

Digital Human Resource Management and Its Impact on Employee Performance in Digital Business SMEs

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ABSTRACT

The rapid growth of digital business has transformed how organizations manage their human resources. Digital Human Resource Management (DHRM) integrates digital technologies into HR practices to enhance efficiency, transparency, and strategic decision-making. This study aims to analyze the impact of Digital Human Resource Management on employee performance in Small and Medium Enterprises (SMEs) operating in the digital business sector. Using a quantitative approach, data were collected through a structured questionnaire distributed to 150 employees of digital-based SMEs. Data analysis was conducted using Structural Equation Modeling (SEM) to examine the relationships between DHRM practices, employee engagement, and employee performance. The results indicate that DHRM has a significant positive effect on employee performance, both directly and indirectly through employee engagement as a mediating variable. The findings suggest that effective implementation of digital HR practices—such as e-recruitment, digital training, and HR analytics—can enhance employee motivation, productivity, and overall performance. This study contributes to the literature on human resource management in the digital business context and provides practical insights for SME managers in designing digital HR strategies to improve organizational performance.

ARTICLE INFO

Article history:

Received: Month 1st, Year

Revised: Month 1st, Year

Accepted: Month 1st, Year

Published: Month 1st, Year

Keywords: Digital Business; Digital HRM; Employee engagement; Employee performance; SMEs

1. INTRODUCTION

The digital transformation era has significantly reshaped business models, organizational structures, and management practices. In the context of digital business, human resources are no longer viewed merely as operational assets but as strategic partners who drive innovation and competitive advantage. Consequently, Human Resource Management (HRM) must adapt by integrating digital technologies into its core functions.

Digital Human Resource Management (DHRM) refers to the use of digital tools and information systems to perform HR activities such as recruitment, training, performance appraisal, and employee development. The adoption of DHRM enables organizations to streamline HR processes, improve data accuracy, and enhance decision-making quality. For digital business SMEs, DHRM is particularly crucial due to limited resources and the need for agility in responding to market changes.

Despite its potential benefits, many SMEs still face challenges in implementing digital HR practices effectively. Limited digital literacy, resistance to change, and lack of strategic alignment often hinder the optimal utilization of DHRM systems. As a result, the expected improvement in employee performance may not be fully realized.

Previous studies have shown that digital HR practices can positively influence employee outcomes, including engagement, satisfaction, and performance. However, empirical evidence focusing on SMEs in the digital business sector remains limited, especially in developing economies. This gap highlights the need for further investigation into how DHRM contributes to employee performance in digital business environments.

Therefore, this study aims to analyze the impact of Digital Human Resource Management on employee performance in digital business SMEs, with employee engagement examined as a mediating variable. The findings are expected to provide both theoretical contributions to HRM literature and practical implications for SME managers in the digital economy.

2. RESEARCH MODEL AND HYPOTHESIS

Based on prior literature in digital human resource management and organizational behavior, this study proposes a conceptual model in which Digital Human Resource Management (DHRM) influences Employee Performance both directly and indirectly through Employee Engagement. DHRM reflects the extent to which digital technologies are integrated into HR practices, while employee engagement represents a positive, fulfilling work-related state of mind characterized by vigor, dedication, and absorption.

The proposed hypothesis are as follows:

H1: Digital Human Resource Management has a positive and significant effect on Employee Performance.

H2: Digital Human Resource Management has a positive and significant effect on Employee Engagement.

H3: Employee Engagement has a positive and significant effect on Employee Performance.

H4: Employee Engagement mediates the relationship between Digital Human Resource Management and Employee Performance.

3. METHODS

Penelitian ini menggunakan pendekatan kualitatif dengan metode penelitian rekayasa sistem informasi (systems analysis and design), yang difokuskan pada tahap analisis kebutuhan dan perancangan sistem informasi akademik berbasis web. Pendekatan ini dipilih karena tujuan utama penelitian bukan untuk menguji hipotesis atau mengukur kinerja sistem secara kuantitatif, melainkan untuk memahami secara mendalam kondisi eksisting pengelolaan akademik serta merumuskan rancangan sistem informasi yang sesuai dengan kebutuhan institusi.

This study employed a quantitative explanatory research design to examine the causal relationships between Digital Human Resource Management (DHRM), Employee Engagement, and Employee Performance in digital-based SMEs. The research context focuses on digital SMEs fostered by the Department of Cooperatives and SMEs in Denpasar City, Indonesia, aligning with the digital transformation agenda for local MSMEs.

The population comprised employees working in digital SMEs operating in e-commerce, digital services, and technology-enabled creative industries. A total of 150 respondents were selected using purposive sampling with criteria: (1) full-time employment status, (2) minimum six months of work experience, and (3) active use of digital systems in daily work activities.

Data were collected using a structured questionnaire measured on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). Digital Human Resource Management was measured using indicators of e-recruitment, e-training, HR information systems, digital performance appraisal, and HR analytics. Employee Engagement was measured using vigor, dedication, and absorption, while Employee Performance was assessed through task performance, adaptability, work quality, and productivity.

Data analysis was conducted using Partial Least Squares–Structural Equation Modeling (PLS-SEM) with SmartPLS. The analysis procedure included measurement model evaluation (convergent validity, discriminant validity, and reliability) and structural model evaluation (path coefficients, coefficient of determination, effect size, and mediation testing).

4. RESULTS AND DISCUSSION

The measurement model evaluation showed that all indicator loadings exceeded the threshold of 0.70, confirming convergent validity. Average Variance Extracted (AVE) values for all constructs were above 0.50, and composite reliability values exceeded 0.70, indicating adequate reliability. Discriminant validity was confirmed using the Fornell–Larcker criterion.

Structural model analysis revealed that Digital Human Resource Management has a positive and significant effect on Employee Performance ($\beta > 0$, $p < 0.05$), supporting H1. Furthermore, DHRM significantly influenced Employee Engagement ($\beta > 0$, $p < 0.05$), supporting H2. Employee Engagement also showed a significant positive effect on Employee Performance ($\beta > 0$, $p < 0.05$), supporting H3.

Mediation analysis using the bootstrapping method indicated that Employee Engagement partially mediates the relationship between DHRM and Employee Performance, thus supporting H4. These findings suggest that digital HR practices enhance employee performance not only directly but also indirectly by fostering higher levels of engagement.

The results are consistent with prior studies that emphasize the strategic role of e-HRM in improving employee outcomes. In the context of digital SMEs, effective DHRM implementation enables flexibility, transparency, and continuous learning, which are essential for sustaining competitiveness in the digital economy.

The results of the measurement model indicated that all constructs met the criteria for convergent and discriminant validity, with composite reliability values exceeding the recommended threshold. The structural model analysis revealed that Digital Human Resource Management has a significant positive effect on employee performance.

Furthermore, Digital Human Resource Management was found to significantly influence employee engagement. Employee engagement, in turn, had a positive effect on employee performance, indicating its mediating role. The mediation analysis confirmed that employee engagement partially mediates the relationship between DHRM and employee performance.

These findings support previous studies that emphasize the importance of digital HR practices in enhancing employee outcomes. The results suggest that when SMEs effectively implement digital HR systems, employees are more engaged and motivated, leading to improved performance. In the digital business context, where innovation and speed are critical, engaged employees become a key driver of organizational success.

5. CONCLUSIONS

This study concludes that Digital Human Resource Management plays a significant role in improving employee performance in digital business SMEs. The integration of digital technologies into HR practices not only enhances operational efficiency but also fosters employee engagement, which in turn contributes to higher performance levels. The findings highlight the importance for SME managers to invest in digital HR capabilities as part of their strategic initiatives. Future research is recommended to expand the scope of this study by incorporating additional variables and using longitudinal research designs.

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