

The Degree of Employing Electronic Applications in the Framework of Human Resources Departments in Order to Reduce the Impact of Crises: A Case Study on Some Business Organizations in Jordan

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Abstract

The current study aimed to reveal the degree of employing electronic applications within the framework of human resources departments in order to reduce the impact of crises through a case study on some business organizations in Jordan. The sample of the study consisted of business organizations in Jordan, the "International City for Humanitarian Services" and the "World Vision" organizations were selected. The study sample amounted to (88) workers in those two organizations. The study used the descriptive survey method. The study reached conclusions, including the existence of a clear effect of electronic applications on human resources departments in reducing the impact of crises, and the study also showed that there is a clear impact of evaluation processes of electronic application methods on the work of human resources departments and the mechanisms for their development by identifying risks and avoiding crises they face.

Keywords

Electronic applications, human resources departments, crises

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Introduction

Recently, the world has witnessed rapid and drastic developments, and organizations found themselves facing major challenges that needed to keep pace with these changes and raise challenges by presenting the new and the better (Naser, Al Shobaki et al., 2017). Hence, human resources departments began to compete in the use of the latest innovations in administrative performance as they sought to shift from the traditional role in performance to the modern role (Muhammad, 2018). Accordingly, electronic applications and their systems have become an integral part of the success of any organization, which led to their benefit from them and its mechanisms to improve its performance and productivity, thus producing new conditions and practices and introducing changes in its functions (Majid & Ali).

It is worth noting that the current era is characterized by rapid developments and changes that are likely to significantly affect the environment of business organizations (Bondarouk, Parry et al., 2017). It is expected that these changes will increase in intensity and ferocity in the coming years, as these changes include what is related to the external environment such as economic, social, political and technological conditions, or changes related to the internal environment of enterprises such as organizational culture, leadership and human resource practices (Jasmine, 2020).

There is no doubt that these external and internal changes related to electronic applications have decisive effects on human resources management in general, and anticipating and understanding these developments and changes is one of the most important tasks of human resource managers, as they make them in a better position to take advantage of the available opportunities and reduce or avoid the risk factor while facing crises (Carvalho, 2018).

It should be noted that electronic applications help the human resources department in constant communication with employees wherever their places and work sites are, and the importance of these electronic applications appears when we notice that the Corona crisis forced most organizations to adopt remote work, and then remote communication in an ongoing and effective manner has become an essential and imperative requirement (Hraskova & Rosnerova, 2021).

In the same context, what distinguishes electronic applications in human resources management is their ease of use, and making the response to them immediate, as it is considered a revolution in the world of modern management as a result of the positive effects it provided in facilitating administrative processes, reducing the time and cost of completing tasks, and making information available at all times, developing job performance, raising the level of efficiency and productivity of the organization by employing technology and information systems in support of the management process (Matveeva, Doroshenko et al., 2020). The benefits of employing electronic applications are not limited to the administrative aspects, but extend to the economic, political and social aspects of the organizations, which made studying them and studying their effects an important topic that must be shed light on (Al-Hazmi, 2021).

On the other hand, electronic application technologies for human resources are used in all stages of employment from selection, operation and integration, as they enable accurate job descriptions and search for the required specifications, based on Internet technologies (Malkawi, 2018). Likewise, the advanced status of electronic application technologies for human resources is recorded in the forward-looking management of job opportunities and competencies in the organization, as the vigilance and monitoring systems help to show the emergent changes in the environment of the organization, and to determine their implications for leadership orientations. What is meant here is the political, economic, social, cultural, and regulatory developments of the markets, and then the use of information programs to determine the human resource needs of organizations according to age, gender, seniority, specialization and professional experiences, which is reflected in the completion of the competency map as one of the informational applications that draw the lines of policy of the human resources of the organization and the analysis of future scenarios and prospects for this management (Ahmad, Bazlamit et al., 2017).

The same applies to training and training activities in economic and social institutions, where information programs and communication applications interfere in the training structure, by conducting a comprehensive study of the institution's defects, and planning an annual training program that shows the institution's choices, its coherence with its strategic orientations, the individuals involved in training, its duration, location and desired goals. After working on the implementation of this program, a training evaluation process is conducted through a

questionnaire about the extent of employee satisfaction and the extent of their benefit from the training, as well as how to use these gains in advancing the work of the organization (ALAWNEH & AL-ZOUBI, 2020).

In the same context, electronic applications provide methods for developing access to information through web-based technologies in systems related to human resources, which, along with some other organizational changes, will contribute to providing access to human resources information on a large scale as well as providing many opportunities for managing that information. It leads to an integration of access to databases, thereby expanding the scope of information, and increasing individuals' access to databases through the electronic portals model, providing verification of the ability of workers to access the system (Al-Adwan, Alrousan et al., 2019).

We see from the foregoing that electronic applications give a more responsive and strategic role for human resources, contribute to employee satisfaction, and provide greater support to management across the company's departments, leading to reduced administrative expenses, and help to provide greater opportunities for participation and training. The basic areas of the electronic management system for human resources are the management of personal information and the provision of basic services, and the management of individuals more effectively, such as recruitment processes, recording time of attendance and management of bonuses and performance, which facilitates cooperation, training, interaction, participation and information dissemination, and leads to communication with employees and motivation and management of job benefits and rewards and improvement of the service provided to them.

Based on the previous considerations, the current study came to shed light on the extent of the impact and employment of electronic applications within the framework of human resources departments in reducing the impact of crises, and the resulting positive effects on organizations and the nature of their work in light of crises and risk management with the aim of enhancing the work of organizations and facing challenges and obstacles which face the employment of electronic applications to achieve its goals effectively, especially in light of the Corona pandemic.

Problem of the Study

Human resources management is the effective engine for developing the work of business organizations, as it is the sum total of activities that seek to bring in, employ, develop and maintain the human element in these institutions, and it is concerned with recruitment, training, planning and evaluation movements (Al Zoubi & Al Zoubi, 2020). Human resources management recorded a quantum leap with the beginning of the current century, and moved from managing personnel affairs to developing human capital, as human resources became an unrivaled wealth that achieves dynamism for the institution and elevates it in the future as one of the competitive advantages that require appreciation and investment (El-Ebiary, 2018). On this basis, we find that electronic applications have a major role in these changes, which has resulted in wide shifts in the responsibilities of human resources management, which are looking forward to developing a clear and well-defined strategic vision for the work of organizations and seeking through them to achieve a competitive advantage (Al-Dmour, Hammdan et al., 2017).

It should be noted that electronic applications are an integrated electronic system that aims to transform normal administrative work from manual management to administration using an electronic system, by relying on powerful information systems that help in making administrative decisions as quickly as possible and at the lowest costs (Hamad, Al-Aamr et al., 2021). Electronic applications also include both internal and external communications for any organization, and the goal is to introduce full transparency and accountability, which leads to improving the electronic system within organizations (Malkawi, 2018). Therefore, employing electronic applications within the framework of human resources departments in successfully limiting the impact of crises requires a continuous evaluation process to measure their effectiveness and compare the results achieved with the desired goals. And then exerting development efforts to close any performance gap between what is achieved and what is required of these organizations when they face a crisis or risks that affect them, and perhaps one of the most important administrative aspects affected by the employment of electronic applications is performance in human resource management processes, as it is considered one of the most important specific metrics because of the success of electronic applications in light of crisis management, and from this perspective, the problem of the study can be identified in the

following question:

What is the degree of employing electronic applications within the framework of human resources departments in order to reduce the impact of crises?

Hypotheses of the Study

1. There is no statistically significant relationship at the level of significance (0.05) in employing electronic applications on the work of human resources departments in reducing the impact of crises.
2. There is no statistically significant relationship at the level (0.05) in evaluating electronic application methods on the work of human resources departments and the mechanisms for their development.

Objectives of the Study

1. Identifying the mechanisms of employing electronic applications and their role in developing the administrative process.
2. Identify methods of measuring the impact of employing electronic applications on the development of human resources departments in business organizations in Jordan.
3. Identify methods of measuring the impact of employing electronic applications on the performance of employees in business organizations in Jordan.
4. Identifying the obstacles to effectively employing electronic applications in business organizations in Jordan.
5. Evaluating the effectiveness of electronic application systems in business organizations in Jordan.

Significance of the Study

The current study derives its importance from the importance of electronic applications, which have become an urgent requirement in light of the accelerating digital and informational developments in our modern era. The importance of this study is also reflected through its role in enriching previous studies in the field of employing electronic applications in the work of human resources management in organizations. Accordingly, the importance of the study is evident through the following:

1. Measuring the impact of employing electronic applications on the work of human resources.
2. Shedding light on development opportunities that would contribute to the organizational development of business organizations in Jordan.
3. Clarifying the concept of electronic applications and their importance in managing human resources in light of risks and crises.
4. Detecting problems in the internal and external work environment that organizations face and adapting to them by employing electronic applications.

Field Study

Population and Sample Study

The study population represents business organizations in Jordan. The "International City for Humanitarian Services" and the "World Vision" organizations were selected. As for the study sample, it reached (88) workers in those two organizations.

Study Instrument

The study instrument consisted in the questionnaire form in order to collect data from the study population, through interviews and surveying the opinions of the research sample about the items that aim to verify the research hypotheses, and the questionnaire questions were divided in light of two main dimensions to test the research hypotheses as follows:

The first dimension: employing electronic applications on the work of human resources departments in reducing the impact of crises.

The second dimension: the processes of evaluating electronic application methods on the work of human resources departments and the mechanisms for their development.

Validity and Reliability of the Instrument

For the purpose of confirming the reliability of the study instrument the coronbachs-alpha equation was used, and the following table shows the reliability coefficients.

Table 1
Coronbachs-Alpha

Dimension	Coronbachs-Alpha
Employing of Electronic application	0.728
Evaluation of electronic application methods	0.801
Total Reliability	0.872

It is evident from the table that the Cronbach a coefficients are highly stable coefficients, which are reliable in the field application of the study.

Results and Discussion

Results of the First Statistical Hypothesis Test

There is no statistically significant relationship at the level of significance (0.05) in employing electronic applications on the work of human resources departments in reducing the impact of crises.

To answer the statistical hypothesis, Simple Regression analysis was used by introducing the employment of electronic applications as an independent variable (predictor), and the variable of human resources departments in reducing the impact of crises as a dependent variable (predicted), and to clarify the significance of the effect between them. The following table clarifies:

Table 2
Analysis of variance (ANOVA) to model the effect between the two variables

The Model	Sum of Squares	df	Means of Squares	F	Sig.
Regression	638.503	1	666.562	313.35	0.000
Remainders	252.273	121	2.091		
Total	879.919	122			

The results of Table (2) indicate a significant effect between employing electronic applications on the work of human resources departments in reducing the impact of crises.

Table 3
The determination coefficient of the model

The Model	R	The coefficient of determination	The modified coefficient of determination
1	0.869 ^a	0.832	0.761

It is evident from Table (3) that the explanatory ability of this model was high according to the value of R Square of (0.761), and this indicates that the employment of electronic applications explains (71.9%) of the change in the work of human resources departments in reducing the impact of crises and to complete the answer to the same question. The constant value, the regression coefficients, and their statistical significance for the independent variable on the dependent variable were found and can be summarized in Table (4)

Table 4

The results of the simple linear regression analysis

The Model	Non-standard coefficients		standard coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	0.151	0.840	—	0.177	0.762
Employing electronic applications on the work of human resources departments in reducing the impact of crises	0.383	0.022	0.849	17.692	0.000

Table (4) shows that the regression coefficients, which indicate a significant effect of the explanatory variable employing electronic applications, according to the value of (t) test under the level of (0.05). From this we conclude that the independent variable was statistically significant and according to the t-test (at the level of significance $P \leq 0.05$) that is, it has a significant effect on the regression, and the multiple regression model equation can be written as follows:

Employment of electronic applications = 0.383 + 0.151 x work of human resources departments in reducing the impact of crises

That is, the parameter of employing electronic applications indicates that an increase of one unit in the values of the variable results in an increase in the work of human resources departments in reducing the impact of crises by (0.383) units.

These results explain that there is a clear effect of electronic applications on human resources departments in reducing the impact of crises, by focusing on the application of the information system and electronic management, which means that there is an effectiveness of electronic applications on the work of human resources departments in reducing the impact of crises.

Results of the second statistical hypothesis test

There is no statistically significant relationship at the level (0.05) in evaluating electronic application methods on the work of human resources departments and the mechanisms for their development.

To answer the second statistical hypothesis, Simple Regression analysis was used by introducing the electronic application methods evaluation variable as an independent variable (predictor), and the work variable of human resources departments and their development mechanisms as a dependent variable (predictor), and the following table clarifies:

Table 5

Analysis of variance (ANOVA) to model the effect between the two variables

The Model	Sum of Squares	df	Means of Squares	F	Sig.
Regression	374.853	1	374.078	96.652	0.000 ^b
Remainders	488.343	121	3.853		
Total	873.382	122			

The results of Table (5) indicate a significant effect between evaluations of electronic application methods on the work of human resources departments and their development mechanisms. To find out the proportion of the explanatory capacity for this model, the determination coefficient was found, which is shown in the following table:

Table 6

The determination coefficient of the model

The Model	R	The coefficient of determination	The modified coefficient of determination
1	0.673 ^a		0.542

It is evident from Table (6) that the explanatory ability of this model was high according to the R Square value of (0.673). This indicates that the evaluation of electronic application methods explains (44.3%) of the work of human resources departments and the mechanisms for their

development. In order to complete the answer to the same question, the constant value, the regression coefficients, and their statistical significance for the independent variable on the dependent variable were found, and they can be summarized in [Table \(7\)](#)

Table 7

The results of the simple linear regression analysis

The Model	Non-standard coefficients		standard coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	2.457	1.195	—	2.056	0.042
Evaluation of electronic application methods	0.308	0.031	0.669	9.893	0.000

[Table \(7\)](#) shows that the regression coefficients, which indicate the presence of a significant effect of the explanatory variable, evaluate electronic application methods, according to the value of (t) test under the level of (0.05). From this we conclude that the independent variable was statistically significant and according to the t-test (at the level of significance $P \leq 0.05$) that is, it has a significant effect on the regression, and the multiple regression model equation can be written as follows:

That is, the parameter of evaluation of electronic applications methods indicates that an increase of one unit in the values of the variable results in an increase in the work processes of human resources departments and their development mechanisms by (0.308) units. These results explain that the evaluation processes of electronic application methods have a fundamental role in determining the work of organizations by determining the methods of selecting human resources. This result also explains that business organizations in the Jordanian environment work according to electronic management applications, which gives them a wide scope in identifying risks and avoiding crises that they are facing.

Results

1. There is a clear impact of electronic applications on human resources departments in reducing the impact of crises, by focusing on the application of the information system, and electronic management.
2. The existence of a clear impact of the processes of evaluating electronic application methods on the work of human resources departments and the mechanisms for their development through identifying risks and avoiding the crises they face.

Recommendations

To overcome the shortcomings in employing electronic applications on human resources departments in reducing the impact of crises, the current study recommends, based on previous results, the following:

1. Keeping pace with the changes taking place in the means and tools of communication technology in the field of electronic management.
2. Encouraging individuals to acquire new ideas and exchange them among themselves, as well as apply their knowledge in their dailywork.
3. Paying attention to familiarizing workers in organizations in the Jordanian environment with electronic applications through holding seminars and issuing brochures.
4. Ensuring the freedom of information and knowledge transfer and sharing among employees of organizations in Jordan, and work on the level of mutual dependence between them in electronic form, so that they can benefit from the common goods between them.
5. Setting an appropriate strategy for electronic applications in business organizations in Jordan in order to achieve the mission and goals of these organizations.
6. Developing electronic applications for human resources and using them to serve organizations in the Jordanian environment.

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