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The Influence of Top Management Support, HR Technology Infrastructure, and System Reliability on Digital HRM Effectiveness in Financial Technology Companies

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ABSTRAK

Perluasan teknologi finansial membutuhkan perusahaan untuk mengadopsi sistem manajemen sumber daya manusia digital yang meningkatkan proses operasional mereka guna mempertahankan keunggulan kompetitif di pasar. Penelitian ini menyelidiki dampak dukungan kepemimpinan eksekutif dan sistem teknologi sumber daya manusia bersamaan dengan keandalan sistem terhadap efektivitas manajemen sumber daya manusia digital di organisasi teknologi finansial. Penelitian ini menggunakan desain penelitian kuantitatif untuk menguji hipotesis melalui pendekatan penelitian eksplanatori. Para peneliti melakukan survei menggunakan kuesioner terstruktur yang mereka distribusikan kepada 150 karyawan dari perusahaan fintech Indonesia yang dipilih melalui purposive sampling. Para peneliti melakukan uji validitas dan uji reliabilitas serta uji asumsi klasik sebelum mereka melakukan analisis regresi linier berganda untuk analisis data.Penelitian menunjukkan bahwa efektivitas HRM digital memerlukan dukungan dari manajemen puncak bersama dengan sistem teknologi HR dan keandalan sistem karena faktor-faktor ini memengaruhi kinerja sistem tersebut. Studi ini menunjukkan bahwa efektivitas HRM digital membutuhkan komponen teknologi sekaligus dukungan organisasi dan keandalan sistem. Penelitian ini menunjukkan bagaimana manajemen sumber daya manusia dan penelitian sistem informasi diuntungkan dengan memahami bagaimana elemen manajerial dan komponen teknis bekerja bersama untuk mengembangkan sistem HRM digital. Temuan studi ini memberikan rekomendasi bagi perusahaan teknologi finansial untuk mengembangkan solusi manajemen HR yang mencapai keandalan dan efektivitas jangka panjang melalui metode digital.

Kata kunci: dukungan manajemen puncak, infrastruktur teknologi, keandalan sistem, efektivitas HRM digital

ABSTRACT

The expansion of financial technology needs companies to adopt digital human resource management systems which enhance their operational processes to maintain their competitive edge in the market. The study investigates the impact of executive leadership backing and human resource technology systems together with system reliability on the effectiveness of digital human resource management in financial technology organizations. The research uses a quantitative research design to test its hypotheses through an explanatory research approach. The researchers conducted a survey using a structured questionnaire which they distributed to 150 employees from Indonesian fintech companies who were selected through purposive sampling. The researchers conducted validity testing and reliability testing plus classical assumption testing before they performed multiple linear regression analysis for data analysis. The research shows that digital HRM effectiveness needs top management support together with HR technology systems and system reliability because these factors influence system performance of the system. The study shows that digital HRM effectiveness requires both technological components plus organizational support and system dependability. The study demonstrates how human resource management and information systems research benefit from understanding how managerial elements and technical components work together to develop digital HRM systems. The study findings provide financial technology companies with recommendations for developing HR management solutions which achieve reliability and long-term effectiveness through digital methods.

Keywords: top management support, technology infrastructure, system reliability, digital hrm effectiveness

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INTRODUCTION

The Financial Technology (FinTech) industry currently operates in a business environment which requires organizations to establish human resource management systems that can adapt to its rapidly changing and competitive and disruptive nature. Digital Human Resource Management has become an essential strategic requirement for FinTech companies which want to compete successfully in their efforts to attract and develop and maintain top digital talent (Harahap et al., 2025). The transition from traditional HRM processes to Digital HRM allows organizations to automate their operations and make decisions based on data while providing better employee experiences that millennial and Gen-Z workers need because they make up most of the workforce (Ferdiansyah & Hendratni, 2024). Organizations fail to implement Digital HRM because they desire to use it but they cannot establish proper technological integrations with their operational activities. FinTech organizations which do not implement Digital HRM correctly experience serious operational difficulties which result in slow market responses and higher operational costs and increased employee departures because staff members become dissatisfied with the human resources support they receive (Mulyadi et al., 2024). The study of Digital HRM success factors exists as an urgent requirement which organizations must fulfill to maintain their competitive advantages in the market.

The successful implementation of new systems depends on executive management support which acts as the primary driving force for organizations to implement technological solutions. Executive leaders at FinTech companies need to implement HR transformation through complete support of their HR departments according to their professional obligations (Djunaedi et al., 2025). Digital HRM capabilities depend on two main factors which include HR technology infrastructure and managerial elements that control system performance (Sundari et al., 2024; Susanto et al., 2024). The infrastructure needs hardware resources and continuous network connectivity and software systems which include payroll and recruitment and performance management systems to operate together with a cloud framework that provides immediate data access (Tawil et al., 2025). FinTech companies which rely on quick data processing will face problems because their current HR technology systems create data silos which block their ability to process data correctly and reduce their operational efficiency (Ibrahim et al., 2025). The system performance for demanding situations depends on the infrastructure quality according to its direct relationship with system performance (Kurniasari et al., 2023). The technical infrastructure success will achieve no value because system reliability functions as the fundamental requirement for maintaining operational performance and system accuracy (Siska et al., 2024). The Digital HRM system reliability depends on its capacity to run continuously while maintaining high operational times and processing data without errors and protecting confidential employee information (Siagian et al., 2024).

The study investigates how support from top management interacts with HR technology systems and their operational reliability to determine digital HRM outcomes at financial technology companies. The study investigates how high-technology industrial environments use technology enablement factors to develop their Strategic Human Resource Management and Management Information Systems research capabilities. The study will identify which leadership support elements and infrastructure and reliability factors lead to different system performance outcomes. The research gives HR professionals together with fintech executives practical solutions for developing their digital transformation roadmaps. The study results will assist organizations in determining their investment priorities which include software acquisition and infrastructure expansion and system reliability improvements and essential management backing needed to create an adaptable HR department that achieves its business objectives.

RESEARCH METHOD

The research employs numerical analysis to assess how executive support and HR technology systems together with operational system reliability impact digital HR management implementation in financial technology organizations. The research team conducted a survey to collect data from employees and HR practitioners in fintech companies throughout Indonesia by using a structured questionnaire which employed a five-point Likert scale. The researchers selected participants through purposive sampling which required respondents to have worked at a financial technology company for one year and to have used digital HR systems and to have knowledge about their company's digital HR policies and procedures. The researchers collected data from 150 respondents which enabled them to conduct inferential statistical analysis according to established minimum requirements. The researchers used instrument quality evaluation methods to assess validity which required them to verify item-total correlation until it reached a 0.30 coefficient threshold at 0.05 significance level and reliability testing which used Cronbach's Alpha to achieve a value above 0.70. The researchers executed classical assumption tests to examine data before they started hypothesis testing which included normality assessments and multicollinearity evaluations and heteroscedasticity examinations to determine if the regression model met testing requirements. The researchers used multiple linear regression analysis to test their hypotheses.

RESULT AND DISCUSSION

The multiple linear regression results show that the research model achieves testing success through its F test value which determines the statistical significance at 0.000. The combination of top management support with HR technology infrastructure and system reliability produces a substantial effect on digital HRM effectiveness which financial technology companies use for their operations. The research model explains 72% of digital HRM effectiveness variation through its three independent variables, while other factors not present in the model impact the remaining portion. The t-test results

show that each independent variable has a positive regression coefficient and a significance value below 0.05, so that all research hypotheses are declared accepted.

The research results show that top management support creates positive effects which significantly enhance digital HRM effectiveness within financial technology organizations. Top management support functions as the main factor which determines the success of digital transformation efforts in human resource management. Fintech companies need their top executives present because it shows employees that Digital HRM is essential for their business operations which require work under unpredictable conditions while developing innovative solutions. The organization shows its backing by distributing monetary funds while creating tactical plans that include their commitment to teaching employees about digital skills. Organizations use top management support to build trust in digital HR systems which decreases their resistance to organizational changes because top management creates trust for these systems. Employees tend to accept digital HR systems when top management shows their support for these systems because they want to achieve optimal usage of them. Organizations without top management support use Digital HRM only for administrative tasks because they do not receive any strategic benefits from the system. The research demonstrates that top management support functions as a basic managerial element which determines how well Digital HRM operates in financial technology organizations.

The present research findings demonstrate that HR technology infrastructure implements direct enhancements to digital HRM capabilities which financial technology companies. The research demonstrates that businesses need adequate technological infrastructure to successfully implement their digital HR systems. HR technology infrastructure includes HRIS software and servers and networks and data integration systems which have the ability to connect with other business applications. The advanced infrastructure of data- and technology-driven fintech companies enables their HR departments to automate essential processes which include recruitment and performance appraisals and payroll processing and talent management activities. The solid infrastructure allows companies to achieve better data accuracy which helps them make faster decisions through HR analytics. Organizations that have insufficient technology infrastructure experience digital HR systems which operate at slow speeds and lack proper integration while being difficult for users to access. The conditions make employees evaluate digital HRM effectiveness as less effective than it actually is. Fintech organizations need to make ongoing HR technology infrastructure investments because digital HRM systems function as essential operational requirements for their business operations.

The study results prove that system reliability creates a direct connection between digital HRM performance metrics and digital HRM performance outcomes for financial technology companies. The research shows that digital HR system reliability serves as the essential factor which users need to establish their trust and contentment. System reliability consists of four components which include system stability

and data security and access speed and minimal technical disruptions during use. Fintech companies need digital HR system reliability as an essential requirement because they handle sensitive technology operations and face high information security threats. A reliable system enables employees and management to operate HR applications without concerns about data loss or operational interruptions. The HR system will experience operational disruptions because of persistent technical problems which result in system failures and reduced employee productivity. Users avoid using digital HRM systems because they find system reliability of the system does not meet their needs. System reliability affects technical performance but it also determines how users will respond to digital HR systems. The research shows that system reliability improvements function as technical strategic assets which financial technology companies use to advance their digital HRM development.

CONCLUSION

According to the research three factors which comprise top management support and HR technology infrastructure and system reliability create positive results which improve digital HRM performance for financial technology companies. The research shows that Digital HRM implementation success depends on two factors which include technological advancement and managerial backing and system dependability. Digital HR transformation needs top management support because executives provide strategic direction and resource allocation and organizational validation. The proper HR technology infrastructure establishes the necessary technical foundation which allows digital HR systems to operate at their best and work together seamlessly. Digital HRM systems operate with their complete system reliability which maintains continuous service delivery and increases user trust and satisfaction. Financial technology companies should establish stronger top management commitment for all digital HR transformation projects according to the research results. Organizations must sustain ongoing investments for HR technology infrastructure development because digital HR systems need this support to meet their changing business requirements. The organization requires system reliability to become its main objective through improved data protection and continuous system maintenance and advanced technological capabilities.

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