

Digital Transformation of Human Resource Management in Enhancing the Competitive Advantage of the Tourism Sector in Riau

Iskandar^{1*}, Risman², Defi Warman³, Rizqi Fakhri⁴, Fatkhurahman⁵

^{1,2,3,4} Sekolah Tinggi Ilmu Ekonomi Riau, Indonesia

⁵ Universitas Lancang Kuning, Indonesia

ABSTRACT

Purpose – This study examines the role of Digital Human Resource Management (Digital HRM) in supporting the achievement of competitive advantage within tourism organizations.

Design/methodology/approach – A quantitative explanatory approach was applied using Partial Least Squares Structural Equation Modeling (PLS-SEM). Data were collected from 150 employees, supervisors, and HR managers in tourism-related organizations in Riau, Indonesia, using purposive sampling.

Findings – The findings indicate that Digital HRM is positively related to the development of HR capabilities and organizational competitiveness. In addition, HR capabilities contribute to competitive advantage and serve as a partial mediator in the relationship between Digital HRM and competitive advantage. These results indicate a dual-path mechanism, where Digital HRM contributes both indirectly through capability development and directly through enhanced organizational efficiency.

Research limitations/implications – The study is limited by its cross-sectional design, self-reported data, and regional scope. The findings extend the Resource-Based View by highlighting the complementary role of digital systems and human capabilities.

Practical implications – Tourism organizations need to combine the use of digital HR systems with ongoing employee development programs in order to maintain their competitive position.

Originality/value – This study provides context-specific evidence and clarifies how Digital HRM drives competitive advantage through both direct and mediated pathways.

ARTICLE INFO

Keywords:

Competitive Advantage,
Digital HRM,
Digital Transformation,
HR Capabilities,
Tourism Sector.

Article Information:

Received: 28/03/2026

Revise: 29/04/2026

Accepted: 31/05/2026

ISSN:

2985-3168 (Online)

2985-3222 (Print)

*Corresponding Author at:

Sekolah Tinggi Ilmu Ekonomi Riau, Indonesia

E-mail Address : iskandar@lecturer.stieriau-akbar.ac.id (Iskandar)

The work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International \(CC BY-SA 4.0\)](https://creativecommons.org/licenses/by-sa/4.0/)



1. Introduction

The tourism industry contributes significantly to economic development, especially in developing countries, because it supports job creation, strengthens regional economies, and increases income from tourism-related activities (Baum, 2015; Kane et al., 2015). Because tourism relies strongly on service interaction, organizational performance in this sector is closely linked to employees' competence, flexibility, and ability to respond to customers' needs. Human resources should not only be viewed as operational support but also as strategic resources that influence competitiveness and the continuity of organizational performance.

The development of digital technology has changed many organizational activities, including the way human resource management is planned and implemented. Digital HRM, through the use of artificial intelligence, data analytics, and cloud-based platforms, helps organizations improve work efficiency, strengthen decision-making processes, and facilitate continuous employee learning (Strohmeier, 2020; Vial, 2019) and (Alqarni et al., 2023; Chaudhuri et al., 2023; Parry et al., 2021). In service sectors such as tourism, where responsiveness and service quality are critical, digital HRM is increasingly viewed as a strategic enabler of performance and innovation (Bondarouk & Brewster, 2016). Existing research has consistently shown that digital HR practices can improve organizational outcomes by enhancing workforce productivity, agility, and engagement (Marler & Boudreau, 2017; Ruel et al., 2007).

The Resource-Based View can be used to explain how organizations build competitive advantage by managing strategic resources that are valuable, difficult to imitate, and closely related to human capital (Barney, 1991). In parallel, competitive advantage theory emphasizes the role of differentiation and operational efficiency in achieving superior performance (Porter, 1985). Digital transformation intersects with these perspectives by strengthening both organizational processes and employee capabilities. Specifically, digital HRM can enhance human resource capabilities such as skills, adaptability, and digital literacy which in turn contribute to improved service delivery and organizational competitiveness (Armstrong & Taylor, 2020; Strohmeier, 2020). At the same time, digital systems themselves may function as strategic resources by enabling faster decision-making, process optimization, and data-driven coordination (Vial, 2019).

Although research on digital transformation and HRM continues to develop, several aspects still require further empirical investigation (Gutierriz et al., 2025; Kraus et al., 2022; Verhoef et al., 2021). First, prior research has predominantly focused on large organizations or developed economies, with limited empirical evidence from regional tourism sectors in emerging contexts (Gutierriz et al., 2025; Kusluvan et al., 2010). This condition makes previous findings less applicable to contexts where digital implementation is still uneven and employee capabilities are still developing. Second, while the positive effects of digital HRM on organizational performance are well documented, the underlying mechanisms through which these effects occur remain insufficiently explored. In particular, the mediating role of human resource capabilities has received limited attention in tourism settings, where human interaction plays a central role in value creation (Marler & Boudreau, 2017; Ruel et al., 2007). Third, existing studies often examine digital transformation and human capital separately, with limited integration of both perspectives within a unified analytical framework (Strohmeier, 2020).

These gaps are especially relevant in regions such as Riau Province, Indonesia, where the tourism sector holds significant potential due to its natural and cultural resources, yet faces challenges related to limited workforce competencies, low digital literacy, and continued

reliance on conventional HRM practices. In such contexts, the adoption of digital HRM is not only a technological shift but also a strategic necessity for enhancing workforce quality and organizational competitiveness.

To address these issues, this study develops and empirically tests an integrated framework linking Digital HRM, HR capabilities, and competitive advantage in the tourism sector. Drawing on the RBV and digital transformation perspectives, this study proposes that Digital HRM influences competitive advantage both directly and indirectly through the development of HR capabilities. By examining this mediation mechanism in the context of regional tourism, this study seeks to provide a more nuanced understanding of how digital transformation translates into organizational performance.

Accordingly, this study investigates the role of Digital HRM in enhancing competitive advantage in the tourism sector in Riau, Indonesia, with a particular focus on the mediating effect of HR capabilities. In doing so, this study contributes to the literature by providing context-specific empirical evidence from an emerging tourism region and clarifying the dual pathways, capability- and system-based, through which digital HRM drives organizational competitiveness.

2. Literature Review & Hypothesis Development

2.1. Digital Transformation in Human Resource Management

Digital transformation in HRM refers to the use of digital systems to support various HR activities, including recruitment, employee training, performance appraisal and employee involvement. The use of artificial intelligence, cloud platforms, and big data analytics allows organizations to make decisions based on more accurate information and improve the efficiency of their operations (Chaudhuri et al., 2023; Strohmeier, 2020; Vial, 2019) (Bindra et al., 2025; Parry et al., 2021).

In tourism organizations, Digital HRM is important because it helps employees develop the competencies and adaptability needed to maintain service quality in a changing business environment. E-recruitment platforms, digital learning systems, and automated performance evaluations allow organizations to respond more effectively to market demands (Marler & Boudreau, 2017). Therefore, digital HRM is considered a strategic tool that enhances organizational agility and innovation.

2.2. Human Resource Capabilities

HR capabilities describe employees' knowledge, skills, competencies, and ability to adapt, which support the achievement of organizational goals. According to Armstrong and Taylor (2020), effective HRM practices directly influence employee productivity, motivation, and overall performance. In a digital context, HR capabilities include digital literacy, technological adaptability, and the ability to utilize digital tools effectively.

Digital transformation can strengthen HR capabilities by offering continuous learning access, faster performance feedback, and development programs that are better suited to employee needs. This aligns with the Resource-Based View (RBV), which emphasizes that valuable and rare human resources are key to achieving sustainable competitive advantage (Barney, 1991). In the tourism industry, where service delivery is highly dependent on human interaction, strong HR capabilities are essential for maintaining excellence in service (Caligiuri et al., 2020; Cooke et al., 2022).

2.3. Competitive Advantage in the Tourism Sector

Competitive advantage refers to an organization's capacity to perform better than its competitors by creating superior value through efficiency, differentiation, or unique service offerings (Porter, 1985). In the tourism sector, competitive advantage is often achieved through high service quality, customer satisfaction, innovation, and responsiveness.

Digital HRM can support competitive advantage by improving employee effectiveness, strengthening service delivery, and encouraging innovation within organizations (Kraus et al., 2022; Zhai et al., 2022). Organizations that effectively utilize digital technologies to manage their workforce can respond more quickly to customer needs and market changes, thereby strengthening their competitive position (Bondarouk & Brewster, 2016).

2.4. Relationship between Digital HRM, HR Capabilities, and Competitive Advantage

The link between Digital HRM and competitive advantage can be understood by considering HR capabilities as an intervening factor. Digital HRM practices improve employee skills, productivity, and adaptability, which enhance organizational performance and competitiveness.

Previous studies suggest that digital HRM positively influences organizational outcomes directly and indirectly through improved human capital (Marler & Boudreau, 2017). This indicates that HR capabilities are a critical mechanism linking digital transformation to competitive advantage.

Hypothesis Development

Based on the theoretical framework and previous studies, the following hypotheses are proposed:

- H1:** Digital transformation in Human Resource Management has a positive effect on human resource capabilities.
- H2:** Human resource capabilities have a positive effect on competitive advantage in the tourism sector.
- H3:** Digital transformation in Human Resource Management has a positive effect on competitive advantage.
- H4:** Human resource capabilities mediate the relationship between digital HRM and competitive advantage.

3. Methodology

3.1. Research Design

This research uses a quantitative explanatory approach to analyze the relationship between Digital HRM, HR capabilities, and competitive advantage in tourism organizations. This study aims to test a theoretically grounded model using Partial Least Squares Structural Equation Modeling (PLS-SEM), which is suitable for predictive analysis and complex models involving mediation effects (Hair et al., 2021). PLS-SEM was used because it is appropriate for analyzing predictive models, mediation relationships, and data with moderate sample sizes or non-normal distributions.

3.2. Population and Sample

The study population included employees and managers from tourism-related businesses in Riau Province, such as hotels, travel agencies, and other tourism service organizations. The sampling frame included organizations that had implemented or were in the process of adopting digital technology in their HR practices.

A purposive sampling technique was employed based on the following criteria:

1. Respondents are employed in tourism-related organizations
2. Respondents are involved in HR-related activities or decision-making
3. The organization has adopted or is adopting digital HR practices

Data were collected by approaching approximately 180 potential respondents across multiple tourism organizations. A total of 165 questionnaires were returned, of which 150 were deemed valid and usable after data screening, yielding a response rate of approximately 83%.

The sampling approach can be categorized as non-probability purposive sampling with elements of convenience access, as respondents were selected based on relevance and accessibility, rather than proportional representation across organizations. While this approach is appropriate for exploratory and explanatory research, it may limit the generalizability of these findings.

3.3 Measurement of Variables

Each variable was measured using several indicators adapted from prior studies to ensure that the instrument was relevant to the concept being investigated. Responses were recorded using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree).

1. Digital HRM was measured using items adapted from Marler & Boudreau, (2017) and Strohmeier,(2020), covering dimensions such as e-recruitment, digital training, HR information systems, and digital performance management.
2. HR Capabilities were measured based on Armstrong, (2020) and Barney, 91991), including skills, digital literacy, adaptability, and productivity.
3. Competitive Advantage was measured using indicators adapted from Porter, (1985) and (Bondarouk & Brewster, 2016), focusing on service quality, innovation, responsiveness, and organizational performance.

All measurement items were slightly modified to fit the tourism context of this study. The full list of measurement items is provided in Appendix A to improve transparency and replicability.

Table 1. Construct Definitions, Dimensions, and Measurement Items

Construct	Definition	Dimensions	No. of Items	Sample Item	Source
Digital HRM	The use of digital technologies to enhance HR functions and decision-making	E-recruitment, digital training, HRIS, digital performance management	4	"Our organization uses digital platforms for recruitment."	Marler & Boudreau (2017); Strohmeier (2020)
HR Capabilities	The skills, competencies, and adaptability of	Skills, digital literacy,	4	"Employees are able to adapt to	Armstrong (2020); Barney (1991)

Construct	Definition	Dimensions	No. of Items	Sample Item	Source
Competitive Advantage	employees in performing tasks effectively	adaptability, productivity	4	new technologies quickly.”	Porter (1985); Bondarouk & Brewster (2016)
	The organization’s ability to outperform competitors through superior value creation	Service quality, innovation, responsiveness, performance		“Our organization provides superior service compared to competitors.”	

3.4 Questionnaire Development and Data Collection

The questionnaire was prepared by modifying the measurement items that had been used and validated in previous research. A pilot test was conducted with 30 respondents, resulting in minor revisions to improve the clarity and contextual relevance.

Since the target respondents were Indonesian speakers, the questionnaire was translated into Bahasa Indonesia using a back-translation procedure. The initial English version was translated into Indonesian, and a second independent translator re-translated it into English to ensure semantic equivalence.

Data were collected using both online (Google Forms) and offline distribution methods to maximize the response rates. Participation was voluntary, and the respondents completed the questionnaire anonymously.

3.5 Data Screening Procedures

Prior to analysis, data were screened to ensure quality and accuracy:

1. **Missing data:** No significant missing values were identified; incomplete responses were excluded
2. **Outliers:** Outliers were assessed using standardized scores and no extreme values were detected
3. **Normality:** Although PLS-SEM does not require normal distribution, skewness and kurtosis values were examined and found to be within acceptable ranges

3.6 Data Analysis Technique (PLS-SEM)

The collected data were processed and analyzed with the assistance of SmartPLS 4. The analysis followed a two-step approach: measurement model evaluation and structural model evaluation (Hair et al., 2021).

3.6.1 Measurement Model Evaluation

The measurement model was assessed using the following criteria.

1. Convergent Validity:
 - a) Factor loadings ≥ 0.70
 - b) Average Variance Extracted (AVE) ≥ 0.50
2. Reliability:
 - a) Composite Reliability ≥ 0.70
3. Discriminant Validity:

- a) Fornell-Larcker Criterion
- b) Heterotrait-Monotrait Ratio (HTMT) ≤ 0.85

3.6.2 Structural Model Evaluation

The structural model was evaluated using:

- 1. Coefficient of Determination (R^2)
- 2. Path coefficients (β)
- 3. t-statistics and p-values
- 4. Effect size (f^2)
- 5. Predictive relevance (Q^2)

The significance of the path relationships was tested through a bootstrapping procedure with 5,000 resamples at a 5 percent significance level.

3.6.3 Mediation Analysis

The mediating effect of HR Capabilities was tested using **bootstrapping procedures**, examining both direct and indirect effects. Mediation was confirmed when the indirect effect was significant.

3.7 Common Method Bias (CMB)

Given that data were collected using a self-reported questionnaire, **common method bias** was assessed using:

- 1. **Harman's single-factor test**, where the first factor accounted for less than 50% of total variance
- 2. **Full collinearity VIF**, where all values were below the threshold of 3.3

These results indicate that common method bias was not a significant concern in this study.

4. Result and Discussion

4.1. Respondent Profile

This study involved 150 respondents working in tourism-related organizations in Riau Province. The respondents were HR managers, supervisors, and employees involved in HR-related functions. Most organizations surveyed have begun adopting digital technology in their HR practices.

Table 2. Respondent Profile

Category	Frequency	Percentage (%)
Gender		
Male	82	54.7
Female	68	45.3
Organization Type		
Hotels	65	43.3
Travel Agencies	42	28.0
Tourism Services	43	28.7
Job Role		
HR Managers	38	25.3
Supervisors	47	31.3

Category	Frequency	Percentage (%)
Staff/Employees	65	43.4
Work Experience		
< 3 years	41	27.3
3–5 years	56	37.3
> 5 years	53	35.4
Level of Digital Adoption		
Low	29	19.3
Moderate	74	49.3
High	47	31.4

The respondents were distributed across different types of organizations and work roles, with most coming from organizations with moderate to high levels of digital implementation. This indicates that the data are suitable for examining the impact of digital HRM in the tourism sector.

4.2. Measurement Model (Outer Model) Evaluation

Convergent Validity and Reliability

The measurement model was evaluated using indicator loadings, Average Variance Extracted (AVE), and Composite Reliability (CR).

Table 3. Measurement Model Results

Construct	Loading Range	AVE	CR	Cronbach's Alpha
Digital HRM	0.79–0.83	0.65	0.88	0.84
HR Capabilities	0.80–0.86	0.68	0.90	0.87
Competitive Advantage	0.79–0.85	0.66	0.89	0.85

All loading values were above 0.70, indicating that the indicators adequately represented their respective constructs. The AVE values exceeded 0.50, showing acceptable convergent validity, while the CR and Cronbach's Alpha values were higher than 0.70, indicating good reliability (Hair et al., 2021). Importantly, the relatively high reliability values suggest strong internal consistency, although an overly high consistency may also indicate potential redundancy among items.

Discriminant Validity

Discriminant validity was assessed using the **Fornell-Larcker criterion** and the **HTMT ratio**.

Table 4. Fornell-Larcker Criterion

Construct	DHRM	HRC	CA
Digital HRM (DHRM)	0.81		
HR Capabilities (HRC)	0.62	0.82	
Competitive Advantage (CA)	0.58	0.65	0.81

The values on the diagonal were higher than the correlations among the constructs, indicating that discriminant validity was achieved.

Table 5. HTMT Ratio

Construct	DHRM	HRC	CA
Digital HRM	-		
HR Capabilities	0.72	-	
Competitive Advantage	0.69	0.74	-

All HTMT values were lower than 0.85, suggesting that each construct was empirically distinct from the others.

4.3 Structural Model Evaluation

Coefficient of Determination (R^2)

Table 6. R^2 Values

Variable	R^2
HR Capabilities	0.52
Competitive Advantage	0.61

Digital HRM accounted for 52 percent of the variation in HR capabilities, while Digital HRM, together with HR capabilities, explained 61 percent of the variation in competitive advantage. These results show that the model has a moderate level of explanatory ability.

Hypothesis Testing

Table 7. Path Coefficients

Hypothesis	Path	β	t-value	p-value	95% CI	Result
H1	DHRM $\rightarrow$ HRC	0.72	10.45	0.000	[0.61, 0.82]	Supported
H2	HRC $\rightarrow$ CA	0.48	5.87	0.000	[0.32, 0.61]	Supported
H3	DHRM $\rightarrow$ CA	0.32	3.95	0.000	[0.18, 0.46]	Supported

The results show that all the proposed relationships in the model were statistically supported. The largest coefficient was found in the relationship between Digital HRM and HR capabilities, suggesting that digital HR practices are closely related to the development of employee competencies.

The effect of HR Capabilities on Competitive Advantage is **moderate** ($\beta = 0.48$), suggesting that while human capital is important, it is not the sole determinant of competitiveness. The direct effect of Digital HRM on Competitive Advantage ($\beta = 0.32$) indicates that digital systems also contribute independently through efficiency and coordination mechanisms.

4.4 Mediation Analysis

The indirect effect of Digital HRM on Competitive Advantage through HR Capabilities was significant:

Table 8. Mediation Results

Path	Indirect Effect (β)	t-value	95% CI	Result
DHRM $\rightarrow$ HRC $\rightarrow$ CA	0.35	4.90	[0.22, 0.49]	Significant

The mediation test indicated that HR capabilities partially mediated the relationship between Digital HRM and competitive advantage.

4.5 Effect Size (f^2)

Table 9. Effect Size

Relationship	f^2	Interpretation
DHRM $\rightarrow$ HRC	0.52	Large
HRC $\rightarrow$ CA	0.28	Medium
DHRM $\rightarrow$ CA	0.15	Medium

Digital HRM has a strong effect on HR Capabilities, while its effect on Competitive Advantage is moderate.

4.6 Predictive Relevance (Q^2)

Table 10. Predictive Relevance

Construct	Q^2
HR Capabilities	0.34
Competitive Advantage	0.41

All Q^2 values were greater than zero, indicating that the model had strong predictive relevance.

Discussion

The results offer empirical evidence that supports the relationship between Digital HRM, HR capabilities, and competitive advantage in tourism organizations. However, rather than treating these results as definitive confirmations, they should be interpreted more cautiously as evidence consistent with existing theoretical perspectives, particularly the Resource-Based View (RBV), while also offering context-specific insights.

First, the positive relationship between Digital HRM and HR capabilities ($\beta = 0.72$) indicates that digital-based HR practices are associated with the improvement of employee competencies. This finding is consistent with prior research, indicating that digital HR practices enhance employee skills, adaptability, and digital literacy through technology-enabled systems (Marler & Boudreau, 2017; Strohmeier, 2020). Notably, the magnitude of this effect appears relatively high compared to some prior service-sector studies, which may reflect the context of an emerging tourism region, where baseline digital capabilities are still developing (Alhelal et al., 2025; Kusluvan et al., 2010). In such settings, even the incremental adoption of digital HR tools may produce disproportionately strong improvements in employee capability. However, this interpretation should be approached with caution, as strong coefficients may also reflect sample homogeneity or same-source data effects.

Second, the positive effect of HR capabilities on competitive advantage ($\beta = 0.48$) aligns with the central argument of the RBV that human capital contributes to superior organizational performance (Barney, 1991). In the tourism sector, where service quality and customer interaction are critical, employee competency plays a key role in shaping organizational outcomes. Nevertheless, the moderate magnitude of this effect suggests that HR capabilities represent only one component of competitive advantage and that other factors, such as organizational processes, technological infrastructure, and market conditions, are also likely to influence performance (Kraus et al., 2022). This finding is broadly consistent with prior

studies in the hospitality and service industries, which emphasize the importance of human capital while acknowledging the role of complementary organizational resources.

Third, the direct relationship between Digital HRM and competitive advantage shows that digital HR systems may support organizational performance not only through employee capability development but also through other efficiency-related mechanisms. This suggests that digital HR systems may generate value through process efficiencies, improved coordination, and data-driven decision-making, independent of their capability development. This finding is in line with the broader digital transformation literature (Vial, 2019), which highlights the dual role of technology as both an enabler of human performance and an independent source of organizational efficiency.

The mediation analysis further reinforces this interpretation by demonstrating that HR capabilities partially mediate the relationship between Digital HRM and competitive advantage. This indicates that Digital HRM operates through both indirect and direct pathways. Rather than claiming a strong theoretical extension, it is more appropriate to interpret this finding as suggesting that digitalized HR practices complement, rather than replace, capability-based explanations of competitive advantages. In other words, while the RBV remains relevant, digital systems may function as additional strategic resources within the organizational resource base.

At the same time, the uniformly significant results and strong model performance warrant careful consideration. All hypotheses were supported, and all measurement criteria were satisfied, which, while possible, increases the importance of critical reflection. Given that the data were collected from a single source at one point in time, the possibility of common method bias or same-source inflation cannot be fully ruled out despite statistical checks. In addition, the relatively high correlations between constructs suggest conceptual proximity, which should be interpreted carefully in future research.

Furthermore, the cross-sectional design limits the ability to draw causal inferences. Therefore, the observed relationships should be interpreted as associational rather than causal, and it is possible that reverse or reciprocal relationships exist. Longitudinal or mixed-method approaches are necessary to better establish the causal direction.

Another limitation of the current analysis is its reliance on a pooled sample, despite the presence of variation in organization types, job roles, and levels of digital adoption. It is plausible that the strengths of these relationships differ across subgroups. For example, organizations with higher levels of digital maturity may experience weaker marginal gains from digital HRM, whereas less mature organizations may experience stronger effects. Future research could explore these possibilities using multi-group analysis or moderation models to provide a more nuanced understanding of the topic (Bharadwaj et al., 2013; Verhoef et al., 2021).

Overall, the findings suggest that Digital HRM is an important factor in enhancing organizational competitiveness in the tourism sector, particularly in emerging contexts. However, its impact should not be considered in isolation. Instead, the results indicate that competitive advantage arises from the interaction between digital systems and human capabilities, as well as broader organizational and contextual factors. This balanced interpretation provides a more realistic and theoretically grounded understanding of digital transformation outcomes.

5. Conclusion and Suggestion

This study analyzes how Digital Human Resource Management contributes to competitive advantage among tourism organizations in Riau, Indonesia. The results show that Digital HRM is related to competitive advantage through both direct and indirect pathways involving HR capabilities. The partial mediation finding indicates that digital HR practices support organizational performance by strengthening employee competencies and improving organizational efficiency.

Theoretically, these findings are in line with the Resource-Based View perspective. (RBV) and suggest that digital HRM may complement capability-based explanations of competitive advantages. Rather than replacing human capital, digital systems appear to function alongside it, reinforcing the importance of integrating technological and human resources within a unified framework.

From a practical standpoint, the findings suggest that tourism organizations should connect investment in digital HR systems with continuous employee capability development. The effectiveness of digital transformation depends not only on technology adoption but also on employees' readiness and adaptability to utilize these systems effectively.

However, these findings should be interpreted with caution. Given the cross-sectional and self-reported nature of the data, the relationships observed are **associational rather than causal**. Overall, the study suggests that digital HRM appears to enhance tourism competitiveness partly because it strengthens workforce capabilities, but the magnitude and direction of this mechanism should be re-examined in broader and more diverse contexts.

6. Limitations and Future Research

Several limitations need to be considered when interpreting the findings of this study. First, this research was limited to tourism organizations in Riau, so the findings may not fully apply to other regions or different industry sectors. Future research could expand the scope by including multiple provinces or conducting comparative studies across different sectors.

Second, the use of self-reported questionnaires may create the possibility of response bias. Respondents may provide socially desirable answers rather than reflecting actual organizational practices. Future studies could incorporate mixed methods, such as interviews or observational data, to obtain more comprehensive insights.

Third, the cross-sectional design used in this study does not allow the researcher to observe changes in the relationships among variables over a longer period. Longitudinal studies are recommended to better understand the long-term impact of digital HRM on organizational performance and competitive advantage.

Fourth, this study only places HR capabilities as the mediating variable and does not include other possible intervening or moderating factors. Future research could explore additional mediators or moderators, such as organizational culture, leadership, technological readiness, and innovation capability, to provide a more comprehensive model.

Declaration of AI and AI-assisted technologies in the writing process (if author[s] utilize AI)

During the preparation of this work, the author(s) used ChatGPT (OpenAI) to assist in drafting, structuring, and refining academic writing. After using this tool, the author(s) carefully reviewed, revised, and validated the content to ensure its accuracy, coherence, and originality and took full responsibility for the final content of the publication.

Reference

- Alhelal, A. A., Alshiha, A. A., & Al-Romeedy, B. S. (2025). AI-driven sustainable competitive advantage in tourism and hospitality: Mediating roles of digital culture and skills. *Sustainability*, 17(19), 8903. <https://doi.org/10.3390/su17198903>
- Alqarni, K., Agina, M. F., Khairy, H. A., Al-Romeedy, B. S., Farrag, D. A., & Abdallah, R. M. (2023). The effect of electronic human resource management systems on sustainable competitive advantages: The roles of sustainable innovation and organizational agility. *Sustainability*, 15(23), 16382. <https://doi.org/10.3390/su152316382>
- Armstrong, M. (2020). *Armstrong's handbook of human resource management practice* (15th ed.). Kogan Page.
- Armstrong, M., & Taylor, S. (2020). *Armstrong's Handbook of Human Resource Management Practice*. Kogan Page Publishers.
- Barney, J. (1991). Firm Resources And Sustained Competitive Advantage. *Journal of Management*. <https://doi.org/10.1177/014920639101700108>
- Baum, T. (2015). Human resources in tourism: Still waiting for change? *Tourism Management*, 50, 204–212. <https://doi.org/10.1016/j.tourman.2015.02.001>
- Bharadwaj, A., El Sawy, O. A., Pavlou, P. A., & Venkatraman, N. v. (2013). Digital business strategy: toward a next generation of insights. In *MIS quarterly* (Vol. 37, Issue 2, pp. 471–482). Management Information Systems Research Center, University of Minnesota. <https://doi.org/10.25300/MISQ/2013/37:2.3>
- Bindra, S., Bhattacharya, S., & Bhattacharya, S. (2025). Traditional to digital: Human resource management transformation. *Journal of Work-Applied Management*. <https://doi.org/10.1108/JWAM-02-2025-0019>
- Bondarouk, T., & Brewster, C. (2016). Conceptualizing the Future of HRM and Technology Research. *The International Journal of Human Resource Management*, 27, 2652–2671. <https://doi.org/10.1080/09585192.2016.1232296>
- Caligiuri, P., De Cieri, H., Minbaeva, D., Verbeke, A., & Zimmermann, A. (2020). International HRM insights for navigating the COVID-19 pandemic. *Journal of International Business Studies*, 51(5), 697–713. <https://doi.org/10.1057/s41267-020-00335-9>
- Chaudhuri, A., Arora, P., & Roy, P. (2023). Digital human resource management and organizational performance: A systematic literature review. *Human Resource Management Review*, 33(2), 100940.
- Cooke, F. L., Dickmann, M., & Parry, E. (2022). IJHRM after 30 years: Taking stock in human resource management research. *The International Journal of Human Resource Management*, 33(1), 1–23. <https://doi.org/10.1080/09585192.2021.2021732>
- Gutiérrez, I., Ferreira, J. J., & Fernandes, P. O. (2025). Digital transformation and the new combinations in tourism: A systematic literature review. *Tourism and Hospitality Research*, 25(2), 194–213. <https://doi.org/10.1177/14673584231198414>

- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM) (3rd ed.)*. Sage Publications.
- Kane, G. C., Palmer, D., Phillips, A. N., Kiron, D., & Buckley, N. (2015). Strategy, not technology, drives digital transformation. *MIT Sloan Management Review*.
- Kraus, S., Durst, S., & Ferreira, J. J. (2022). Digital transformation in business and management research: An overview of the current status quo. *International Journal of Information Management*, 63, 102466. <https://doi.org/10.1016/j.ijinfomgt.2021.102466>
- Kusluvan, S., Kusluvan, Z., Ilhan, I., & Buyruk, L. (2010). The human dimension: A review of human resources management issues in the tourism and hospitality industry. *Cornell Hospitality Quarterly*, 51(2), 171–214. <https://doi.org/10.1177/1938965510362871>
- Marler, J. H., & Boudreau, J. W. (2017). An Evidence-Based Review of HR Analytics. *The International Journal of Human Resource Management*, 28, 3–26. <https://doi.org/10.1080/09585192.2016.1244699>
- Parry, E., Strohmeier, S., Bondarouk, T., & Brewster, C. (2021). Digital HRM: A review and future agenda. *Human Resource Management Review*, 31(1), 100857.
- Porter, M. E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. The Free Press.
- Ruel, H., Bondarouk, T., & Van der Velde, M. (2007). The contribution of e-HRM to HRM effectiveness: Results from a quantitative study in a Dutch Ministry. *Employee Relations*, 29(3), 280–291. <https://doi.org/10.1108/01425450710741757>
- Strohmeier, S. (2020). Digital human resource management: A conceptual clarification. *German Journal of Human Resource Management*. <https://doi.org/10.1177/2397002220921131>
- Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 122, 889–901. <https://doi.org/10.1016/j.jbusres.2019.09.022>
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *The Journal of Strategic Information Systems*. <https://doi.org/10.1016/j.jsis.2019.01.003>
- Zhai, H., Yang, M., & Chan, K. C. (2022). Digital transformation, intellectual capital and sustainable competitive advantage. *Sustainability*, 14(21), 13942.