

The application of human resources accounting and its impact on improving the quality of financial statements in Algerian economic institutions

تطبيق محاسبة الموارد البشرية وأثرها في تحسين جودة القوائم المالية في المؤسسات الاقتصادية الجزائرية

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Abstract:

This study aims to show the impact of the application of human resources accounting on the quality of the financial statements in the Algerian economic institutions, and to try to bring it down through an exploratory study of a sample of 40 individuals that included a group of accountants and financiers for economic institutions in the state of Biskra, using the questionnaire tool for data collection, data processing and analysis. The interpretation of the results was based on the statistical package for social sciences SPSS v26.

This study concluded that there is a statistically significant effect at the level of significance (0.05) for human resources accounting in improving the quality of financial statements in Algerian economic institutions. This study also concluded that the financial statements include accounting information that allows the comparison of the financial statements of economic institutions in order to evaluate their financial position, performance and changes in financial positions.

Keywords: human resources accounting; financial statements; The quality of the financial statements ; Economic Institutions ; Financial Accountants.

JEL Classification Codes: M41, M51, B52, G20.

ملخص:

تهدف هذه الدراسة إلى تبيان أثر تطبيق محاسبة الموارد البشرية على جودة القوائم المالية في المؤسسات الاقتصادية الجزائرية، ومحاولة إسقاط ذلك من خلال دراسة استطلاعية لعينة مكونة من 40 مفردة شملت مجموعة من المحاسبين والماليين للمؤسسات الاقتصادية بولاية بسكرة، باستخدام أداة الاستبيان لجمع البيانات، ومعالجة البيانات وتحليل وتفسير النتائج تم الاعتماد على برنامج الحزم الإحصائية للعلوم الاجتماعية SPSS V26. توصلت هذه الدراسة إلى أن هناك أثر ذو دلالة إحصائية عند مستوى الدلالة ($\alpha=0.05$) لمحاسبة الموارد البشرية في تحسين جودة القوائم المالية في المؤسسات الاقتصادية الجزائرية. كما خلصت هذه الدراسة بأن القوائم المالية تشمل معلومات محاسبية تسمح بمقارنة القوائم المالية للمؤسسات الاقتصادية من أجل تقييم مركزها المالي وأدائها والتغيرات الحاصلة في المراكز المالية.

الكلمات المفتاحية: محاسبة الموارد البشرية، قوائم مالية، جودة القوائم المالية، مؤسسات اقتصادية، المحاسبين الماليين.

تصنيفات JEL: G20، B52، M51، M41.

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INTRODUCTION:

Human resource accounting is one of the newest branches of accounting. Its importance is not limited to the international level, but also extends to the national level in light of global developments, as it is a tool that seeks to serve accounting in general and works specifically to provide the necessary information to parties interested and concerned with this branch of accounting. This has made economic institutions obliged to provide appropriate financial information related to this type of accounting and then communicate it to the various parties interested in such information by subjecting it to quantitative measurement and disclosing the results of the latter in the financial statements in order to shed light on the institution's performance and evaluate it comprehensively.

In light of the above, the problem to be studied can be formulated as follows:

To what extent does the application of human resource accounting improve the quality of financial statements in Algerian economic institutions?

To cover all aspects of the topic, the following sub-questions are posed:

- Is there a statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through the appropriateness dimension in Algerian economic institutions?
- Is there a statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through comparability in Algerian economic institutions?
- Is there a statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through reliability in Algerian economic institutions?
- Is there a statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through the stability dimension in Algerian economic institutions?

❖ **Study hypotheses:** This research is based on the following main hypothesis:

- Is there no statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements in Algerian economic institutions?
- This main hypothesis includes the following sub-hypotheses:
 - There is no statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through the appropriateness dimension in Algerian economic institutions?
 - There is no statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through comparability in Algerian economic institutions.
 - There is no statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through reliability in Algerian economic institutions?
 - There is no statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through stability in Algerian economic institutions.

❖ **Study objectives:** This study seeks to achieve a number of objectives, the most important of which are:

- To identify human resource accounting and its most important objectives.
- To explain the concept of financial statement quality and identify its most important characteristics.
- To identify the reality of human resource accounting in Algerian economic institutions.
- To demonstrate the relationship between human resource accounting and the quality of financial statements.
- To identify the impact of human resource accounting on the quality of financial statements.

❖ **Study methodology:** We relied on a descriptive analytical approach when addressing the theoretical aspect of the topic, while we used a case study approach in the field study, relying on a questionnaire technique to collect and statistically analyze information using SPSS V26 software in order to arrive at answers to the hypotheses.

❖ **Contents of the study:** This study has been divided into two main sections. The first section includes the theoretical framework of human resource accounting, a general framework of financial statement quality and the relationship between human resource accounting and financial statement quality. In the other side, the second section aims to present the applied study.

❖ **Previous studies:** After reviewing various references on this topic, we find that there are several previous studies that have addressed this topic from all angles. The most important of these are as follows:

🚩 **Etude de Demdoun Zakaria et autres (2020), La contribution des pratiques du conservatisme comptable à l'amélioration de la qualité des états financiers dans l'environnement algérien, RoaIktissadiaReview, vol (10), N (02).** This study aimed to clarify the extent of the impact of accounting conservatism on the most important variables that make it possible to achieve good financial statements and apply them to the reality of the Algerian environment, as well as to test the relationship between accounting conservatism and the adequacy and reliability of accounting information at the level of joint-stock companies. To achieve the objectives of the study, a questionnaire was used to collect data and information from a sample of 104 accountants and managers of economic establishments in the south-eastern provinces (El Oued, Ouargla, Biskra) in 2020. The SPSS statistical program was used to analyze the results and test the study's hypotheses. This study concluded that there is a statistically significant effect of accounting conservatism on the quality of financial statements through its strong impact on the disclosure and transparency of accounting information, the quality of accounting profits, and the quality of accounting information. It also found that it has an impact on the effectiveness of corporate governance and the cost of equity.

🚩 **A study by Tahar Khamra (2021) entitled 'The Application of Human Resource Accounting in Algerian Economic Institutions,' Journal of Administrative and Financial Sciences, Volume 05, Issue 02, Algeria:** This study sought to highlight the motivations and difficulties of applying human resource accounting in Algerian economic institutions, as well as the preferred methods of measurement in the field. To achieve the objectives of the study, a questionnaire was used, and the SPSS statistical program was used to analyze the results and test the hypotheses. This study concluded that there are several motivations for applying human

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resource accounting in institutions, as accounting measurement methods for human resources were rejected, but the historical cost method remains the most applicable method.

✚ **Study by Samira Abdel Samad (2022) entitled: ‘The role of human resource accounting in achieving outstanding performance in cement companies,’ Business and Trade Economics Magazine, Volume 07, Issue 01, Algeria.** This study aimed to identify the role of human resource accounting in achieving performance. To achieve the study's objectives, a questionnaire was used as the main tool for collecting data and information, which was distributed to a sample representing the management of the Ain Touta Cement Company. The statistical program SPSS was used to analyze the results. This study concluded that the institution uses human resource accounting and proved that there is a statistically significant impact of human resource accounting on achieving outstanding performance.

2. Human resource accounting and the quality of financial statements:

2.1 Concepts related to human resource accounting:

Researchers and specialists in the field of accounting continue to focus on the concept of human resource accounting, as it is considered a fundamental tool in accounting science. due to its importance within organizations, where it plays a major role in providing relevant accounting information to internal and external stakeholders. This is achieved by addressing the concept of the importance of human resource accounting, as well as its objectives, assumptions and difficulties in implementation.

2.1.1. Definition of human resource accounting: There are many definitions of human resource accounting, the most important of which are:

Human resource accounting is defined as: “The set of principles and concepts that govern the process of identifying and measuring data related to human resources, with the procedures and methods used for this purpose, in order to communicate it to the relevant parties.” (Ben Aichi, 2019, p. 156)

It has also been defined as: "the process of measuring and reporting on human dynamics in an organization, which is the process of assessing the state of human resources in an enterprise and measuring changes in this state over time, as well as providing information about individuals and groups in the enterprise to decision-makers both inside and outside the enterprise". (Bougoffa, Demdoun, & Meraghni, 2020, p. 29)

It is also defined as:” A field of contemporary knowledge whose primary function is to provide management with quantitative information of a critical nature relating to the costs of acquiring, developing and developing human resources, in addition to determining the expenses of amortization and write-offs and changes in their value that are useful in making decisions related to human resources." (Abdessamed, 2022, p. 154)

Based on the above definitions, “we can provide a definition of human resource accounting: It is considered one of the newest branches of accounting that is concerned with determining and measuring the costs associated with the development and advancement of human resources at the level of economic institutions, in accordance with several procedures, methods, and rules derived from accounting principles and assumptions, and then disclosing and communicating them to parties interested in such information”.

2.1.2. The importance of human resource accounting: The importance of human resource accounting is evident in the following: (Soualem, 2020, pp. 159-160)

- Human resource accounting attempts to measure the benefits of spending on human resources, whereas traditional accounting does not attempt to determine these benefits. The value of human resources can only be recognized as part of goodwill, as it treats human resources as an expense for the period and carries it over to its own income. This can distort income measurement, as expenses are overstated and cycle profits are understated.
- By not recognizing human assets in financial statements, the investment base will be valued below its value, distorting the return on investment and rate of return measures. Under traditional accounting systems, changes in an organization's human resource capabilities may not be reflected until long after the event.
- Human resource accounting provides a framework for optimizing the value of human resources and allows human organization to be divided on the basis of costs and benefits, enabling the entire organization to be managed more rationally and economically.
- External decision-making can also be improved by human resource accounting. By taking human resources into account, investors are able to assess the organization's performance and future prospects with greater confidence. It is also possible to determine the contribution of each of the organization's inputs and assess the ratio of human assets to total assets, which is useful in providing a useful forecast of the organization's performance.
- According to many researchers, a lack of information about human resources leads to uncertainty about the value of the organization, particularly in labor-intensive industries.

2.1.3. Objectives of human resource accounting: Human resource accounting seeks to achieve the following objectives: (Kharkhache & Mahmoudi, 2021, pp. 106-107)

- Assisting management and external parties in making decisions related to the planning, use, and control of human resources.
- Provide management with information on the actual costs of acquiring and developing human resources, whether by adding new resources or developing existing ones.
- Assist in preparing the planned budget for the costs of acquiring and developing human resources.
- Help to use available human resources efficiently and effectively.
- Determines the value of individuals to the organization by finding valid and reliable measures.
- Determines the impact of cost-cutting programs on human resources (management's reluctance to conduct specialized training courses, failure to conduct sufficient tests to identify individuals for appointment, etc.). This has a direct impact on productivity and staff turnover, which is clearly demonstrated by human resource accounting through the reports and data it provides on human resources.
- Human resource accounting aims to prepare the training programs necessary to raise the skills and abilities of individuals, based on the costs of these programs and the expected return on investment.

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- Assisting management in distributing individuals to different jobs in a way that leads to the best possible allocation, which requires determining the rate of return from the use of workers in different positions.
- Determining the return that the project obtains from human capital and evaluating investment decisions in the workforce by comparing the cost and benefit of different alternatives.
- Work to find some financial ratios related to human resources that are useful in the financial analysis process and in making various decisions regarding the current and future periods (capital to human capital ratio).
- Identify changes in the workforce structure due to factors such as changes in the age distribution of employees and the impact of this on voluntary capacity and growth rates.

2.1.4.Assumptions underlying human resource accounting: Human resource accounting is based on the following assumptions (Saadani, 2017, pp. 135-136)

❖ **First assumption:** Human resources are considered an important resource for the organization, as they have direct and indirect economic value. The direct value is represented by the effort and time spent by human resources to accomplish the tasks assigned to them directly and to provide various current and future services. while the indirect economic value is represented by their good use and benefit from material and technological resources, as they are able to contribute to the achievement of the institution's objectives.

❖ **Second assumption:** The value of human resources is affected by the management's leadership style, as employee productivity depends on their abilities and skills on the one hand, and their desires and inclinations on the other. The knowledge of human resources develops in organizations whose management focuses on training and developing employees, as well as the material and moral incentives it offers to satisfy various needs. Management also contributes to guiding human resources and making proper use of their energies, which generates positive motivation and psychological and mental readiness to contribute to the organization's goals. If management fails to make good use of human resources, their value declines, and therefore successful management must attract the best talent.

❖ **Third assumption:** Information on human resource accounting in terms of the cost and value of human resources is essential for the effectiveness and efficiency of the organization's management. Such information is useful in the planning, selection, recruitment and development of human resources. The information contained in human resource accounting is also of great importance in short- and long-term monitoring and evaluation processes, both for the organization's management and for external stakeholders.

❖ **Fourth assumption:** The employment of human resources is considered an economic cost borne by the organization in exchange for services and benefits it will receive in the future. Therefore, these costs and services can be translated into monetary terms and shown in the financial statements.

❖ **Fifth assumption:** The traditional concept of assets is based on the following: "Rights and services owned that are measurable in monetary units and are acquired as a result of transactions between economic units from which future services or economic benefits are expected to be obtained.

2.1.5. Difficulties in applying human resource accounting: Considering human resources as assets is a matter that faces many difficulties, the most important of which are: (Alloun, Saadi, & Salhi, 2020, p. 215)

- Organizations do not have legal ownership of human resources to justify treating them as assets.
- Given the uncertainty surrounding the future of the organization, it is difficult to measure the future benefits or services of its human resources, and human resources have the natural freedom to transfer or leave their jobs for any reason.
- It is difficult to be objective when measuring the cost of human resources, as this requires the use of complex mathematical methods and techniques that may be difficult to access.
- High employee turnover makes it difficult to estimate their productive lives, which is necessary for capitalizing and amortizing their expenses.
- Measuring human value and presenting it in financial statements is in itself unacceptable from a humanitarian point of view, not to mention the subjectivity of the measurement process, which may lead to animosity among employees and be met with hostility and hatred.

2.2. Quality of financial statements:

2.2.1. Definition of financial statements:

Financial statements are defined as: "A complete set of accounting and financial documents that are inseparable from each other and provide a true and fair view of the financial position, performance and changes in the financial position of an entity at the end of the accounting period." (Kaskas & Zerkoun, 2019, p. 48)

Financial statements are defined as: "financial statements that must accurately present the financial position of the institution, its efficiency and any changes in its financial situation. They are prepared under the responsibility of the managers and within a maximum period of four months from the end of the financial year. Financial statements provide information that allows comparisons with the previous financial year. It should be noted that financial statements must be presented in the national currency." (SaidOubira, Moussaoui, & Keskas, 2021, p. 380)

Based on the above definitions, we can define financial statements as: a set of accounting documents prepared in accordance with a set of accounting principles applied in economic institutions, which are concerned with diagnosing the financial position of institutions and evaluating their financial performance, and which mainly include: the balance sheet, cash flow statement, income statement, statement of changes in equity, etc.

2.2.2. Objectives of financial statements: According to the conceptual framework of the International Accounting Standards Board, the objectives of financial statements are as follows (Mezimeche & Awadi, 2021, pp. 50-51)

- Financial statements aim to provide information about the financial position, performance and changes in the financial position of an entity that is useful to many categories of users in making economic decisions.
- Financial statements are prepared to meet the common needs of most users. However, they do not provide all the information that users may need to make economic decisions, largely because they reflect the financial effects of past events and do not necessarily provide non-financial information.

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▪ Financial statements also show the results of assessing management's efficiency in performing its duties and help hold it accountable for the resources entrusted to it. Users who wish to assess management's efficiency and hold it accountable aim to make economic decisions, which may include, for example, decisions to retain or sell their investments in the entity or whether it is necessary to change management.

2.2.3 Quality of financial statements: There are many definitions related to the quality of financial statements. Although they differ, they all boil down to one thing. The most important ones are reviewed below:

The quality of financial statements is defined as: ‘The credibility of the accounting information contained in financial reports and the benefit it provides to users. To achieve this, it must be free from distortion and misrepresentation and prepared in accordance with a set of legal, regulatory, professional and technical standards that achieve the purpose for which it is used’” (Riad & chikhi, 2021, p. 74)

The quality of financial statements is also defined as: "A true and fair view of the reality of the institution, being free from errors, misrepresentation, fraud and deception, and prepared without exaggeration and realistically for the items in these statements. The quality of financial statements is considered a green light for decision-makers because of its impact on determining the results of actions or decisions taken, and it aims to express the credibility of financial statements and their freedom from manipulation." (Boufarg, 2022, p. 176)

On the other hand, the quality of financial statements is defined as: "a reflection of a set of qualitative characteristics of accounting information, including credibility as a fundamental characteristic, in addition to a set of other characteristics that include relevance, objectivity, comparability, feedback, and timeliness. The quality of financial statements is nothing more than the quality of the accounting information they contain, measured by their accuracy on the one hand and their impact on the decisions of users of these statements on the other. (Hemiani & Boukerdid, 2022, p. 633)

2.2.4. Characteristics of financial statement quality: The characteristics of financial statement quality are as follows:

▪ **Relevance:** There is a close relationship between accounting information and the purposes for which it is prepared. It can be described as relevant if the decision made on the basis of it differs from the decision made without it. It also helps the decision-maker to evaluate one of the alternatives related to the decision, provided that the other characteristics of useful information are present. (Chikh, 2021, p. 76)

▪ **Comparability:** Information is comparable when it is created and presented in accordance with consistent methods and allows its users to make meaningful comparisons over time and between entities. (khelifa & Boudour, 2018, p. 21)

▪ **Consistency:** Consistency means that when preparing financial statements and reports, the accounting principles used to record economic events and transactions are assumed to remain unchanged from one period to another. The consistency of information increases its usefulness to users by facilitating the analysis and understanding of comparative accounting information, which is an essential element in comparison processes. This means that the economic entity follows the same accounting methods and techniques and applies the same generally accepted

principles from one period to another on a regular basis (Tagourt & Cherif Hassane, 2019, p. 38)

▪ **Reliability:** Financial information is supposed to be reliable in order to contribute to decision-making. This is achieved by ensuring that it is free from errors. Information may be relevant but not highly reliable due to its nature or meaning, to the extent that it may be misleading. Therefore, management must ensure that information is reliable when changing or selecting accounting policies. (Boualag & Bentadj, 2022, p. 132)

2.2.5. Financial statement quality standards: Given that there is no specific definition of financial statement quality, as it varies according to the different perspectives and objectives of the producers and users of financial statements, general standards for measuring its quality can be defined as follows: (SoltaneKaddouri & Lechlach, 2019, pp. 12-13)

❖ **Accuracy as a measure of financial statement quality:** The quality of financial statements can be expressed by their degree of accuracy, i.e., the degree of information about the past, present, and future. The more accurate the statements are, the higher their quality and value in expressing historical facts or future expectations.

❖ **Usefulness as a measure of financial statement quality:** This consists of two elements: the accuracy of the statements and their ease of use. Usefulness can take the following forms:

✓ **Formal usefulness:** i.e. the format of the statements matches the requirements of decision-making.

✓ **Temporal utility:** the statements are available to the decision-maker at the right time.

✓ **Spatial utility:** i.e. they are easily accessible.

✓ **Evaluative or corrective utility:** i.e. the ability of the statements to evaluate and correct the results of the implementation of the decision.

❖ **Effectiveness as a measure of the quality of financial statements:** This expresses the extent and degree to which an economic institution achieves its objectives through specific resources. Therefore, the quality of statements can be defined from the perspective of effectiveness as the extent to which the information achieves the objectives of the institution or decision-maker through the use of specific resources.

❖ **Predictability as a measure of financial statement quality:** Predictability refers to the means by which past and present information can be used to anticipate future events and outcomes, and this information is used in planning and decision-making. Therefore, it is certain that the quality of financial statements is reflected in the reduction of uncertainty.

❖ **Efficiency as a measure of financial statement quality:** Efficiency refers to the use of resources, i.e. achieving the organization's objectives with the least possible use of resources and applying the principle of information economy, which aims to maximize the quality of financial statements at the lowest possible cost, which should not exceed the value of the information contained in the statements.

2.3. The impact of human resource accounting on financial statements

Human resource accounting affects financial statements as follows: (Mezimeche & Awadi, 2021, pp. 128-129)

❖ **For internal financial reports:** Including information about the monetary value of human capital in internal financial reports creates effects and behaviors in individuals that influence their attitudes and preferences. These effects are as follows:

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- Individuals' satisfaction with their quantitative evaluation depends primarily on their conviction that the methods and criteria used in this evaluation are fair and objective. It also generates a subtle desire to increase these values.
- Including quantitative information about human resources in financial statements meets the economic unit's management objective of maximizing the value of these resources and making optimal use of them.
- Human resources are a key variable in most management decisions, and therefore representing this variable in quantitative terms will be more useful to management than representing it in descriptive terms.
- It provides the information needed to evaluate the alternatives available in many human resource decisions, such as hiring and dismissal decisions. This data is also used in many situations. For example, the turnover rate of human assets is an indicator that can be used to control the movement of these assets.

❖ **For financial statements (budget and income statement):** The accounting disclosure of human resource accounting information affects the budget and income statement as follows:

- Objective measurement of both business results and the budget, as charging financial periods with human resource costs as they occur will lead to an imbalance in the process of matching revenues and expenses, and its effects will be reflected in the value of expenses in the income statement and the value of assets in the balance sheet.
- Human resources accounting provides more objective quantitative indicators for performance evaluation purposes.
- It provides financial analysts with significant information for making investment decisions, as it allows them to derive a set of financial ratios that are not provided by traditional accounting statements. These ratios are used to measure the degree of worker concentration in the organization and then to assess the economic impact of high labor turnover rates in different industries.
- The total value of human assets can be analyzed into sub-groups according to the nature or age of the workforce in the organization, or according to the degree of scientific qualification, in order to derive indicators that help evaluate the structure of the workforce in the organization.
- The introduction must contain the basic elements that are systematically accepted in the formulation of the introduction, such as: the study problem - the study hypotheses - the study objectives - the importance of the subject - the methodology used in the study - previous studies - the terms of the study.

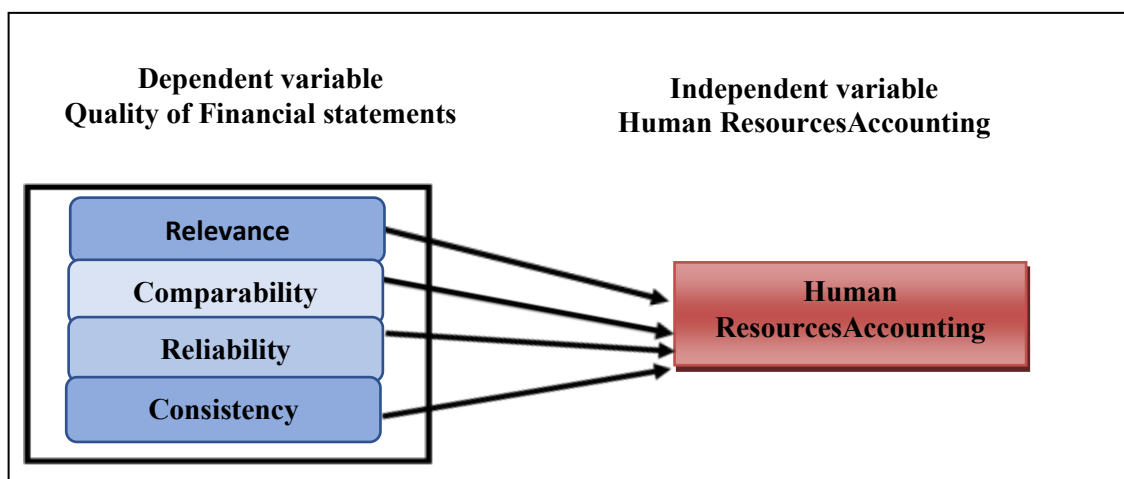
3.1. Description of the study population and sample: The study sample was selected randomly from the study community, comprising a group of accountants and financiers from economic institutions in the state of Biskra, numbering 50 individuals. The questionnaire was distributed to all members of the sample, after which 40 valid questionnaires were retrieved for study and analysis.

Form	Distributed	Retrieved	Cancelled	Used in the study
Number	50	43	3	40
Percentage	100%	86%	6.98	93.02%

Source: Prepared by the researcher.

3.2. Study model: The study model was determined based on the dimensions of the study problem in order to determine the relationship between the independent variable, represented by human resource accounting, and the dependent variable, represented by the quality of financial statements, as illustrated in the following figure:

Figure 1: Study model



Source: Prepared by the researcher.

3.3. Statistical methods used: To achieve the study's objectives, answer the sub-questions, and test the hypotheses, the researchers used a set of statistical methods, relying on the statistical package program (Spss.v26), in which all data were entered and analyzed. The most important statistical methods used in this study are as follows:

- **Cronbach's alpha coefficient:** to determine the reliability of the study tool.
- **Arithmetic mean:** to identify and determine the direction of the sample's responses.
- **Standard deviation:** used to express the dispersion of the sample's opinions.
- **Frequency distribution and percentages:** used to describe the characteristics of the sample.
- **Correlation coefficients and simple linear regression.**

3.4. Testing the validity and reliability of the questionnaire: Here we will test the validity and reliability of the questionnaire (study tool) by calculating Cronbach's alpha coefficient to determine the reliability of this tool. We will also calculate the validity coefficient, which is the square root of Cronbach's alpha value. The following table shows the test of reliability and validity of the questionnaire.

Table 01: Reliability coefficient (Cronbach's alpha) and validity coefficient

Statement	Number of statements	Coefficient of stability Alpha Cronbach	Coefficient of reliability
First axis: Human resources accounting	08	0.713	0.844
Second axis: Quality of financial statements	16	0.711	0.843
The questionnaire as a whole	24	0.831	0.912

Source: Prepared by researchers using SPSS v26 software.

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Comment: We note from the results in the table above that the total value of the stability coefficient for all questionnaire items is equal to **(0.831)**, noting that the Cronbach's alpha coefficient value must be within this range **(0.60 to 1.00)**, where the closer it is to one, the greater the stability. We have observed that the stability coefficient value **(0.831)** is very high, which indicates that all the statements included in the study tool have a high degree of stability. We also note that the reliability coefficient is **0.912**, which is a high value, meaning that the questionnaire statements are reliable. Thus, the stability and reliability of the study's performance have been confirmed, giving us complete confidence in the validity of the study tool, through which we can analyze the outputs.

2-5- Study scale: In this study, the Likert five-point scale was chosen as it is one of the most common and widely used scales. The limits of agreement can be seen in the following table:

Table 02: Study scale “Likert five-point scale”

Classification	Grade	Average categories
Strongly disagree	1	1.00-1.79
Disagree	2	1.80-2.59
Neutral	3	2.60-3.39
Agree	4	3.40-4.19
Strongly agree	5	4.20-5.00

Source: Prepared by researchers

2.5. Presentation and analysis of results related to the study topics:

2.5.1. Analysis of the general characteristics of the study sample: From the data in the questionnaire related to the characteristics of the sample, we obtained the information shown in the following table:

Table 03: Characteristics of the sample

Number	Variable	Category	Frequency	Percentage
1	Gender	Male	25	62.50%
		Female	15	37.50%
2	Age group	Under 30 years	04	10%
		31 to 40 years	8	20%
		41 to 50 years	16	40%
		Over 50 years	12	30%
3	Academic qualification	Bachelor's degree	18	45%
		Master's degree	16	40%
		Master's degree	04	10%
		Doctorate	02	05%
4	Specialization	Accounting	16	40%
		Accounting and Auditing	15	37.5%
		Accounting and Taxation	09	22.5%
5	Years of experience	Less than 5 years	06	15%
		5 to 10 years	20	50%
		More than 10 years	14	35%

Source: Prepared by researchers

Comment: The table above shows the statistical results of the study sample characteristics. From these results, we observe that:

- A high percentage of the sample are male (62.50%), while females account for 37.50%.’
- The most of the study sample are in the 41-50 age group, accounting for 40% followed by those aged over 50 years (30%), then those aged between 31 and 40 years (20%). Those aged under 30 years constituted the smallest group, accounting for 10%.
- We also note that the majority of the study participants in terms of educational qualifications are those with a bachelor's degree, accounting for 45% of the total. followed by those with a master's degree, accounting for 40%. As for the other groups, those with a master's degree accounted for 10%, and finally, those with a doctorate accounted for a very small percentage, estimated at 5%.
- We also note that the specialization with the highest percentage of individuals in the study sample is accounting, with a percentage of 40%, followed by accounting and auditing with a percentage of 37.5%. As for the percentage of individuals in the sample specializing in accounting and tax collection, it was estimated at 22.5%.’
- The table also shows that the majority of the sample have between 5 and 10 years of experience (50%). This is followed by those with more than 10 years of experience (35%), while those with between 1 and 5 years of experience constitute the smallest group (15%).

2.5.2. Analysis of the first axis statements: To analyze the statements related to the first axis, “human resource accounting”, the arithmetic means and standard deviations of the study sample's responses were calculated.

Table 04: Results of the sample's opinions on human resource accounting

Expressions	Arithmetic mean	Standard deviation	Trend
01. Human resource accounting is a modern concept in accounting and is of great interest to the organization.	4.22	0.768	Strongly agree
02. The organization relies on the historical cost method to measure the cost of human resources.	4.10	0.982	Agree
03. The existence of systems and laws that require the organization to apply human resource accounting.’	4.28	0.784	Strongly agree
04. The difficulty of measuring human resources reduces the organization’s interest in applying human resources accounting.	4.15	1.051	Agree
05. The existence of an accounting standard for measuring and disclosing human resources helps the organization prepare quality financial statements.’	4.08	0.984	Agree
06. The organization has an accounting system that meets the purposes of accounting disclosure for human resources.	4.13	0.757	Agree
07. The organization organizes training courses to explain the general framework of human resource accounting and how to apply it.	3.70	1.067	Agree
08. Human resources accounting contributes to estimating the organization’s costs, which helps in making financial decisions.	3.88	0.883	Agree
Total	4.06	0.528	Agree

Source: Prepared by researchers based on the outputs of the SPSS v26 program.

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Comment: This table shows the arithmetic means and standard deviations for the items in the first axis, which is human resource accounting. It is clear that the overall arithmetic mean for the items in this variable is between **3.70 and 4.28** with a value of **4.06**, which falls within the agreeable range according to the Likert scale, indicating that the study sample agrees with the existence of human resource accounting in their organizations. As for the total standard deviation of the items in this axis, it is equal to **(0.528)**, which is a very weak value, indicating that there is no significant dispersion (i.e., there is agreement and harmony) in the opinions of the study sample individuals regarding the answers to the items in this axis.

2.6.1. Analysis of the statements in the second axis: To analyze the statements in the second axis, “**Quality of financial statements**”, the arithmetic means and standard deviations of the responses of the study sample were calculated.

2.6.2.1 Analysis of the statements in the first dimension: Appropriateness

Table 05: Results of sample individuals' opinions on statements related to the first dimension, “Appropriateness”

Expressions	Arithmetic mean	Standard deviation	Trend
01. Financial statements contain information that is relevant to the parties using those statements for making informed decisions.	3.58	1.259	Agree
02. Financial statements provide financial information that is relevant to management for planning and control.	4.33	0.474	Strongly agree
03. Financial statements are prepared by the organization on the specified date and are available to users at the appropriate time.	4.28	0.784	Strongly agree
04. Financial statements provide relevant and predictable information to avoid potential losses	4.35	0.700	Strongly agree
Total	4.13	0.569	Agree

Source: Prepared by researchers based on the outputs of the SPSS v26 program

Comment: Table 4 shows that the study sample agrees with the statements of the first dimension, “appropriate”, as reflected in the weighted arithmetic mean of the items of this dimension, which is **4.13**, falling within the range of **3.40-4.19** according to the five-point Likert scale used in the study, where this value indicates an agree response. We also note that the arithmetic means range between **3.58 and 4.35**, with response scores of agree and strongly agree. As for the standard deviation, its value ranges between **(0.7000-1.259)**, with a total value for all items of this variable **(0.569)**, which indicates that there is no significant dispersion in the sample's responses to the questions of this dimension.

2.6.2.2. Analysis of the statements of the second dimension: comparability

Table 06: Results of the sample's opinions on the second dimension, “comparability”

Expressions	Arithmetic mean	Standard deviation	Trend
01. Financial statements include accounting information that allows comparison of the entity's financial statements in order to assess its financial position, performance and changes in financial position.	3.98	1.000	Agree

02. Financial statements enable users to identify differences in accounting policies within the entity for similar transactions and other events.	3.80	1.067	Agree
03. The entity adheres to accounting principles and assumptions in preparing its financial statements.	4.10	1.008	Agree
04. The entity's financial statements include information that allows for comparison with the financial statements of other entities.	3.63	1.148	Agree
Total	3.88	0.604	Agree

Source: Prepared by researchers based on the outputs of the SPSS v26 program

Comment: Table 5 shows that the study sample agrees with the items in the second dimension, “comparability”, as reflected in the weighted arithmetic mean for this dimension, which is 3.88, falling within the range of 3.40-4.19 according to the five-point Likert scale used in the study, where this value indicates an agree response. We also note that the arithmetic means range between 3.63 and 4.10, with agree responses. As for the standard deviation, its value ranges between (1.000-1.148), with a total value for all items of this variable of (0.604), which indicates that there is no significant dispersion in the sample's responses to the questions of this dimension.

2.6.2.3. Analysis of the statements of the third dimension: reliability

Table 07: Results of the sample's opinions on the third dimension, “reliability”

Expressions	Arithmetic mean	Standard deviation	Trend
01. The information contained in the financial statements should be able to express the substance of the economic objectives in a manner that enables users to rely on it in making decisions.	4.18	0.931	Agree
02. The institution relies on verified records and documents for all transactions when preparing financial statements, which contributes to increasing the impartiality and reliability of the information contained in those statements.	4.05	0.986	Agree
03. Fair presentation helps users of accounting information determine the level of confidence in their decision-making.	3.98	0.891	Agree
04. The information contained in the financial statements is free from bias and error.	3.90	0.900	Agree
Total	4.03	0.625	Agree

Source: Prepared by researchers based on the outputs of the SPSS v26 program

Comment: Table 6 shows that the study sample agrees with the items in the third dimension, “reliability”. This is reflected in the weighted arithmetic mean for the items in this dimension, which is **4.03**, falling within the range of **3.40-4.19** according to the five-point Likert scale used in the study, where this value indicates an agree response. We also note that the arithmetic means range between **3.90 and 4.18**, with response scores of ‘agree’ and ‘strongly agree.’ As for the standard deviation, its value ranges between (**0.891-0.986**), with a total value for all items in this dimension of (**0.625**), which indicates that there is no significant dispersion in the sample's responses to the questions in this dimension.

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2.6.2.4. Analysis of the statements of the second dimension: stability

Table 08: Results of the sample's opinions on the fourth dimension, "stability"

Expressions	Arithmeticmean	Standard deviation	Trend
01. The institution is committed to consistency in accounting methods and techniques in the preparation of financial statements.	3.68	1.071	Agree
02. Consistency in information increases its usefulness to users.	4.20	0.992	Strongly agree
03. Accounting information contained in financial statements and based on consistent accounting principles and methods allows for comparison between one period and another.	3.73	1.219	Agree
04. The institution is committed to disclosing explanations supplementing the financial statements regarding the adoption of the new policy.	4.13	0.883	Agree
Total	3.93	0.648	Agree

Source: Prepared by researchers based on the outputs of the SPSS v26 program

Comment: Table 7 shows that the study sample agrees with the items in the fourth dimension, "stability", as reflected in the weighted mean score for this dimension, which is 3.93, falling within the range of 3.40-4.19 according to the Likert scale used in the study, where this value indicates an agree response. We also note that the arithmetic means range between 3.68 and 4.13, with agree responses. As for the standard deviation, its value ranges between (0.883-1.071), with a total value for all items of this variable of (0.648), which indicates that there is no significant dispersion in the sample's responses to questions about this dimension.

2.7. Testing the study hypotheses:

2.7.1. Testing the first sub-hypothesis: There is no statistically significant effect at the significance level ($=0.05\alpha$) for human resource accounting in improving the quality of financial statements through the appropriateness dimension in Algerian economic institutions.

Table 09: Results of testing the first sub-hypothesis

Independent variable: Human resource accounting							
Statistics	Correlation coefficient	Coefficient of determination R ²	Calculated t-value	Calculated F-value	Regression coefficient B	Significance level (Sig)	Result
Values	0.565a	0.319	4.219	17.80	1.657	0.000	Rejection of the null hypothesis

Source: Prepared by researchers based on the outputs of the SPSS v26 program

We observe from the results in the table that the Pearson correlation coefficient between the independent variable "**human resource accounting**" and the dependent variable reached a value of ($R=0.565$) after adjustment. which is a positive value indicating a direct relationship. Since it is close to one, the relationship between them is strong. We also note that the coefficient of determination is equal to (31.90%), which means that the explanatory power of the independent variable (human resource accounting) for the dependent variable 'after adjustment' is very acceptable. The table also indicates that the F value reached (17.80), which is greater than its tabulated value, and that the sig value reached (0.000), which is less than (0.05). Based on these results, **we reject the null hypothesis** that 'there is no statistically significant effect at

the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through the dimension of appropriateness in Algerian economic institutions.’ and **we accept the alternative hypothesis** that states that ‘there is a statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through the appropriateness dimension in Algerian economic institutions.

2-7-2- Testing the second sub-hypothesis: There is no statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through comparability in Algerian economic institutions.

Table 10: Results of testing the second sub-hypothesis

Independent variable: Human resource accounting							
Statistics	Correlation coefficient	Coefficient of determination R2	Calculated t-value	Calculated F-value	Regression coefficient B	Significance level (Sig)	Result
Values	0.379a	0.141	9.112	6.374	2.111	0.005	Rejection of the null hypothesis

Source: Prepared by researchers based on the outputs of the SPSS v26 program

We note from the results in the table that the Pearson correlation coefficient between the independent variable “**human resource accounting**” and comparability reached a value of ($R=0.379$), which is a positive value indicating a direct relationship. Since it is close to one, it is a moderate relationship between them. We also note that the coefficient of determination is equal to (14.10%), which means that the explanatory power of the independent variable (human resource accounting) for the dependent variable “**comparability**” is **somewhat weak**. The table also indicates that the F value reached (**6.374**), which is greater than its tabulated value, and that the sig value reached (0.005), which is less than (**0.05**). Based on these results, **we reject the null hypothesis** that ‘there is no statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through comparability in Algerian economic institutions. and **we accept the alternative hypothesis** that states that there is a statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through comparability in Algerian economic institutions.

2-7-3- Testing the third sub-hypothesis: Is there no statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through the reliability dimension in Algerian economic institutions.

Table 11: Results of testing the third sub-hypothesis

Independent variable: Human resource accounting							
Statistics	Correlation coefficient	Coefficient of determination R2	Calculated t-value	Calculated F-value	Regression coefficient B	Significance level (Sig)	Result
Values	0.828a	0.686	9.112	83.037	0.980	0.000	Rejection of the null hypothesis

Source: Prepared by researchers based on the outputs of the SPSS v26 program

We observe from the results in the table that the Pearson correlation coefficient between the independent variable “**human resource accounting**” and reliability reached a value of ($R=0.828$). which is a positive value indicating a direct relationship. Since this value is close to one, the relationship between them is strong. Meanwhile, we note that the coefficient of determination is equal to (68.60%), which means that the explanatory power of the independent variable (human resource accounting) for the dependent variable “**reliability**” is very high. The

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table also indicates that the F value reached (83.037), which is greater than its tabulated value, and that the sig value reached (0.000), which is less than (0.05). Based on these results, **we reject the null hypothesis**, which states that ‘there is no statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through reliability in Algerian economic institutions.’ and **we accept the alternative hypothesis** that states that ‘there is a statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through the reliability dimension in Algerian economic institutions.

2-7-4- Testing the fourth sub-hypothesis: There is no statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through the stability dimension in Algerian economic institutions

Table 12: Results of testing the fourth sub-hypothesis

Independent variable: Human resource accounting							
Statistic s	Correlation coefficient	Coefficient of determination R ²	Calculated t-value	Calculated F-value	Regression coefficient B	Significance level (Sig)	Result
Values	0.306a	0.094	3.094	3.931	2.404	0.004	Rejection of the null hypothesis

Source: Prepared by researchers based on the outputs of the SPSS v26 program

We observe from the results in the table that the Pearson correlation coefficient between the independent variable “human resource accounting” and stability reached a value of ($R=0.306$), which is a positive value indicating a direct relationship. Since it is close to one, the relationship between them is strong. Meanwhile, we note that the coefficient of determination is equal to (09.40%), which means that the independent variable (human resource accounting) has a weak explanatory power for the dependent variable “**stability**”. The table also indicates that the F value reached (3.931), which is greater than its tabulated value, and that the sig value reached (0.004), which is less than (0.05). Based on these results, **we reject the null hypothesis**, which states that ‘there is no statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through stability in Algerian economic institutions and **we accept the alternative hypothesis** that states that ‘there is a statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through stability in Algerian economic institutions.

2-7-5- Testing the main hypothesis: There is no statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements in Algerian economic institutions.

Table 13: Results of testing the main hypothesis

Independent variable: Human resource accounting							
Statistics	Correlation coefficient	Coefficient of determination R²	Calculated t-value	Calculated F-value	Regression coefficient B	Significance level (Sig)	Result
Values	0.673a	0.453	5.607	3.441	1.518	0.000	Rejection of the null hypothesis

Source: Prepared by researchers based on the outputs of the SPSS v26 program

We observe from the results in the table that the Pearson correlation coefficient between the independent variable “**human resource accounting**” and the dependent variable “quality of financial statements” reached a value of ($R=0.673$). which is a positive value indicating a direct relationship. Since it is close to one, the relationship between them is strong. We also note that the coefficient of determination is equal to (45.30%), which means that the independent variable (human resource accounting) explains a high percentage of the dependent variable ‘quality of financial statements’ is high. The table also indicates that the F value reached (5.607), which is greater than its tabulated value, and that the sig value reached (0.000), which is less than (0.05). Based on these results, **we reject the null hypothesis** that ‘there is no statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements in Algerian economic institutions, and **we accept the alternative hypothesis** that states that ‘there is a statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements in Algerian economic institutions.

4. CONCLUSION

Through our theoretical and field study of the impact of using human resource accounting to improve the quality of financial statements, we have reached a set of conclusions and recommendations, which we list as follows:

❖ **Study results:** This study reached a set of conclusions:

- Financial statements provide financial information that is relevant to the management of the institution for the purposes of planning and control.
- The accounting information contained in financial statements, which is based on established accounting principles and methods, allows for comparisons between different time periods.
- The institution is committed to disclosing the notes to the financial statements on the adoption of the new policy.
- There is a statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through the dimension of relevance in Algerian economic institutions.
- There is a statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through comparability in Algerian economic institutions.
- There is a statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through the reliability dimension in Algerian economic institutions.’

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- There is a statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements through the stability dimension in Algerian economic institutions.
- There is a statistically significant effect at the significance level ($=0.05\alpha$) of human resource accounting on improving the quality of financial statements in Algerian economic institutions.
- ❖ **Recommendations:** Based on the results obtained, we can make some scientific recommendations:
 - The need to issue an accounting standard that clarifies how to apply human resource accounting at the level of Algerian economic institutions.
 - Encouraging institutions to pay attention to modern accounting software in light of its application to human resource accounting.
 - The need to organize training courses and scientific forums for professionals working in the field of accounting to provide them with everything related to human resource accounting.

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