

Human Resources Information Systems and their Impact on Competitive Advantage: An Empirical Study on Cement Companies in the Hashemite Kingdom of Jordan

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Abstract

The study identifies human resources information systems (HRIS) and their impact on the competitive advantage of Jordanian cement companies (Lafarge Cement Company, Arab White Cement Company, Manaseer). To achieve the objectives of the study, a questionnaire was developed for data collection, and then the Statistical Package for Social Sciences (SPSS.16.1) was used to analyze the data of the questionnaire. The study produced a series of results, the most prominent of which are: The level of importance of human resources information systems (the efficiency, integration, and response of human resources information systems) in Jordanian cement companies according to the respondents' perceptions was "medium". Moreover, human resources information systems had an effect on competitive advantage. Human resources information systems accounted for 69.8% of the variation in competitive advantage in Jordanian cement companies. In the light of the study's results, the study produced several recommendations, the most important of which is to design training programs for employees and users of human resources information systems. The study also stressed on the importance of providing and constantly upgrading and maintaining the basic infrastructure for hardware, equipment, and software used in human resources information systems, to minimize the occurrence of potential errors that may disrupt required work.

Key words

Information system, human resources, competitive advantage

DOI: 10.6007/IJARAFMS/v7-i2/2994

URL: <http://dx.doi.org/10.6007/IJARAFMS/v7-i2/2994>

1. Introduction

Human resources management is one of the most important management activities related to the most valuable resources in the management of the company, and the most influential in productivity: the human element. Human resources management is also considered a cornerstone of most companies. It aims to strengthen organizational capabilities and enable companies to attract and qualify the necessary competencies capable of keeping up with current and future challenges. Human resources strongly contribute to achieving the goals and profits of companies. The efficiency and success of companies depends primarily on the efficiency of the human element. In order to be able to control performance and achieve the strategic objectives efficiently and efficiently, human resources management needs a large number of decisions, Turn on accurate and convenient information when needed, easily accessible and easily used. The competition has become the language of the era and the interest of individuals, institutions and countries alike. It is the driving factor and the engine that controls the steps of everyone, and motivates them to work for more benevolence, creation, and creativity, and to achieve some degree of competitive advantage or excellence on their peers and competitors, leading to the highest levels of return or profitability.

1.1. Problem and Questions of the Study

Recently, companies have become increasingly aware of the importance and effectiveness of human resources. They are realizing how important this component is in the success of businesses, both at the

individual level, the company level, and the economic level as a whole. Human resources represent an important corporate resources and one of the most important assets of the company. Therefore, all companies realize that they need to strive to develop the skills and competencies of their human resources to be able to achieve the objectives of the company effectively and efficiently, and stand in the face of external and internal changes and challenges.

Information management has become one of the most important resources for any company, due to the increase in the size of organizations and the complexity of administrative activities and the development of means of decision-making at the present time. Managers at different organizational and functional levels are more interested in accessing accurate and appropriate information in a timely manner, and conducting tasks of planning, control and decision-making efficiently and effectively. However, many companies still struggle in understanding the importance of human resources information system in achieving competitive advantage with its dimensions (cost, quality, flexibility and creativity).

This study seeks to answer the following main question:

What is the impact of human resources information systems on achieving competitive advantage in Jordanian industrial companies?

1.2. Importance of the Study

The subject of the Human Resources Information System (HRIS) has received considerable attention in field research over the last four decades. This demonstrates the awareness of the importance of HRIS and the wide range of its effects and uses for analysis, testing, measurement, and evaluation of the various activities of employees. The important of the study stems from the fact that it:

1. Provides formal procedures that enhance competitive experience through the selection and development of personnel based on human resources information systems;
2. Helps to achieve the optimal performance of human resources management by improving the performance of the personnel working in HRIS management through proper evaluation based on human resources information systems.

1.3. Objectives of the Study

The main objective of the study is to analyze human resources information systems in achieving competitive advantage in Jordanian industrial companies. The sub-objectives of the study are as follows:

1. Provide an integrated theoretical framework for all study variables;
2. Identify the respondents' perceptions of the independent variable "human resources information systems" and each of its dimensions;
3. Identify the respondents' perceptions of the variable "competitive advantage" and each of its dimensions;
4. Understand the nature of the relationship between human resources information systems and achieving competitive advantage in cement companies in the Hashemite Kingdom of Jordan;
5. Provide a set of recommendations based on the results of the study analysis.

1.4. Hypotheses of the Study

Main hypothesis 1: There is no statistically significant impact at the level of ($\alpha \leq 00.05$) for human resource information systems (efficiency, integration, and response of human resources information systems) on competitive advantage (cost and flexibility) on cement companies in the Hashemite Kingdom of Jordan.

First sub-hypothesis: *"There is no significant statistical significance at the level of ($\alpha \leq 00.05$) for human resource information systems (efficiency, integration, and response of human resources information systems) on cost as a dimension of the dependent variable "competitive advantage".*

Second sub-hypothesis: *"There is no significant statistical significance at the level of ($\alpha \leq 00.05$) for human resources information systems (efficiency, integration, and response of human resources information systems) on flexibility as a dimension of the dependent variable "competitive advantage".*

2. Human Resources Information Systems (HRIS)

The Human Resource Information System (HRIS) is a clear reflection of the interest of business organizations in human resources and the development of their use by providing data and facts on personnel, activities, and individual policies to facilitate the production of information and reports that help decision-making (Morocco, 2006). The core function of the Human Resources Information System (HRIS) is to: meet the needs of human resources management of information on all personnel, and to plan, organize, direct, and manage the activities and operations of the department. This system also provides management with comprehensive and accurate information of human resources management, including information reports with analytical indicators of the personnel's performance. Kassim (2012) states that HRIS has been used to support and process transactions and enhance the role of management oversight, and therefore the information provided by the HR system is important for the management of human resources, on the one hand, and for the management of the company, on the other hand, because the information is relevant to the needs of managements and the requirements for improving the efficiency and effectiveness of human capital, from knowledge makers and employees of the company (Yassin, 2006).

2.1. Concept of Human Resources Information System

2.1.1. Definition of Human Resources Information System

Studies on the subject indicate that human resources information systems represent a system that provides the information managers need to make decisions about the effective use of human resources, which will lead to higher performance and achievement of organizational goals. Therefore, the definitions proposed by researchers for human resources information systems have varied. Abbas define human resources information systems as: A system that includes information on human resources in the company that can be utilized to make various decisions on human resources, such as training, development, motivation, promotion etc. (Abbas, 2006). Mondy and Noe (2005) see human resources information systems as: any systematic approach timely used to access relevant information that can help make decisions on human resources. Johan & Jackson (2007) define Information systems as an integrated system designed to provide information used in making human resource decision.

We notice from previous concepts of researchers that HRIS helps decision-makers make the right decision about human resources in terms of training, motivation, promotion, and recruitment, etc. It is also an integrated system specifically designed to help decision making, since it contains all important human resources information for decision-making. Human resources information systems also play a key role in their impact on decision-making. They assist managers in early detection of deviations in human resources operations and predict problems which can take place in the future. Moreover, they assist senior management in developing strategic plans and programs in support of human resource strategies, and the possibility of providing new services in the activities of these resources. The more accurate the information, the closer the decision is to reality, and if the information is inaccurate or incomplete, the resulting decisions are expected or may not be useful (Beulen, 2009).

2.2. The Concept of Competitive Advantage

There is no agreed definition of competitive advantage, because it varies depending on the nature of the sector under study. However, competitive advantage can generally be defined as an advantage or an element of superiority for the organization that can be achieved with the implementation of a specific competition strategy (Saleh, 2009).

The competitive advantage is the ability of the company to provide a product or service that is difficult to imitate by competitors, thus attracting the largest number of clients, increasing the market share of the company compared to competitors, and improving the attitudes of employees and external mental image towards the company (Abdul Hamid, 2012).

It is also the ability to produce goods and services at the right quality and at the right price in a timely manner. This means meeting the needs of clients more efficiently than other companies by finding new more effective ways than those used by competitors (Abu Bakr, 2006).

3. Literature review

Al-Sakka (2013), "*The Impact of the Human Resources Information System on the Performance of the Public Employees' Bureau in the Gaza Strip*". The study describes the reality of using the electronic human resources information system in the Public Employees Bureau in the Gaza Strip, and the impact of this use on the performance of the Bureau in four aspects: efficiency, efficiency, quality of performance, and time required for performance from the standpoint of the Bureau's employees who use this system. To achieve the objective of the study, the researcher followed an analytical descriptive method and collected the data from its primary sources by means of two tools: a questionnaire distributed to eighty-five (85) male and female employees of the bureau, who use the electronic system. The second tool took form of personal interviews with some departments and support units managers in the bureau. The study concluded that the electronic human resources information system is already used in the bureau, and that its use has improved the performance of the bureau by its increasing the effectiveness and efficiency of the quality and performance of the bureau's functions: recruitment, training, career management processes, and employees' performance evaluation. The electronic system also contributed in reducing the time needed for the bureau to perform all these function. The most improved aspect of performance was the time aspect, followed by the efficiency and quality of performance, and finally the effectiveness of the performance. Finally, the study recommended the completion of the computerization of the human resources information system in the bureau to include all the internal and external affairs of the bureau. It also recommended linking the bureau's database with its counterparts in the Ministry of the Interior, Finance, Health, and the Council of Ministers in a broader and a more comprehensive manner than it is now.

Suryah and Melod (2010), "*The Role of Human Resources Information System in Assessing Human Rresource Performance in the Enterprise*". The study clarifies the role of human resources information systems in evaluating the performance of human resources. The study concluded that human resources information systems in an enterprise always need to be developed in order to achieve the tasks that are supposed to be performed, and render evaluation of human resources performance more effective. The researchers concluded their study with a number of recommendations, including:

- 1) Provide workers in human resources management with training courses to enable them to cope and keep pace with technological changes and take advantage of them to perform their duties;
- 2) Create a website for the enterprise to help disseminate human resources information, like recruitment advertisements, employment test results announcements, and disseminating information on the status and importance of the enterprise, all in order to attract competencies.

(Abu Abila, 2010), "*The Impact of Human Resource Information Systems on the Effectiveness of Human Resource Management Performance in the Jordanian Public Security Department*". The study demonstrates the impact of human resources information systems on the effectiveness of human resources management performance in the Jordanian public security department. To achieve the objective of the study, a questionnaire was developed in the departments of officers' affairs and personnel affairs and their departments. A total of 450 questionnaires were distributed, and appropriate statistical methods were used to answer the study's questions and tests. The study produced a number of results, the most important of which are:

1. The perceptions of the respondents regarding the application of human resources information systems were high, as well as their perceptions of the effectiveness of human resources performance.
2. The existence of a significant statistical affect on the application of human resource information systems in human resource management (personnel and officers' affairs departments) with their dimensions that include: the use of the system, training on the system, providing technical support, supporting senior management, and providing infrastructure on the effective performance of human resources management, work analysis and design, selection and recruitment, performance evaluation, and training. In order to achieve this, the study presented a number of recommendations, including: continue work on improving and developing the MIS in the officers' affairs department and personnel affairs department in the Jordanian public security department, use modern equipment and advanced software, prepare training programs for workers in Human Resources Management Information System on all levels to enhance their knowledge and increase their skills.

(Tartara, 2006), "Impact of the Use of Computerized Information Systems on Human Resource Management Functions in Public Institutions in Jordan". The study investigates the impact of using computerized management information systems (MIS) in human resource management functions (staff attraction, recruitment, training, and performance evaluation) in public institutions in Jordan. The results of the study showed a statistically significant effect on the use of computerized management information systems in human resource management functions in public institutions in Jordan, and a statistically significant impact on the efficiency of the personnel working in the computerized management information system department in human resource management functions (staff attraction, recruitment, training, and performance evaluation) in public institutions in Jordan. The results also showed the existence of a statistically significant affect on the quality of the devices used in the computerized management information systems in the functions of human resources management (staff attraction, recruitment, training, and performance evaluation) in the public institutions in Jordan, and finally the results showed no statistically significant differences in the impact of computerized management information systems on human resource management functions in public institutions in Jordan due to demographic and functional characteristics (gender, age, qualifications, and experience).

4. Methodology of research

The study adopted the methodology of descriptive, analytical, and field research. In the field of descriptive research, an office survey was conducted to examine the theoretical and field studies and researches, crystallize the foundations and bases of the theoretical framework, and stand at the most important previous studies, which comprise a vital resource for the study. In the field of analytical field research, a comprehensive survey was conducted, and all collected data were analyzed by answering the questionnaires and using the appropriate statistical methods. The study was based on the developed questionnaire.

4.1. Study Population and Sample

The study population included all the directors, assistants, heads of departments, and employees of the Jordanian cement companies (Manaseer, Al Arabiya, Lafarge), which amounted to (480) members. A total of 253 questionnaires were distributed and (193) questionnaires were retrieved.

4.2. Study Sample

A simple random sample of (253) employees of the Jordanian Customs Department (53%) was drawn from the study population. The questionnaire was distributed to the entire sample with 193 retrieved questionnaires. Nine questionnaires were excluded because they were not valid for statistical analysis. The number of valid questionnaires was 184, which amounts to 9.5% of the total study population and (63.5%) of the selected study sample. Table 1 shows the characteristics of the study sample.

Table 1. The characteristics of the study sample

Variables	Variables categories	Quantity	Percentage
Sex	Male	126	69%
	Female	31	31%
Academic qualifications	Community college and below	59	30%
	Bachelor	98	55%
	Postgraduate studies	27	15%
Age	30 years and below	55	33%
	31 – 40 years	86	44%
	41 – 50 years	43	23%
Experience	Less than 5 years	38	21%
	5 – 10 years	57	33%
	More than 10 years	89	46%
Job title	Director – Assistant director	19	11%
	Department / division manager	44	24%
	Administrative officer	50	65%

4.3. Study Tool

A questionnaire was developed to measure human resource information systems and their impact on competitive advantage as an empirical study on the cement companies in the Hashemite Kingdom of Jordan. This questionnaire consisted of 3 parts:

1. The demographic information required from the respondent (sex, age, experience, and job title);
2. Items to identify the dimensions of human resources information systems. The development of this part was based on a set of questionnaires designed by (Qariuti *et al.*, 2009, Abd El-Fattah, 2009; Wadi, 2007).
3. Items to determine the dimensions of (competitive advantage). The establishment of this part's items was guided by the studies of (Okasha, 2009; Znkna, 2010, Muraba', 2004). The answers were given numbers from (1-5), so that the number (1) indicates (does not apply at all), and (2) (Rarely applicable), 3 (sometimes applicable), 4 (often applicable) and 5 (always applicable).

Tool Validity: The questionnaire was presented to a number of university faculty members to ascertain the validity of the questionnaires. Their notes were taken, some items were reworded, and the required modifications were made to balance between the contents of the questionnaire and the items.

Statistical processing: To answer the questions of the study and test the validity of its hypotheses, descriptive and analytical statistical methods were used, namely the Statistical Package for the Social Sciences (SPSS.16). The following statistical methods were also used:

- Descriptive statistic measures to describe the characteristics of the sample of the study, based on frequency and percentages.
- The Variance Inflation Factory (VIF) and Tolerance test to ensure the absence of multicollinearity between the independent variables.
- Skewness test to ensure that the data follow normal distributions.
- Multiple regression analysis was used to test the validity of the study models and the effect of the independent variable and its dimensions on the dependent variable and its dimensions.
- Stepwise Multiple Regression Analysis to test the entry of independent variables in the dependent variable prediction equation.

5. Results

It was ascertained that there was no multicollinearity between independent variables using (VIF) and Tolerance test for each independent variable, taking into account that VIF does not exceed (10), and the Tolerance test value is greater than 0.05. It was also confirmed that the data has normal by calculating the Skewness coefficient, taking into account that the data follow normal distribution if the value of the Skewness coefficient is less than (1).

Table 2, which contains the independent variables and the VIF and Tolerance values for each variable, indicates that the value of VIF for all variables was less than 10, ranging from (5.102) to (2.789) The Tolerance value for all variables was greater than (0.05) and ranged from (0.287) to (0.395). Therefore, it can be said that there is no real problem with the existence of a multicollinearity between the independent variables.

Table 2. VIF, Skewness coefficient, and Tolerance value tests

Dimensions of the independent variable	VIF (Less than 10)	Tolerance (More than 5%)	Skewness (Less than 1)
Efficiency of the human resources information systems	3.119	0.395	0.211
Integration of the human resources information systems	3.491	0.374	0.209
Response of the human resources information systems	5.102	0.287	0.129

Table 3 shows the validity of the test hypothesis model and the high value of calculated (F) from its original value at the level of significance ($\alpha \leq 00.05$). The dimensions of organizational justice explain (52.1%) of the variance in the (Knowledge of functional requirements) dimension. They also (35.1%) of the variance in the (the amount of work done) dimensions. all of these inputs underline the role and impact of

organizational justice dimensions in interpreting the dimensions of organizational performance. Accordingly, we can test the hypotheses of the study.

Table 3. Results of analysis of variance to verify the validity of the model, in order to test the hypotheses of the study

Dependent variable	Source	R ² (Coefficient of determination)	Sum of squares	Average of squares	Calculated F value	F level of significance
Cost	Slope	0.521	249.048	49.810	150.603*	0.000
	Error		134.278	0.331		
Flexibility	Slope	0.351	163.769	32.754	60.568*	0.000
	Error		219.557	0.541		

* Statistical significance at the level of significance ($\alpha \leq 00.05$)

Table 4. Results of analysis of variance to verify the validity of the model, in order to test the hypotheses of the study

Dependent variable	R ² (Coefficient of determination)	Tolerance levels	Calculated F value	F level of significance
Cost	0.536	96,3	56.086	0.000
Flexibility	0.583	96,3	44.754	0.000

* Statistical significance at ($\alpha \leq 00.05$).

Table 4 shows the validity of the study hypotheses model via the higher value of calculated (F) compared to its value at the level of significance ($\alpha \leq 00.05$) and tolerance levels (96.3). All the dimensions of human resources information systems explained about (58.6%) of the overall variance in the (cost) dimension. all of this confirms the role and impact of human resources information systems on explaining the dimensions of competitive advantage, and therefore we can test the hypotheses of the study as follows:

1. First main hypothesis:

There is no statistically significant impact at the level of ($\alpha \leq 00.05$) for human resource information systems (efficiency, integration, and response of human resources information systems) on competitive advantage (cost and flexibility) on cement companies in the Hashemite Kingdom of Jordan. To test the hypothesis, multiple regression analysis was used and table (5) shows the results of the analysis:

Table 5 the results of multiple regression analysis used to test significant statistical significance at the level of ($\alpha \leq 00.05$) of human resources information systems (efficiency, integration, and response of human resources information systems) on competitive advantage (cost and flexibility) on cement companies in the Hashemite Kingdom of Jordan.

Table 5. The results of multiple regression analysis

Dependent variable	R ² (Coefficient of determination)	B	Standard error	Beta	Calculated F value	F level of significance
Regression constant	0.698	.332	.208		1.592	.115
Efficiency of the human resources information systems		.251	.114	.259	2.208	.030
Integration of the human resources information systems		.200	.097	.234	2.068	.041
Response of the human resources information systems		.409	..103	.400	3.982	.000

The statistical results in Table 5 and the t-test values show that the sub-dimensions (efficiency, integration, and response of human resources information systems) have had an impact on competitive advantage, evidenced by the Beta coefficients of these dimensions as displayed in the table, and by increase in calculated (T) values compared to its table value at the level of significance ($\alpha \leq 00.05$). The calculated values of (t) amounted to (2.208, 2.068 and 3.892) respectively. These values were significant at

the level of ($\alpha \leq 00.05$). Therefore, we reject the null hypothesis and accept the alternative hypothesis, which proposes that there is significant statistical affect at the level of ($\alpha \leq 00.05$) of human resources information systems (efficiency, integration, and response of human resources information systems, on competitive advantage (cost and flexibility). Stepwise Multiple Regression analysis was performed to determine the significance of each independent dimension in the contribution to the mathematical model.

Table 6. Results of Stepwise Multiple Regression Analysis which predict the competitive advantage through Human Resources Information Systems dimensions

Entry sequence of independent variable in the prediction equation	R ² (Coefficient of determination)	B	Calculated F value	F level of significance
Constant		.332	1.592	.115
Response of the human resources information systems	0.057	.251	2.208	.030
Efficiency of the human resources information systems	0.627	.409	3.982	.000
Integration of the human resources information systems	0.014	.200	2.068	.041

* Statistical significance at the level of ($\alpha \leq 00.05$).

Table 6 shows the entry sequence of the independent dimensions in the regression equation. The response of human resources information systems dimension is ranked first and explains (62.7%) of the total variation in competitive advantage. The efficiency dimension comes second, as the integration and efficiency dimensions explain together (68.4%) of the total variance in competitive advantage, i.e. the efficiency variable alone explains (5.7%) of the total variance. In the third place we have the integration dimension which explains with the other two variables (69.8%) of the variance in the dependent variable (competitive advantage). The integration dimension alone explains (1.4%) of the variance in the dependent variable (competitive advantage).

First sub-hypothesis: "There is no significant statistical significance at the level of ($\alpha \leq 00.05$) for human resource information systems (efficiency, integration, and response of human resources information systems) on cost as a dimension of the dependent variable "competitive advantage". To test the hypothesis, multiple regression analysis was used. Table 7 demonstrates the results of the analysis:

Table 7. Results of multiple regression analysis used to test the impact of human resources information systems (efficiency, integration, and response of human resources information systems) on cost.

Independent variable	R ² (Coefficient of determination)	B	Standard error	Beta	Calculated F value	F level of significance
Regression constant	0.536	.411	.277		1.482	.142
Efficiency of the human resources information systems		.311	.151	.298	2.058	0.042
Integration of the human resources information systems		.102	.129	.111	.797	.428
Response of the human resources information systems		.410	.136	.372	3.004	.003

* Statistical significance at the level of ($\alpha \leq 00.05$)

The statistical results in Table 7 and the t-test values show that the dimensions (efficiency and response of human resources information systems) have had an impact on cost, evidenced by the Beta coefficients of these two dimensions as displayed in the table, and by increase in calculated (T) values compared to its table value at the level of significance ($\alpha \leq 00.05$). The calculated values of (t) amounted to (2.058, 3.004 and 3.892) respectively. These values were significant at the level of ($\alpha \leq 00.05$). The dimension (*Integration of human resources information systems*) have had no impact on cost, evidenced by the Beta coefficients of this dimension, and by decrease in calculated (T) values compared to its table value at the level of significance ($\alpha \leq 00.05$). The calculated values of (t) amounted to (0.797). Therefore, we reject the null hypothesis and accept the alternative hypothesis, which proposes that there is significant

statistical affect at the level of ($\alpha \leq 00.05$) of human resources information systems (efficiency, integration, and response of human resources information systems, on cost

Stepwise Multiple Regression analysis was performed to determine the significance of each independent dimension in the contribution to the mathematical model.

Table 8. Results of Stepwise Multiple Regression Analysis used to predict cost through Human Resource Information Systems dimensions

Entry sequence of independent variable in the prediction equation.	R ² (Coefficient of determination)	B	Calculated F value	F level of significance
Constant		.332	1.592	.115
Response of the human resources information systems	0.489	.409	3.982	.000
Efficiency of the human resources information systems	0.047	.251	2.208	.030

* Statistical significance at the level of ($\alpha \leq 00.05$)

Table 8 shows the entry sequence of the independent dimensions in the regression equation. The response dimension is ranked first and explains alone 48.9% of the total variance in the cost. Second, we have the efficiency dimension, as the response and the efficiency dimensions together explains (53.6%) of the total variance in the cost, i.e. the efficiency dimension alone explains (4.7%) of variance in the dependent variable (cost).

Second sub-hypothesis: "There is no significant statistical significance at the level of ($\alpha \leq 00.05$) for human resources information systems (efficiency, integration, and response of human resources information systems) on flexibility as a dimension of the dependent variable "competitive advantage". To test the hypothesis, multiple regression analysis was used. Table 9 demonstrates the results of the analysis:

Table 9. Results of multiple regression analysis used to test the impact of human resources information systems (efficiency, integration, and response of human resources information systems) on flexibility

Independent variable	R ² (Coefficient of determination)	B	Standard error	Beta	Calculated F value	F level of significance
Regression constant	0.583	.176	.283		.621	.536
Efficiency of the human resources information systems		.175	.155	.155	1.128	.262
Integration of the human resources information systems		.295	.132	.298	2.242	.027
Response of the human resources information systems		.429	.140	.362	3.076	.003

* Statistical significance at the level of ($\alpha \leq 00.05$)

The statistical results in Table 9 and the t-test values show that the two dimensions (integration and response of human resources information systems) have had an impact on flexibility, evidenced by the Beta coefficients of these two dimensions as displayed in the table, and by increase in calculated (T) values compared to its table value at the level of significance ($\alpha \leq 00.05$). The calculated values of (t) amounted to (2.242, 3.076) respectively. These values were significant at the level of ($\alpha \leq 00.05$). The dimension (*efficiency of human resources information systems*) have had no impact on cost, evidenced by the Beta coefficients of this dimension, and by decrease in calculated (T) values compared to its table value at the level of significance ($\alpha \leq 00.05$). The calculated values of (t) amounted to (1.128). Therefore, we reject the null hypothesis and accept the alternative hypothesis, which proposes that there is significant statistical affect at the level of ($\alpha \leq 00.05$) of human resources information systems (efficiency, integration, and response of human resources information systems) on flexibility.

Stepwise Multiple Regression analysis was performed to determine the significance of each independent dimension in the contribution to the mathematical model.

Table 10. Results of Stepwise Multiple Regression Analysis used to predict flexibility through Human Resource Information Systems dimensions

Entry sequence of independent variable in the prediction equation.	R ² (Coefficient of determination)	B	Calculated F value	F level of significance
Constant		.254	.923	.359
Response of the human resources information systems	0.521	.495	3.893	.000
Integration of the human resources information systems	0.057	.382	3.597	.001

* Statistical significance at the level of ($\alpha \leq 00.05$)

Table 10 shows the entry sequence of the independent dimensions in the regression equation. The response dimension is ranked first and explains alone 52.1% of the total variance in the cost. Second, we have the integration dimension, as the response and the integration dimensions together explains (57.8%) of the total variance in the flexibility, i.e. the integration dimension alone explains (4.7%) of variance in the dependent variable (flexibility).

6. Results and Discussions

First: the results of the study showed that the arithmetic means of the study sample's perceptions of the level of availability of HRIS dimensions at the macro level were "average" with an average of 3.48 and a standard deviation of 0.77. As for the ranking of HRIS axes, the integration HRIS was ranked first and obtained a "high" arithmetic mean of (3.52). The efficiency of HRIS came in second place with a "high" arithmetic mean of (3.50). And finally, the response of HRIS achieved the lowest level with an "average" score of 3.41. This result can be explained by the fact that human resource information systems may not help determine the responsibilities and roles of the employees in the company, which will certainly help to keep employees from overloading.

Second: the results showed that the averages of the respondents' perceptions in the Jordanian cement companies demonstrated that the competitive advantage obtained an arithmetic mean of 3.31 and a standard deviation of 0.77. Cost came first with an average mean of (3.29) and flexibility ranked second with an average mean of 3.26.

7. Recommendations

1. Design websites for Jordanian cement companies. The websites should be easy to use and uncomplicated, so that individuals who want to work in these companies can apply electronically. This technology can provide the company with the opportunity to attract a largest number of highly qualified candidates;

2. Design training programs for employees and users of human resources information systems. The programs should provide training on how to use and handle the system. The training should be help in the right time and place, and should contain various types of text files, video, and presentations, as a guide to use of these systems;

3. Hold lectures and distribute awareness leaflets to workers in Jordanian cement companies on the importance of the existence and adoption of such systems;

4. Provide the basic infrastructure of hardware, equipment, and software used in human resources information systems. These software and equipment should be continuously updated and maintained to reduce potential errors that may lead to disruption of work.

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