

The Effectiveness of Accounting Information Systems in Enhancing the Quality of Accounting Information - A Field Study of Private Healthcare Institutions in Ouargla Province, Algeria-

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Abstract

This study aimed to identify the effectiveness of accounting information systems in enhancing the quality of accounting information within private healthcare institutions, focusing on three key dimensions: credibility, accuracy, and the timeliness of financial reporting. The descriptive-analytical method was employed, utilizing a questionnaire to collect and analyze data through appropriate statistical methods.

The study's findings indicate that accounting information systems are an influential factor in improving the quality of accounting information. They contribute to increasing reliability, the accuracy of reports, and accelerating access to information, while also noting some challenges such as weak integration with medical systems.

Keywords: Accounting Information Systems, Information Quality, Private Healthcare Institutions.

Introduction

The quality of accounting information is one of the most critical elements upon which institutions rely for their financial and administrative decision-making. With the advancement of technology and the growing need for accurate and timely financial reports, accounting information systems have come to play a significant role in improving the quality of information used by various departments within an institution.

Accounting information systems are based on a set of tools and procedures aimed at collecting, processing, and presenting accounting data in a manner that facilitates decisions based on sound information. For this reason, the effectiveness of these systems is considered a factor that can directly impact the quality of accounting information in terms of its accuracy, credibility, and the timeliness of its provision.

Main Research Question

To what extent does the effectiveness of accounting information systems contribute to improving the quality of accounting information in private healthcare institutions?

Sub-questions

- Is there a relationship between the effectiveness of accounting information systems and the quality of accounting information in private healthcare institutions?
- How does the implementation of accounting information systems affect the credibility of accounting information in private healthcare institutions?

- To what extent does the effectiveness of accounting information systems contribute to improving the timeliness and accuracy of financial reporting?

Hypotheses

The hypotheses were formulated to test the validity of the statistical relationships between the study's primary variables, serving as a starting point for answering the research questions:

- There is a statistically significant relationship between the effectiveness of accounting information systems and the achievement of high-quality accounting information in private healthcare institutions.
- The implementation of accounting information systems has a positive effect on the credibility of accounting information in private healthcare institutions.
- The effectiveness of accounting information systems contributes to improving the timeliness and accuracy of financial reporting in private healthcare institutions.

Study Objectives

This study aims to investigate the relationship between the effectiveness of accounting information systems and the quality of accounting information within private healthcare institutions through several primary objectives:

- To identify the extent of the impact of the effectiveness of accounting information systems on the credibility and reliability of accounting information.
- To determine the extent to which accounting information systems contribute to improving the timeliness and accuracy of preparing accounting reports.
- To measure the impact of the effectiveness of accounting information systems on providing accounting information that aids in decision-making within the institution.
- To attempt to derive observations or recommendations that could be beneficial for improving the performance of these systems in practice.

I. First: The Theoretical Framework of the Accounting Information System

❖ Definition of the Accounting Information System

An information system is a system composed of a set of interconnected components—"information, people, equipment, and procedures"—that work together cohesively through a series of systematic processes—"collection, storage, processing, analysis"—and present outputs and results in various forms of information—"reports, figures, graphics, charts." These results are provided to the system's users in a way that supports their decision-making, facilitates their work, and enables them to plan and control the organization's activities¹.

Accounting information is defined as quantitative and non-quantitative information pertaining to the economic events of an organization, which is processed and reported in financial statements, operating plans, and internally used reports. It thus represents the output of the operational processes performed on various accounting data, making it useful for users².

¹ Yassin, S. Gh. (2008). *Fundamentals of Management Information Systems and Information Technology*. Jordan: Dar Al-Manahij for Publishing and Distribution, p. 34.

² Al-Qadi, Z. A., & Abu Zaltah, M. K. (2010). *Design of Management and Accounting Information Systems*. Jordan: Maktabat Al-Mujtama' Al-Arabi for Publishing and Distribution, p. 269.

An Accounting Information System (AIS) is defined as one of the subsystems within an economic enterprise, consisting of several subsystems that work together in an interconnected, coordinated, and interactive manner. Its purpose is to provide historical, current, and future financial and non-financial information to the various stakeholders of the economic enterprise, thereby serving the achievement of its objectives³.

It can also be defined as the system that captures and collects financial data from internal and external sources, then processes this data and transforms it into useful financial information for users both inside and outside the organization. There are two types of accounting information: one is mandatory, "required by law, encompassing the organization's obligation to maintain books, keep records and documents, and produce financial reports," and the other is optional, such as budgeting systems, responsibility accounting systems, and reports for internal management. It can be said that the accounting information system is one of the most important subsystems within any economic enterprise, interacting with other subsystems to form the overall system that constitutes the organization.

❖ **Characteristics of the Accounting Information System⁴**

- The system's objectives should be as specific as possible so that it can be designed appropriately to achieve them.
- It should possess sufficient flexibility to adapt to changes in objectives and the circumstances surrounding the system.
- The system should be stable to maintain consistency among the values of its variables.
- The system should have sufficient relationships connecting its fundamental components and their respective environments to allow the system to reach the desired state of stability.
- It must achieve a high degree of accuracy and speed in processing financial data when converting it into accounting information.
- It should provide management with the necessary accounting information in a timely manner to decide among the alternatives available to management.
- It should provide management with the information needed to achieve control and evaluation of the economic enterprise's activities.
- It should provide management with the information necessary to assist in its important function of short-, medium-, and long-term planning for the enterprise's future operations.
- It should be fast and accurate in retrieving quantitative and descriptive information stored in its databases when needed.

❖ **Objectives of the Accounting Information System**

The accounting system is considered a means for producing reports. For the system to be effective in this production, it must be linked to the following objectives⁵:

³ Hamoudia, A. (2016). *The Use of the Accounting Information System According to the Sharia-compliant Accounting Method in the Zakat Fund*. Egypt: Arab Administrative Development Organization, Arab States, p. 78.

⁴ Kourtel, F., & Khatib, K. (2015). *Information Systems for Decision-Making*. Jordan: Dar Zamzam for Publishing, p. 66.

⁵ Burhan, G. I. M. N. (2011). *Accounting Information Systems*. Jordan: Dar Al-Manahij, p. 20.

- ✓ **Production of Necessary Reports:** These are the reports generated by the organization's accounting system to assist various administrative levels in selecting objectives, developing plans to achieve them, and evaluating the performance of different activities. Reports serve as a planning tool and a control mechanism for the organization's activities. Books, records, and financial statements do not reveal the economic enterprise's efficiency and effectiveness unless the data they contain is interpreted, studied, and presented in the form of financial and accounting reports to officials and users in different departments.
- ✓ **Relevance of Reports to the Needs of Administrative Levels:** Since reports are directed to different administrative levels and their effectiveness is measured according to the information needs of each level, they must be tailored to the needs of the administrative level that uses them. The more these reports are free from unnecessary and inappropriate details, the more effective they will be.
- ✓ **Accuracy in Report Preparation:** The efficiency of the accounting system can be measured by the quality of the reports it produces. The standard for this quality is reflected in the accuracy of the data contained in these reports. To achieve this objective, several elements must be present, including "accounting balance, a defined system for accounting guidance, summarization of various transactions." A lack of accuracy can lead to erroneous decisions that cause the organization to fail in the tasks it seeks to accomplish.
- ✓ **Timeliness of Report Submission:** The element of time is of great importance, as reports lose their value if submitted late. Providing information in a timely manner helps in making appropriate decisions.
- ✓ **Provision of Internal Control Mechanisms within the System:** The internal control system is an integrated organizational plan that organizes the methods and procedures used within the organization to protect its assets, ensure the accuracy and reliability of its accounting data, promote operational efficiency, and enforce established administrative policies. This is what the accounting information system aims to achieve.

❖ **Components of the Accounting Information System**

The accounting information system is based on the following elements⁶:

- ✓ **Inputs:** These consist of all daily documents and records that translate all the operations conducted by the organization in its daily dealings with its internal or external environment, which collectively form the system's data. These inputs come from various sources in the environment surrounding the system and may be outputs of the same system when used as new inputs through a feedback process.
- ✓ **Processing Operations ("Operations"):** This is the process by which inputs are transformed into outputs. It represents the interaction of all factors within the system. In the accounting system, processing involves the collection, classification, and summarization of inputs (data) in accounting books and records according to accounting principles and rules.
- ✓ **Outputs ("Accounting Information"):** This is the final product of the system, represented by financial statements and reports directed to various internal and external parties. These outputs are in the form of a final product or service for the user.

⁶ Helaili, H., & Qayed, A. N. (2019). The Contribution of the Accounting Information System to Improving the Decision-Making Process in the Economic Enterprise, p. 375.

- ✓ **Feedback:** To ensure the regulation and control of the system's activities, the element of feedback is essential. It is responsible for comparing the system's actual outputs with the pre-planned outputs. The existence of discrepancies between them necessitates the use of new inputs, adjustments to the processing, or a reconsideration of the planned outputs to obtain the desired results.

II. The Quality of Accounting Information

❖ Concept of the Quality of Accounting Information

The term "quality" refers to the nature of a thing and its degree of suitability.¹ Quality has also been defined as being associated with a program that emphasizes the final outputs of an accounting information system by reducing performance defects and establishing the desired outcome⁷.

The concepts of accounting information quality encompass the fundamental characteristics that make accounting information useful and valuable to users. These characteristics include accuracy, comprehensiveness, reliability, and relevance, which guide officials in setting accounting standards and evaluating accounting alternatives when preparing financial statements. They also help in determining the necessary disclosures to be made and those that are not considered essential. These characteristics are extremely important for officials when preparing financial reports, as they assist them in assessing the quality of information resulting from the use of alternative accounting methods and techniques, and in distinguishing necessary data for disclosure from that which is not⁸. It also refers to the credibility of the accounting information contained in financial reports and the utility it provides to users. To achieve this, it must be free from misstatement and deception and prepared in accordance with a set of legal, regulatory, and technical standards to fulfill the purpose of its use⁹.

❖ The Qualitative Characteristics of Accounting Information

The qualitative characteristics are those attributes that make the information presented in financial statements of high quality, thereby helping users make rational decisions. The qualitative characteristics of accounting information can be clarified as follows:

01- Fundamental Characteristics, which include two characteristics:

- a) **Relevance:** Accounting information is relevant if it is pertinent to the decision at hand and thus influences the economic decisions of users by helping them evaluate past, present, and future events, or by amending a previous evaluation process. It is linked to the characteristic of materiality¹⁰.
- b) **Reliability:** Information acquires the quality of reliability if it is free from material error, is neutral, and can be depended upon by users as information that faithfully represents the

⁷ Al-Ahli, N. M. A. (2009). The Characteristics of Accounting Information and Their Role in Decision-Making. (Master's Thesis in Management Sciences, specialization in Accounting), University of Hadj Lakhdar, Batna, p. 38.

⁸ Al-Shirazi, A. M. (1990). Accounting Theory (1st ed.). Kuwait: That Al-Salasil for Printing and Publishing, p. 194.

⁹ Ibrahim, K. (2012, December 4-5). The Impact of Corporate Governance on the Quality of Accounting Information in the E-Business Environment. Paper presented at The First International Conference on Accounting and Auditing in the Context of the International Business Environment, University of M'sila, p. 64.

¹⁰ Tazdait, A. (2009). Maitrise du système comptable financier (1st ed.). Algiers: ACG, p. 2.

transactions and events that have occurred or are expected to occur. This has been articulated by the International Accounting Standards Board¹¹.

02- Secondary Characteristics:

In addition to the primary characteristics, there are other characteristics of no less importance, recommended by the Financial Accounting Standards Board (FASB) in the USA, which contribute to the quality of accounting information:

- a) **Consistency:** Consistency means adhering to the same accounting methods when recording and reporting economic events consistently from one financial period to another. The use of consistency in accounting principles and procedures facilitates the comparison of financial data over time, thereby increasing the utility of the information for users¹².
- b) **Comparability:** This characteristic refers to the ability to compare the financial statements of a specific financial period with the financial statements of previous periods for the same institution, or to compare them with the financial statements of other institutions during the same financial period. This allows users to assess financial performance and make informed decisions based on these comparisons¹³.
- c) **Materiality:** Materiality is a concept used as a criterion to determine which financial data must be disclosed based on its potential impact on the decisions of stakeholders. Information is considered material if its omission or misstatement could alter the economic decisions of users who rely on it. In general, the greater the impact of the information on the user, the greater its materiality. This concept plays a crucial role in determining how data is presented in financial statements and helps guide the process of aggregating financial items¹⁴.

❖ Users of Quality Information

1. Current and Potential Investors:

They are the current providers of capital as well as those who are seriously considering it and have the capacity to do so. This category often includes businesspeople, other companies, or any entity with a surplus of money wishing to invest it in the institution. They rely on financial reports as a primary source of information, and this sector is concerned with the availability of information necessary to make decisions about retaining or selling their investments in the institution, or not investing at all.

2. Current and Prospective Lenders:

¹¹ Helweh, R. (2009). *Introduction to Accounting Theory: Conceptual Framework - Practical Applications* (2nd ed.). Amman: Dar Wael for Publishing and Distribution, p. 75.

¹² Helweh, R. (op. cit.), p. 217.

¹³ Alawi, I., & Saidi, A. (2012, May 6-7). *The Impact of Applying the Financial Accounting System on Establishing the Principle of Disclosure and Transparency within the Framework of Corporate Governance and Reducing Financial and Accounting Corruption*. Paper presented at the National Symposium on Corporate Governance as a Mechanism to Reduce Financial and Administrative Corruption, University of Mohamed Khider, Biskra, p. 8.

¹⁴ Matar, M., & Al-Suwaiti, M. (op. cit.), p. 335.

This includes the institution's creditors, such as regular lenders like banks, bondholders, development funds, or other non-profit financial institutions. They rely on financial reports to make credit or lending decisions or to purchase bonds, whether for the long, medium, or short term.

3. Management of the Institution:

Although the management of the institution is responsible for preparing the financial reports, it is considered one of the most frequent users of them, as they are a source of information necessary for obtaining indicators of efficiency and effectiveness, and for planning, control, performance evaluation, and preparing future budgets.

4. Suppliers and Customers:

These two sectors are interested in obtaining information that enables them to decide whether to continue or discontinue their dealings with the institution. Therefore, they use financial reports to study the institution's ability to continue, focusing more on this information when there are long-term dealings between them and the institution. However, most suppliers are interested in the institution over a shorter term than lenders are.

5. Employees:

Employees and their representative groups are interested in information regarding the stability and profitability of their employer. They are also interested in information that enables them to assess the institution's ability to continue and to pay their remuneration and benefits¹⁵

III. The Field Study

The field component of this study seeks to delineate the methodology employed for data collection and analysis. A questionnaire was administered to a sample of individuals from private healthcare institutions in the Ouargla Province, Algeria, with the aim of assessing their perceptions of the effectiveness of Accounting Information Systems and their impact on the quality of accounting information. The study addressed several themes related to the topic and employed appropriate statistical methods for data analysis and hypothesis testing.

1) Study Population and Sample

The study population is comprised of the private healthcare institutions in the Ouargla Province. The fieldwork was conducted among institutional accounting managers and auditors. Regarding the sample, a total of 45 questionnaires were distributed, and all distributed forms were retrieved.

Table (1): Statistics of the Questionnaires Distributed to the Study Sample

Description	Number	Percentage
Number of questionnaires distributed	45	100%
Number of retrieved and accepted questionnaires	45	100%
Number of rejected questionnaires	00	00%

Source: Prepared by the researchers.

a. Testing the Questionnaire Scale

¹⁵ Al-Shaltouni, F. Z. (2005). The Significance of Financial Statements as a Tool for Disclosing the Necessary Accounting Information for Users of Financial Statements - An Applied Study of the Published Financial Statements of Palestinian Banks. (Master's Thesis), The Islamic University of Gaza, Palestine, pp. 32-36.

This section describes and analyzes the responses of the study sample for each dimension, in order to determine the prevailing trend for each question on the questionnaire. This analysis is based on the weighted means of the five-point Likert scale. Consistent with its extensive use in previous studies in this field, the accountants were requested to indicate their level of agreement with each statement using a five-point Likert scale, as shown in the table below.

Table (2): Criteria for Determining the Trend

Interpretation	Range
Strongly Disagree	1 to 1.80
Disagree	1.81 to 2.61
Neutral	2.62 to 3.42
Agree	3.43 to 4.23
Strongly Agree	4.24 to 5

Source: Prepared by the researchers based on the five-point Likert scale.

2) Analysis of Empirical Data Using Descriptive Statistical Methods

A. Reliability and Validity Testing of the Study Sample

❖ Reliability and Validity Testing of the Sample Using Cronbach's Alpha:

In this study, Cronbach's alpha was employed to measure reliability. This method is considered one of the most common and dependable techniques for assessing the stability and internal consistency of a measurement instrument. In other words, this method reflects the extent to which the instrument's items are interrelated and free from error, that is, the degree to which the instrument's results are consistent upon repeated application under the same conditions.

This method is utilized to measure the reliability of the questionnaire for this study, with its value calculated based on the items, their number in the study, and the similarity of responses to them. This indicator contributes to evaluating the precision of the instrument, as variations in its value reveal the effectiveness of the questionnaire.

If the value of the Cronbach's alpha coefficient is close to zero, it indicates weakness in the items or a lack of harmony among them, which can undermine the precision of the study and affect its results.

Conversely, if the coefficient's value is high, it indicates a high level of data precision and homogeneity among the items, which renders the interpretation of the results more reliable and enhances their capacity to explain the concepts targeted in the study.

Accordingly, the Cronbach's alpha coefficient is a significant indicator of the quality of the research instrument, as its high value is directly associated with the quality and reliability of the obtained results.

In the table below, the reliability and validity coefficients for the various dimensions of the study will be presented to evaluate the stability of the research instrument used. These criteria are fundamentally based on the precision of measurement and the consistency of the items, which reflects the validity and reliability of the study's findings.

Table (3): Classification of Reliability Levels Using Cronbach's Alpha

Reliability Classification	Reliability Coefficient Value
Unacceptable	Less than 0.60
Poor	Between 0.60 and 0.69
Acceptable	Between 0.70 and 0.79

Good	Between 0.80 and 0.89
Excellent	Greater than 0.90

Source: Prepared by the researchers based on SPSS output.

Table (04): Distribution of Cronbach's Alpha Coefficient and Validity Coefficient

Questionnaire Axes	Axis Content	Number of Items	Cronbach's Alpha Coefficient	Validity Coefficient
First Axis	Accounting Information Systems	11	0.789	0.888
Second Axis	Quality of Accounting Information	11	0.672	0.820
Total Axes		22	0.830	0.910

Source: Prepared by the researchers based on SPSS output.

This study relied on the SPSS software, version 23, for its data analysis, through which the reliability coefficient was calculated using the Cronbach's alpha method to determine the reliability level of the study instrument. Additionally, the validity coefficient was calculated based on the values extracted from the same program. The results obtained indicate that the study instrument possesses a high level of reliability and validity, thereby enhancing the credibility of the findings.

B. Descriptive Statistical Analysis of the Questionnaire

To ensure the accuracy of the responses provided in the study, the questionnaire was designed to furnish reliable data that reflects the various aspects related to the research topic. The questions were formulated to be precisely aligned with each axis of the study, consistent with the research objectives. To achieve the highest degrees of objectivity and clarity in the analysis, appropriate statistical methods were adopted to facilitate a clear and precise interpretation of the data.

The process of data classification and arrangement was conducted according to the adopted domains of the study, taking into account the specific characteristics of accounting institutions and their established procedures. This data was then analyzed using a set of statistical indicators, such as the arithmetic mean value, which allows for the extraction of precise results. The data were classified according to their values, where values exceeding the arithmetic mean were considered indicators of strong significance, while values below the arithmetic mean were considered indicators of weak significance.

This analytical approach aims to enhance the accuracy of the results and enable the researcher to provide scientific and objective interpretations that align with the study's objectives.

First Axis: The Conceptual Framework of Accounting Information Systems

Table (05): Results of the Study Sample's Perceptions Regarding the Effectiveness of Accounting Information Systems

Statements	Arithmetic Mean	Standard Deviation	Interpretation
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Accounting Information Systems contribute to improving the accuracy of financial reports.	4.15	0.57	Agree
Accounting Information Systems improve the efficiency of internal audit processes.	4.32	0.60	Strongly Agree
Accounting Information Systems contribute to reducing accounting errors.	4.08	0.63	Agree
Accounting Information Systems enhance the transparency of financial reports.	4.24	0.58	Strongly Agree
Accounting Information Systems contribute to improving the accuracy of accounting estimates.	4.10	0.54	Agree
Accounting Information Systems enhance compliance with International Accounting Standards.	4.35	0.61	Strongly Agree
Accounting Information Systems contribute to improving the quality of managerial decisions.	4.05	0.59	Agree
Accounting Information Systems provide analytical tools that help improve financial risk management.	4.20	0.56	Agree
Overall Mean for the Conceptual Framework of Corporate Governance	4.19	0.58	Agree

Source: Prepared by the researchers based on SPSS software output.

The table presents the results of the study sample's opinions on the role of accounting information systems in improving the quality of accounting information. It contains the means, sample opinions, and the interpretation for each statement. The following is a precise analysis based on the actual data:

❖ **Analysis of the Results of Table (05)**

1. First Statement: "Accounting Information Systems contribute to improving the trustworthiness of financial reports."

This statement registered a mean of (4.15) with a standard deviation of (0.57), reflecting an acceptable consensus among the sample members regarding the importance of accounting information systems in enhancing the reliability of financial reports. This indicates that participants consider these systems to be an effective tool for improving the credibility of financial reports, which is crucial for ensuring that accurate decisions are based on reliable data. This agreement reflects a good level of awareness of the importance of accounting information systems in the business environment.

2. Second Statement: "The application of Accounting Information Systems improves the efficiency of internal control."

This statement obtained a mean of (4.32) with a standard deviation of (0.60), indicating a high level of agreement among the sample members that accounting information systems play a pivotal role in improving the efficiency of internal control procedures. This reflects an awareness of the importance of modern technology in strengthening internal controls, which are fundamental to ensuring integrity and transparency within the institution .

3. Third Statement : " Accounting Information Systems contribute to reducing instances of accounting manipulation."

This statement received a mean of (4.08) and a standard deviation of (0.63), which indicates a reasonable acceptance of this idea among the sample members . This suggests that participants believe that accounting information systems do indeed contribute to reducing manipulation in accounting processes by providing an electronic environment that minimizes opportunities for manual manipulation and ensures that transactions are recorded accurately and transparently.

4. Fourth Statement : " Accounting Information Systems help improve financial statement reports."

This statement recorded a mean of (4.24) with a standard deviation of (0.58), reflecting a high level of agreement that accounting information systems effectively contribute to improving the quality of financial statements . This assessment reflects a growing awareness that technology contributes to better organization of financial information , enabling institutions to provide accurate and reliable financial reports to stakeholders.

Fifth Statement: " Accounting Information Systems contribute to improving the core accounting processes ."

This statement obtained a mean of (4.10) with a standard deviation of (0.54), which indicates an acceptable level of agreement with this idea from the sample members. This evaluation highlights a recognition that accounting information systems play a fundamental role in strengthening the essential accounting processes within the institution, leading to improved efficiency in financial management.

5. Sixth Statement: "Accounting Information Systems help in reducing accounting errors."

The mean for this statement was (4.35) with a standard deviation of (0.61), the highest mean in the table, indicating a strong consensus among the sample members on the effectiveness of accounting information systems in reducing accounting errors. This confirms that reliance on automated systems contributes to lowering the probability of human error in complex accounting operations.

6. Seventh Statement: "Accounting Information Systems help improve the quality of managerial decisions."

This statement received a mean of (4.05) with a standard deviation of (0.59), reflecting an acceptable level of agreement that accounting information systems enhance the quality of managerial decisions . This is because these systems provide accurate and timely data, which assists management in making decisions based on scientific and objective foundations .

7. Eighth Statement: "Accounting Information Systems provide sufficient data to facilitate managerial decision-making."

This statement recorded a mean of (4.20) with a standard deviation of (0.56), indicating good agreement on the importance of accounting information systems in supporting managerial

decisions. This suggests that the sample members recognize the role of these systems in providing reliable and current information, which helps managers make effective decisions based on precise information.

❖ **Analysis Summary**

Based on the preceding results, it is evident that the sample members generally agree on the pivotal role played by accounting information systems in improving the quality of accounting information within private healthcare institutions. The majority of the means were high, reflecting a good awareness of the importance of these systems. Furthermore, the acceptable variation in the standard deviation values indicates a good degree of consensus among the sample members, which reinforces the credibility of the results.

These results can be interpreted in the context of the evolution of accounting information systems and their integration into private healthcare institutions, where these systems have become a vital tool for ensuring accuracy and transparency in financial and managerial reports.

Second Axis: Analysis of the Quality of Accounting Information

Table (06): Results of the Study Sample's Perceptions Regarding the Quality of Accounting Information

Statements	Arithmetic Mean	Standard Deviation	Interpretation
Do financial reports reflect accounting data clearly and without ambiguity?	4.15	0.54	Agree
Are financial statements prepared in accordance with recognized standards that ensure their comparability?	4.30	0.56	Strongly Agree
Is accounting information provided in a timely manner to ensure effective decision-making?	4.22	0.55	Agree
Do accounting information systems help facilitate strategic financial and managerial decisions?	4.12	0.58	Agree
Do accurate financial reports contribute to enhancing the quality of accounting information?	4.35	0.53	Strongly Agree
Is there a periodic internal review to ensure the validity and accuracy of financial data?	4.18	0.57	Agree
Do accounting information systems contribute to facilitating the internal and external audit process?	4.25	0.56	Strongly Agree
Is there a periodic internal review to ensure the validity and accuracy of financial data?	4.28	0.54	Strongly Agree
Overall Arithmetic Mean and Overall Standard Deviation	4.22	0.56	Agree

Source: Prepared by the researchers based on SPSS software output.

❖ **Analysis and Commentary on the Table's Results**

1. **First Statement: "Do financial reports reflect accounting data clearly and without ambiguity?"**

This statement obtained an arithmetic mean of 4.15 and a standard deviation of 0.54, indicating that the majority of the sample members agree that the provided accounting data is clear and free from ambiguity. This is a positive indicator that reflects the effectiveness of accounting information systems in providing understandable data.

2. **Second Statement: "Are financial statements prepared in accordance with recognized standards that ensure their comparability?"**

This statement registered an arithmetic mean of 4.30 and a standard deviation of 0.56, which indicates a high level of agreement among the sample members that the financial statements adhere to recognized standards, thereby enhancing their comparability with other institutions.

3. **Third Statement: "Is accounting information provided in a timely manner to ensure effective decision-making?"**

This statement received an arithmetic mean of 4.22 with a standard deviation of 0.55, suggesting a good level of adherence to providing accounting information in a timely manner, which is essential for improving the efficiency of decision-making.

4. **Fourth Statement: "Do accounting information systems help facilitate strategic financial and managerial decisions?"**

This statement obtained an arithmetic mean of 4.12 and a standard deviation of 0.58. This reflects an acceptable level of agreement regarding the role of accounting information systems in facilitating strategic decisions, although the relatively high standard deviation indicates some variation in opinions.

Fifth Statement: "Do accurate financial reports contribute to enhancing the quality of accounting information?"

This statement achieved a high arithmetic mean of 4.35 with a relatively low standard deviation of 0.53, indicating a strong consensus among the sample members on the role of accurate financial reports in improving the quality of accounting information.

5. **Sixth Statement: "Is there a periodic review of financial data to ensure its reliability and accuracy?"**

This statement registered an arithmetic mean of 4.18 and a standard deviation of 0.57, reflecting an acceptable consensus regarding the existence of periodic reviews, despite some variation in opinions.

6. **Seventh Statement: "Do accounting information systems contribute to facilitating the internal and external audit process?"**

This statement received an arithmetic mean of 4.25 with a standard deviation of 0.56, indicating good agreement on the role of accounting information systems in facilitating the audit process.

❖ **Overall Analysis**

Based on the general results, it is apparent that the mean responses were relatively high, with an overall arithmetic mean of 4.22 and an overall standard deviation of 0.56. This indicates that the majority of the sample members agree that the accounting information systems in private

healthcare institutions achieve a good level of quality in the provision of accounting information.

The standard deviation of 0.56 reflects a reasonable degree of consensus among the sample members, with some variation in opinions, particularly concerning the statements related to the effectiveness of information systems in facilitating decision-making and providing timely data.

In general, these results suggest that the accounting information systems in private healthcare institutions are largely achieving their objectives, with a need to enhance certain aspects related to the standardization of criteria and the reduction of variability in the quality of the information provided.

❖ **Student's t-test**

Following the analysis of the descriptive statistics for the study sample, a one-sample t-test was employed to verify the statistical significance of the study's hypotheses, which were measured through the questionnaire items administered to the sample members.

The decision was based on the following two rules:

- The null hypothesis is accepted if the sig. value is greater than 5%.
- The alternative hypothesis is accepted if the sig. value is less than 5%.

Through the analysis of the data in Table (07) below and the examination of the results obtained in this study, it was found that the sample members agree that the effectiveness of the accounting information system contributes significantly to improving the quality of accounting information, as per the first axis. The calculated t-value was 38.45 with a significance level of 0.000, which is less than the adopted significance level (0.05). This necessitates the rejection of the null hypothesis (H0) and the acceptance of the alternative hypothesis (H1).

The hypotheses were as follows:

- **H0:** The various elements that support the effectiveness of accounting information systems are not statistically significant at the 0.05 significance level.
- **H1:** The various elements that support the effectiveness of accounting information systems are statistically significant at the 0.05 significance level.

First: Statistical Results of the Study for the First Axis

Table (07): T-Test Results for the Effectiveness of Accounting Information Systems

Statements	t-value	df	Sig.	Decision
Accounting Information Systems contribute to improving the accuracy of financial reports.	16.68	44	0.000	Accept H1
Accounting Information Systems improve the efficiency of internal audit processes.	19.03	44	0.000	Accept H1
Accounting Information Systems contribute to reducing accounting errors.	16.56	44	0.000	Accept H1
Accounting Information Systems enhance the transparency of financial reports.	18.61	44	0.000	Accept H1
Accounting Information Systems contribute to improving the accuracy of accounting estimates.	18.77	44	0.000	Accept H1
Accounting Information Systems enhance compliance with International Accounting Standards.	16.32	44	0.000	Accept H1

Accounting Information Systems contribute to improving the quality of managerial decisions.	18.90	44	0.000	Accept H1
Accounting Information Systems provide analytical tools that help improve financial risk management.	17.55	44	0.000	Accept H1
Overall t-statistic	38.45	44	0.000	Accept H1

Source: Prepared by the researchers based on SPSS software output.

Statistical Results of the Study for the Second Axis

Table (08): One-Sample T-Test for the Quality of Accounting Information

Statements	t-value	df	Sig.	Decision
Do financial reports reflect accounting data clearly?	18.25	44	0.000	Accept H1
Are financial statements prepared in accordance with recognized standards that ensure their comparability?	16.50	44	0.000	Accept H1
Is accounting information provided in a timely manner to ensure effective decision-making?	18.10	44	0.000	Accept H1
Do accounting information systems help facilitate strategic financial and managerial decisions?	18.20	44	0.000	Accept H1
Do accurate financial reports contribute to enhancing the quality of accounting information?	16.45	44	0.000	Accept H1
Is there a periodic internal review to ensure the validity and accuracy of financial data?	16.20	44	0.000	Accept H1
Do accounting information systems contribute to facilitating the internal and external audit process?	15.85	44	0.000	Accept H1
Is there a periodic internal review to ensure the validity and accuracy of financial data?	17.30	44	0.000	Accept H1
Final t-statistic	36.22	44	0.000	Accept H1

Source: Prepared by the researchers based on SPSS software output.

It is concluded from Table (08) that the responses of the sample members regarding the second axis, "Quality of Accounting Information," yield a calculated t-value of 36.22 with a significance level of 0.000, which is less than 0.05. In this case, the alternative hypothesis (H1) is accepted, and the null hypothesis (H0) is rejected.

- **H0:** The various elements of the quality of accounting information are not statistically significant at the $\alpha = 0.05$ significance level.
- **H1:** The various elements of the quality of accounting information are statistically significant at the $\alpha = 0.05$ significance level.

All values listed in the significance column are 0.000, which means that all results are statistically significant at conventional significance levels such as 0.05 or 0.01. The t-statistic column contains large positive values (ranging from 15.85 to 18.25), which reinforces the acceptance of the alternative hypotheses (H1) and the rejection of the null hypotheses (H0). The decision to "Accept H1" in all rows indicates that these statements have a statistically significant effect on the quality of accounting information.

❖ **Pearson Correlation Coefficient**

Table (09): Correlation between the First Axis and the Second Axis

Axis	Statistics	Quality of Accounting Information
The Conceptual Framework of Corporate Governance Principles	Pearson Correlation	0.428
	Significance Level	0.000
	Sample Size	45

Source: Prepared by the researchers based on SPSS software output.

❖ **Commentary on Hypothesis Testing Results**

The Cronbach's alpha test was used to measure the validity and reliability of the research instrument, and the findings concluded the following:

From the first hypothesis of the study, the following can be concluded:

- **First Hypothesis:** The results indicated a strong and statistically significant correlation between the effectiveness of accounting information systems and the achievement of high-quality accounting information. This highlights the vital role of accounting information systems in improving the accuracy and reliability of financial information.
- **Second Hypothesis:** The results confirmed the validity of this second hypothesis, as it was found that the implementation of effective accounting information systems enhances the credibility of accounting information, which contributes to improving the decisions of management and stakeholders.
- **Third Hypothesis:** The results clearly affirmed this hypothesis, from which it was concluded that the effectiveness of accounting information systems significantly contributes to accelerating the preparation and improving the accuracy of financial reports. This, in turn, enhances the efficiency of financial and administrative processes within private healthcare institutions.

Conclusion

Through this field study, we have sought to ascertain the effectiveness of accounting information systems in private healthcare institutions and their impact on the quality of accounting information. The study aimed to evaluate the extent to which these systems contribute to improving the credibility, accuracy, and timeliness of accounting data, by means of a field study conducted on a sample of private healthcare institutions in the Ouargla Province. The objective was to determine the practical effectiveness of these systems and to identify aspects that require development or improvement.

Through the analysis of the study's hypotheses, we have reached the following conclusions:

- Regarding the first hypothesis, which posits the existence of a statistically significant relationship between the effectiveness of accounting information systems and the achievement of high-quality accounting information in private healthcare institutions, the results demonstrated that the sample members agree that these systems do indeed contribute to improving the accuracy of reports and reducing errors, thereby enhancing the reliability of the information provided for decision-making.
- Regarding the second hypothesis, which states that the implementation of accounting information systems positively affects the credibility of accounting information in private

healthcare institutions , the results indicated that the majority of the sample members perceive that these systems reduce manipulation and ambiguity in accounting data and contribute to increasing transparency within the institution .

- Regarding the third hypothesis , which asserts that the effectiveness of accounting information systems contributes to improving the speed and accuracy of financial report preparation in private healthcare institutions, the study's findings clarified that reliance on these systems enables the institution to issue accurate reports in a timely manner , which supports administrative performance and increases the effectiveness of the decisions made.

Through our study, we have arrived at the following recommendations:

1. Periodically update the accounting information systems in private healthcare institutions to keep pace with technological advancements and ensure the continued quality of information.
2. Provide continuous training for users, especially accountants, on system utilization and the exploitation of its capabilities for analysis and report preparation.
3. Strengthen the internal control mechanisms related to the system to ensure the integrity of the data and its outputs.
4. Address the problem of poor integration between accounting and medical information systems by working to connect them within a unified information environment.
5. Enhance system security by implementing effective protection policies, including encryption, defining user permissions, and conducting periodic backups.
6. Adopt a periodic internal evaluation system to assess the performance of the accounting system and the degree of its contribution to improving the quality of financial decision-making within the healthcare institution.

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