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Patterning of structural equations of digital human resources in Mellat Bank branches

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Abstract

The aim of this research was to find patterns of structural equations of digital human resources in Mellat Bank. The present research is applicable-developmental in terms of the type of objective, descriptive in terms of data collection, and quantitative in terms of the nature of the data. The data collection tool consisted of two parts: a review and exploration of research literature and upstream documents in the library section, and a researcher-made questionnaire in the field section. According to the population survey, the statistical population of Mellat Bank was approximately 20,000 people, and 377 people were selected as a sample based on the Cochran formula. Then, the questionnaire was distributed among the quantitative research sample, and after collecting statistical data, it was analyzed using PLS software. The results showed that the digital human resource management model includes causal factors (technological, environmental, human, and organizational), contextual factors (digital platform, managerial platform, and individual platform), intervening factors (cultural factors and creating new platforms), strategies (organizational and managerial), and consequences (individual, cultural and organizational); and all relationships in the model are meaningful.

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Extended Abstract

Introduction

Human resource management is currently on the verge of a major transformation driven by digital technologies. Technologies such as artificial intelligence, big data, social networks, cloud computing, blockchain and etc. are transforming human resources. The combination of human resource management and digital transformation has formed a new concept called digital human resource management, which is briefly called digital human resources. Human resource management serves digital transformation and brings soft transformation capabilities to the organization. Organizational digital transformation is a journey in which an organization creates the capabilities necessary for survival and competitiveness in this era and then takes full advantage of these capabilities to maximize business value. Do not forget that digital transformation begins, first of all, with a change in our attitudes and perspectives. If you go directly to the use of technologies and tools before developing a digital mindset in your organization, especially your senior managers, you will get nowhere. Also remember this golden proposition well that digital transformation is business transformation. This insight teaches us that technology itself is not valuable to us, but becomes valuable when we can solve organizational problems with it. So digital transformation is a pragmatic and value-oriented concept, not a fashionable topic that is only for show (Gheidar & Shami Zanjani, 2020).

Digital human resource management is a digital transformation in human resource practices and processes through the use of electronic media, mobile, analytics, and information technology to make human resource management more efficient. In other words, digital HRM essentially performs or manages all HR work using soft technologies, applications, and the internet. Digitalization or digital transformation is something that all organizations must bring to be efficient and relevant in the future. Otherwise, they will lag behind other organizations in the market industry. Digital HRM transforms traditional HR processes using new technologies. This approach not only increases efficiency and speed of work, but also enables more accurate and evidence-based decision-making by collecting and analyzing employee data. As a result, organizations can improve employee performance, attract and retain top talent, and ultimately achieve sustainable competitive advantage. In recent years, Bank Mellat has moved from the employee management model to the digital human capital management paradigm with a transformational approach. The lack of a comprehensive digital thinking model is noticeable, and this digital thinking, model, and paradigm have not yet dominated the bank. Therefore, there is a need to design a model that replaces the digital transformation thinking in the field of human resources with the idea of becoming electronic. Considering this digital gap in many activities of the medical system organization, the lack of the necessary ability of employees to digitize activities, and the lack of providing the necessary training and skills in the field of digital and information technology; implementing this plan seemed necessary to solve these problems, and this research tries to provide the right information and solutions to solve these problems and advance the activities of Bank Mellat in a better and faster way. For this purpose, this research tries to present a digital model of human resources management in the country's banking network in line with this necessity and answer the question: What is the patterning of the structural equations of digital human resources in Bank Mellat?

Theoretical Literature

Digital Human Resource Management

Concepts such as “digitalization”, “digital transformation” or “digital disruption” are currently among the most prominent research topics. In general, such concepts indicate the increasing

use of technology and the related fundamental changes in various areas of business and society, which is also true (Martins, 2022). Digital human resource management is a mindset that continuously provides digital technologies for greater employee productivity and a better work experience (Ghader & Shami Zanjani, 2020). Digital human resource management is also considered as a set of knowledge, rules and best practices that lead to effective human resource management. Weermans and van Veldhoven define digital human resource management as “the administrative support of the human resource function in organizations by using Internet technology”. But they also emphasize the importance of understanding that the introduction of electronic human resource management may lead to changes in the content and positioning of the human resources role. Adopting web-based technologies for human resource functions involves a combination of two components: the use of electronic media and the active participation of individuals in this process (Voermans & Van Veldhoven, 2007).

Research Background

Orhan & Kurnaz (2025) conducted a study with the aim of conducting a bibliometric analysis of the keyword network, numerical distribution per year, citation network of highly cited publications, most active researchers, and most active journals; countries and institutions of published studies. Human resource management education has been in the WOS database between 1990 and May 1, 2024. In addition, the objectives of the studies examined in the study are analyzed in order to identify the research trend in the field of artificial intelligence in human resource management and the remaining gaps in the research field. In the study, the criterion sampling method was selected as one of the purposive sampling methods. This study is a descriptive content analysis using a qualitative research method. The R programming language package program of "biblioshiny" was used in the analysis of the collected data. For the primary purpose of the study, MAXQDA 2020 was also used in the second stage and analyzed in 16 sections.

Abdollahzadeh Namini et. al., (2024) conducted a study with the aim of designing a behavioral model of managers in the digital age with a grounded theory approach. Data analysis and model design were carried out in three stages of open, axial and selective coding. The findings indicate that the causal conditions include human factors, environmental factors, and organizational factors; the main phenomenon of managers' behavior includes communication and interactions, trust, decision-making under uncertainty, personality traits, and digital temperament; the background conditions include digital cognition and understanding, digital education and culture, digital experience and talent and skill management, digital forward-looking and strategic thinking, change management, and digital leadership capabilities; the intervening conditions include digital mindset and attitude, manager intelligence, manager values, innovation, and the nature of business and industry; the strategies and mechanisms include innovation and learning strategy, digital retention strategy, digital mix and focus, digital participation strategy, and digital leadership and governance strategy; and the consequences include consequences of individual dimensions and organizational dimensions.

Abidi et. al., (2024) conducted a study aimed at identifying and evaluating the components of human resource competence in the era of digital transformation. The results in the qualitative section showed that the competence of digital managers includes 7 components: individual factors, organizational factors, culture of change, digital attitude, communication factors, leadership and management, and technical and specialized factors. The results in the quantitative section showed that there is a significant correlation between all components. Also, among the components, the component of culture and change management was received first priority. The results also showed that the research model has the necessary validity.

Research Methodology

The present research is applicable-developmental in terms of the type of objective, descriptive in terms of data collection, and quantitative in terms of the nature of the data. The data collection tool consisted of two parts: a review and exploration of research literature and upstream documents in the library section, and a researcher-made questionnaire in the field section. According to the population survey, the statistical population of Mellat Bank was approximately 20,000 people, and 377 people were selected as a sample based on the Cochran formula. Then, the questionnaire was distributed among the quantitative research sample of the study, and after collecting statistical data, it was analyzed using PLS software.

Research findings

Several criteria are used to examine the fit of the structural model of the research; the first and most basic criterion being the t-significance coefficients. The structural model fit using t-coefficients is such that these coefficients must be greater than 1.96 in order to confirm their significance at a 95% confidence level. The results of the significance of the coefficients are reported based on the t-statistic value; so that if the t-statistic value is greater than 1.96, it can be concluded with 95% confidence that the independent variable has an effect on the dependent variable. In this section, Figures 1 and 2 are examined and the overall research model is fitted. The results showed that the model has a good fit and all relationships in the model are significant.

Discussion and Conclusion

The aim of this research was to find a pattern of structural equations of digital human resources in Bank Mellat. The results showed that the model had a good fit and all relationships in the model were meaningful. The research findings also show that the digital human resources management model includes several key factors that together help improve and develop digital human resources management systems. These include causal factors (technological, environmental, human and organizational), contextual factors (digital platform, managerial platform, individual platform), intervening factors (cultural factors and creating new platforms), strategies (organizational and managerial), and consequences (individual, cultural and organizational). These findings are consistent with the results of Tijan et al, (2021 and Vrontis et al, (2021). In general, the digital human resource management model presented in this study shows that in order to achieve success in human resource management, attention should be paid to all causal, contextual, and intervening factors, as well as strategies and consequences. This model can help organizations improve their human resource management systems by considering all these factors and achieve their organizational goals. Finally, it is suggested that to adapt to the digital workplace, Bank Mellat needs to provide appropriate strategies and processes to create a suitable work environment for implementing digital human resources, including creating a balance between remote and in-person work, developing employees' digital skills, and encouraging collaboration and knowledge sharing. Technological facilities for the digitization of human resources should be provided to use employees' capabilities more effectively.