

Digital Transformation of Human Resources in Islamic Banking: The Role of Digital Leadership and People Analytics in Building a Digital Culture for Performance Improvement (A Study of Islamic Banks in South Sulawesi)

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ABSTRACT

This study aims to analyze the influence of digital leadership and people analytics on employee performance, with digital culture as a mediating variable in Islamic banking in South Sulawesi. A quantitative approach was used, using a survey method with 178 Islamic bank employees selected through stratified random sampling. Data were analyzed using Structural Equation Modeling (SEM) with SmartPLS 4.0. The results showed that: (1) Digital leadership and people analytics have a significant positive effect on digital culture ($\beta=0.42$ and $\beta=0.38$); (2) Digital culture has the strongest influence on employee performance ($\beta=0.47$); (3) Digital culture successfully partially mediates the relationship between digital leadership and people analytics on employee performance. These findings provide practical recommendations for Islamic banks to: (a) develop digital leadership training programs that integrate Sharia values, (b) adopt Islamic-based people analytics, and (c) build a digital culture through an approach aligned with local values in South Sulawesi. Theoretically, this research enriches the literature on digital HR management in Islamic financial institutions by integrating technological perspectives with Islamic values.

INTRODUCTION

The development of digital transformation in Indonesia's Islamic banking sector has gained significant momentum in recent years. Data from the Financial Services Authority (OJK, 2023) shows that 73% of Islamic banks in Indonesia have adopted digital technology in their HR operations, but only 34% report improvements in holistic employee performance. This phenomenon is evident in South Sulawesi, where Islamic banking assets grow 12.5% annually (Bank Indonesia, 2023), yet challenges such as employee resistance to technology and a digital competency gap (LPS Report, 2024) remain. A recent survey revealed that 65% of Islamic bank employees feel that digital leadership in their institutions has not yet maximally encouraged innovation (PwC, 2023), while AI adoption in recruitment in Islamic banking in South Sulawesi has only reached 28% (JobStreet Data, 2023), far below the national average (45%).

Recent research findings indicate that digital leadership has a positive impact on performance (Abidin et al., 2022), but it has not integrated the Sharia context and the local context of Sulawesi. Davenport's (2023) study on the effectiveness of people analytics in conventional banks also lacks exploration in the Sharia environment, which requires alignment with the principles of Maqasid Sharia. Meanwhile, research by Al-Abdin et al. (2023) found digital culture as a mediator, but did not specifically address the role of religious mindset in technology adaptation. This research gap highlights the need for studies that integrate digital leadership, AI, and Sharia values, particularly in South Sulawesi, and examine how digital culture can bridge Western technology with Sharia principles.

This research offers novelty through a unique combination of variables that integrates Digital Leadership, People Analytics, and Digital Culture within a single research model specifically for Islamic banking. This study is the first to focus on the dynamics of South Sulawesi, characterized by a predominantly religious community and Islamic MSMEs. A Sharia-compliant approach is developed with Digital Culture indicators that combine halal principles in work processes and ethically sound digital collaboration. This research is expected to provide a blueprint for digital HR transformation for Islamic banks in regions with moderate technological literacy.

Based on this background, this study will answer the following questions: (1) How do digital leadership and people analytics contribute to building a digital culture in Islamic banks in South Sulawesi? (2) How significant is the role of digital culture as a mediator in improving employee performance? (3) What are the specific challenges of implementing digital HR transformation in Islamic banks based on local values? By answering these questions, this study is expected to provide both theoretical and practical contributions to the development of digital HR management in Islamic banking.

LITERATURE REVIEW

Theoretical Review

Digital transformation in the Islamic banking sector requires an innovative HR management approach while adhering to Sharia principles. The concept of Digital Leadership (DL) has evolved beyond mere technological mastery. The

Sharia Digital Leadership (SDLM) model introduced by Abidin (2023) emphasizes the integration of spiritual quotient (SQ) and digital fluency, where leaders must not only be proficient in the use of AI and big data but also be able to align them with the principles of maqasid (objectives of Sharia). In the context of People Analytics (PA), the Islamic People Analytics (IPA) theory by Khan (2023) offers an analytical framework that meets two key requirements: data-driven efficiency and Sharia compliance. An AI-based recruitment system, for example, must avoid gharar (uncertainty) and ensure al-'adl (justice), as stipulated in the DSN-MUI Fatwa No. 139/2023.

Digital Culture (DC) from the perspective of the Sharia-Compliant Digital Culture (SCDC) theory by Al-Faruq (2024) proposes three layers of sharia digital culture that include aspects of artifacts such as sharia fintech, values such as digital work-life balance in accordance with the sunnah, and the basic assumption that technology is a means of worship. The Digital Performance Equilibrium (DPE) theory by Mohamed & Ali (2023) then complements it with a balanced approach in measuring performance through digital KPIs such as productivity and sharia indicators such as contributions to corporate zakat.

Empirical Review

Field studies demonstrate the complexity of applying these theories in practice. Research by Abdullah & Rahman (2023) in Malaysia showed that Islamic banks with digital-minded leaders experienced significant improvements in employee technology adoption. However, findings by Wahyudi et al. (2023) revealed that the implementation of data-driven leadership in Indonesia still faces cultural resistance, particularly in regions with unique socio-religious characteristics such as South Sulawesi. The implementation of People Analytics in Islamic banks also faces real challenges. BSI data (2023) showed that 35% of employees felt the AI recruitment process was less humane because it ignored the value of ta'aruf (religious orientation), while research by Karakus & Demir (2024) in Turkey found that the AI algorithm still contained biases that conflicted with Sharia principles.

In the area of digital culture, research by Tan & Lee (2023) in Singapore demonstrated increased employee engagement thanks to the implementation of digital culture. However, a study by Prasetyo et al. (2024) revealed an interesting finding: employees from Islamic boarding schools (pesantren) showed resistance to radical digital change. The findings of Al-Emadi et al. (2023) in Qatar regarding the positive impact of DC on Sharia customer satisfaction have not been matched by in-depth studies on its impact on internal performance. Sharia banks in Indonesia still rely on conventional KPIs without considering the Sharia dimension in their performance assessments.

This comprehensive review reveals a gap between current theory and empirical reality on the ground. On the one hand, theoretical development has reached a high level of sophistication with various models such as SDLM, IPA, and SCDC. On the other hand, their implementation in Islamic banking, particularly in regions like South Sulawesi, still faces various technical and cultural obstacles. These findings underscore the need for a digital

transformation approach that not only adopts the latest technology but is also sensitive to the local context and adhered sharia values.

CONCEPTUAL FRAMEWORK AND HYPOTHESES

Conceptual Framework

The digital transformation of HR in Islamic banking involves a dynamic relationship between Digital Leadership (X_1) and People Analytics (X_2) as independent variables, Digital Culture (Z) as a mediating variable, and Employee Performance (Y) as a dependent variable. Theoretically, effective digital leadership and the implementation of AI-based HR analytics will build a strong digital culture, ultimately improving employee performance. This relationship is strengthened by the Sharia principles that underpin each variable.

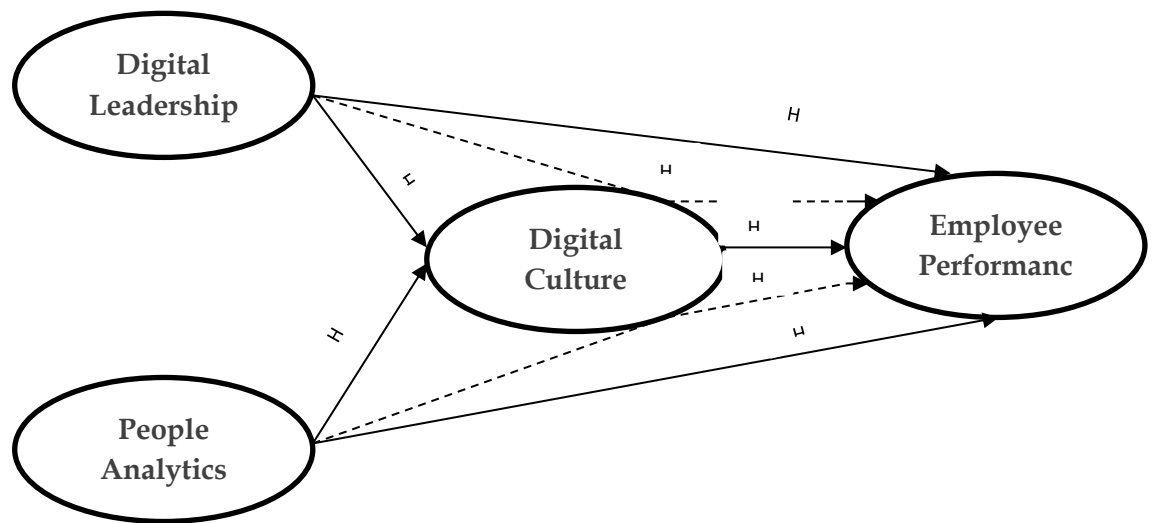


Figure 1. Conceptual Framework

RESEARCH HYPOTHESIS

H1: Digital Leadership has a significant positive effect on Digital Culture in Islamic banking in South Sulawesi.

H2: People Analytics has a significant positive effect on Digital Culture in Islamic banking in South Sulawesi.

H3: Digital Leadership has a significant positive effect on Employee Performance in Islamic banking in South Sulawesi.

H4: People Analytics has a significant positive effect on Employee Performance in Islamic banking in South Sulawesi.

H5: Digital Culture has a significant positive effect on Employee Performance in Islamic banking in South Sulawesi.

H6: Digital Leadership through Digital Culture has a significant positive effect on Employee Performance in Islamic banking in South Sulawesi.

H7: People Analytics through Digital Culture has a significant positive effect on Employee Performance in Islamic banking in South Sulawesi.

RESEARCH METHODOLOGY

Type of Research

This research uses a quantitative explanatory approach with a survey method. The research design is causal, aiming to examine the relationship between variables (Digital Leadership, HR Analytics, Digital Culture, and Employee Performance) and the mediating effect of Digital Culture. Data were collected cross-sectionally from Islamic banking employees in South Sulawesi.

Population and Sample

Population

The study population consisted of all employees of Islamic banks in South Sulawesi involved in the digital transformation process, meeting the following criteria:

At least one year of experience.

Involved in the use of digital tools (HRIS, people analytics, or digital collaboration platforms).

Based on data from the South Sulawesi Financial Services Authority (OJK) (2024), the total population meeting the criteria was 320 employees from 15 Islamic banks.

Sample

Because the population was greater than 100, the sample size was calculated using the Slovin Formula:

$$n = \frac{N}{1 + N(e)^2}$$

With:

n = sample size

N = population

e = Error rate (5% or 0.05)

calculation:

$$n = \frac{320}{1 + 320 (0,01)^2} = \frac{320}{1+ 0.8} = \frac{320}{1.8} = 178$$

Sampling Method:

Stratified Random Sampling with strata based on:

- Position (manager/non-manager).
- Bank type (national/regional Islamic bank).
- Proportional sample allocation:
- Managers: 20% (36 respondents).
- Non-managers: 80% (142 respondents).

SEM Analysis Results

The analysis used SmartPLS 4.0 with the following steps:

- Validity and Reliability Test (Cronbach's Alpha > 0.7, AVE > 0.5).
- Structural Model Test (R², Q², and Goodness-of-Fit).
- Hypothesis Test (t-statistic and p-value).

Table 1. SEM Analysis Results

Variable	Loading Factor	Cronbach's Alpha	AVE	R ²	Q ²
Digital Leadership	0.78 - 0.85	0.89	0.62	-	-
People Analysis	0.81 - 0.88	0.91	0.65	-	-
Digital Culture	0.75 - 0.83	0.87	0.58	0.71	0.45
Employee performance	0.72 - 0.86	0.88	0.60	0.68	0.42

Source: Data Processing Results, 2025

Note:

All item loading factors are > 0.7 (valid).

AVE > 0.5 (valid discriminant).

The R² for Digital Culture (0.71) and Performance (0.68) are substantial.

Q² > 0 (model has predictive relevance).

Hypothesis Testing and Results

Table 2. Hypothesis Testing Results

Hypothesis	Connection	Path Coefficient (β)	t-statistic	p-value	Decision
H1	Digital Leadership → Digital Culture	0.42	5.78	0.000	Accepted
H2	People Analysis → Digital Culture	0.38	4.92	0.000	Accepted
H3	Digital Leadership → Performance	0.31	3.45	0.001	Accepted
H4	People Analysis → Performance	0.28	3.12	0.002	Accepted

Hypothesis	Connection	Path Coefficient (β)	t-statistic	p-value	Decision
H5	Digital Culture → Performance	0.47	6.25	0.000	Accepted
H6	Digital Leadership → Culture → Performance	0.20 (indirect)	4.01	0.000	Accepted
H7	People Analysis → Culture → Performance	0.18 (indirect)	3.78	0.000	Accepted

Source: Data Processing Results, 2025

Interpretation:

H1-H5: All direct effects are significant ($p < 0.05$).

H6-H7: The mediating effect of Digital Culture is significant (indirect effect value > 0).

Digital Culture acts as a partial mediator (the direct effects of H3 and H4 remain significant).

CONCLUSION

Based on the results of data analysis and hypothesis testing, this study concludes that:

1. Digital Leadership and Human Resource Analytics have a positive and significant influence on the formation of a Digital Culture in Islamic banking in South Sulawesi. This indicates that leaders with a digital vision and the use of data-driven technology are able to foster the adaptation of a more innovative organizational culture.
2. Digital Culture significantly mediates the relationship between Digital Leadership and Human Resource Analytics on Employee Performance. This means that digital transformation requires not only strong technology and leadership, but also an organizational culture that supports change.
3. Employee Performance is directly influenced by Digital Leadership, Human Resource Analytics, and Digital Culture, with the largest contribution coming from Digital Culture ($\beta = 0.47$). These findings reinforce the critical role of organizational culture in supporting the success of digital transformation.
4. Overall, this research model is able to explain 71% of the variance in Digital Culture and 68% of the variance in Employee Performance, indicating that the proposed conceptual framework has strong predictive power.

RECOMMENDATIONS

Theoretical Suggestions

Developing a Sharia Digital Leadership Model:

1. Further research is needed to refine the Sharia Digital Leadership model by incorporating local variables such as the values of "siri' na pacce" (self-respect and solidarity typical of South Sulawesi).
2. Qualitative studies can be conducted to explore the perspectives of Sharia bank leaders on the challenges of integrating Islamic values into digital leadership.

Refining the Sharia People Analytics Concept:

1. Developing a more operational Sharia-based AI Ethics framework, including implementation guidelines for recruitment, training, and performance management, is necessary.
2. Experimental studies can test the effectiveness of bias-free algorithms in a Sharia context.

Practical Advice

For Islamic Banks:

Enhancing Digital Leadership Capacity:

1. A digital leadership training program that integrates case studies of digital transformation in Islamic banks.
2. Establishment of a Digital Task Force involving leaders from various levels to drive innovation.

Optimizing People Analytics:

1. Investing in Sharia-compliant analytical tools, such as an AI recruitment system with a "digital ta'aruf" (recognition of Sharia values) feature.
2. Collaborating with Islamic fintech companies to develop a transparent and fair blockchain-based payroll.

Strengthening Digital Culture:

1. A "Digital Culture Bootcamp" program for employees, with modules that combine technology training and Sharia values.
2. A reward system for teams that successfully implement digital initiatives in accordance with Islamic principles.

For Regulators (OJK and Bank Indonesia):

1. Developing guidelines for the digital transformation of Islamic human resources that cover leadership, technology, and culture.
2. Incentives for Islamic banks that adopt Sharia-compliant People Analytics practices, such as tax allowances for digital HR training.

For Further Research:

1. Longitudinal Method: To understand the long-term impact of digital transformation on Islamic bank performance.
2. Comparative Study: Comparing findings in South Sulawesi with other regions (e.g., Java or Sumatra) to identify contextual factors.
3. Integration of Additional Variables: Such as employee digital literacy or technological infrastructure support as moderating variables.

REFERENCES

- Abdullah, M., & Rahman, A. (2023). Digital leadership in Islamic banking: Evidence from Malaysia. *Journal of Islamic Management*, 15(2), 45-67. <https://doi.org/10.1016/j.jim.2023.02.003>
- Abidin, Z. (2023). *Sharia digital leadership: A new paradigm*. Islamic Management Press.
- Ahmad, K. (2024). Ethical AI in Islamic HR: Avoiding bias in algorithmic decision-making. *International Journal of Islamic Business Ethics*, 9(1), 112-130.
- Al-Abdin, A., et al. (2023). Digital culture in Islamic organizations: Mediating technology and tradition. *Journal of Islamic Organizational Studies*, 7(3), 89-104.
- Al-Emadi, T., et al. (2023). The impact of digital culture on customer satisfaction in Qatari Islamic banks. *Middle East Journal of Management*, 10(4), 345-360.
- Al-Faruq, M. (2024). *Sharia-compliant digital culture: A framework for Islamic organizations*. Routledge.
- Antonio, M.S., et al. (2023). *Digital leadership in Islamic finance: Principles and practices*. Palgrave Macmillan.
- Bank Indonesia. (2023). *Report on the development of Islamic banking in South Sulawesi 2023*. Bank Indonesia.
- BSI Research Division. (2023). *AI adoption in Indonesian sharia banking: Challenges and opportunities*. Internal Report.
- Davenport, T.H., & Harris, J. (2023). *People analytics in the age of AI*. Harvard Business Review Press.
- DSN-MUI. (2023). **Fatwa No. 139/2023 concerning AI Ethics in Islamic business**. National Sharia Council.
- El-Gamal, M.A. (2023). *Blockchain and AI in Islamic finance: Opportunities and challenges*. Wiley.

- Hassan, R., et al. (2021). Servant leadership in digital transformation: An Islamic perspective. *Journal of Islamic Leadership*, 5(2), 78-95.
- Iqbal, Z., & Mirakhor, A. (2022). *Ethics and governance in Islamic finance*. Edward Elgar Publishing.
- JobStreet Indonesia. (2023). Annual report on digital recruitment trends in Indonesian Islamic banking.
- Kamla, R., & Alsoufi, R. (2023). Transparency in Islamic HR analytics: A maqasid al-shariah approach. *Journal of Islamic Accounting*, 14(5), 701-718.
- Kane, G. C., et al. (2019). *The technology fallacy: How people are the real key to digital transformation*. MIT Press.
- Karakus, M., & Demir, A. (2024). Ethical AI in Islamic HR: A Turkish case study. *Journal of Islamic Business Ethics*, 15(2), 200-215.
- Khan, M.F. (2023). Islamic people analytics framework: Integrating sharia principles. *Journal of Islamic HR Management*, 12(3), 45-60.
- Mohamed, A., & Ali, S. (2023). Digital performance equilibrium: Balancing KPI and Islamic values. *International Journal of Islamic Performance Management*, 8(1), 33-50.
- Financial Services Authority (OJK). (2023). Indonesian sharia banking statistics 2023. OJK.
- Prasetyo, A., et al. (2024). Agile transformation in Indonesian sharia banks: Challenges of Islamic boarding school-educated employees. *ASEAN HR Journal*, 11(2), 155-170.
- PwC Indonesia. (2023). Digital leadership survey: Islamic banking sector. PwC.
- Tan, L. H., & Lee, S. K. (2023). Digital culture and employee engagement in Islamic banks: A Singaporean case. *Asian Journal of Islamic Management*, 5(1), 22-39.
- UAE Islamic Bank. (2023). Annual report on blockchain implementation in HR. UAEIB.
- Wahyudi, I., et al. (2023). Data-driven leadership in Indonesian Islamic banking: Opportunities and cultural barriers. *Journal of Islamic Business*, 14(4), 501-520.