not be viewed solely as technological improvements but as strategic resources that enhance employees' digital performance.

Second, hospitality organizations should establish continuous HR upskilling programs that focus on developing digital competencies. Regular training related to digital reservation systems, customer relationship management platforms, cloud-based collaboration tools, and digital problem-solving skills will enable employees to utilize digital technologies more effectively and adapt to rapidly changing business environments.

Third, managers should recognize that the success of digital transformation depends not only on technological investment but also on employees' psychological readiness. Organizations are therefore encouraged to implement structured change management strategies, including transparent communication, coaching, mentoring, employee involvement, and readiness assessment programs before introducing new digital technologies.

Finally, hospitality organizations should integrate digital transformation strategies with human resource development policies. By simultaneously strengthening technological infrastructure, employee competencies, and psychological readiness, organizations will be better positioned to improve digital performance, service quality, operational efficiency, and long-term organizational competitiveness.

CONCLUSION

The results of this study show that digital transformation and upskilling of human resources are two very important factors in improving the digital performance of employees in the hospitality industry in Bali. Digital transformation has been proven to be able to improve workflows, accelerate access to information, and strengthen operational efficiency through the use of integrated digital systems. Similarly, HR upskilling contributes significantly to improving employees' digital literacy, technical skills, and adaptability to new technologies. The study also confirms that individual readiness for change plays a strong moderating role in both relationships. Employees who have a high level of readiness show a more positive response to technology and

training, so that they are able to optimize the use of digital systems in their daily work. On the other hand, employees with low readiness show more limited achievement, even though the organization has undergone technology development and training. These findings confirm that the success of digitalization in the hospitality sector does not only rely on the application of technology and training, but also on the psychological readiness of employees to accept change. Therefore, organizations need to balance digital investment with HR development strategies and change management so that digital performance can improve optimally and sustainably.

LIMITATION

This study has several limitations that should be considered when interpreting the findings. First, the study employed a cross-sectional research design, which captures respondents' perceptions at a single point in time. Consequently, causal relationships among the research variables should be interpreted with caution. Future studies are encouraged to adopt longitudinal research designs to better understand the dynamic effects of digital transformation and HR upskilling on employee digital performance over time.

Second, this research was conducted exclusively within the hospitality industry in Bali. Although the hospitality sector represents an appropriate context for investigating digital transformation, the findings may not be fully generalizable to other industries or geographical regions. Future research is therefore recommended to examine different industrial sectors and broader geographical contexts to improve the generalizability of the findings.

Third, this study focused on digital transformation, HR upskilling, individual readiness, and digital performance. Other organizational and individual factors, such as digital leadership, organizational culture, innovation capability, digital mindset, organizational learning, and technology acceptance, were not incorporated into the research model. Future studies may include these variables to develop a more comprehensive understanding of employee digital performance in the digital era.

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DECLARATION OF CONFLICTING INTERESTS

The authors declare that there are no conflicts of interest regarding the publication of this article. The research was conducted independently, and the authors have no financial, professional, or personal relationships that could have influenced the research design, data collection, analysis, interpretation of the findings, or the preparation of this manuscript.

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