

The Impact of Human Resource Information Systems on Human Resource Strategies with the Modified Role of Organizational Factors in Jordanian Commercial Banks

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This study aimed to identify the impact of human resource information systems in their dimensions (ease of system use, provision of technical support, infrastructure provision, training on the system) on human resource strategies in their dimensions (human resource planning, selection and appointment, training and development, incentives and rewards, performance evaluation) with the modified role of organizational factors in Jordanian commercial banks. It relied on the descriptive and inferential methods appropriate for the purposes of the study. The study population consisted of those held leadership and supervisory positions (managers and their assistants as well as heads of departments) in the general administration of Jordanian commercial banks. The Purposive sample method was used, where the researcher published an online questionnaire and obtained (208) questionnaires, all valid for the purposes of statistical analysis. A number of statistical methods appropriate for the objectives of this study were used.

This study concluded a number of results. There is a statistical significant impact at the level ($\alpha \leq 0.05$) of human resource information systems in their dimensions (ease of system use, provision of technical support, and infrastructure provision) on human resource strategies in Jordanian commercial banks. There is a statistical significant impact at the level ($\alpha \leq 0.05$) of human resource information systems in their dimensions on human resource strategies with the modified role of organizational factors in Jordanian commercial banks.

Based on the results of this study, a number of recommendations were made, the most important of which is the need for the surveyed banks to continue providing clear instructions specifying the permissions of users of human resource information systems, encourage senior management to support these systems through constantly following up on their outputs, and provide financial support to their users.

• **Keywords: Human Resource Information Systems, Human Resource Strategies, Organizational Factors, Jordanian Commercial Banks.**

1. Introduction:

The advanced organizations rely heavily on information systems in their work, especially in the field of human resources, since human resources are one of the most prominent components of organizations as they are the main operator of positions in the organizational structure, and they accomplish work and tasks.

The activities of human resource management are considered the most important management activities related to the human resource, which is one of the most important and valuable resources of organizations. It aims to enhance organizational capabilities and enable organizations to attract and qualify them for the necessary competencies

capable of coping with and facing current and future challenges (Barisic, et. al., 2019).

Organizational factors also play a significant role in influencing human resource management due to their importance in improving job satisfaction, and thus achieving the objectives of the organization. Once the workers feel the organizational factors in the organization, they show the behavior of belonging to the organization.

Therefore, it must be emphasized that human resource management have a strategic dimension with an advanced system related to the human element and in line with the nature of developments in all fields of the organization (Armstrong, 2016).

Accordingly, Jordanian commercial banks seek to develop their human resources by enrolling them in training programs that help activate human resource information systems in planning, organizing and controlling human resource management, through the modern scientific vision of human resources using the latest human resource applications in the field of information systems.

2. Study Problem:

Through reviewing the previous administrative literature, the researcher observed the limitation of Arab studies that examined the impact of human resource information systems on human resource strategies, according to the findings. Some studies recommended conducting studies related to the factors affecting human resource strategies (Knezovic, 2018). The researcher also observed that there is no clear awareness of the concept of human resource

4. Study Model:

Through the study model in Figure (1), we note that the research in this study is based on the following themes:

information systems and strategies and the importance of organizational factors in the relationship between these variables among individuals working in Jordanian commercial banks.

In view of the foregoing, the problem of the current study is to answer the main question "What is the impact of human resource information systems on human resource strategies with the modified role of organizational factors in Jordanian commercial banks?"

3. Objective of the Study:

The main objective of this study is to identify the impact of human resource information systems on human resource strategies with the modified role of organizational factors in Jordanian commercial banks.

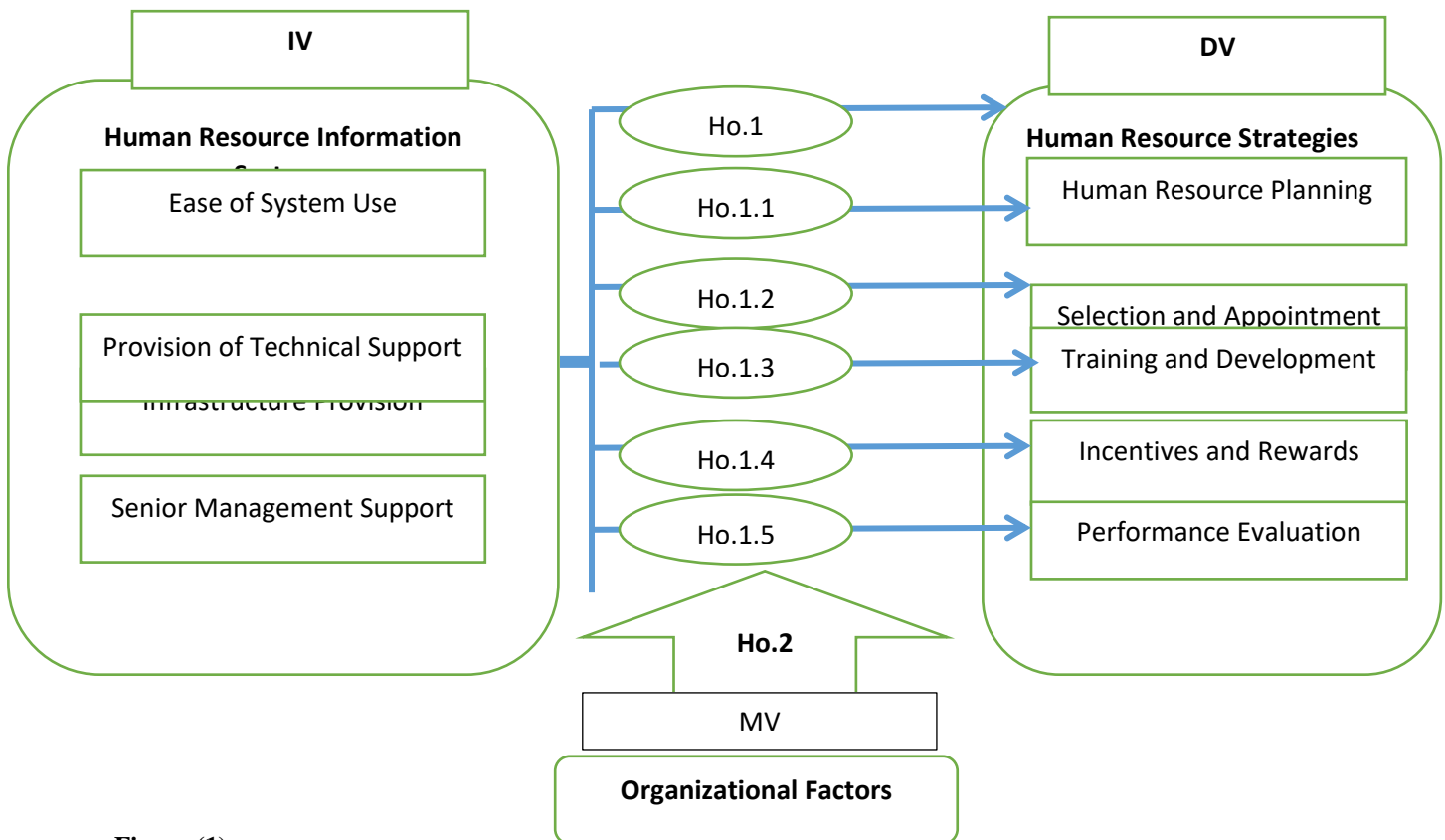


Figure (1)

Source: Prepared by the researcher with reference to the study of: (Anwar and Abdullah, 2021), (Kooli and Abadi, 2020), (Alomari, 2019), (Barisic, et. al., 2019), (Knezovic, 2018), (Kamaludin and Kamaludin, 2017).

5. Study Hypotheses

Based on the study problem and model, the following hypotheses can be formulated:

Ho.1: There is no statistical significant impact at the level ($\alpha \leq 0.05$) of human resource information systems in their dimensions (ease of system use, provision of technical support, infrastructure provision, senior management support) on human resource strategies in their dimensions (human resource planning, selection and appointment, training and development, incentives and rewards, performance evaluation) in Jordanian commercial banks.

This hypothesis is divided into the following sub-hypotheses:

Ho.1.1: There is no statistical significant impact at the level ($\alpha \leq 0.05$) of human resource information systems in their dimensions (ease of system use, provision of technical support, infrastructure provision, senior management support) on human resource planning in Jordanian commercial banks.

Ho.1.2: There is no statistical significant impact at the level ($\alpha \leq 0.05$) of human resource information systems in their dimensions (ease of system use, provision of technical support, infrastructure provision, senior management support) on selection and appointment in Jordanian commercial banks.

Ho.1.3: There is no statistical significant impact at the level ($\alpha \leq 0.05$) of human resource information systems in their dimensions (ease of system use, provision of technical support, infrastructure provision, senior management support) on training and development in Jordanian commercial banks.

Ho.1.4: There is no statistical significant impact at the level ($\alpha \leq 0.05$) of human resource information systems in their dimensions (ease of system use, provision of technical support, infrastructure provision, senior management support) on incentives and rewards in Jordanian commercial banks.

Ho.1.5: There is no statistical significant impact at the level ($\alpha \leq 0.05$) of human resource information systems in their dimensions (ease of system use, provision of technical support, infrastructure provision, senior management support) on performance evaluation in Jordanian commercial banks.

Ho.2: There is no statistical significant impact at the level ($\alpha \leq 0.05$) of human resource information systems in their

dimensions on human resource strategies with the modified role of organizational factors in Jordanian commercial banks.

6. Theoretical Framework:

6.1 Human Resource Information Systems

6-1-1 The Concept of Human Resource Information Systems

Human resource information systems are not significantly different from other management information systems. They consist of the essential dimensions in any system, including inputs, operational processes, outputs, and feedback element. However, human resource information systems are characterized by the multiplicity of activities they include and serve (Armstrong, 2016). Turban, et al., (2021) defined it as a component of a network of databases, computer applications, hardware and software necessary for collecting, recording, storing, managing and processing human resource data. Anthony and Kacmar, (2013) defined it as the systematic procedure for collecting, storing, sustaining and retrieving the required information related to human resources in the organization.

6-1-2 Benefits of Human Resource Information Systems

Organizational adoption of human resource information systems achieves many benefits for organizations, including investing in the information resource with control of all information, linking all parties that produce information in the organization, determining the career path of its employees, the ability to share information and exchange knowledge through communication networks within and outside the organization, the ability to prepare human resource plans and forecast the future, forecasting the future human resource needs that contribute to achieving objectives, and helping organization complete the administrative processes with the least effort and time possible and the least number of human resources (Mashhour and Zaatreh, 2008).

6-1-3 Dimensions of Human Resource Information Systems

Human resource systems have a number of dimensions as follows (Armstrong, 2016; Turban, et. al. 2021):

1. Ease of System Use: It refers to the system flexibility, ease of learning, and suitability to the level of users, which enables them to access, update and retrieve stored information easily.

2. Training on the System: It refers to providing workers with the necessary skills in the field of computers, dealing with systems to increase their efficiency, and achieving effectiveness in using human resource information systems through holding courses and providing the necessary supplies.

3. Provision of Technical Support: It refers to solving technical problems the system users may face through specialists in providing assistance and advice and dealing with any defect that occurs to the system in order to maintain the continuity of its work without interruption and errors.

4. Senior Management Support: It refers to the interest and keenness of senior management to develop the human resource information system and increase the employee efficiency through providing the system users with the material and moral support and the appropriate environmental conditions.

5. Infrastructure Provision: It refers to the requirements for managing and operating an information system, including physical needs such as hardware, networks, software, and procedures.

6.2 Human Resource Strategies

6-2-1 The Concept of Human Resource Strategies

The main objective of human resource strategies is to identify areas that enable them to implement long-term strategies for motivating the human resources and increasing their productivity (Malik, 2009). Kapur, (2020) defined it as the process that requires linking human resource practices with the organization's strategic objectives in order to improve performance and achieve the planned objectives. According to Armstrong, M., (2017), it was defined as an approach that determines how the employees achieve the organizational objectives through the integration of human resource management strategies and human resource management policies and practices.

6-2-2 The Importance of Human Resource Strategies

The strategic planning process in the organization is the cornerstone on which the other activities are based. The importance of strategic human resource planning is highlighted through the following (Hamadamin and Atan, 2019):

A- Helping to show the strengths and weaknesses in the quality of human resource performance, which contributes

to determining the quality of training programs required to develop the employee performance.

B- Contributing to achieving integration and coherence among all human resource management programs.

C- Contributing to rationalizing the use of human resources and reducing labor costs.

D- Contributing to facilitating the selection and appointment processes.

E- Contributing to achieving a competitive advantage by increasing employee commitment and developing human skills.

6.2.3 Human Resource Strategies

6-2-2 Human Resource Strategies:

1. Human Resource Planning Strategy: The planning process gives a general perception of the necessary needs of human resources. In this sense, planning is defined as the process of determining the needs of human resources in quantity, quality and time, in order to achieve the organizational objectives or the organizational unit objectives (Contiu, 2010).

2. Recruitment and Appointment Strategy: to attract multiple internal and external sources, internal recruitment refers to the promotion of the current employee at a certain administrative level to a senior manager, or his transfer from one workplace to another, and the external source refers to external parties that can provide the organization with its needs of human resources. As for the appointment process, it aims to place the right individual in a job that matches his qualifications and competency as well as its conditions and requirements (Zirra, et al, 2017).

3. Training and Development Strategy: Training and development strategy is used as one of the strategic tools to respond to environmental changes, which contributes to gaining understanding and knowledge and is translated into an organizational resource through individuals, aiming to bridge the gap between current and expected performance, make changes in the employee behavior, and gain and improve the skills and capabilities necessary to achieve organizational objectives. (Neelam et al., 2014).

4. Incentives and Rewards Strategy: Incentives refer to the external factors and influences that motivate the individual and push him to perform the required work in the best way through satisfying his material and moral needs and desires (Ngwa, et al., 2019). Rewards refer to the

benefits that arise from performing a task, providing a service, or delegating a responsibility (Micander, 2010).

5. Performance Evaluation Strategy: performance evaluation is the process of making a judgment on the performance and behavior of employees at work by issuing decisions related to retaining, promoting or transferring employees to another job, whether within or outside the organization (Nawahda and al-Sarayreh, 2022).

6.3 Organizational Factors

6.3.1 The Concept of Organizational Factors

The organizational factors are major determinants of the organization success or lack thereof, through their role in motivating the organization officers to work hard, participating in decision-making, enhancing performance, improving the service provided, and achieving a competitive advantage that distinguishes it from other competitors, if it is exploited in an optimal way, by meeting a prompt and appropriate response to the needs of customers and other parties.

6-3-2 Dimensions of Organizational Factors

The organizational factors are multifaceted and multidimensional. Therefore, it is impossible to deal with all of them in one study. In this study, the following dimensions were discussed:

First: Organizational Structure

Fazli (2012) defined organizational structure as the way in which different tasks can be organized and divided to harmonize the various tasks and duties.

Second: Information Technology

O'Brien (2002) defined it as relying mainly on the use of tools, devices and means in managing information related to the human being, which requires him to have skills, knowledge, and experiences to be able to manage and deal with this information technologically. Technology mainly includes communication and computer techniques. He also indicates that it consists of hardware, software, human resources, networks, communications, and data.

Third: Organizational Flexibility

Dias and Escoval (2014) defined organizational flexibility as the organization's ability to face environmental changes through the ability to develop products by building a culture

of innovation, learning and creativity in both the internal and external environment of the organization, which is represented in the organizational structure, culture, products, and processes, and creativity in the markets.

Fourth: Organizational Development

Derbali and Elnagar defined organizational development as those long-term efforts that are exerted to develop the organization's ability to solve problems and respond to the internal and external environmental changes. These efforts also include a number of organizational activities taking into account differences. Examples of organizational development are team spirit, coordination with senior management, structural change, and functional enrichment.

Fifth: Strategic Leadership

Barbara and Brent (2006) defined strategic leadership as leadership that can anticipate possible events in the external environment and achieve effective response to them in the internal environment of the organization. It is also the science and art of making, implementing and evaluating decisions through various functions, making the organization able to achieve its objectives.

7. Study Methodology and Design

The study relied on the descriptive and inferential approach to identify the impact of human resource information systems on human resource strategies with the modified role of organizational factors in Jordanian commercial banks.

7-1 Study Population

The study population consisted of those held leadership and supervisory positions in the general administration of Jordanian commercial banks in the capital of Jordan, Amman.

7-2 Study Sample

The data were collected through an online questionnaire addressed to those held leadership and supervisory positions in the general administration of Jordanian commercial banks using the purposive sample method, where (208) questionnaires were answered, all valid for the purposes of statistical analysis.

8. Results of Data Analysis and Hypothesis Testing

8-1 Descriptive Statistics for the Three Study Variables

This part of the study is concerned with describing the dimensions of the independent variable (human resource information systems), the dependent variable (human resource strategies), and the modified variable (organizational factors), in order to determine the degree of

relative importance of the study sample, depending on the arithmetic mean and standard deviation of the respondents' responses and the degree of relative importance towards the dimensions of all variables shown in Table (1).

Table (1): Descriptive Statistics Results of the Study Sample Responses to the Three Study Variables (Human Resource Information Systems, Human Resource Strategies, Organizational Factors)

Independent Variable	Arithmetic Mean	Standard Deviation	Percentage	Degree of Importance	Rank
Human Resource Information Systems					
Ease of System Use	3.88	0.727	%77.6	High	2
Provision of Technical Support	4.10	0.639	%82	High	1
Infrastructure Provision	3.88	0.788	%77.6	High	3
Senior Management Support	3.75	0.745	%75	High	4
General Index	3.91	0.614	%78.2	High	
Dependent Variable	Arithmetic Mean	Standard Deviation	Percentage	Degree of Importance	Rank
Human Resource Strategies					
Human Resource Planning	3.97	0.737	%79.4	High	1
Selection and Appointment	3.92	0.692	%78.4	High	3
Training and Development	3.93	0.714	%78.6	High	2
Incentives and Rewards	3.85	0.721	%77	High	5
Performance Evaluation	3.90	0.678	%78	High	4
General Index	3.91	0.615	%78.2	High	
Moderate Variable	Arithmetic Mean	Standard Deviation	Percentage	Degree of Importance	Rank
Organizational Factors					
General Index	3.73	0.736	%74.6	High	

Table (1) shows that the dimension (provision of technical support) ranked first among the dimensions of human resource information systems, while the dimension (senior management support) ranked last, as the arithmetic means ranged between (3.75 - 4.10). The overall index of human resource information systems was (3.91) with a standard deviation of (0.614), which indicates that the degree of application of the independent variable (human resource information systems) was high. It also shows that the dimension (human resource planning) ranked first among the dimensions of human resource strategies, while the dimension (performance evaluation) ranked last, as the arithmetic means ranged between (3.85 - 3.97). The overall index of human resource strategies was (3.91) with a standard deviation of

(0.615), which indicates that the degree relative importance of application of human resource strategies was high. It is observed that the arithmetic mean of items of the modified variable (organizational factors) was (3.73) at the high level of relative importance, which indicates that the degree of importance of organizational factors was high.

8-2 Hypothesis Testing

8-2-1 Result of Testing the Main Hypothesis (First):

To analyze this hypothesis, a multiple linear regression test was used. Its result is shown in Table (2).

Table (2): Results of Testing the Impact of Human Resource Information Systems in its Various Dimensions on Human Resource Strategies

Dependent Variable	Model		Variance Analysis			Coefficients Table				
	R	R ²	F Calculated Value	F Sig	DF	Green Human Resource Management	Std. Error	β	T Calculated Value	T Sig
Human Resource Strategies	0.805	0.648	93.369	0.00	203/4	Ease of System Use	0.057	0.297	4.375	0.00
						Provision of Technical Support	0.057	0.224	3.798	0.00
						Infrastructure Provision	0.054	0.319	4.585	0.00
						Senior Management Support	0.055	0.091	1.371	0.172

Table (2) indicates that there is a strong relation between human resource information systems and human resource strategies, and that human resource information systems in the surveyed banks explained (64.8 %) of the variance in human resource strategies. It is observed that there is a statistical significant impact of human resource information systems in their dimensions (ease of system use, provision of technical support, infrastructure

provision) on human resource strategies in Jordanian commercial banks.

2-2-8 Result of Sub-Hypothesis Test (First):

To analyze this hypothesis, a multiple linear regression test was used. Its result is shown in Table (3).

Table (3): Results of Testing the Impact of Human Resource Information Systems in their Dimensions on Human Resource Planning

Dependent Variable	Model		Variance Analysis			Coefficients Table				
	R	R ²	F Calculated Value	F Sig	DF	Green Human Resource Management	Std. Error	β	T Calculated Value	T Sig
Human Resource Planning	0.714	0.510	52.772	0.00	203/4	Ease of System Use	0.081	0.152	1.892	0.060
						Provision of Technical Support	0.080	0.251	3.604	0.00
						Infrastructure Provision	0.077	0.181	2.203	0.029
						Senior Management Support	0.077	0.257	3.299	0.001

Table (3) indicates that there is a strong relation between human resource information systems and human resource planning, and that human resource information systems explained (51 %) of the variance in human resource planning. It is observed that there is a statistical significant impact of human resource information systems in their dimensions (provision of technical support,

infrastructure provision, senior management support) on human resource planning.

8-2-3 Result of Sub-Hypothesis Test (Second):

To analyze this hypothesis, a multiple linear regression test was used. Its result is shown in Table (4).

Table (4): Results of Testing the Impact of Human Resource Information Systems in their Dimensions on Selection and Appointment

Dependent Variable	Model		Variance Analysis			Coefficients Table				
	R	R ²	F Calculated Value	F Sig	DF	Green Human Resource Management	Std. Error	β	T Calculated Value	T Sig
Selection and Appointment	0.772	0.596	74.944	0.00	203/4	Ease of System Use	0.069	0.374	5.140	0.00
						Provision of Technical Support	0.068	0.161	2.547	0.012
						Infrastructure Provision	0.065	0.278	3.728	0.00
						Senior Management Support	0.066	0.070	0.992	0.322

Table (4) indicates that there is a strong relation between human resource information systems and selection and appointment, and that human resource information systems explained (59.6 %) of the variance in selection

and appointment. It is observed that there is a statistical significant impact of human resource information systems in their dimensions (ease of system use, provision of

technical support, infrastructure provision) on selection and appointment in Jordanian commercial banks.

To analyze this hypothesis, a multiple linear regression test was used. Its result is shown in Table (5).

8-2-4 Result of Sub-Hypothesis Test (Third):

Table (5): Results of Testing the Impact of Human Resource Information Systems in their Dimensions on Training and Development

Dependent Variable	Model		Variance Analysis			Coefficients Table				
	R	R ²	F Calculated Value	F Sig	DF	Green Human Resource Management	Std. Error	β	T Calculated Value	T Sig
Training and Development	0.590	0.349	27.152	0.00	203/4	Ease of System Use	0.091	0.334	3.616	0.00
						Provision of Technical Support	0.090	0.083	1.031	0.304
						Infrastructure Provision	0.086	0.311	3.284	0.001
						Senior Management Support	0.086	-0.082	-0.917	0.360

Table (5) indicates that there is a medium relation between human resource information systems and training and development, and that human resource information systems explained (34.9%) of the variance in training and development. It is observed that there is a statistical significant impact of human resource information systems in their dimensions (ease of system use, infrastructure

provision) on training and development in Jordanian commercial banks.

8-2-5 Result of Sub-Hypothesis Test (Fourth):

To analyze this hypothesis, a multiple linear regression test was used. Its result is shown in Table (6).

Table (6): Results of Testing the Impact of Human Resource Information Systems in their Dimensions on Incentives and Rewards

Dependent Variable	Model		Variance Analysis			Coefficients Table				
	R	R ²	F Calculated Value	F Sig	DF	Green Human Resource Management	Std. Error	β	T Calculated Value	T Sig
Incentives and Rewards	0.800	0.640	90.301	0.00	203/4	Ease of System Use	0.068	0.330	4.796	0.00
						Provision of Technical Support	0.067	0.173	2.891	0.004
						Infrastructure Provision	0.064	0.302	4.295	0.00
						Senior Management Support	0.065	0.119	1.781	0.076

Table (6) indicates that there is a strong relation between human resource information systems and incentives and rewards, and that human resource information systems explained (64 %) of the variance in incentives and rewards. It is observed that there is a statistical significant impact of human resource information systems in their dimensions (ease of system use, provision of technical

support, infrastructure provision) on incentives and rewards in Jordanian commercial banks.

6-2-8 Result of Sub-Hypothesis Test (Fifth):

To analyze this hypothesis, a multiple linear regression test was used. Its result is shown in Table (7).

Table (7): Results of Testing the Impact of Human Resource Information Systems in their Dimensions on Performance Evaluation

Dependent Variable	Model		Variance Analysis			Coefficients Table				
	R	R ²	F Calculated Value	F Sig	DF	Green Human Resource Management	Std. Error	β	T Calculated Value	T Sig

Performance Evaluation	0.648	0.420	36.716	0.00	203/4	Ease of System Use	0.081	0.099	1.135	0.258
						Provision of Technical Support	0.081	0.309	4.073	0.00
						Infrastructure Provision	0.077	0.317	3.556	0.00
						Senior Management Support	0.077	0.020	0.233	0.816

Table (7) indicates that there is a strong relation between human resource information systems and performance evaluation, and that human resource information systems explained (42 %) of the variance in performance evaluation. It is observed that there is a statistical significant impact of human resource information systems in their dimensions (provision of technical support,

infrastructure provision) on performance evaluation in Jordanian commercial banks.

8-2-7 Result of Testing the Main Hypothesis (Second):

To analyze this hypothesis, a hierarchical regression test was used. Its result is shown in Table (8).

Table (8): Results of Testing the Impact of Human Resource Information Systems on Human Resource Strategies with the Modified Role of Organizational Factors

Variables	Model 1			Model 2		
	T	Beta	(Sig)	T	Beta	(Sig)
Human Resource Information Systems	18.898	0.796	0.00			
Human Resource Information Systems * Organizational Factors				8.435	0.444	0.00
(R) Value	0.796			9.112	0.479	0.00
(R) Δ Value						0.064
(R ²) Value	0.634					0.740
(R ²) Δ Value						0.106
Calculated F Value	357.129					291.180
F Significance Level	0.00					0.00

Table (8) indicates the first model in which the impact of human resources information systems in their dimensions on human resources strategies was examined. It is found that there is a significant impact of human resources information systems on human resources strategies, and that human resources information systems explained (63.4 %) of the variance in human resources strategies. Table (8) also indicates the second model, as the interaction formula between human resources information systems and organizational factors was introduced. It is found that there is an impact of the interaction formula between them, and the interpretation coefficient (R²) recorded an increase of (10.6%).

Therefore, it is found that there is a statistical significant impact of human resource information systems in their dimensions on human resource strategies with the modified role of organizational factors in Jordanian commercial banks.

9. Recommendations

In light of the findings of this study, this study recommends the following:

- The surveyed banks continue to provide clear instructions specifying the permissions of users of human resources information systems.
- The surveyed banks should continue to provide periodic maintenance programs for human resources information systems used to ensure business continuity.
- Encouraging the senior management of the surveyed banks to continue providing financial support to users of human resource information systems.
- Encouraging the senior management of the surveyed banks to support human resource information systems by constantly following up on their outputs.
- The necessity of examining human resources information systems, human resources strategies and organizational factors as combined variables in other academic fields.

References:

- Anthony, P., Kacmar, K., (2013). **Human Resource Management: A Strategic Approach.** The Dryden Press. USA.

- Armstrong, M., (2016). **A Handbook of Human Resource Management Practice**. (10th) Edition. UK.
- Barbara, J., Davies and Brent. D., (2006). **Developing a Model for Strategic Leadership in Schools. Educational Management Administration Leadership**. 34 .
- Barisic, A., Poor, J., and Pejic, B., (2019). The Intensity of Human Resources Information Systems Usage and Organizational Performance. **Interdisciplinary Description of Complex Systems: INDECS**. 3(B), 586-597.
- Contiu, C., (2010). **The influence of organizational culture on human resources management**. Published Doctoral thesis. Babes-Bolyai University. Romania.
- Derbali, A., and Elnagar, A., (2020). Measuring Student and Staff Satisfaction with University Facilities. **Virtual Economics**. 3(3), 1-27.
- Fazli, S., (2012). Investigating The Relationships between Organizational Factors (Culture, Structure, Strategy) and Performance through Knowledge Management. **American Journal of Scientific Research**. 44(2), 116-130.
- Hamadamin, H., and Atan, T., (2019). The Impact of Strategic Human Resource Management Practices on Competitive Advantage Sustainability: The Mediation of Human Capital Development and Employee Commitment. **Sustainability**. 11, 5782. (<https://doi.org/10.3390/su11205782>)
- Kapur, R., (2020). Strategic Human Resource Management in Organizations. **International Journal of Transformations in Business Management**. University of Delhi.
- Malik, N., (2009). Emergence of Strategic Human Resource Management Historical Perspective. **Academic Leadership**. 7(1), 201-218.
- Mashhour, A., and Zaatreh, Z., (2008). A Framework for Evaluating the Effectiveness of Information Systems at Jordan Banks: An Empirical Study. **Journal of Internet Banking and Commerce**. 13(1), 1-14.
- Micander C., (2010). **The impact of a reward system on employee motivation in Motonet-Espoo**. Unpublished PHD Thesis. University of applied sciences in Helsinki. Finland.
- Neelam, T., Israr, Y., Jan, D., and Muhammad, H., (2014). The Impact of Training and Development on Employees Performance and Productivity A case study of United Bank Limited Peshawar City, KPK, Pakistan. **International Journal of Academic Research in Business and Social Sciences**. 4(4), 86-98.
- Ngwa, T., Adeleke, S., Agbaeze, E., Ghasi, N., and Imhanrenialena, B., (2019). Effect of Reward System on Employee Performance among Selected Manufacturing Firms in the Litoral Region of Cameroon. **Academy of Strategic Management Journal**. 18(3), 1-16.
- O'Brien, James, A., (2002). **Management Information System: Managing Information Technology in the E-Business Enterprise**. (15th) Edition. McGraw-Hill. USA.
- Turban, E., Dastgir, M., and Hashem, N., (2021). **Information Technology for Management**. (12th) Edition. Wiley. USA.
- Nadia, S., and Al-Sarayreh, A., (2022). Effectiveness of Organizational DNA in Achieving Pioneering Performance through the Quality of Work Life in Jordanian Commercial Banks. **Journal of Positive School Psychology**. 6(3)m 9784-9798.
- Yogesh Hole et al 2019 J. Phys.: Conf. Ser. 1362 012121
- Zirra, O., James, O., and Remilekun, G., (2017). Impact of Recruitment and Selection Strategy on Employees Performance: A Study of Three Selected Manufacturing Companies in Nigeria. **International Journal of Management Science and Business Administration**. (3), 32-43.