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# The Impact of Information Systems Management Elements on Human Resource Development: The Case of Jordan Commercial Bank

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**Abstract:** We investigate the impact of information systems management on human resource development at the Jordan Commercial Bank (JCB). The study's sample consists of (192) employers, division chief, and manager who work in the JCB and its branches spread all over Jordan. To achieve the goals of this study a questionnaire is designed to estimate the impact of applying information systems management (building an infrastructure and improving strategic planning) on human resource development in the Jordan Commercial Bank by measuring professional growth, staff performance, and staff satisfaction as a human resource development domains. It is shown that: i) the range of information system management at the JCB has a significant positive effect in terms of organizational performance and strategic planning "from the organizational perspective", likewise, the professional growth, job satisfaction and performance of the employees "from the personal perspective", ii) the range of human resource development at JCB is medium, iii) there is a significant statistical effect of information system management on human resource development at JCB, iv) there is a significant statistical effect on the elements of information system management (professional development, staff performance, and staff satisfaction), v) there are no effects of (gender, employment position, and experience) on both information system management and human resource development. The research recommends that (JCB) management should concentrate on the staff satisfaction domain by giving promotions and some privileges and (JCB) management should exchange experiences with local and international banks.

**Keywords:** Human Resource Development, Information Systems Management, staff performance, staff satisfaction, strategic planning.

## 1 Introduction

The imposition of scientific progress and the rapid development in information technology, let institutions seek the latest scientific findings of advanced technologies, allowing them to run amid globalization, and competition in global markets. Thus, the information systems must meet the wishes of customers in general [1].

The changes in this era finding new concepts and methods of management in organizations; to be able to deal with the challenges that face and overcome them to achieve the best performance level [2-3].

Human resources development has a great significance; due to consider this the most important supplier of resources that contribute to the success of any institution in the long run, and identifies the organization's ability to adapt to technological developments, and thereby ensure the survival and continuity [4-5].

### 1.1 Information Systems Management

Widening unprecedented in information technology in the twenty-one century, move the world rapidly from the industrial age to the information age, and the manifestations of this age, the appearance of new concepts such as information systems, e-commerce, e-money, and in the areas of communications has emerged the concept of e-mail, all of this has led to the emergence of the information society, and as a result of that, new professions appear such as knowledge business, knowledge engineers, internet service providers, developers of websites for the institutions and so on. The willingness of institutions to achieve the best performance level may impose upon the use of efficient and effective information; it has increased interest in these systems as they play a crucial role in the development of systems of organizations. Providing all appropriate information at the most suitable time for the various administrative levels, to support all the tasks and administrative functions, in addition to the improvement and development of communications and the flow of information between those levels, all of which would be reflected positively on the performance of the total [2].

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Information systems management is defined as a set of planned procedures and practices that were intended to direct the elements (hardware, human, financial, and software) for coordinated and integrated with each other through gathering, storing, processing, and delivering information to users appropriately and promptly to help them perform the functions that were assigned to them, to find solutions for administrative problems, and to take proper and timely action [6-7].

### 1.2 Information System

The first appearance of information systems in the organization was in the fifteenth century through the invented accounting system, which has remained for many years as the only official information system, and then the evolution of the system to include other areas of the administration with the advent and use of mathematical models and operations research in decision-making [8-10].

Information systems are defined as a set of financial and human resources in the organization and are responsible for the preparation of the information in addition to the information resulting from the collected data processing, and then this information is provided for each administrative level for planning and oversight of the organization's activities as well as external parties with which it has relations with an organization [1, 7].

## 2 Human Resources

Increasing interest in the subject of human resources development; due to be considered of the most important resources that contribute to the success of any institution in the long run, and identifies the organization's ability to compete, and then ensure survival and continuity, and to contribute to the achievement of comprehensive development, because the human resources are the most important element and the most influential compared to the rest resources owned by the corporation, in the absence of human resources originally institutions do not arise [4].

### 2.1 The Concept of Human Resource Management

Human resources management [4] is defined as expanding people's choices and their ability through social capital formation so that they meet the needs of the present generation as much as possible justice without compromising the needs of future generations.

### 2.2 Human Resource Management Practices

There are many practices of interest to human resources management include the following:

- Polarization: It means the institution attracts the attention of multiple elements of qualified

human talent, skills, and abilities, and chooses the best ones [11].

- Choice: It defines as selections of human resources, that have the qualifications required for the completion of specific functions that are available as required [12].
- Training and Development: It is a process that is based on the supply of human resources by information, expertise, and necessary skills to perform their jobs effectively [12].
- Preservation of human resources: This means the institution's ability to protect its capital from qualified human resources from moving to other institutions [13].
- Performance management: A contract organization process with staff to achieve some of the achievements and standards, and follow-up their performance and correct deviations and reinforcement down to the final evaluation of the overall performance of the employee [14].

## 3 Literature Review

The purpose of study [15] is to identify the impact of the quality of management information systems, raise the functionality level in the Jordanian Social Security Corporation, and get to know the reality of the quality of management information systems in this institution, and the level of functionality. The study sample consisted of (271) employees, the researcher used a questionnaire as a tool for the study, the study found that the level of management information systems in the organization was moderate, and demonstrated the impact of the quality of information systems on raising the level of functionality.

The Almkhademh study [1] aimed to survey the opinions of a sample of Jordanian industrial companies on the impact of accounting information systems in making investment decisions using computerized accounting systems, data were collected through a questionnaire distributed to a sample consisting of 143 individuals to see the impact of information systems in making investment decisions in the Jordanian industrial companies process, and the results indicated the impact of information systems and its factors in the investment decision-making process except for neutral property and property comparison.

The following study for [2] aimed to highlight the impact of the use of information systems on the administrative performance of insurance companies and to achieve the objectives of the study. The researchers developed a questionnaire that was distributed to the employees in insurance companies in the state of Constantine, the study sample consisted of (40) employees,

and the study revealed the existence of the impact of the use of information systems on the overall performance of the insurance companies, but the actual usage or optimal investment for information systems in insurance companies in Algeria is still limited because of the existence of obstacles, limitations related to Managers and leaders, potential technical, information, and availability of materials.

Obeidat study [16] aimed to identify the reality of the application and practice of human resources management information systems in the Jordanian government sector, and to identify the level of contribution of the application of information technology and human resource functions, data were collected based on a questionnaire that was distributed to a sample consisting of (23) individuals representing human resource managers in the Jordanian ministries, and the most important results that ministries are applying human resources information systems in HR functions to perform the functions but to varying degrees, where the highest percentage in the function of employment, as the results of the study showed that the experience, training, and academic qualification have an average impact for system efficiency and effectiveness in the ministries.

The study of Mashhour [17] sought to identify how investment in information systems in the Jordanian commercial banks contributes to the effectiveness of accounting information systems, in addition to the measurement of the factors that determine the effectiveness of accounting information systems in the major commercial banks in Jordan, the study sample consisted of Jordanian Commercial Banks of (12) banks, data were collected through a questionnaire, the study found that accounting information systems dramatically affect the performance of these banks and they affect the level of competitiveness among the study sample banks.

Nankervis study [18] aimed to find how practicing senior management strategies for human resources in medium-sized organizations, these studies included (800) medium-sized organizations in Australia that have been selected randomly, the study used the questionnaire and found that the construction and the formulation of the organization strategy are in the covered organizations, this process was conducted in isolation from the participation of human resources managers. Where the preparation and strategy formulation process is concentrated in the hands of senior management, the majority of these organizations not practiced the functions of human resources management at a strategic level, but look at this department on a traditional basis.

The Li study [19] aimed to identify the reality of human resources management strategy in international companies in China, compared to the human resource management practices in those companies within two important sectors, the soft drinks sector, and the electronics sector. The study found that some of the basic assumptions of human resources management strategy focus on the need

to integrate human resource management practices with the overall strategy of the organization, in addition, the practice of human resources management has little impact on the profitability of companies, but there was no relationship between the effectiveness of the human and technical resources management and performance of the organization.

The Ajantha study [20] has identified personal and organizational factors that influence the strategic direction of the globalization of human resources in South Asia, this study used interviews and questionnaire methods, and the researchers distributed a sample consisting of (4 HR managers, 4 CEOs, and 4 Financial Managers), this sample covered the four largest commercial banks in South Asia, namely Bangladesh, Pakistan, India, and Sri Lanka. The results showed that the knowledge, skill, practical awareness, and leadership knowledge of human resources, have a greater impact on the strategic orientation towards globalization and the regulatory environment on the personal side. The performance has the biggest impact on the regulatory side, the results also showed the impact of these factors on the available opportunities.

#### 4 Problem Statement

Most of the administrative organs in Arab countries face pressure urgent to address the related challenges of the development of human resources regarding the digital revolution, technology progress, information systems, and communications, where it became not possible to think of development in any field without paying attention to information systems and human resources [21]. The Commercial Bank of Jordan as one of the services sector institutions stands in this day and age in front of challenges imposed by the accelerated technology and communications developments, this situation required managing this amount of information through specialized staff, so that provides service characterized by quality and speed to allow him to compete locally and internationally, and through informed researchers on studies in information systems as a study [15] and studies in human resources as a study of [16]. The problem of the study is summarized in the following important questions:

- The first main question: What is the impact of information systems management (building an infrastructure for information systems, and improving strategic planning for information systems) on human resource development in the Jordan Commercial Bank?

The branching to this question, the following sub-questions:

- The first sub-question: Is there an impact of the elements of management information systems on professional growth?
- The Second sub-question: Is there an impact of the elements of management information systems on the performance of employees?

- The third sub-question: Is there an impact of the elements of management information systems on the satisfaction of the employees?
- The second main question: Are there differences in the level of management information systems due to personal variables (gender, job class, and years of experience)?
- The third main question: Are there differences in the level of human resources development attributable to personal variables (gender, job location, and years of experience)?

#### 4.1 The Importance of Studying

This study provides a theoretical framework for institutions to evaluate their labor force. Moreover, it sheds the light on the importance of motivation, as the study provides a theoretical framework for the effective characteristics of the information systems management, the importance of information management in the services sector, the study of management information systems and their impact on human resource development earns bank managers and employees flexibility and adapted largest with rapid changes in technology. The findings and recommendations of the study may be useful to workers in Jordanian banks management.

#### 4.2 Procedural Definitions

- Information Systems Management: are the procedures and practices that guide the hardware and the software and data to enter, store, process, and produce useful information group, and the delivery of this information to users appropriately, in time, to help Jordan Commercial Bank staff and clients to perform the functions assigned to them and the achievement of planned targets [22].
- Building an infrastructure for information systems: is the processing and preparation of a physical environment that includes all the components of hardware and software necessary for data management, storage, preservation, and processing in Jordan Commercial Bank under the management of information systems. It is measured by the average answers of Jordan Commercial Bank staff on the paragraphs of the questionnaire in the field of building an infrastructure for information systems.
- Improving strategic planning for information systems: data collection and study of the reality of information systems in the Jordan Commercial Bank to improve upon future vision through strategic planning for information systems and to improve according to technological developments. It is measured by the average responses of Jordan

Commercial Bank staff on improving strategic planning for information systems in the questionnaire.

- Human Resources Development: improving staff capabilities and competencies through the formation of social capital to meet Jordan Commercial Bank customer needs, and be able to perform the tasks assigned to them effectively.
- Professional growth: raising efficiencies of Jordan Commercial Bank staff in the performance of the tasks assigned to them, and meeting customers' needs effectively through appropriate media training and learning, and is measured by the average replies for Jordan Commercial Bank staff on professional growth.
- Staff Performance: is the extent of Jordan Commercial Bank staff and direction of link performance towards achieving the planned goals, which is measured by calculating the average answers of Jordan Commercial Bank staff on the performance of employees.
- Satisfaction of employees: a sense of Jordan Commercial Bank staff that the bank achieves balanced psychologically in terms of appropriate wages, bonuses, allowances, and social value of the effort. Satisfaction of employees is measured by the average responses of Jordan Commercial Bank staff on the satisfaction of employees.

As for the spatial boundaries of the study, it will include the administration of the Commercial Bank of Jordan located in Amman, and all branches scattered in Jordan. The Human border will be the managers working in the Jordan Commercial Bank branches in Jordan, the heads of departments and staff. Finally, the scientific borders for this study will deal with detecting the impact of information systems on human resources development in the Jordan Commercial Bank.

#### 4.3 The methodology of the study

This study is one of the field studies, in which researchers follow the descriptive and quantitative (mainly regression analysis) analytical methods, in order to identify the impact of information systems on human resources development in the Jordan Commercial Bank.

Members of the study sample consisted of 192 employees of the Jordan Commercial Bank staff in the Hashemite Kingdom of Jordan, distributed in (32) branches. The researchers collected notes and ideas from the seven professionals and experts who made up the committee of arbitrators. The researchers calculated the stability of the internal consistency of the phrases using Cronbach Alpha after applying to a sample of (20) employees of the Arab Bank staff, ranging stability of the

areas between the coefficients values (0.83 to 0.89), and (0.91) for all areas.

### 5 Study Results

The researchers calculated averages and standard deviations for the areas of information systems management (see Table 1).

**Table 1:** Mean and standard deviation of Jordan Commercial Bank staff, heads of departments, and directors (Information systems management area).

Estimate	Standard Deviation	Mean	Area	Rank
Large	0.63	3.74	Building an infrastructure for information systems	1
Medium	0.68	3.64	Improving strategic planning for information systems	2
Large	0.61	3.69	Information systems	

It can be seen from Table 1, that the level of management information systems in the Jordan Commercial Bank was substantially estimated, it has reached its arithmetic average (3.69) with a standard deviation (0.61), the area of building an infrastructure of information systems came in the first place with a mean (3.74 ) and standard deviation (0.63) with a large degree estimate, while improving strategic planning for information systems, came in the second place with a mean (3.64) and standard deviation (0.68) with a medium degree estimate .

**The areas of human resources development:** the researchers calculated averages and standard deviations for the areas of human resources development as in Table 2.

**Table 2:** Mean and standard deviation of Jordan Commercial Bank staff, heads of departments, and directors (Human resources development areas).

Estimate	Standard Deviation	Mean	Area	Rank
Medium	0.69	3.64	Professional growth	1
Medium	0.68	3.50	Satisfaction workers	2
Medium	0.69	3.48	The performance of employees	3
Medium	0.61	3.54	Human resources development	

It can be noticed from Table 2, the level of human resources development was a medium degree of estimation, it has reached its arithmetic average (3.54) with a standard deviation (0.61), and the area of professional growth came in first place with a mean (3.64) and standard deviation (0.69) with a medium estimate, while the satisfaction workers came in second place with a mean (3.50) and standard deviation (0.68) and medium degree estimate.

Meanwhile, the area of the performance of employees came in third and last place with a mean (3.48) and standard deviation (0.69) with medium estimation.

**The first main question:** What is the impact of information systems management on human resource development in the Jordan Commercial Bank?

The researchers applied multiple linear regressions to study the impact of information systems management on human resource development, as summarized in Table 3. The value of the correlation coefficient between management information systems and human resources development is equal to (0.786), where the F value is equal to (153.164) with a significance level (0.000), indicating the impact of Management information systems on human resources development.

**Table 3:** The results of multiple linear regressions for the impact of information systems management on human resources development in the Jordan Commercial Bank.

Variables	R	R <sup>2</sup>	R <sub>2</sub> Amended	F	Significance level
Information systems management	0.786	0.618	0.614	153.164	0.000

Table 4 presents which variables (building an infrastructure for information systems or improving strategic planning for information systems) have an effective impact on human resource development.

**Table 4:** Using the regression coefficients and T-test, to measure the impact variables of management information systems on the development of human resources.

Variables	β	T	Significance level
Building an infrastructure for information systems	0.306	5.072	0.000
Improving strategic planning for information systems	0.476	8.461	0.000

Table 4 shows the regression coefficients, that the value of (t) is statistically significant for the independent variables (building an infrastructure of information systems and improving strategic planning for information systems) at the level of significance ( $\alpha \geq 0.05$ ) which shows the impact of these variables on the dependent variable (Human Resource Development).

**The first sub-question:** Is there an impact of management information systems (building an infrastructure for

information systems, and improving strategic planning for information systems) – as constructs - on professional growth?

The researchers applied multiple linear regressions to study the impact of information systems management on professional growth, and the results were as in Table 5.

Table 5, shows that the value of the correlation coefficient between management information systems and professional growth is equal to (0.800), it is clear from the table also that F value is equal to (168.075), and the significance level is equal (0.000), this indicates the impact of information systems management on professional growth.

**Table 5:** The impact of information systems management on professional growth using multiple linear regression.

Variables	R	R <sup>2</sup>	R <sub>2</sub> Amended	F	Significance level
Information systems management	0.800	0.640	0.636	168.075	0.000

Table 6 depicts which variables (building an infrastructure for information systems) or (improving strategic planning for information systems) have an effective impact on professional growth.

**Table 6:** The impact of information systems management variables on professional growth using regression coefficients and T-test.

Variables	$\beta$	t	Significance level
Building an infrastructure for information systems	0.441	6.647	0.000
Improve strategic planning for information systems	0.470	7.604	0.000

Table (4-6) shows the regression coefficients, that the value of (t) is statistically significant for the independent variables (building an infrastructure of information systems and improving strategic planning for information systems) at the level of significance ( $\alpha \geq 0.05$ ) which shows the impact of these variables on the dependent variable (professional growth).

**The Second sub-question:** Is there an impact of management information systems on the performance of employees?

The researchers applied multiple linear regressions to study the impact of information systems management on the performance of employees, as illustrated in Table 7.

**Table 7:** The impact of information systems management on performance of employees using multiple linear regression.

Variables	R	R <sup>2</sup>	R <sub>2</sub> Amended	F	Significance level
Information systems management	0.758	0.575	0.570	127.752	0.000

The results in Table 7, show that the value of the correlation coefficient between management information systems and performance of employees is equal to (0.758), it is clear from the table that F value is equal to (127.752), and the significance level is equal (0.000), indicating that the presence impact of information systems management on the performance of employees.

Table 8 determines which variables (building an infrastructure for information systems) or (improving strategic planning for information systems) have an effective impact on the performance of employees, (see Table 8).

**Table 8:** The impact of information systems management variables on performance of employees using regression coefficients and T-test.

Variables	$\beta$	t	Significance level
Building an infrastructure for information systems	0.173	2.384	0.018
Improve strategic planning for information systems	0.652	9.660	0.000

Table 8 displays the regression coefficients, where the value of (t) is statistically significant for the independent variables (building an infrastructure of information systems and improving strategic planning for information systems) at the level of significance ( $\alpha \geq 0.05$ ) which shows the impact of these variables on the dependent variable (performance of employees).

**The Third sub-question:** Is there an impact of management information systems on the satisfaction of the employees?

The researchers applied multiple linear regressions to study the impact of information systems management on the satisfaction of the employees, (see Table 9).

**Table 9:** The impact of information systems management on the satisfaction of the employees using multiple linear regression.

Variables	R	R <sup>2</sup>	R <sup>2</sup> Amended	F	Significance level
Information systems management	0.541	0.293	0.285	39.106	0.000

Table 9, shows that the value of the correlation coefficient between management information systems and satisfaction of the employees is equal to (0.541), it is clear from the table that F value is equal to (39.106), and the significance level is equal (0.000), indicating that the presence impact of information systems management on the satisfaction of the employees.

Table 10 determines which variables (building an infrastructure for information systems) or (improving strategic planning for information systems) have an effective impact on the satisfaction of the employees.

**Table 10:** The impact of information systems management variables on the satisfaction of the employees using regression coefficients and T-test.

Variables	$\beta$	t	Significance level
Building an infrastructure for information systems	0.304	3.296	0.001
Improve strategic planning for information systems	0.307	3.579	0.000

According to Table 10, the value of (t) is statistically significant for the independent variables (building an infrastructure of information systems and improving strategic planning for information systems) at the level of significance ( $\alpha \geq 0.05$ ) which shows the impact of these variables on the dependent variable (satisfaction of the employees).

**The second main question:** Are there differences in the level of management information systems due to personal variables (gender, job class, and years of experience)? The researchers used the T-test for independent samples to study the differences in the level of management information systems due to gender, and the results were introduced in Table 11.

**Table 11:** T-test for independent samples to study the differences in the level of management information systems due to gender.

Gender	Total	Mean	Degree Freedom	T	Sig T	Result
Male	97	3.77	190	1.968	0.051	No Differences

The results of Table 11, indicate that the value of (T) is equal to (1.968) in terms of (0.051), a non-statistically significant, indicating that there is no difference in the views of the members of the study on the impact of gender in information systems management.

The results indicate a specific job site in Table 12, the value (F) is equal to (0.771) in terms of (0.464), a non-statistically significant, indicating that there is no difference in the views of the members of the study on the impact of the job site in the Systems Management information.

The results indicate specific for years of experience in Table 12, the value (F) is equal to (0.567) in terms of (0.568), a non-statistically significant, indicating that there is no difference in the views of members of the study on the impact of years of experience in information systems management.

**Table 12:** The results of analysis of variance (One way ANOVA) to study the differences in the views of a sample study on the management of information systems, due to job site and years of experience.

Variables	Variance source	Sum of squares	Degree Freedom	Average sum of squares	F	Sig	Result
Job Site	Between groups	0.568	2	0.284	0.771	0.464	No differences
	Within groups	69.566	189	0.368			
	The total Variance	70.134	191				
Years of experience	Between groups	0.418	2	0.209	0.567	0.568	No differences
	Within groups	69.716	189	0.369			
	The total Variance	70.134	191				

**The third main question:** Are there differences in the level of human resources development attributable to personal variables (gender, job location, and years of experience)?



The researchers applied the T-test for independent samples to study the differences in the level of human resources development, due to gender, and the results were presented in Table 13, the value of (T) equal to (0.451) in terms of (0.652), a non-statistically significant, indicating that there is no difference in the views of the members of the study on the impact of gender in human resource development.

**Table 13:** T-test for independent samples to study the differences in the level of human resources development due to gender.

Gender	Total	Mean	Degree Freedom	T	Sig T	Result
Male	97	3.55	190	0.451	0.652	No Differences

The researchers applied the one-way analysis of variance (One way ANOVA) to study the differences in the level of human resources development and due to job site and years of experience, as indicated in Table 14.

**Table 14:** The results of analysis of variance (One way ANOVA) to study the differences in the views of a sample study on the development of human resources due to job site and years of experience.

Variables	Variance source	Sum of squares	Degree Freedom	Average sum of squares	F	Sig	Result
Job Site	Between groups	0.212	2	0.106	0.282	0.755	No differences
	Within groups	70.979	189	0.376			
	The total Variance	71.190	191				
Years of experience	Between groups	0.854	2	0.427	1.148	0.320	No differences
	Within groups	70.336	189	0.372			
	The total Variance	71.190	191				

The results indicate specific for the job site in Table 14, where the value (F) is equal to (0.282) in terms of (0.755), a non-statistically significant, indicating that there is no difference in the views of the members of the study on the impact of the job site in the resource development human.

The results indicate specific for years of experience in Table 14, the value (F) is equal to (1.148) in terms of (0.320), a non-statistically significant, indicating that there is no difference in the views of the members of the study on the impact of years of experience in human resource development.

## 6 Discussion

### *The areas of information systems management:*

The results showed that the level of management information systems in the Jordan Commercial Bank was great, the cause of these results is due to the attention of Jordan Commercial Bank management information systems, where all employees undergo intense sessions after each development in information systems, and these results are consistent with the results of [15] study, and vary with the results of the study of [2].

### *The areas of human resources development:*

The results showed that the development of human resources at the Jordan Commercial Bank level was medium, the reason for these results back to the Jordan Commercial Bank's interest in the development of human resources, where it employed competencies and specialists in the bank, and then all employees take various courses in administrative affairs and accounting.

### *The first main question:*

The results showed that there is a statistically significant effect for the management of information systems on human resources development in the Jordan Commercial Bank and that the areas of management information systems (building an infrastructure of information systems and improving strategic planning for information systems) have a statistically significant impact on human resource development, the reason for this result is that banks in their competition to attract customers, seeking to recruit programs and electronic devices, speed up processes, and increase reliability, these findings and results are consistent with the study of [2], and the study of [17].

### *The first sub-question:*

There is a statistically significant effect for the areas of management information systems (building infrastructure for information systems, improving strategic planning for information systems) on professional growth, the reason for this result is due to that the management of information systems requires professional development and continuing training for workers to keep up with the rapid and successive developments in information systems.

### *The second sub-question:*

Findings showed a statistically significant effect for the areas of management information systems on the performance of employees because the information systems of programs and materials and devices were designed to

facilitate performance, and save time and effort. these findings and results are consistent with the study [2], and the study [17-27].

**The third sub-question:**

Results demonstrated a statistically significant impact for the areas of management information systems on the satisfaction of the employees and human resource development, since the management of information systems facilitate the work of employees, and help them get their work done, and save time and effort in data exchange.

**The second main question:**

Based on the results, there is no statistically significant difference based on personal variables (gender, job location, and years of experience) in the management of information systems. This may be due to the staff in the Jordan Commercial Bank with different job sites dealing with information systems long ago.

**The third main question:**

The results showed a non-significant difference based on personal variables in human resources development, this result is due to the male and female employees who receive the same training and qualifications, specialized in accounting and financial management, and that the staff in the Jordan Commercial Bank with different job positions are trained regularly based to the site occupied by the employee, regardless of years of experience.

**Recommendations**

Jordan Commercial Bank management should focus on customer satisfaction and provide more privileges and bonuses to prevent brain drain to banks and other competition.

JCB management should provide smart electronic systems in the organization, which increases the quality of employees' performance, and they should start exchanging experiences with other banks.

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