

Investigating the Effect of Management Information Systems on Human Resources Management in the Insurance Industry

Abstract

This research investigates the effect of management information systems on human resources management performance in the insurance industry. This research was carried out cross-sectionally. The research statistical population includes the General Department of Human Resources employees of the Insurance Industry, a total of 112 persons. The statistical sample is 199 randomly selected employees of the General Human Resources Department of Insurance. A questionnaire was used to collect data. Based on the results, Cronbach's standardized alpha value equals 0.78. Validity was also confirmed. The results showed that the correlation coefficient value is almost equal to 0.69, and the significance level is less than 5%. For this purpose, the positive and significant relationship between the two variables of using management information systems on the human resources management recruitment sub-system is confirmed. According to the results, the value of the correlation coefficient is almost equal to 0.46, and the significance level is less than 5%. For this purpose, the positive and significant relationship between the two variables of using management information systems on the human resource management improvement sub-system is confirmed. On the other hand, there is a positive and significant relationship between the use of management information systems, human resource management maintenance systems, and human resource management application systems.

Keywords: *management information systems, human resources management performance, human resources, insurance industry, performance- management*

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Introduction

Human resources have always played a vital role in the activities of organizations, and today they play a strategic role in competitive supply. Various research has shown that human resource management leads to the sustainable competitive advantage of the organization and its outstanding performance (Chen, 2009). In addition, they are essential for the company's progress, and human capital is considered an essential resource (Mazanti, 2006). The performance of this resource depends on the seriousness and ability of the agents of the human resources unit (Mumford, 2000). Training, motivation, evaluation, and effective control are essential issues in human resource management because new knowledge is obtained through training human resources while it acquires the ability to innovate faster (Chi, 1989).

One of the problems that organizations and companies face today is not using a proper information system. Management information systems can process information in the fields of demographics, education, employment, and factors affecting the supply and demand of the labor force, which will ultimately be widely used in the field of human resources planning. Managers can prepare to face current and future problems before the start of any crisis by having the necessary information through proactive management (Bassri, 2010). Information and communication technology has had a profound impact on human resource management and has

caused its transformation in some new dimensions. Experts also believe that electronic human resources management has the potential to reduce management costs, speed up response time, improve the decision-making process develop customer services, and increase productivity. For this reason, it helps human resources management be more flexible, strategic, and cost-effective (Hosseini, 2012). In recent years, many researchers have paid attention to the relationship between human resource management and company performance in human resources and innovation. Technical innovation as development is also an important tool to gain a competitive advantage (Rimanoczy, 2010). Technical innovation, as the development and creation of new products or technologies, has an essential effect on the company's performance (Alain, 2011).

Therefore, there is a close relationship between human resource management, technical innovation, and company performance. Finally, effective human resource management can speed up the technical innovation of a company; the resource-based theory emphasizes that the company's competitive advantage is to improve the resources and increase the company's performance. However, there are many gaps in this field. Most of the research has examined the positive relationship between resource management and the relationship between technical innovation and performance. Many managers of companies with advanced technology seek to know how factors such as training, perception, control, and

evaluation of human resources in human resource management affect technical innovation (Narimani, 2012).

The electronic human resources management system is used in organizations to implement training programs, manage people's performance, and manage benefits and compensation systems. Research indicates that human resource management reduces administrative costs, optimizes interaction time, and helps the organization computerize human resources activities and their information (Gueutal and Stone, 2005). The human resources information system is divided into three parts: the management system is the hardware and software system, and the organization is the structure, systems, and methods (Hashmi Far Esmacil 2007).

Management information systems are tools that have served human resource managers with information technology advancement. The research problem is to what extent the management information systems used in the insurance industry (Kawsar Insurance) have influenced the four activities of human resource management so that its strengths and weaknesses are revealed and taken into consideration by managers in future planning because the quality of human resources depends on the competitive advantage of the organization. Nowadays, the prevailing belief is that the strategic management of human resources can empower organizations to face the complex environment of the current world. According to the mentioned problems, the current research aims to investigate the effect of management information systems on the performance of human resources management in the insurance industry

Information system

Organizational systems do not exist without humans (Latham, 2019). Adam Hickman and Jennifer Robison (2020) reported from Gallup Research data that remote work improves business outcomes, attracts talent and an engaged workforce has the best financial outcomes. Management reporting systems are also called information systems and are focused on decision support in cases where the specific information needs of that decision are specific. In other words, this category of systems is used in cases where the decision-making situation is repeated periodically, and the necessary information is identified and determined by analyzing the situation (Rowly 2001). In other words, the management information system is a system that collects environmental data and records the data of transactions and organizational operations. Then they filter, organize, and select them and present them as information to the managers, providing a tool for them to produce the needed information (Murdic 1986, quoted by Beheshti 2012). The duties of an information system are as follows: First, it receives data from sources inside and outside the organization as input. Then it processes the data to obtain information. For this purpose, procedures, and instructions are used that determine how to produce information. In the end, information is provided to system

users in the form of system outputs (Beheshti, 2013).

Human resources management

Human resource management means understanding the importance of an organization's human resources, which gives shape and meaning to the organization's excellence, attention to customers, entrepreneurship, and quality. Growth and development and increasing the level of abilities and organization of human resources of an organization to achieve the organization's goals are summarized in the perspective and intellectual level of human resources management. This management level significantly contributes to the organization's success and failure. Human resource management is considered a strategic factor that not only plays a role in the effectiveness of the organization's strategy but can potentially be effective in creating a competitive advantage. In other words, the organization's effectiveness is achieved through the strategic management of human resources (Huselid, 2005).

Functional duties of human resources management

General functional tasks for human resource management include selection, evaluation, development, and reward. This division has been done with an emphasis on individual and organizational performance. However, in the new literature, these tasks have become more complete, including selection, training, development, capability, and performance management, which cannot include all functional tasks, including suitable work opportunities, diversity management, and work structure.

1. Employee participation and work development

This area is mainly related to the activities related to the development of human resources at individual levels and higher levels of the organization. From the time a person enters to the time he leaves the organization, capability development and the construction of a dynamic career path are carried out in the organization so that both the ability of the individual and his employability increase and the organization takes advantage of his capabilities (Asili, 2014).

2. Human resource management and organizational commitment by maintaining employees

Human resource management practices are considered demographically, technologically, and economically imposed on organizations for their growth and development (Decastri

et al. 2020).

Moreover, it is taken into consideration that human resources are priceless economic resources. The efficient use of human resources can reduce the overall cost of an organization and increase its performance (Ackerman and Heggstad 2019).

The high commitment to human resource measures includes options such as selective recruitment, development performance evaluation, fair and competitive service compensation, and comprehensive training and development activities (Clark, 2013). Alnaqbi (2011) shows that employees become more committed to their jobs and achieving the organization's goals when they feel that the company pays enough attention to their training and development needs. A fair evaluation system makes employees understand their job responsibilities and the path of individual growth, and organizational commitment produces positive results, such as retaining capable employees.

3. Human resource management measures and job satisfaction by retaining employees

Actions such as training and development, incentives, and rewards directly affect employee satisfaction and cause them to be retained. In some research, Martin (2011) considers rewards to affect people's satisfaction among these four measures significantly. Based on the difference theory, employees feel satisfied when they see their payment commensurate with their time and effort. Providing opportunities for employee training and development opportunities improves skills and abilities and increases job satisfaction and willingness to stay (Shirazi, 2014).

4. Management of human resources and technical innovation

Human resource management through information technology provides an opportunity for the productivity of human resource specialists by eliminating their routine tasks. Using technology leads to gaining a competitive advantage for the organization. Nowadays, information technology has affected all elements and issues related to human resource management, including employee training and employee motivation and control, changing roles and issues related to job stress, self-monitoring in the organization, and employee ethics, and has helped to facilitate the issue of human resource management in the organization.

5. Employee motivation and technical innovation

Employee motivation is closely related to the organization's effectiveness because it needs to ensure that it has employees who can and want to use advanced technology to achieve its goals. The company's employees need organizational incentives to increase the innovation process (Nasution, 2011). Material motivation is based on economic benefit, and non-material motivation is more classified in social acceptance. Material and non-material incentives can create different employee needs in technical innovation activities.

Information technology and changing roles

Information and communication technology has two favorable benefits for the organization. The first is that it enables the organization and its managers to obtain data and information quickly, providing more support for decision-making. Second, information and communication technology enables organizations to act more favorably in a competitive environment and consider quality and effectiveness decisions. Human resources management is one of the organizational areas strongly affected by the Internet. The widespread use of the Internet in this field has changed the roles of human resource specialists. The Internet has made it possible to hand over many human resources activities to them. In online communication between employees, managers, and organizational consultants, the task of human resources specialists has shifted from daily administrative activities to strategic human resources activities. The concept of electronic human resource management is also due to the role of the Internet in this field (Stone, 2013).

Research Methodology

The current applied research has a survey descriptive and quantitative approach. This research will be done cross-sectionally. The research statistical population includes the General Department of Human Resources employees of the insurance industry, whose number is 112. The statistical sample include 199 employees of the Insurance, who were randomly selected. The people can be selected both randomly and systematically. The researcher prepared a questionnaire and delivered it to the participants using a perfectly random distribution approach. The most popular selection technique in probability sampling is called simple random sampling (SRS).

The field method was used to collect numerical and statistical data. This way, information was collected from the studied statistical population using the questionnaire, and the data was analyzed after scoring the received answers.

After formulating the questions, the questionnaire was given to professors and experts to determine its validity. Finally, the questions had the necessary validity after applying the

amendments made by the professors and re-editing the items. After that, the reliability of the questionnaire was determined. Cronbach's alpha method was used to estimate the validity of the questionnaire. First, 30 questionnaires were distributed among a random sample through a pre-test to obtain the reliability coefficient of the questionnaire. Then, Cronbach's alpha coefficient was calculated using computer and SPSS software. Based on the results, the overall standardized alpha value equals 0.78. This value shows that the items related to the research have an acceptable level of reliability and internal consistency to measure the research topic

Findings

The results showed that the highest frequency of people was in the age group of 20 to 30 years old. The highest frequency was observed at the bachelor's education level. The highest frequency was observed in people with 10 to 20 years of work experience. The descriptive statistics of the variables in this study are specified in Table (1).

Table 1: Descriptive statistics of the tested variables

	Management information	Recruitment Management Sub-system	Management improvement sub-system	Management maintenance sub-system	Management application sub-system
Average	8018.3	1982.4	6452.4	7465.2	4101.03
Error from the mean	0.05112	0.05112	0.3911	0.06041	0.04630
Middle	0000.4	0000.4	0000.5	0000.2	0000.3
MODE	00.4	00.5	00.5	00.2	00.3
standard deviation	0.75302	0.75302	0.57606	0.88991	0.68210
Variance	0.567	0.567	0.332	0.792	0.465
kurtosis	-0.378	-0.345	-1.393	0.959	0.418
The error of kurtosis	0.165	0.165	0.165	0.165	0.165
Skewness	0.014	-1.165	0.956	-0.031	0.012
The error of Skewness	0.329	0.329	0.329	0.329	0.329
Minimum	2.00	3.00	3.00	2.00	2.00
Maximum	5.00	5.00	5.00	5.00	5.00

According to Table (2), each variable's mean, median, and mode are not significantly different and can be a sign of normal distribution in these variables. Skewness and kurtosis are at different levels in each variable, and this is a sign of a non-uniform distribution of data related to each variable compared to other variables.

Table 2: Valid Kolmogorov Smirnov test

	Management information	Recruitment Management Sub-system	Management improvement sub-system	Management maintenance sub-system	Management application sub-system
N	384	384	384	384	384
Test statistics	0.304	0.257	0.427	0.302	0.325
Significance level	0.000 ^e	0.000 ^e	0.000 ^e	0.000 ^e	0.000 ^e
Probability level	0.95	0.95	0.95	0.95	0.95
State	normal	normal	normal	normal	normal

It should be noted that the permissible significance level is determined according to the 95% probability level. In other words, in this test, the variables with probability levels higher or lower than 5% have a normal distribution. Therefore, all the variables in this study have a normal distribution.

Table 3: Correlation matrix

		Management information
Management Recruitment	The correlation coefficient	0.698
	Significance level	0.000
Management improvement	The correlation coefficient	0.542
	Significance level	0.000
Management improvement	The correlation coefficient	0.298
	Significance level	0.000
Management application	The correlation coefficient	0.592
	Significance level	0.000

Table (3) shows that using management information systems affects the recruitment sub-system of human resources management. The improvement system of human resources management has an effect. Using management information systems affects the maintenance sub-system of human resources management. Using management information systems affects the application sub-system of human resources management.

Table 4: Regression adequacy index

R	Determination coefficient	Durbin-Watson
0.812	0.659	1.967

Table (4) shows that the value of the correlation coefficient between the variables equals 0.812. In addition, the determination coefficient is 0.659. The determination coefficient expresses the predictive power of the performed fitting. Based on this problem, it can be acknowledged that the performed fitting, in this case, has 65% of the power of predicting the dependent variables compared to the independent variable. In addition, Durbin-Watson's test indicates the degree of independence of errors, which is also called regression adequacy. It should be considered that if this statistic is close to the numerical value of 2, it indicates the independence of the errors. The more independent the errors are, the better the regression fit.

Table 5: F test for the significance of the fit

Model		significance level	F statistic	significance level
1	regression	7	102.501	0.000
	Remaining	376		
	Total	383		

The table shows the problem that the performed fitting is at a significant level and whether it is statistically significant or not. According to this problem, the significance level is one of the signs of the significance of the fitting. If the significance level in the numerical value is less than 5%, the fitting is significant, and vice versa. In addition, the F statistic shows the strength of the performed fitting. As observed, this value is equal to the numerical value of 102.50, which indicates the significance of the fitting and the high power of this fitting.

Table 6: Regression effect coefficients

Model		Standardized Coefficients Beta	t-statistic	significance level
1	Width from the origin		1.520	0.130
	management Recruitment	0.759	10.979	0.000
	Management improvement	0.243	3.484	0.001
	Maintenance management	0.313	3.776	0.000
	management Application	0.384	6.109	0.000

Table (6) shows that each of the variables in the model is at what level of relationship with the independent variable, which is the management information system. In addition, the significance level in all variables is less than 5%, and finally, the correlation relationship is evaluated as significant. In addition, the T coefficient shows the importance of the variable in the model. According to this problem, the management

recruitment and management information system, with a coefficient of 0.759, is more related to the management information system than other variables. The written beta coefficient also expresses the number of changes in the observed variables for one unit changes in the independent variable.

Conclusion

The current research investigated the effect of management information systems on the performance of human resources management in the insurance industry. The results showed that the correlation coefficient value is almost equal to 0.69, and the significance level is less than 5%. For this purpose, the positive and significant relationship between the two variables of using management information systems on the human resources management recruitment sub-system is confirmed. According to the results, the value of the correlation coefficient is almost equal to 0.46, and the significance level is less than 5%. For this purpose, the positive and significant relationship between the two variables of using management information systems on the human resource management improvement sub-system is confirmed. According to the results, the correlation coefficient value is approximately equal to 0.31, and the significance level is less than 5%. For this purpose, the positive and significant relationship between the two variables of using management information systems on the human resources management maintenance sub-system is confirmed. According to the results, the value of the correlation coefficient is almost equal to 0.592, and the significance level is less than 5%. For this purpose, the positive and significant relationship between the two variables of using management information systems on the human resources management application sub-system is confirmed.

This study shows that human resource management is one of the crucial things companies are trying to achieve. Therefore, the results of this study are entirely consistent with the results of the present study, which examines information systems and management information systems. In addition, Sazikhani conducted a study titled "Examining the Relationship between the Information System and the Performance of Imam Khomeini (RA) Committee Employees. The results are consistent with those obtained in the present study from the perspective of the relationship between sub-systems and human resources management, which is part of a company's goals. In addition, Minaei (2013) conducted a study titled "Pathology of the Organization's Information System for the Establishment of Human Resources Management in Tehran Municipality." The results obtained are consistent with the results of the present study from the perspective of studying the sub-systems and the relationship of each of these sub-

systems with the management information system and, finally, the optimal management of human resources.

According to the results obtained in this part, it was required to implement the management information system to increase the efficiency of its dependent sub-systems. The results in the insurance industry show that the sub-system of management attraction as an influencing factor in the management information system needs special attention in this company. Therefore, according to this problem, the sub-system of management recruitment is suggested to work more delicately in performing its duties.

To raise the level of management in these businesses and the major impacts it has on the management information system, it is advised that special attention be paid to the sub-system of management improvement.. According to the obtained results, people consider a robust management information system as a guarantee of management maintenance. Therefore, empathy and common language should be important to employees in this management maintenance.

Moreover, studies can investigate the relationship between management information systems and management applications in more detailedly because the stronger the management information system is, the better the management application system will be, and vice versa.

Considering that the study of the effect of Management Information Systems on Human Resources Management in the Insurance Industry measures the strengths and weaknesses of insurance companies from the customer's point of view, based on the results of this evaluation, the following recommendations can be made for continuous improvement of Human Resources Management in the insurance industry. A comprehensive and most important and complete recommendation is that insurance companies with their consensus through the syndicate of insurers or central insurance, develop a single and standard model based on the effect of the Management Information system of insurance companies. It is continuously evaluated and compared and its results are published in order to intensify healthy competition and improve the quality of services of insurance companies. In such a model, in addition to Management Information Systems models can be considered more broadly. How to guide the insurance industry in a way that affects Human Resources Management in the industry.

This study is a good start for this work some limitations of this path such as restrictions on access to the insured of group insurances, the uncertainty of the insurance trustee in legal insurers and failure to register possible financial relationships of insurance Legal transactions with insurers in the insurance industry database have shown that they need to be addressed for better results.

The results of this study on the effect of the age of insurance companies on their Human Resources Management may be due to the fact that the present study can consider the organizational relationships between some large legal insurers and insurance companies, which has a significant effect on the portfolio of some insurance companies.

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