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Accounting information systems and their impact on human resources engineering (an analytical study of the opinions of a sample of workers in University institution)

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Abstract :

Accounting information systems are among the oldest information systems in institutions, because these systems are of great importance in identifying the economic and financial reality of the institution, and identifying the relationship of the institution with its surrounding environment. The study aims to identify the impact of accounting information systems in the university institution on human engineering. The descriptive analytical method was used by collecting data through a distributed questionnaire. After the statistical analysis of the questionnaire, the statistical results showed that there are correlations and influences between the research variables.

Keywords: accounting information systems, human engineering, university institution.

Introduction:

Accounting information systems are considered part of the overall information system, and these systems play an effective and important role represented in providing the various levels of decision-making with ready, correct and accurate information in a timely manner and help them in making various administrative decisions. For organizations, and universities are nothing but a new formula for these organizations that aims to transfer higher education activities to global educational and scientific activities, making it necessary to install new systems, flexible legislation, and a university environment that differs from the environment of traditional education.

1 - Accounting information systems:

In recent years, companies have begun to change faster and faster in front of globalization technology, part of this change is the accounting information system, that is, a change based on data for information, to improve the international accounting information system or to make it more



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successful business must collect high-quality data that will lead to quality High information about the project, this information will be a means of control planning and making the right decision¹.

Accounting information systems are the means by which institutions present their financial status, performance, and monetary and non-monetary expenditures, and the technical means that are used to communicate accounting information is the financial data, which must be appropriate and prepared in a good way in order to ensure sufficient credibility and can be relied upon in making appropriate decisions².

1.1 the concept of accounting information systems:

(Moscov, and Sikman, 2002) defined accounting information systems, "which is one of the components of an administrative organization concerned with collecting, classifying, processing, analyzing, and communicating financial information appropriate for decision-making to external parties and management of the enterprise. The accounting information system is one of the basic components of the management information system, and the difference between them is limited to the fact that the first It is concerned with accounting data and information, while the second is concerned with all data and information that affect the activity of the establishment³.

Hafnawi (2011) defines accounting information systems as "one of the computerized information systems in business establishments, and this system aims to store accounting information that is reached after processing the accounting data obtained from the internal and external environment."⁴

1.2 the importance of accounting information systems:

Information systems have an important role in assisting individuals and institutions, as they provided great and continuous support to society along the previous and subsequent periods of time, in order to achieve their goals, as they provide technologies, tools, and means of assistance in this field. Therefore, they aim to achieve the following:⁵

1. The possibility of using it in the business strategy to improve the competitive position of the organization at the level of manufacturing, economies, distribution and marketing activity.
2. Securing the needs of senior management, especially the information that helps them in drawing up their policies and carrying out their tasks and responsibilities.
3. Accounting information systems are an important resource for any organization to form the basic dimensions of the administrative process through computer systems, information technology and their applications.
4. - Accounting information systems are important in the generation and transfer of knowledge, due to their response to user needs, ease of access to the structure and contents of their contents, the integration of their systems, their susceptibility and their ability to develop and expand.

1.3 Characteristics of accounting information systems :

A- Appropriateness: The suitability of accounting information is one of the most important characteristics that must be available in this information. It means the extent to which accounting information matches the needs of users. It also represents the ability of accounting information to influence administrative decisions, and it has the ability to help users of accounting information to make more predictions. Accuracy about future events, i.e. the existence of a logical link between the information and the decision, and the relevance of the accounting information has an important advantage whether this information is for the internal use of the organization or for external use,



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but the most important is the internal use because of the direct reliance on it in addressing problems and making decisions related to a specific problem in itself.⁶

B- Reliability : It means the ability to rely on accounting information that is characterized by a sufficient and acceptable level of confidence when making a decision. In order for the credibility feature to be available, the accounting information must be objective.⁷

Reliability also means that accounting information is free from fundamental errors and bias, and therefore the user of accounting information becomes confident and reliable. Credibility does not mean absolute accuracy because there are degrees of confidence. Accounting information may be based on personal judgment and includes estimates that are not accurate. However, it must be available. The minimum level of validity of accounting information and the truth of its representation in order to be reliable, and the main objective is to provide accounting information that users trust.⁸

C - The ability to understand and absorb : It is known that it is not possible to benefit from accounting information if it is incomprehensible and not comprehensible by its users, and the ability to understand information depends on the nature of the data included in the financial statements and how it is presented on the one hand, and on the capabilities of those who use it. And their level of culture on the other hand, and thus those who set accounting standards, as well as those who prepare financial statements, must be aware of the capabilities and capabilities of those who use those data and the limits of these capabilities in order to achieve communication that ensures the delivery of the information contained in those data in a clear and precise manner.⁹

D- Stability (consistency): It is the continuation of applying the same principles, methods and methods adopted in measuring and communicating accounting information from one period to another, and if there is a need for any change, this change must be disclosed in order for it to be taken into consideration by the user. Comparison of accounting information requires similar information so that it is based on consistent accounting foundations and methods for the years of comparison, and thus the institution must adhere to the consistency policy, but this does not prevent changing from one accounting principle to another acceptable, or from one method to another, but on the condition that there is a convincing necessity for change and that disclosure is made for this change in the financial statements.¹⁰

2 – Human Resources Engineering :

Human engineering has been defined as a field of knowledge that is concerned with the relationship of working individuals with the work environment and what it includes of equipment, tools, furniture and materials with the aim of harnessing them to meet their abilities and skills and choosing the best workers to use to perform the tasks required of them through the appropriate design of the work environment taking into account the physical capabilities of the individual the worker¹¹ . It is also defined as consisting of people, devices, equipment, and procedures that are used to collect, process, and store data and information in order to obtain comprehensive pictures of the organization's activities.¹²

2.1 the importance of human Resources engineering:

The importance of human engineering revolves around several aspects, as follows:



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1- Find ways to work that are compatible with the human mind in order to reduce the burden and intellectual and muscular stress by designing a work environment for workers that is compatible with his work and reduces exhaustion and fatigue.

2- Achieving compatibility with work designs and its location as an important part of preserving minds and protecting bodies and souls from the variables of the work design process.¹³

3- Fulfilling safety requirements: the comfort and safety of human resources during the completion of various works in order to achieve the best performance of all material resources and human energies.

4- Evaluation of environmental variables: It includes the study of physical working conditions such as: light, sound, temperature, humidity and industrial safety in order to improve them and then increase their efficiency.

5 - Evaluating the performance of the human resource: human engineering specialists are concerned with the human element within the system and focus on many related variables, such as age, gender, size, competence, training, habits, experiences,...etc.¹⁴

2.2 Human Resources Engineering Elements:

1- Workstation design: The workstation constitutes the limited space in which equipment, various means of production, and necessary work tools are available that are used by the working individual or a group of working individuals to perform production or service operations. And data related to human body measurements, standards and guides for work, and takes into account the position of the worker's body during the completion of the work, whether by taking a sitting or standing position, whether the work is easy or difficult.¹⁵

2- Controlling and preventing danger: The role of the human engineering specialist is to develop ways to maintain the safety of workers and the workflow. on the workers.¹⁶

3- Education and Training: Training means those efforts aimed at providing workers with the information and knowledge they need in the scope of their work. Education and training helps workers apply administrative concepts effectively and acquire skills that enable them to contribute to improving quality, reducing errors and performing the work assigned to them correctly from the first time.¹⁷

4- Continuous evaluation: Evaluation is an important element for the success of the human engineering program, as this stage represents continuous improvement in reducing injuries and diseases, tracking the effectiveness of applied or specific human engineering solutions, identifying potential new risks or areas that need more attention, and methods that can be used to reduce risks from the work environment.¹⁸

3- The relationship between accounting information systems and human Resources engineering:

Human engineering has come up with rules for human resources to preserve the energies and capabilities to rearrange workers according to international laws and specifications, and to provide an organizational climate within an electronic framework stemming from the accounting information system that will classify, analyze, process and store that information related to those capabilities, skills and expertise necessary to develop the work of organizations.¹⁹

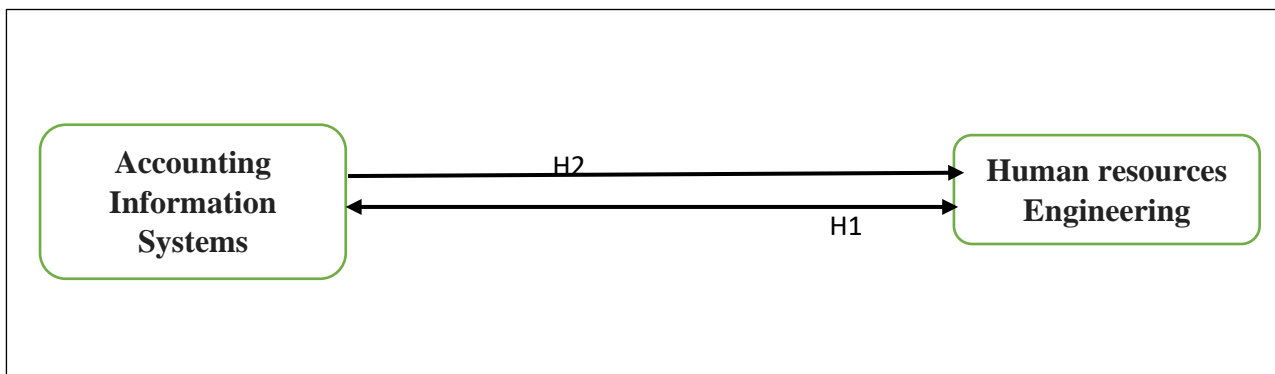


Considering that the human resource is the real capital of the organization and the most important component of the accounting information systems because it is responsible for controlling, managing and operating the other components in it, and the importance of human resources in the organization stems from being the most important element of the production process, where good competence must be available that is capable of outstanding performance, and human resource engineering is An indication that intellectual capital is the source of knowledge, information, and experience. We find that knowledge, information and experience are information technology and its systems .²⁰

4 - Materials and Methods

Figure (1) below shows the hypothesis diagram of the research, which refers to the total of the four hypotheses that explain the relationship and effect between the research variables.

Figure (1) Hypothesis Diagram of the Research



H1–There is statistically significant correlation at $\alpha = 0.05$ between Accounting Information Systems and Human Resources Engineering .

H2- There is statistically significant effect at $\alpha = 0.05$ to Accounting Information Systems in Human Resources Engineering .

5- Results

A – Study Population and Sample

The research tried by studying the nature of the relationships between the variables to identify the extent of the correlation and effect between the research variables, and the research targeted a sample consisting of (20) workers in in University institution, as the questionnaire was distributed to the sample members in order to know the level of their opinions and ideas about the variables the research, and the answers were collected from the sample and analyzed statistically through the statistical program SPSS.

B- Reliability and Validity of the Survey Instrument

The research tool includes (45 items) that depends on two variables, which are Accounting Information Systems as an independent variable and includes four dimensions which are (Convenience , reliability , The ability to understand and absorb , fixability) , as human resources



engineering, it is a dependent variable and includes four dimensions, which are (work site design, risk control and prevention, education and training, continuous evaluation) .

C- Hypothesis testing

H₁–There is statistically significant correlation at $\alpha = 0.05$ between Accounting Information Systems and Human Resources Engineering .

Table (1) corellation between Accounting Information Systems and Human Resources Engineering

		Accounting Information Systems	Human resource engineering
Accounting Information Systems	Pearson Correlation	1	.491*
	Sig. (2-tailed)		.028
	Sum of Squares and Cross-products	3.083	3.432
	Covariance	.162	.181
	N	20	20
Human resource engineering	Pearson Correlation	.491*	1
	Sig. (2-tailed)	.028	
	Sum of Squares and Cross-products	3.432	15.854
	Covariance	.181	.834
	N	20	20

*. Correlation is significant at the 0.05 level (2-tailed).

It is evident from the results in Table (1) above that there is a positive significant correlation between Accounting Information Systems and Human Resources Engineering, which was valued at (.491), in addition to that was the value of the sig. less than 0.05, which means that the first hypothesis is accepted, which states that there is a statistically significant correlation at $\alpha = 0.05$ between Accounting Information Systems and Human Resources Engineering .

H₂- There is statistically significant effect at $\alpha = 0.05$ to Accounting Information Systems in Human Resources Engineering .

Table (2) ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.821	1	3.821	5.715	.028 ^b
	Residual	12.033	18	.669		
	Total	15.854	19			



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- a. Dependent Variable: Human_resource_engineering
- b. Predictors: (Constant), Accounting_Information_Systems

It is clear from the results presented in Table (2) that there is a statistically significant impact of Accounting Information Systems in Human Resources Engineering ., as the value of sig. was (0.028) which less than (0.05) and this indicates the acceptance of the second hypothesis, which refers to there is statistically significant effect at $\alpha = 0.05$ to Accounting Information Systems in Human Resources Engineering .

Table (3) Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.491 a	.241	.199	.818	.241	5.715	1	18	.028

- a. Predictors: (Constant), Accounting_Information_Systems

Finally, the results presented in Table (3) indicate the total correlation value of the model by considering that Accounting Information Systems as independent variable have a correlation with the dependent variable Human Resources Engineering, as the correlation value was positive by (0.491) and at a significant level of (0.028)) Which is less than (0.05), which supports the correlation between the research variables, in addition, the value of R. Square indicates the amount of variance that occurs in the value of the independent variable will affect the interpretation of the variance in the dependent variable with a value of (0.241).

6- Conclusions and recommendations

A - Conclusions

1- Human engineering, with its wide applications, represents a field for achieving harmonization between working individuals according to the characteristics of their physical, muscular and intellectual characteristics, and their work environment, because it is considered an entry point for designing work systems.

2- Accounting information systems have contributed to a strategic shift in the life of business organizations, as they paint a picture of creativity as an effective tool in re-maintaining programming and business structure through human engineering applications.

3- Accounting information systems are of great importance in the researched organization, because they maintain the organization's excellence and continuity through the correct procedures followed by implementing human engineering elements on its human capital properly.



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4 - According to the statistical indicators, the level of interest of the management of the sample under study in the level of raising the efficiency of its workers in the field of accounting information systems through training courses was very weak.

5. The statistical results in the environment of the researched sample showed the existence of a statistically significant relationship between accounting information systems and human engineering, and this is evidence of a harmony between the devices used in the work environment and between the physical specifications and mental capabilities of individuals.

C - Recommendations

In light of the aforementioned conclusions, and the aforementioned theoretical and practical frameworks for the subject of accounting information systems and their impact on human engineering, and what the conclusions showed (theoretical and practical), we review the following a set of recommendations submitted to the study sample organization as well as some general recommendations:

1- Due to the widespread use of modern devices and computer technologies in the work environment of the research sample, this requires the establishment of training programs for human engineering given to workers, which increases their knowledge in this field.

2- Providing material variables (chairs, tables) that are compatible with the nature of the work of individuals, and also requires securing the physical conditions represented in temperature and lighting.

3- The need to use the job description guide and keep updating it using modern technologies according to work design programs and task distribution based on the skills and capabilities of the incumbents of those tasks.

4- Interest in managing the training of individuals in the field of accounting information systems, directing them and informing them of the rules and programs of human engineering to benefit from them by distributing work tasks in the correct manner.

5- Redesigning human resources according to the rules of human engineering set by the international specifications for job holders in a way that is suitable for placing the right person in the right place.

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