

# The Role of Computer Based Accounting Information System in Supporting Top-Management Decisions

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## **ABSTRACT**

*The aim of this study is to identify the role of computerized accounting information systems in enhancing the efficiency of administrative decision-making in oil service companies in Iraq. To achieve the research objectives, the researcher followed the descriptive approach. The effects of the look at confirmed that there's a position for the automatic accounting records systems in improving the efficiency of administrative selections in oil service companies in Iraq at an excessive stage and that there is a position of automated accounting statistics structures in enhancing the performance of strategic, tactical and operational choices in oil service companies in Iraq. The researcher encouraged that greater interest ought to be paid by the administrations inside the oil service companies to the development of the work processes according with the computerized accounting records systems to be had and used, and the need for the sanatorium management to the outcomes of the have a look at confirmed that there may be a role for the automated accounting statistics systems in improving the efficiency of administrative decisions in oil service companies in Iraq at a high stage and that there is a position of automated accounting information structures in improving the efficiency of strategic, tactical and operational choices in oil service companies in Iraq. There had been no differences inside the responses of the pattern participants due to the Demographic variables the researcher encouraged that greater attention have to be paid via the administrations in the college hospitals to the development of the work techniques according with the automatic accounting statistics structures available and used, and the want for the health facility administration to preserve non-stop education guides for all personnel in monetary departments at the structures with a purpose to hold abreast of the developments within the paintings, the want to replace and expand Automated accounting data systems constantly to be compatible with the wishes of the departments of the oil service companies in Iraq and*

*at exclusive organizational stages in the making numerous decisions.*

**Keywords :** *Information Systems, Accounting Information Systems, Decision-Making, Oil sector, Petroleum Services.*

## **I. INTRODUCTION**

The world has recently witnessed a remarkable technological development, a revolution in communications and information and the development of computers and the Internet, and these rapid developments in the world in the information revolution reflected their impact on all different fields of life, these systems have become the focus of attention of many enterprises, because of their A large role in the development of enterprises, where the use of modern technology and advanced computer technologies led to the development of information systems from traditional manual systems to modern computerized systems, as these systems addressed all the problems faced by traditional systems [1]. The computerized system plays an important and prominent role within the establishments as an important source in the production of information on the basis of which administrative decisions are taken.

Iraq has kept pace with these technological developments, and increased attention to computerized accounting information systems significantly, and this development was not limited to a particular sector, but included the financial sector, government sector, service sector and many other sectors, and has headed most medical sectors in general, and oil services companies In particular, to design and build information systems to control the vast amount of information needed to assist the work due to the increasing number of auditors, the expansion of medical activities and the expansion of medical specialties, which also required computerized accounting systems to Counting on the development of the performance of petroleum services companies, due to its characteristics of working to save time and effort,

which helps in the access of information to decision makers, which will contribute to enhancing the efficiency of administrative decisions in the petroleum services companies [2].

Due to this great interest in the use of computers in information systems, accounting science has been affected by this and the emergence of what is known as the computerized accounting information system, which was adopted in order to facilitate the work and practices required and in the implementation of various accounting activities efficiently and effectively, and the speed and accuracy of obtaining the accounting information needed by management. It helps them in making decisions, as the output of the computerized accounting system is directed to decision makers at different levels in the establishment - upper, middle and lower, where there are strategic decisions and there are also tactical decisions and operational or routine decisions [3]. In which automated accounting information structures have an energetic and important role in the work of firms, and the management is based on its various tiers of upper, center and decrease levels on the outputs of the accounting facts machine in decision-making, and there may be no doubt that the firms in popular keep in mind the important and key function of automated accounting statistics structures in the carrier of these organizations [4]. This examine got here to try to discover the role of automatic accounting information structures in improving the performance of control decisions in Iraqi oil offerings organizations.

## **II. THE PROBLEM OF THE STUDY AND ITS ELEMENTS**

Petroleum services companies in Iraq have kept abreast of technological developments, and their interest in switching from traditional information systems to computerized systems has increased. On the efficiency of departments at the senior, middle and lower levels of management in the strategic, tactical and operational decision-making process, and the significant role of computerized accounting information systems in the decision-making process [5], including the information they provide to management.

## **III. LITERATURE REVIEW**

What adds the use of accounting information systems to the administrative performance in the organization and the problems facing management in decision-making in educational institutions in Nigeria, coordination and control and maximize profit, and the best benefit and the optimal use of resources, the researcher has used the descriptive analytical method. It has been designed a questionnaire to achieve the goal. The questionnaire was

distributed among the 140 sample members. The information was collected to find the relationship between the accounting information systems and the strategic decision-making processes. Arithmetic, standard deviation, variance test and Pearson correlation coefficient [6]. The results of the study showed that there is a strong positive correlation between the application of accounting information systems significantly with the impact of strategic and administrative decision-making processes in organizations. The researcher has benefited from this study in developing the theoretical framework of the study [7].

The role of accounting information systems in rationalizing the administrative decision-making process and to achieve the objective of the study, the researcher applied the study to three Jordanian banks, namely, Jordan Islamic Bank, Arab Islamic International Bank, and Housing Bank for Trade and Finance. Objective of the study, the questionnaire was distributed to 250 employees and retrieved 210 and questionnaires valid for analysis 205. Appropriate statistical methods were used, such as arithmetic mean and standard deviation. The study reached a set of results, the most prominent of which was the availability of the required characteristics in the accounting information that can be used to rationalize the management decision-making process. Administrative decisions, that there are no differences in the answers of the respondents depending on gender, marital status, age and qualifications, and that there are differences between respondents in terms of practical experience [8].

The look at endorsed that the effectiveness of accounting facts systems in administrative choices attention at the position of accounting records structures within the activation of accounting control strategies and the development of laptop systems and software, in addition to the usage of facts structures inside the planning of marketing for destiny sales and rules, and accelerated hobby in accounting facts systems that assist analytical procedures and examine them in destiny predictions. The researcher has benefited from this study in increasing knowledge in statistical analysis and interpretation of results [9].

To analyze the effectiveness of accounting statistics structures in Iraqi banks from the factor of view of management, the researcher has used the descriptive analytical technique, and to acquire the targets of the look at changed into designed a questionnaire and distributed to the take a look at pattern which include 197 employees of Iraq business banks, and the researcher used the precise statistical strategies together with mathematics mean the results of the take a look at

showed that accounting data structures have an effect on management making plans methods, that accounting information structures affect the effectiveness of administrative and operational selection-making method, control additionally [10]. The researcher recommended that require the management of commercial banks to apply accounting information systems to achieve several tasks such as planning, management control and operational decision-making to increase the effectiveness of decision-making, and to ensure continuously and permanently to improve the accounting information systems in the Iraqi commercial banks in terms of financial and administrative functions in the banks. Ensure the continuous updating of the accounting information system in the Iraqi banks in order to keep abreast of the developments of advanced technology in both the financial and accounting sectors that would positively affect the management functions in the banks such as planning, control and decision-making [11].

Defining the role of computerized accounting information systems applied in measuring the cost and pricing of industrial products in the Iraqi industrial companies. The study community consists of all Iraqi industrial companies listed on the Stock Exchange [12].

The impact of information technology on accounting work for the production of information in industrial banks in Nigeria, the researchers used the descriptive analytical method and design questionnaire for the purpose of data collection, and used appropriate statistical methods in order to reach the results such as arithmetic average, percentage and standard deviation. Information has contributed significantly and effectively in the expansion of the industrial banking sector during the past years, also showed that accounting information technology contributes to improve the performance of banks by working to reduce operational costs and Facilitating transactions for customers, information technology has become an important business resource and the lack of these resources leads to weakness and mismanagement in administrative decisions leading to the failure of these organizations, the study reached several results, the most important of which is that accounting information technology is important and appropriate in simplifying the collection process And provide high quality information in the Nigerian banking sector. This study recommended the need to continue the use and development of accounting information technology by these banks because of the many benefits provided in terms of efficiency, quality of service and profitability [13], [14].

#### IV. THE CONCEPT OF ACCOUNTING INFORMATION SYSTEM

Due to the non-stop technological tendencies that have taken location in all fields, the massive length of the companies and the enlargement of its sports, and the consequent production of a big quantity of different records, the want arises to apply the pc, as a way to be able to run records and bring records, so as to benefit from the good sized and flexible talents of these computer systems, see figure1 [15].

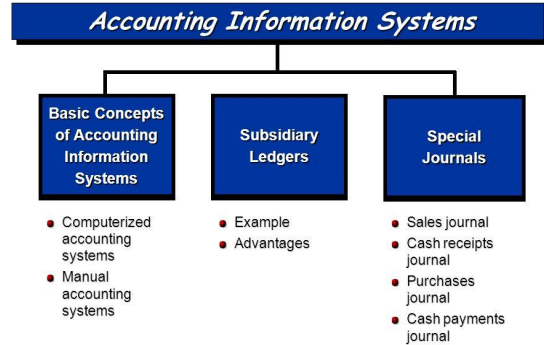


Figure1: Accounting Information System Hierarchy

For the purposes of introducing a computerized accounting information system, we must identify a set of definitions and terms that are closely related to computerized accounting information systems:

- System: A group of elements or actions that work with each other within specific relationships or mechanisms of action in order to achieve a specific goal. The system is defined as a set of interrelated resources and elements that seek to achieve specific objectives [16].
- Data: The raw facts that are fluctuated or recorded about the events in placeInterest [17].
- Information: It represents the results we get from data processing.
- Computerized systems: systems that rely mainly on computers or a network of computers [18].

The accounting information machine is defined as a fixed of physical and non-physical elements that paintings collectively in coordination and association primarily based on precise tactics and guidelines with a view to arrange and implement the steps of the accounting cycle inside the company. it's also a machine that collects, stores and strategies data to supply records for selection makers [19].

Accounting facts systems: an included structure in the monetary unit that uses the to be had assets and different

elements to convert economic statistics into accounting records so that you can fulfill the needs of different users of records [20]. it's far one of the automated data structures within the institutions and targets to shop the accounting facts that has been accessed via the processing of accounting facts both inside and outside the status quo.

About the concept of computerized accounting information systems: It is a computerized system, developed by people with specialized and computer work. A system that provides timely accounting information to assist management in making decisions. A system that provides all appropriate accounting information that serves management functions [21]. Through the previous definitions that dealt with the computerized accounting information system, the researcher believes that computerized accounting information systems are to carry out various accounting activities and activities using the computer in order to obtain important and useful results for people interested in the outputs of these systems in order to make appropriate decisions

**V. THE RELATIONSHIP BETWEEN COMPUTERIZED AIS AND THE EFFICIENCY OF ADMINISTRATIVE DECISIONS**

The last aim of any computerized facts device is to offer the right data for well timed choice making, the right layout, the right content material and the right cost, and to offer this records to the right character for the right selection making. any employer, as one of the most vital motives for the lifestyles of accounting technological know-how and its non-stop improvement is that it offers information this is the cornerstone of the decision-making manner, wherein theAccountant offers this records to meet the wishes of management in any respect three tiers to rationalize the decision-making method, See figure2 [22].

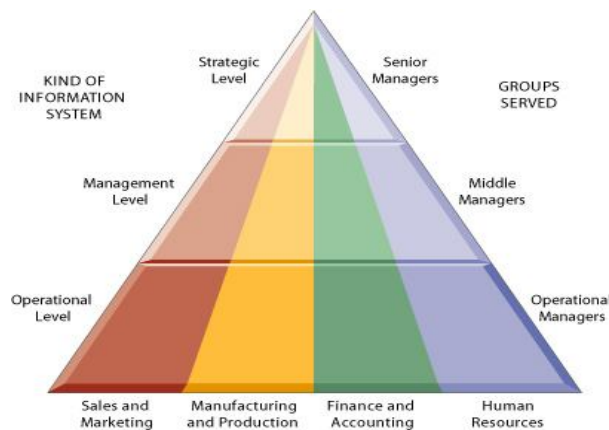


Figure 2: The Process of Decision-Making

The role of computerized accounting facts systems is highlighted in numerous aspects, the most important of which might be assisting and rationalizing administrative selections. to serve all internal and outside events.

Because users of accounting statistics are broadly speaking choice makers, in that they rely upon accounting facts to help them make distinctive decisions, and to be fair judgment on accounting information, there may be a fixed of qualities, which must be characterized via the one who will take the decision [23]. strategic, tactical and operational, wherein there are three styles of information as below, see figure3:



Figure 3: Levels That Using Accounting Information System

1- Strategic information: This is the information needed by the senior management in the establishment through which strategic decisions are made in order to determine the goals and objectives of the establishment and the resources and policies necessary to achieve the objectives of the establishment, where this information is inaccurate and covers the entire enterprise for long-term financial periods, as it covers For all economic, political and social information of the environment in which the establishment operates, there are several examples of strategic information:

- The current and future status of the establishment,
- Procedures and decisions taken by the State and affect the services provided by the establishment,
- The current and future status of the facility and the extent of the possibility of expansion.

2 - Tactical information: the information needed by the middle management in the facility through which to take tactical decisions, and the conversion of strategies and objectives, which are set by the senior management into actionable actions, where the senior management set the broad objectives of the facility and then the middle management to translate these goals into

Enforceable procedures and means. The most important characteristic of tactical information is that they cover shorter periods of time than covering strategic information, and tactical information is more accurate than strategic information, as there are several examples of tactical information:

- How to finance for expansion purposes in the facility,
- Opening new sections and branches in the facility.

3 - Operational information: This is the information needed by the minimum management in the facility through which to make operational decisions, for the purposes of operation and which helps in accessing plans and programs that have been developed by the middle management in the facility, and the most important characteristic of operational information as more accurate and specific. It covers strategic and tactical information, as it covers a short period of time and relates primarily to the internal operations of an entity. There are several examples of tactical information:

- The quality of materials used in daily work,
- The additional means of transport to be adopted,
- The number of ads and the quality of advertising methods that will be used [24].

In order for the computerized accounting information system output to be appropriate, of quality and influence of management decisions, it must have the following characteristics:

- 1 - Accuracy: Measures the quality of accounting information and promotes management decisions and the expression of the quality of accounting information, where the more accurate the accounting information, the greater the quality and value in expressing future expectations and historical facts,
2. Benefit: Measures the quality of accounting information and promotes management decisions where the benefit represents the validity and ease of use of such information;
3. Effectiveness: Measures the quality of accounting information and promotes management decisions. Effectiveness depends on the ability of an entity to achieve its objectives,
4. Prediction: measures the best of records and complements control selections and is supposed to be expecting that it is the way through which historical and present day statistics may be used to be expecting future events, where those expectations may be utilized in making plans and choice-making strategies, and that the pleasant of statistics is in its capacity to be expecting and decrease uncertainty,
5. performance: measures the first-rate of facts and promotes control selections. performance is the greatest use of assets if you want to acquire the goals of the organization, and the utility of the precept of facts

economics, which objectives to boom the nice of records at the bottom possible charges as those fees have to now not exceed the fee of data [25].

The researcher believes that there is an important and key role played by the computerized information system in the decision-making process through its ability to ensure a good flow of data and provide the necessary information to meet the needs of users inside and outside the facility. Since computerized accounting information systems are one of the most reliable sources of information, decision-makers can rely on computerized accounting information systems to obtain useful information related to the administrative situation faced by the enterprise, and with the development of computerized accounting information systems and the widespread use of software and computers is no longer. The role of these systems is not only to measure financial events, but also to include all events that are important to the administration and to make critical decisions about them.

## **VI. STUDY RESULTS**

The present study raised a number of questions about the role played by computerized accounting information systems in enhancing the efficiency of administrative decisions in the Iraqi petroleum services companies. Its first main hypothesis and prove its second main hypothesis.

The subsequent is a summary of these outcomes there may be a position for automated accounting information structures in enhancing the efficiency of control decisions inside the Iraqi oil services groups. there may be a function for computerized accounting information structures in enhancing the performance of strategic decisions in Iraqi oil offerings corporations. there is additionally a function for automatic accounting information structures in enhancing the efficiency of tactical decisions in Iraqi oil services companies. There is additionally a position for automated accounting facts structures in improving the performance of operational selections in Iraqi oil services businesses

## **VII. RECOMMENDATIONS**

The researcher considered that it is necessary to pay more attention by the departments in the petroleum services companies in the development of work procedures in line with the computerized accounting information systems available and used. The need for the management of companies to hold continuous training courses for all employees in financial departments on modern and sophisticated systems, in order to keep abreast of developments in the work. And the need to work to modernize and develop computerized accounting information systems

continuously to be compatible with the needs of the management of Iraqi oil services companies and at different levels of organizational in making various decisions, and requires that each decision is given the information needed. Ultimately, different comparable studies were conducted at the function of automated accounting statistics systems in enhancing the performance of management selections in petroleum offerings corporations

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