

# Digital transformation adoption in human resources management during COVID-19

446

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## Abstract

**Purpose** – The purpose of this study is to discover the factors related to human resource (HR) digital transformation (DT) in Bahrain during coronavirus disease 2019 (COVID-19) and to analyze the impact of e-human resource management (e-HRM) on organizational performance. These factors are funding, information technology (IT) infrastructure, technical support, digital skills or talents, organizational culture, employee resistance and top management support. These factors were tested to determine whether they affected HR DT in Bahrain during COVID-19. There are no findings in the researched literature regarding the proposed factors that affect HR DT in Bahrain during COVID-19 in this study.

**Design/methodology/approach** – For data collection, a quantitative method was applied by conducting an online survey and distributing it to HR executives and employees from multiple organizations in Bahrain, both in the private and public sectors.

**Findings** – This study proposes a DT adoption model based on seven factors extracted from the literature review. A questionnaire was deployed, and accurate data were collected, processed and then analyzed. The logit model shows determinants factor to the DT adoption where all variables have a positive effect.

**Originality/value** – Using technology in an organization's HR practices, known as e-HRM or HR DT, is becoming more crucial since the COVID-19 pandemic. Unlike European countries, the HR sector in Bahrain is not prepared to adopt the e-HRM process. This paper proposes a model that enables the HR sector to adopt digital technologies. This model is based on the key factors that enable an effective transition to the sector's



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digitalization (e-HRM). Future research is sought to provide additional insights into the same factors and measure their effect on HR DT during COVID-19 in other countries.

**Keywords** e-HRM, Digital transformation adoption, Human resource management (HRM), COVID-19, Logistic regression

**Paper type** Research paper

## 1. Introduction

### 1.1 Overview

The sudden coronavirus disease 2019 (COVID-19) pandemic that emerged in early 2020 caused a worldwide economic crisis that hurt many businesses. Many employees lost their jobs due to their organizations suffering immense losses. Employees who remain working at their jobs must undergo sudden changes in the working environment, like implementing social distancing or working from home through technology and digitalization of business practices (Cooke, Dickmann, & Parry, 2020). Organizations need their human resource (HR) departments more than ever to manage and lead employees through this difficult situation. They have a significant role in helping employees adjust to new working environments and overcoming the feeling of ambiguity and fear by developing and implementing new strategies throughout the organization (Al-Alawi & Al Showmali, 2019; Pandey, 2020).

The pandemic resulted in organizations making difficult decisions to ensure they continue functioning and surviving, including laying off some employees to reduce costs. Social distancing was introduced in organizations, and most employees started working from their homes to avoid spreading the COVID-19 virus. It threatens human capital by affecting work behavior and motivation, which automatically impacts organizational performance outcomes (Pandey, 2020). The use of technology is becoming crucial, and this includes the need for the digital transformation (DT) of HR practices in organizations. To maintain an organization's competitive advantage, the HR departments face a challenge in the DT of their HR practices and must strategically utilize HR technology (Banu, 2019). The Kingdom of Bahrain has been chosen as the field of study considering the changes within the organizations within the country, focusing on enhancing the human resource management (HRM) systems.

### 1.2 Background

The sudden COVID-19 pandemic affected all organizations and their business operations, which required them to take precautions to protect their employees and continue business operations simultaneously (Opatha, 2020). The HRM process needed to be digitalized due to the pandemic. Technology is being used more than ever to facilitate the required changes with the pandemic. HR's function is essential during a pandemic and will not be restricted by its standard HR practices. At the same time, strategic thinking will become the core competence of HR to aid in the DT of its HR practices and the organization's employees. They will also utilize more analytics and big data to augment their value to the firm, requiring more specialization. The DT process of HRM dramatically depends on properly appropriate technological developments in its practices (Gigauri, 2020). In order to achieve DT within the organization, we need to focus on two fundamental aspects of the company – the usage of technologies within the value chain and the impact of the change on the people, culture and values of the company (Nicolás-Agustín, Jiménez-Jiménez, & Maeso-Fernandez, 2021). The tangible and intangible sources are involved while considering the change implementation and the HRM. The implication of DT within the HRM is not new. Furthermore, the devastating situation of the COVID-19 pandemic has catalyzed the need for DT in HRM across the globe. Considering the implementation of DT within the HRM process, the organization's goal should be identified and strategies per the organization's requirements.

In order to improve productivity and enhance the recruitment process, the implementation of DT is considered within HRM. Furthermore, the recent lockdown due to the pandemic made it evident for every organization to implement DT. The effectiveness of the implementation is a matter of concern considering the employee and organizational performance.

### *1.3 Research problem*

The COVID-19 pandemic led to the need for organizations to change their approaches in the way they do their business to reduce the risk of spreading the virus. This includes digitally transforming business operations and HRM practices. Technology has become crucial to aid this DT and allowing HR practices to continue digitally throughout the pandemic (Gigauri, 2020). However, not all organizations can easily digitally transform their HRM practices because it depends on several factors mentioned in this study's proposed research factor section. The authors collected and combined the proposed factors after reviewing multiple kinds of literature studies in the same field of this topic. They can affect an organization's HR DT during COVID, influencing this process's outcomes. They were not collectively found and studied in another research. Hence, this research problem occurs with the lack of knowledge of the factors that affect HR DT in the Kingdom of Bahrain during COVID-19.

### *1.4 Research questions*

To achieve the research objectives, several questions need to be answered.

The primary research question is: *What are the main factors affecting HR DT in the Kingdom of Bahrain during COVID-19?*

The minor research questions are the following:

- (1) How much is the impact of these factors on DT adoption?
- (2) How much the implementation of e-HRM can enhance organizational performance?
- (3) What strategies can be implemented to mitigate the risks within e-HRM?

### *1.5 Research objectives*

The main objective of this research is to explore the factors affecting HR DT in organizations located in the Kingdom of Bahrain during COVID-19. Moreover, the research aims to achieve the following objectives:

- (1) To identify the factors that affect HR DT in the Kingdom of Bahrain.
- (2) To analyze the impact of the e-HRM on employee and organizational performance
- (3) To test the importance of each variable in the study (Funding, information technology (IT) infrastructure, technical support, digital skills or talents, organizational culture, employee resistance, top management support).

### *1.6 Significance of the research*

The use of technology in an organization's HR practices, known as e-HRM or HR DT, has become more crucial since the COVID-19 pandemic. Most organizational practices are being conducted with the help of technology since many employees work from home. Organizations must change and digitally transform their practices, including HR practices (Cooke *et al.*, 2020). However, there is a lack of information in the literature regarding the factors that affect digitally transforming HR practices during COVID-19. This research will help HR executives and employees understand and learn about these factors.

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## 2. Literature review

### 2.1 Introduction

As the sudden COVID-19 pandemic changed how businesses operate, e-HRM and DT increased worldwide. As a result, many organizations started to rely on technology to perform their operations, and the HR department has a significant role in implementing this change (Banu, 2019).

### 2.2 Concept of e-HRM and digital transformation

Since the middle of the 1990s, there has been a lot of investigation into the effectiveness of the HRM system to show how it relates to the organization's objectives (Huselid, 1995; Wright *et al.*, 2001). There is no overarching theory of performance as noted by Guest (1997). Nevertheless, there is an agreement in the HRM literature on the use of various performance indicators, such as financial measures (Huselid, 1995; Al-Alawi, 2017), employee satisfaction (Jamrog & Overholt, 2004), turnover and absence rates (Guthrie, 2001), and commitment (Macky & Boxall, 2007), which were used to determine the efficacy of HRM.

According to Marler and Parry (2016), "e-HRM consists of configurations of computer hardware, software, and electronic networking resources that enable intended or actual HRM activities (e.g. policies, practices, and services) through coordinating and controlling individual and group-level data capture and information creation and communication within and across organizational boundaries." A study by Parry (2011) states that e-HRM is more efficient in performing HRM duties because technology will make the job faster and more accurate. It will also help the HR department enhance its practices by conducting online meetings, managing employees who work from home and performing other traditional HR practices like training, recruitment, selection and performance assessment.

DT in business organizations is related to utilizing data and various technologies to operate and manage various departments (Schwertner, 2017). It is the thought of linking the IT strategy and the organizational strategy. For example, authors have different interpretations of the meaning and purpose of DT. Some authors explain it as implementing new digital innovations in organizational practices to generate differential value. In contrast, others see it as a form of artificial intelligence (AI) to change business models and organizational structures (Morakanyane, Grace, & O'reilly, 2017; Al-Alawi *et al.*, 2021). The digitalization of an organization mainly depends on its HR department, which includes using AI, social media, the Internet and other technologies to perform its HR operations (Banu, 2019).

### 2.3 HRM challenges during COVID-19

Organizations worldwide face many implications in their business operations due to the COVID-19 pandemic. First, it has affected HRM practices that mainly deal with the employees of an organization. The recruitment and selection process requires more staff in their workplace. However, the pandemic slowed business operations, and businesses started losing, laying off employees instead of recruiting to reduce costs. The need for social distancing to reduce the virus spread resulted in recruiters not meeting up and adequately assessing their potential employees (Mwita, 2020).

The HR departments face some challenges in HRM due to the sudden need to transform (Opatha, 2020) digitally. One of the main challenges of HRM during the pandemic is adjusting to change and ensuring that the human capital can adapt to the uncertainty and fear that comes with it. Employees must adjust to DT (Carnevale & Hatak, 2020). HR executives must remain positive during difficult times and support their employees to remain creative, driven and motivated toward the organization and its goals (Kaushik & Guleria, 2020).

HR practices need to be managed strategically to fit the changed scenario. The shift in the traditional mode of communication and the regime of remote working has been quite challenging to maintain the performance of the employees. The transformation requires a significant change in the system of the process in architecture and operations. Thus, it is a proven fact that the pandemic forced organizations to plan and implement new business strategies. The HR department plays a significant role in this implementation since it plans, manages and supports employees. Innovative leadership to properly plan and ploy the tactics will contribute to the wellness of the members and the organizations (Shil *et al.*, 2020).

#### *2.4 Importance of e-HRM and digital transformation during COVID-19*

Categorically, technology has embedded its role in traditional business practices, and its role is doubly manifested. For example, technology plays a pivotal role as employees work remotely; digitalization leads the way to continue business operations. The widening void of physical interaction needs to be curtailed, and face-to-face working needs to be retrieved. As a result, HRM plays a significant role in this DT. Digitalization will help communicate well with HRs and assess their needs (Gigauri, 2020). According to Cooke *et al.* (2020), business organizations adjust their operations. They started depending on technology while working from home, conducting online meetings and using robotics to tackle manual jobs like deliveries.

E-HRM and DT proved effective during the pandemic because they allowed HR to continue its practices digitally. Organizations that continued their recruitment and selection practices during the pandemic can post or advertise job vacancies online through social media like LinkedIn, Facebook, Twitter, Instagram or the Internet. E-recruitment is less costly and more effective in searching, attracting, interviewing and recruiting new employees since there will be a larger pool of prospective employees which also helps in the selection process. People looking for jobs will apply for these vacancies and send their applications online (Mallik & Patel, 2020). Regarding employee training, HR can provide online training through e-learning to their employees, which supports social distancing requirements (Mwita, 2020).

e-HRM has added value to the organization and helped the organization to shift from a labor-intensive HRM process to enhancing the processes within the organization (Junejo, Shaikh, Thebo, & Salahuddin, 2021). Due to the changes within the market and employee and consumer demands, HR departments are expected to focus on the transformation of the administrative processes within the organization. Furthermore, the strategic approach within the HRM and alignment with the IT and business requirements are also matters of concern (Wirtky, Laumer, Eckhardt, & Weitzel, 2016). Furthermore, implementing e-HRM can help industries reduce the turnover rate and further consider retaining talented employees within the organization (Al-Alawi, Al-Azri, & Mohammad, 2016; Johnson, Stone, & Lukaszewski, 2020). Therefore, implementing e-HRM is necessary while considering the enhancement of organizational performance.

#### *2.5 Implications of e-HRM and digital transformation during COVID-19*

Since HR practices are being conducted online due to the pandemic, HR faces some implications in using technology to implement e-HRM practices. First, the recruitment and selection process usually requires recruiters to meet with prospective employees to assess them face-to-face and physically. Online interviews or phone calls make it more challenging for recruiters to do this task. Second, submitting formalities like certificates or forms that need physical verification is only possible with social distancing. Third, conducting training practices online through e-learning may not be as effective as face-to-face training because employees may fail to adapt and comprehend the utilization. Another implication occurs with

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managing and monitoring the performance of employees since most of them started working from home. As a result, employees may face distractions in their homes which may negatively affect the performance outcome by not achieving the desired organizational goals (Mwita, 2020).

Remote working has become the new normal, which means that an organization needs to ensure that the employees hold the apt technology to conduct their professional practices from the comfort of their homes since, often, a lack of essential resources disrupts the expected professional performance. For example, some organizations provide devices, software systems and even an allowance to their employees to cover their working requirements. However, not all organizations can afford it, especially during a pandemic. For example, employees may need assistance or training on using the technology and systems to perform well digitally. Another challenge is the risk to security since the organization's confidential and sensitive information is open to employees who work from home. Organizations that deal with this type of information must ensure that their employees work from a secure area. Finally, installing appropriate security software on employees' devices and keeping them updated regularly. This will also require employees to identify and report suspicious actions like phishing efforts, hackers or cyber-attacks (Al-Alawi, Al-Kandari, & Abdel-Razek, 2016; Pandey, 2020).

The implementation of digitization is not new within the field of HRM across the globe. While considering the enhancement of employee performance and competitive advantage within an industry, implementing technology is quite evident. Considering the changes due to the pandemic, the organizations were pushed forward to implement DT within their processes. As a result, the scale of the effectiveness of digitization is a matter of concern and a vast area to explore. Previous researchers have found the effectiveness of the e-HRM in the recruitment process and employee data analysis. However, the change implementation areas and employee perceptions towards the digitalization of the process have yet to be identified. Furthermore, the effective ways to implement the same are yet to be analyzed in previous studies.

## 2.6 HRM post-COVID-19

The COVID-19 pandemic quickly implemented different tools and strategies in HR practices to adapt to the sudden change. It has also stressed the importance of employees' health and safety. The HRM duties post-COVID-19 will include more focus on employee health and safety, embracing a flexible workplace, a crucial role in implementing technological innovations, encouraging constant skill development and developing plans to deal with sudden future changes smoothly. Organizations adopting these measures will have a competitive advantage due to better employee performance (Aurelia & Momin, 2020).

## 2.7 Proposed research factors for HR digital transformation during COVID-19

After researching multiple studies and literature, this section will be based on the findings from the researched studies. The following are the research factors studies:

**2.7.1 Funding.** During the pandemic, organizations have saved on energy resources since the employees are now utilizing resources from their homes. However, the process of digitally transforming HR practices will need some funding. This is because there will be a shift in how employees do their jobs which requires providing and utilizing the appropriate technological software and devices. If there is a lack of funding, it will affect the organization's HR DT process (Pandey, 2020).

**2.7.2 IT infrastructure.** Working remotely during the pandemic gives rise to the following requirements to provide essential and apt technology. The organization must cater to these essential requisites for those employees who need to be better equipped. For example, some

organizations provide their employees with allowance payments to get their requirements while work from home during the pandemic, including buying a good Internet connection, power backups, required technology devices or even office equipment. In addition, a lack of IT infrastructure will affect the HR DT process (Kaushik & Guleria, 2020).

*2.7.3 Technical support.* Collaborating between departments is necessary to support the DT process. This includes the collaboration between HR and IT departments by assisting HR staff in handling DT and adopting IT resources. In addition, IT professionals can provide training and hands-on practice, asking for all impediments. The HR employees can also communicate with the IT specialists when they face any technical issues and help solve them (Banu, 2019).

*2.7.4 Digital skills or talents.* Suppose an organization's employees do not have the applicable skills, knowledge or talent to adapt to the digitalization of their HR practices. In that case, it can affect the implementation process of HR DT. As a result, the organization will not succeed without its employees understanding the meaning of digitalization (Vey et al., 2017).

*2.7.5 Organizational culture.* Suppose an organization's culture is weak, meaning that the organization does not have an innovative or learning culture. In that case, it can affect the HR DT process and even be a barrier to this change. This includes employees and managers lacking the knowledge and confidence to implement this change in their organization (Vey et al., 2017).

*2.7.6 Employee resistance.* If employees have limited mindsets or are resisting or unwilling to accept the need for DT in their organization, it can affect the HR DT process. However, with the COVID-19 pandemic, most employees do not have many options other than digitally transforming their practices to keep their jobs (Vey et al., 2017).

*2.7.7 Top management support.* With the need to digitally transform HR practices, the support of the top management is needed because it can encourage or motivate employees to utilize the appropriate HR technology in their practices. If top management lacks good support, it will affect the HR DT process (Banu, 2019).

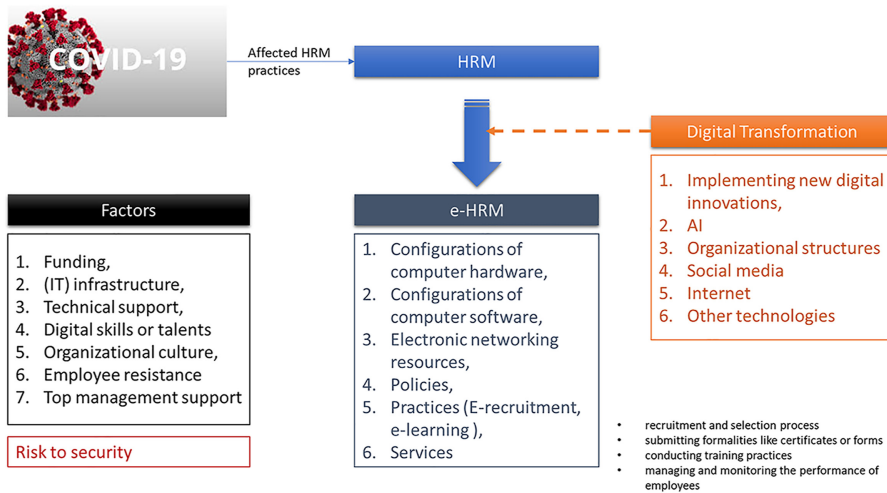
These factor studies within the study have been considered focusing on the different components of IT implementation in the DT of the HRM department. With the DT within an organization, change implementation is necessary. DT makes it easier to enhance employee performance and efficiency within the organization. However, employee resistance to the change process is a matter of concern (Bannikov & Abzeldinova, 2021). Considering this notion, the processes to be adapted within an organization with HR DT, the above components have been identified and discussed as the factor studies.

### 3. Approach and findings

Figure 1 shows the proposed framework for HR DT. The first step is transitioning from HRM to e-HRM, called DT. DT is based on implementing new digital innovations, AI, organizational structures, Internet and social media and all related technologies. During COVID-19, the transition from HRM practices changed suddenly, and e-HRM adoption became unavoidable. As shown in the figure, this adoption is based on 7 main factors extracted from the literature review on HRM DT according to the COVID-19 impact (see Figure 1).

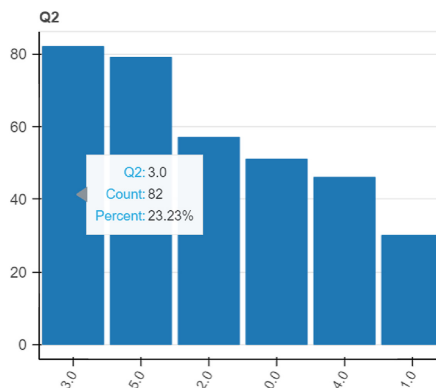
#### 3.1 Data collection

The researchers collected the data quantitatively through a designed online questionnaire distributed by the link in social media programs such as WhatsApp and E-mail addresses (Figure 2). The study was conducted during the COVID-19 crisis, which led the researchers to



**Figure 1.** Conceptual model of HRM digital transformation

Dataset Statistics	
Number of Variables	9
Number of Rows	353
Missing Cells	37
Missing Cells (%)	1.2%
Duplicate Rows	0
Duplicate Rows (%)	0.0%
Total Size in Memory	45.2 KB
Average Row Size in Memory	131.1 B
Variable Types	Categorical: 9



**Figure 2.** Distribution of the answers related to Q2: To what extent did IT infrastructure affect HR digital transformation in your workplace?

collect the data through an online questionnaire that helped the researchers gather data and information with less time and effort and reach a large sample faster.

The sample population targeted in the research was HR employees working in different organizations in the Kingdom of Bahrain, both private and public sectors. The survey results were revealed to the management of different organizations considering their concern for managing employee performance and engagement. In addition, all 56 respondents were asked to complete an online survey, and all respondents completed the survey successfully. The data were collected from a stratified random sample of 353 industrials and institutions in the area of Bahrain, with 155 adapters and 198 non-adapters of DT. Of the total, 57.1% of the participants were females, while 42.9% were males.

The participants' age group was 57.1% between 25 and 35 years old, 25% between 36 and 45 years old, and 12.5% participants aged between 46 and 55 years old. At the same time, 5.4% of the participants were more than 55 years old.

Though most participants are between the ages of 25–35, it cannot be considered a bias. The participants' age is an external component that the researcher cannot control.



However, the participants' perceptions might vary as per the DT considering their age and understandability towards digitalization and digitization. Therefore, the research results may be biased to some extent.

3.2 Data preparation

The first step of our work is data preparation. In this step, we started by analyzing the missed values and outliers. The first results show 1.2% of missing cells. Based on the low missing values number and to make our analysis more efficient, we dropped all rows containing missing values.

The correlation analysis will measure the strength of the existing link between two (or more) variables. The following Pearson correlation analysis shows that all our variables are independent. Figure 3 shows that all absolute values are less than 0.7, indicating no significant relationship between variables.

After data cleaning and correlation analysis, we can see the description of our dataset in the following Table 1. The table shows the statistical description of the data used in the logistic regression analysis. The count shows no missing values, and all rows are filled. All variables are ordinal between 0 and 5; that is why the mean is around (2.5 and 2.8).

A binary logistic regression (Hosmer et al., 2013) was used to identify correlations between DT and the seven factors related to HR DT (Q1, Q2, Q3, Q4, Q5, Q6, Q7). The labeled output cap Y represents the binary decision to adopt the DT. The output Y is equal to one for adopters and zero for non-adopters.

The logit model is based on the logarithmic transformation of the odds ratio. It can assess the likelihood of a DT acceptance. In logit regression, the maximum likelihood assessment approach is employed to construct a continuous criterion as a transformed version of the dependent variable (Rokach et al., 2005). Logit regression may be used to calculate the odds ratios for each dependent variable in the model (eq. (1)). To assess the possibility of DT being adopted, multivariate logit regression was used for the data.

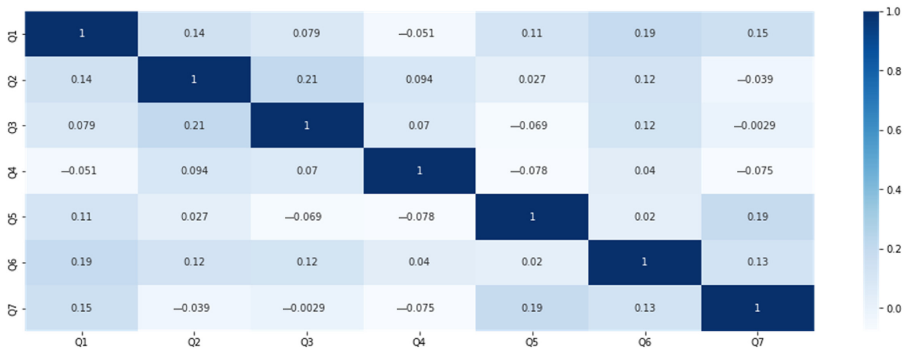


Figure 3. Distribution of the answers related

Table 1. Descriptive statistics of different variables used in the logistic regression analysis

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	DT
Count	353	353	353	353	353	353	353	353
Mean	2.569	2.802	2.272	2.229	2.261	2.439	2.677	
Std. dev	1.622	1.706	1.601	1.718	1.812	1.813	1.832	

$$\left(\frac{p(x)}{1-p(x)}\right) = B_0 + B_1Q_1 + B_2Q_2 + \dots + B_7Q_7 + e \tag{1}$$

where  $P$  is the probability of DT adoption ( $p = 1$  DT adopted and  $p = 0$  DT not adopted).

$B_0 = \text{Consta}$

$Q_1 = \text{funding impact on HR Digital transformation}$

$Q_2 = \text{IT infrastructure impact on HR Digital transformation}$

$Q_3 = \text{Technical support impact on HR Digital transformation}$

$Q_4 = \text{Digital skills or talents impact on HR Digital transformation}$

$Q_5 = \text{Organizational culture impact on HR Digital transformation}$

$Q_6 = \text{Employee resistance impact on HR Digital transformation}$

$Q_7 = \text{Top management support impact on HR Digital transformation}$

$B_1, B_2, \dots, B_7 = \text{Estimated parameters corresponding to each explanatory variable.}$

$e = \text{Random Error}$

The collected data are used to generate the adoption model. To achieve this, the dataset is split into 80% for training the model and 20% for checking how the model is generalized on the unseen data set. The following (eq. (2)) shows the obtained parameters of the logistic regression model.

$$\text{Coefficients} = \beta = \begin{bmatrix} B_0 \\ B_1 \\ \dots \\ B_7 \end{bmatrix} = \begin{bmatrix} -13.0831 \\ 0.7425 \\ 0.8961 \\ 0.8835 \\ 0.7146 \\ 0.4012 \\ 0.7557 \\ 0.6769 \end{bmatrix}; \text{Variables} = X = \begin{bmatrix} 1 \\ Q1 \\ Q2 \\ Q3 \\ Q4 \\ Q5 \\ Q6 \\ Q7 \end{bmatrix} \tag{2}$$

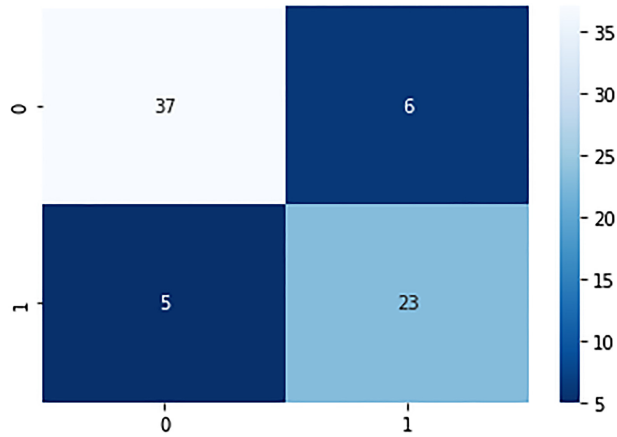
We used the confusion matrix to measure our model's accuracy (eq. (3)). A confusion matrix is a tool for measuring the performance of classification models. In the binary case (i.e. with two classes, our case), the confusion matrix (Baldi *et al.*, 2000) is a four-value table representing the different combinations of actual and predicted values as in the figure below. Accuracy is the ratio of accurately predicted cases (both the true and false predictions) to all cases in the dataset. The following function shows how accuracy is computed, where TP and TN are, respectively, total true positive and total true negate accurate predictions. FP and FN are the errors in predictions, respectively, false positive and false negative predictions.

$$\text{Accuracy} = \frac{TP + TN}{TP + TN + FP + FN} \tag{3}$$

The obtained accuracy result is presented in Figure 4, where we have (37 + 23) true predictions and (6 + 5) false predictions.

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41,4

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**Figure 4.**  
Confusion matrix

$$Accuracy = \frac{23 + 37}{23 + 37 + 6 + 5} = 0.845$$

The model summary (Table 2) displays the coefficients, standard error,  $z$ -score and 95% confidence intervals. The results show that the overall model is significant, as shown by an LLR  $p$ -value of 0.05 ( $3.255 e-47$ ), allowing us to examine the remaining data. The  $p$ -values for all the variables are smaller than 0.05 (shown in the column  $p > |z|$ ). So, all factors have a substantial influence on the log odds.

Table 2 provides information about the model, as the log-likelihood ratio test shows the fitting model. The model fitting with only intercept (null model) is reflected through the log-likelihood =  $-194.08$ , which significantly is improved when fitted with all independent variables ( $Q_1, Q_2, \dots, Q_7$ ) through (Log-likelihood =  $-76.292$ ).

Dep. Variable	DT	No. observations	282			
Model	Logit	Df Residuals	274			
Method	MLE	Df Model	7			
Date	Tue, 25 Oct 2022	Pseudo R-squ	$-0.6069$			
Time	17:35:11	Log-Likelihood	$-76.292$			
Converged	TRUE	LL-Null	$-194.08$			
		LLR $p$ -value	$3.26E-47$			
	Coef	Std err	$z$	$p >  z $	[0.025	0.975]
Const	$-13.0831$	1.647	$-7.945$	0.000	$-16.311$	$-9.856$
Q1	0.7425	0.152	4.883	0.000	0.444	1.04
Q2	0.8961	0.172	5.217	0.000	0.559	1.233
Q3	0.8835	0.156	5.656	0.000	0.577	1.19
Q4	0.7146	0.143	5.002	0.000	0.435	0.995
Q5	0.4012	0.131	3.058	0.002	0.144	0.658
Q6	0.7557	0.148	5.105	0.000	0.466	1.046
Q7	0.6769	0.142	4.775	0.000	0.399	0.955

**Table 2.**  
Logit regression  
results

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The table showed that all factors of the model have a significant influence ( $p$ -values  $< 0.05$ ) on DT adoption. The coefficients ( $B_1, B_2, \dots, B_7$ ) are expressed with log-odds terms, which means that each one-unit change in the variable will increase the log odds of DT adoption. For example, one-unit change in digital skills will increase the DT adoption by 0.7146 with a significant  $p$ -value.

#### 4. Discussion

The research has identified that the implementation of e-HRM positively impacts the organizational processes, and the employees within the organization further agree with the same. The implementation of e-HRM can enhance the capacity of the high-potential employees within an organization, and global performance standards can be achieved (Khoreva, Vaiman, & Van Zalk, 2017). Furthermore, the research has identified that employee engagement within the organization can also be enhanced. During the turmoil of the pandemic, implementing digitalization within the organizational processes has enhanced organizational activities and provided employees with a safe work environment. Along with that, the management of different organizations can keep track of employee performance, and the policies can be modified as per the requirements of the employees and the organization.

The purpose of this study is to investigate the factors that influence HR DT adoption in Bahrain. The binary logistic regression model investigates the important factors influencing e-HRM adoption in Bahrain. The results show that the IT infrastructure in enterprises is positively and significantly associated with HR DT adoption. This suggests that enterprises investing in IT infrastructure tend to adopt DT. Funding impacts HR DT, more money is required to stimulate DT processes. This point is in adequation with Ebert and Duarte (2018), who states that poor access to funding is an external barrier to DT. Technical support and digital skills or talents positively impact the HR DT. Effectively, HR is now being requested to lead enterprises toward DT and support their ongoing digital growth in partnership with the IT department. This entails equipping employees with a digital mindset to optimize workforce procedures and boost productivity.

HR collaborates with business executives to develop a strategic sourcing approach for the enterprise. The result shows that top management support positively impacts HR DT. So, it is critical for HR to recognize that establishing an internal sustainable capability is an important task that involves top management, people support, digital skills enhancement and definition, and organizational culture. However, developing a favorable atmosphere and culture for DT influences DT. Enterprises must focus more on the people and culture components of change management and change leadership. Resistance to change is one of the important challenges that transition faces. Employees are not robots, and any transformation includes emotions and behavioral modifications. Change managers ensure that a shift's softer, emotional aspects are handled. They guarantee that employees' training and coaching are established and well-implemented. DT projects are subject to failure because people's passive opposition or lack of agreement on the goal is underestimated.

The targeted sample shows 44.6% of the employees having 3–5 years of experience in the HR department. Also, 66.1% of the employees work in HR organizations in the private sector. All the participants agree that COVID-19 stimulated the need for the DT of HR practices, while 83.9% of the employees also implement HR DT in their workplace. In addition, most employees agree that HRM in the organization improves with DT during COVID-19.

According to the study, the participants were asked if e-HRM continues post-COVID-19. The study observed that 69.6% of the participants responded yes, while 30.4% responded no. It has long-term cost-saving potential. In the queue, unique technological resources were

employed to achieve the best results during the pandemic, and staff gatherings and interviews were efficiently conducted. Besides the convenience, it also helps in eco economize and resourcing while catering to employees in different sites. It was noted that many participants felt that the same tasks could be done online. In contrast, other participants deviated from the same and highlighted the importance of face-to-face interactions in certain practices such as training, recruitment and selection.

## 5. Conclusion

The research has considered the different aspects of the DT of HRM in different organizations. Considering this notion, it has been identified that implementing DT can enhance the processes within an organization. Some constraints include a lack of infrastructure, IT funding and employee resistance. However, the research has identified that most employees look forward to implementing DT in HRM processes considering their concerns within the organization. Furthermore, organizations can benefit from implementing the same through recruitment, selection, training, and education process and maintaining employee performance and engagement within the organization. The performance tracking of the employees can further be enhanced through implementing the DT within the HRM processes due to minimized cost and time.

*In summary*, COVID-19 significantly affects economics, society and the work environment inside the organization in many countries around the world. This research was conducted to discover the impact of DT in HRM of the organization during the COVID-19 pandemic in the Kingdom of Bahrain in the public and private sectors. The research also discovered possible factors that may affect the work in the organization, such as funding, IT infrastructure, technical support, digital skills or talents, organizational culture, employee resistance and top management support. Researchers tested the hypothesis; they collected data through a quantitative method by designing an online survey distributed to many employees working in multiple organizations in the Kingdom of Bahrain to determine the impact of the factors related to HR DT. The research also targets the employees who worked as HR executives and HR employees and analyzes the data using descriptive analysis for the first time.

To evaluate the identified factors, researchers implemented logistic regression and evaluated the impact of the seven factors. The obtained results show that all these factors (funding, IT infrastructure, technical support, digital skills or talents, organizational culture, employee resistance and top management support) strongly impact the HR DT.

According to the interview, all the participants agree that COVID-19 stimulated the need for the DT of HR practices. So, 69.6% of the employees agreed that e-HRM continues post-COVID-19 because they think it saves time and cost and is effective, while 83.9% of the employees also implement HR DT in their workplace. In addition, most employees agree that HRM in the organization improves with DT during COVID-19.

*Research limitations*: The primary purpose of the quantitative research design is to develop quantifiable data to help consider generalizations within the research variables. However, implementing the quantitative method within the research process is costly and time-consuming. Furthermore, the process requires a considerable data sample. Furthermore, the researchers do not have any control over the environment, and the responses can vary over time. Considering this notion, the current study could not control the environment, and the number of respondents was relatively limited within the research. Along with that, the research being an academic one, the time and budget of the data were relatively low, and accessibility to the employees of different organizations was a bit difficult.

*In future work*, authors will investigate more enterprises and consider the different fields of business. Also, the authors will explore the strategic orientation of the DT aspects and DT implementation.

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