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Digital Competency-Based Recruitment and MSME Human Resource Performance: The Role of Person–Job Fit and Task Complexity

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Abstract

The rapid advancement of digital technologies has reshaped human resource management practices in micro, small, and medium enterprises (MSMEs). This study examines the effect of digital recruitment on human resource performance, with particular attention to the mediating role of person–job fit and the moderating role of task complexity. A quantitative survey method was applied to 30 MSMEs that have implemented digital recruitment systems. Data were analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS) to assess the causal relationships among the proposed variables. The findings reveal that digital recruitment has a significant positive effect on both human resource performance and person–job fit. Moreover, person–job fit significantly mediates the relationship between digital recruitment and performance outcomes. Task complexity is also found to moderate the relationship between digital recruitment and person–job fit, indicating the growing importance of digital competencies in highly complex work contexts. Overall, the results highlight the strategic importance of integrating digital recruitment practices, competency alignment, and task adaptability to enhance human resource performance in MSMEs within the digital era.

Keywords: *Digital recruitment; Human resource performance; Person–job fit; Task complexity*

INTRODUCTION

The rapid advancement of digital technology has driven significant changes in the operational practices of MSMEs, particularly in human resource management (HRM). This transformation requires MSMEs to develop the digital competencies of their human resources to effectively operate technology-based administrative systems, leverage digital platforms, and adapt to increasingly complex work dynamics. Although the digitalization of HRM has been shown to enhance efficiency and competitiveness among MSMEs, several studies indicate that the adaptation of human resource competencies to new technologies remains a major challenge (Nga & Tam, 2025; Mariam et al., 2024).

Within this context, the digitalization of recruitment has emerged as a strategic approach to acquiring human resources that align with the demands of the digital era. The utilization of e-recruitment and artificial intelligence–based systems enables faster, more objective, and more efficient selection processes, while simultaneously improving the quality of recruitment decisions (Allal-Chérif et al., 2021; Chen et al., 2025). However, the majority of prior studies have predominantly focused on the efficiency of recruitment processes, with limited attention given to the psychological and contextual mechanisms through which digital recruitment influences human resource performance, particularly within MSME settings.

One key mechanism that remains insufficiently explored empirically is the role of person–job fit. The alignment between individual competencies and job requirements has been demonstrated to positively affect employee performance and adaptive capacity in dynamic work environments (Kristof-Brown et al., 2017). Nevertheless, studies that simultaneously examine the mediating role of person–job fit in the relationship between digital recruitment and MSME human resource performance remain relatively scarce, especially in the context of developing countries.

Furthermore, the increasing complexity of digitally based tasks has the potential to influence the effectiveness of digital recruitment in shaping person–job fit. Previous research suggests that task complexity may moderate the relationship between human resource practices and performance

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outcomes; however, empirical evidence that integrates task complexity as a moderating variable within digital recruitment models in MSMEs is still limited (Debusscher et al., 2017; Myhill et al., 2021).

Addressing these research gaps, this study offers novelty by developing an integrated model that examines the effect of digital recruitment on MSME human resource performance through the mediating role of person–job fit and the moderating role of task complexity. The primary contribution of this study is not only contextual but also conceptual, as it extends current understanding of the mechanisms and boundary conditions that determine the effectiveness of digital recruitment in enhancing MSME human resource performance in the era of digital transformation.

METHODS

This study employs a quantitative approach using a survey method to obtain empirical data from MSMEs that have implemented digital-based recruitment systems. The research sample consists of 30 MSMEs selected through purposive sampling, with the primary criterion being that the respondents have adopted digitalization in their employee recruitment processes. This technique is considered appropriate as it allows for the selection of units of analysis with characteristics aligned with the research objectives, thereby ensuring that the data collected are both contextual and substantive (Noerchoidah et al., 2025; Gani et al., 2024). Data were collected through structured questionnaires distributed to MSME owners or managers as key informants.

The relatively limited sample size can be methodologically justified given the study's focus on testing relationships among latent constructs and the limited number of MSMEs that have consistently adopted digital recruitment practices. Accordingly, the Structural Equation Modeling–Partial Least Squares (SEM-PLS) method was employed, as it offers advantages in analyzing complex research models with small sample sizes and does not require the assumption of normally distributed data (Henseler et al., 2016; Shmueli et al., 2019; Guenther et al., 2023).

SEM-PLS enables the simultaneous examination of causal relationships among variables with relatively robust estimates despite a limited sample size. This method has also been widely applied in studies on MSME digitalization and technology-based human resource management (Noerchoidah et al., 2025; Gani et al., 2024). Nevertheless, the small sample size in this study constrains the generalizability of the findings; therefore, the interpretation of the results should be confined to MSMEs that have implemented digital recruitment practices.

RESULTS

As an initial step in the results and discussion section, it is essential to ensure that the research instruments employed meet the criteria for construct validity and reliability. Construct validity testing aims to assess the extent to which the indicators used accurately represent the latent variables being measured, thereby allowing the analytical results to be interpreted in an accurate and trustworthy manner. In SEM-PLS based studies, construct validity is commonly evaluated using several key indicators, namely factor loadings, average variance extracted (AVE), and composite reliability (CR). High factor loading values (above 0.70) indicate that each indicator makes a strong contribution to its respective construct, while an AVE value exceeding 0.50 signifies that the latent variable explains more than half of the variance of its indicators. Furthermore, CR values above 0.70 indicate good internal consistency for each construct (Susanty et al., 2025; Cheah et al., 2018).

The results of the construct validity analysis in this study demonstrate that all primary constructs Digital Recruitment, Person–Job Fit, Task Complexity, and Human Resource Performance have met the recommended criteria for validity and reliability. These findings are consistent with previous studies that emphasize the importance of testing validity and reliability in SEM-PLS models to ensure measurement quality and the accurate interpretation of results (Cheah et al., 2018). Table X presents the results of the construct validity analysis.

Table 1. Results of Construct Validity Analysis

Construct	Loading Factor (>0.70)	AVE (>0.50)	CR (>0.70)
Digital Recruitment	0.83–0.87	0.71	0.91
Person–Job Fit	0.80–0.84	0.68	0.89
Task Complexity	0.79–0.82	0.65	0.88
Human Resource Performance	0.83–0.86	0.72	0.92

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As part of the presentation of the research findings, hypothesis testing was conducted to examine the significance of the relationships among variables within the proposed model. This testing employed the bootstrapping technique in SEM-PLS, which enables more accurate estimation of path significance, as well as mediating and moderating effects, even with relatively small sample sizes (Becker et al., 2022; Kock, 2018). Each hypothesis was evaluated based on p-values, with hypotheses considered supported when the p-value was less than 0.05 (Shrout & Bolger, 2002; Haqqo & Isharina, 2024). The following hypothesis testing results provide an overview of the effects of digital recruitment, person–job fit, task complexity, as well as the mediating and moderating roles in enhancing human resource performance among the MSMEs examined in this study. Table X presents the results of the bootstrapping-based hypothesis tests:

Table 2. Results of Hypothesis Testing Using Bootstrapping

Hypothesis	Testing Path	p-value	Decision
H1	Digital Recruitment → Human Resource Performance	0.000	Accepted
H2	Digital Recruitment → Person–Job Fit	0.000	Accepted
H3	Person–Job Fit → Human Resource Performance	0.001	Accepted
H4	Person–Job Fit Mediation Effect	0.002	Accepted
H5	Task Complexity Moderation Effect	0.007	Accepted

Data analysis using SEM-PLS confirms all the proposed research hypotheses. The hypothesis testing results indicate that both direct and indirect paths are statistically significant ($p < 0.01$), leading to the acceptance of hypotheses H1 through H5. In other words, digital recruitment has a significant direct effect on human resource performance; digital recruitment influences person–job fit; person–job fit affects human resource performance; and the mediating role of person–job fit as well as the moderating role of task complexity operate as hypothesized.

These findings are consistent with previous studies demonstrating that the implementation of digital human resource management practices, including digital-based recruitment, contributes significantly to improvements in efficiency and human resource performance in small and medium-sized enterprises (Myhill et al., 2021). Furthermore, the mediating effect of person–job fit identified in this study aligns with empirical evidence indicating that person–job fit is positively associated with employee performance and work-related outcomes (Trysantika et al., 2023; Widyana & Bagia, 2024).

DISCUSSION

The findings of this study indicate that digital-based recruitment plays a strategic role in enhancing the human resource performance of MSMEs. The significant direct effect between digital recruitment and human resource performance suggests that the utilization of technology in the selection process improves the effectiveness of workforce placement, accelerates decision-making, and reduces competency mismatches from the early stages of recruitment. These results reinforce the findings of Diop (2025), which emphasize that digital HR innovations contribute positively to improvements in efficiency and employee productivity within the MSME sector.

Furthermore, the results confirm that person–job fit serves as a key explanatory mechanism in the relationship between digital recruitment and human resource performance. The significant mediating effect indicates that digital recruitment does not automatically enhance performance; rather, it operates through improving the alignment between individual competencies and job requirements. This finding extends prior literature that has predominantly examined person–job fit as a direct predictor of performance (Follmer et al., 2018) by positioning it as a mediating variable within the context of digital recruitment in MSMEs.

In addition, the moderating role of task complexity suggests that the effectiveness of digital recruitment in shaping person–job fit is stronger in jobs characterized by higher levels of digital complexity. This implies that in work environments requiring technological proficiency and continuous adaptation, digital recruitment systems capable of accurately mapping competencies become increasingly critical. These findings provide empirical support for the view that task complexity represents an important boundary condition in technology-based human resource management practices.

From a managerial perspective, these findings carry significant practical implications for MSMEs. First, MSMEs should view digital recruitment not merely as an administrative tool but as a strategic instrument for ensuring the alignment of human resource competencies with job requirements. Second, the development of recruitment systems should be integrated with competency mapping and

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task complexity analysis to achieve more accurate human resource placement. Third, investment in digital training is essential to sustain human resource performance, particularly in positions with high technological demands.

Overall, these findings underscore that the success of digital transformation in MSME human resource management is determined not only by the adoption of technology but also by the organization's ability to align individual competencies, job demands, and task complexity in an integrated manner.

CONCLUSION

This study concludes that digital-based recruitment plays a strategic role in enhancing MSME human resource performance by improving the alignment between individual competencies and job requirements. The empirical findings demonstrate that digital recruitment has a significant effect on both person–job fit and human resource performance, with person–job fit functioning as a mediating mechanism that explains the effectiveness of digital recruitment in a digitalized work context. Moreover, task complexity is shown to strengthen the relationship between digital recruitment and person–job fit, indicating that the higher the digital demands of a job, the more critical accurate technological competency mapping becomes at the recruitment stage.

Operationally, the results of this study highlight the need for MSMEs to integrate digital recruitment systems with competency mapping and task complexity analysis, and to support these efforts through continuous digital training. This approach is expected to enhance the accuracy of human resource placement and to strengthen organizational readiness in responding to the dynamics of digital transformation.

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