

Challenges in Measuring and Disclosing Sustainability Accounting Information: Evidence from Algerian Companies

Ikram Hafsaoui, Raouf Bouali

¹ Faculty of Economics, Commercial and Management Sciences, University of Jijel, Jijel, Algeria

Dr. Ikram Hafsaoui

Email: ikramhafsaoui395@gmail.com

ORCID: <https://orcid.org/0009-0000-1305-0208>

Dr. Raouf Bouali

Email: raouf.bouali@univ-jijel.dz

ORCID: <https://orcid.org/0000-0002-3618-5006>

Abstract

Sustainability accounting has become increasingly important for integrating economic, environmental, and social considerations into corporate measurement, reporting, and decision-making. Nevertheless, its effective implementation remains constrained by significant measurement and disclosure challenges, particularly in emerging economies. This study examines the relevance of sustainability accounting to Algerian economic companies and identifies the principal obstacles preventing its comprehensive and consistent application. An exploratory case-study design was employed, supported by an inductive analysis of the perspectives of Algerian accounting professionals. Their professional assessments were examined to determine how current accounting practices address sustainability-related information and to evaluate the difficulties associated with measuring and communicating corporate sustainability performance. The findings indicate that sustainability accounting can strengthen organisational competitiveness by improving transparency, supporting strategic decision-making, and broadening the information available to internal and external stakeholders. However, its practical application in Algerian companies remains limited by persistent methodological, organisational, and disclosure-related constraints. These challenges reduce the comparability, reliability, and decision usefulness of sustainability information and hinder its systematic integration into conventional accounting systems. The study concludes that sustainability accounting should be developed as an integral component of corporate reporting rather than treated as a supplementary disclosure practice. Greater institutional coordination, clearer measurement and reporting guidance, enhanced professional capacity, and stronger organisational commitment are required to facilitate its effective adoption. The findings provide practical implications for companies, accounting professionals, standard-setting institutions, and policymakers seeking to advance sustainability reporting practices in Algeria and comparable emerging-market contexts.

Keywords: sustainability accounting; sustainability measurement; corporate disclosure; economic companies; implementation barriers; Algeria

¹ Received: January 04, 2026; Accepted: March 12, 2026; Published: August 16, 2026

© 2026 The Author. Published by AVADA. This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY 4.0), which permits unrestricted use, distribution, adaptation, and reproduction in any medium, provided that the original author and source are properly credited.
<https://creativecommons.org/licenses/by/4.0/>



Introduction

Sustainable accounting is considered the latest stage in the development of accounting, emerging as a result of the growing interest in issues related to environmental and social protection, meeting and safeguarding consumers' needs, as well as the increasing demand for non-financial information about organizations. Traditional accounting has become unable to provide adequate non-financial information or achieve sustainable development objectives due to the limitations associated with the difficulty of making non-monetary measurements. This is because financial accounting alone is insufficient to evaluate and measure the environmental and social factors and impacts of organizations' operations. Therefore, sustainable accounting has emerged as an important accounting tool on which economic organizations rely to obtain information for measuring their performance in the environmental, social, and economic fields and for incorporating the dimensions of sustainable development. This is achieved through the measurement and disclosure of environmental and social costs in financial statements, enabling decision-makers to assess the organization's actual performance and make appropriate decisions. This is based on the premise that economic performance does not reflect the organization's actual situation or provide a complete picture unless its environmental and social performance is also measured. However, the latter still faces challenges regarding the implementation of measurement and disclosure practices in sustainable accounting.

Research Problem

The research problem can be formulated as follows:

What are the challenges associated with implementing measurement and disclosure practices in sustainable accounting in economic organizations in Algeria?

Sub-Questions

To what extent are the members of the sample aware of the importance of implementing measurement and disclosure practices in sustainable accounting in economic organizations in Algeria?

What are the main obstacles facing economic organizations in Algeria when implementing measurement and disclosure practices in sustainable accounting?

Research Hypotheses

In order to answer the research questions, the following hypotheses were formulated:

The sample members are aware of the importance of implementing measurement and disclosure practices in sustainable accounting in economic organizations in Algeria.

There are obstacles and challenges facing the implementation of measurement and disclosure practices in sustainable accounting in economic organizations in Algeria.

Research Objectives

This study seeks to achieve the following objectives:

To identify the importance of implementing measurement and disclosure practices in sustainable accounting in economic organizations in Algeria.

To identify the difficulties and challenges associated with implementing measurement and disclosure practices in sustainable accounting in economic organizations in Algeria.

Significance of the Study

The significance of this study can be highlighted through the following point:

The importance of this study generally stems from the importance of measuring and disclosing environmental and social performance for economic organizations, particularly large industrial organizations, in order to provide a comprehensive and complete picture of the organization's overall performance by providing useful information to stakeholders.

Research Methodology

To answer the research question raised in the research problem and achieve the objectives of the study, the descriptive-analytical approach was adopted in the theoretical sections by collecting information related to the subject under investigation. In the applied section, the case study method, based on an inductive approach, was employed by examining the opinions of a group of accounting professionals, with the aim of generalizing the findings to the sample belonging to the study population.

1. Measurement and Disclosure in Sustainable Accounting

Accounting plays an important role in achieving sustainable development through the outputs provided by economic organizations in the form of financial statements at the end of each accounting period. In this section, we address the concept of accounting measurement and disclosure in sustainable accounting within economic organizations.

A. Definition of Sustainable Accounting

Sustainable accounting can be defined as an information system aimed at measuring a company's environmental, social, and economic performance and demonstrating the extent of its contribution to economic development. Sustainability accounting reflects the management of the environmental and social impacts arising from an organization's production of goods and services, in addition to managing the environmental and social capital necessary to create long-term value (Ali Khalaf Kati' Al-Jubouri, 2019, p. 305)

B. Definition of Accounting Measurement

The International Accounting Standards Board defines accounting measurement as "the process of determining the monetary amounts at which the elements of the financial statements are to be recognized and carried in the statement of financial position. This involves the selection of a particular measurement basis" (Elena, 2021, p. 194)

Accounting measurement was also defined by the Financial Accounting Standards Board (FASB) as the assignment of numbers to objects or events according to specified rules. It is also a comparative process aimed at obtaining accurate information that enables differentiation between one alternative and another when making decisions (Youssef Kheniche, 2018, p. 178)

Hendriksen considers accounting measurement to mean determining the numerical values of objects or events relating to the economic entity. These numerical values are determined in a manner that makes them suitable for aggregation, such as calculating the total value of assets, or for disaggregation when required by particular circumstances (Eldon, 1992, p. 130)

C. Definition of Environmental Accounting Measurement

Environmental accounting measurement refers to determining the values of all cost elements arising from an organization's commitment to a particular environmental and social obligation, whether such commitment is voluntary or imposed by law.

Environmental accounting measurement also refers to the quantitative or monetary translation of an organization's activities in relation to the environment, through which environmental information can be obtained to assist users of the organization's financial statements in understanding and interpreting such information (Abdelkader Awadi, 2018, p. 128)

D. Definition of Social Accounting Measurement

It is the process of selecting variables, indicators, and procedures for measuring social performance at the organizational level, and then presenting them systematically. These variables, indicators, and procedures are used to assess the organization's social performance **(Mouayed Al-Fadl, 2002, p. 68)**

Al-Alaymat argues that social accounting measurement is merely a monetary expression of activities with a social dimension, which can be measured using monetary indicators, with their effects on the financial statements determined on the basis of historical and future information in accordance with social accounting and legislative principles **(Al-Alimat, 2010, p. 150)**

Social financial statements are the means through which a company communicates with its stakeholders and society by informing them about its social, economic, and environmental actions. Through these financial statements, the organization can communicate with stakeholders and society **(Gray, 1995, p. 88)**

A. Accounting Disclosure:

Accounting disclosure refers to complete clarity, the absence of ambiguity, inaccuracies, and uncertainty in the preparation of the financial statements of economic institutions. These statements should contain the information required by their users so that they accurately reflect the financial position reached at the end of the fiscal year **(Dafour, 2016, pp. 153-154)**

B. Social Disclosure:

Social disclosure is the process through which an organization communicates with society by presenting all of its social and environmental impacts, whether with regard to stakeholders or society as a whole. It can also be stated that social disclosure encompasses all reports submitted by organizations concerning the social aspects of their activities, beyond profit-related matters. These reports are of interest to shareholders, creditors, and even employees **(Al-Ayache, 2018, p. 47)**

C. Environmental Disclosure:

Shaheen argues that all types of items considered by the organization as costs should be disclosed, along with an indication of the amount of such costs recognized in the income statement and those capitalized during the period **(Shaheen, 2011, p. 290)**.

Environmental disclosure can be defined as the presentation of data and information related to an organization's environmental activities in its financial statements, periodic reports, and accompanying notes. This facilitates the task of users of financial data and information in evaluating environmental performance, rationalizing decisions related to it, and assessing the efficiency of management in terms of environmental performance **(Mahouat, 2015, p. 88)**

2. Sustainability Accounting Standards

These can be presented as follows:

Jean Rogers established the Sustainability Accounting Standards Board (SASB) in 2011 as a non-profit organization aimed at developing sustainability accounting standards. This came at a time when investors, lenders, insurance companies, and other providers of financial capital were becoming increasingly aware of sustainability-related issues **(Tanushri, 2023)**

It can also be stated that the Sustainability Accounting Standards Board (SASB) is an independent standards-setting organization that develops standards and promotes the disclosure of material sustainability information in order to meet investors' needs **(Ajinomoto, 2024)**

The SASB standards constitute a set of standards designed to meet investors' needs by enhancing the disclosure of high-quality information. These standards focus on known trends and uncertainties that could reasonably be expected to affect a company's financial condition or operating performance. They can be summarized as follows **(Tanushri, 2023):**

A. Global Applicability:

SASB standards seek to provide investors with sustainability disclosures that are “relevant, reliable, and comparable across companies on a global basis.” Most SASB metrics apply to companies and investors worldwide, while other metrics are reviewed and refined to improve their global applicability.

B. Financial Materiality:

SASB standards aim to identify the environmental, social, and governance issues that are most significant to the financial performance of organizations across 77 industries. An issue is considered financially material if the omission or misstatement of sustainability information could significantly affect a company’s risk profile or influence capital allocation.

C. Evidence-Based Approach:

The SASB Board gathers evidence from external sources to determine the financial impact of each specific sustainability issue across the industries covered. It also assesses the regulatory, environmental, and economic drivers specific to businesses in order to ensure the relevance of environmental, social, and governance (ESG) concerns to each industry.

D. Sector Specificity:

SASB standards focus on increasing disclosure of environmental, social, and governance concerns specific to particular sectors, because not all sustainability issues are equally important to every company. The same sustainability issue may also manifest itself differently across industries.

E. Market-Informed Approach:

When assessing sustainability issues that should be disclosed within a particular industry, the Standards Board seeks the views of key stakeholders, including companies, investors, and other market participants.

3. Approaches to the Development of Sustainability Accounting

There are three approaches to the development of sustainability accounting, which can be summarized as follows (Farid, 2016, pp. 15-16):

A. First Approach: The Inside-Out Approach

Attempts by organizational managers to develop sustainability accounting practices emerged because they needed information related to social and environmental issues affected by the organization’s activities, particularly information that could contribute to strengthening the organization’s competitive position in the market and other areas. According to this approach, sustainability accounting is viewed as a process of collecting and communicating information to support internal decision-making processes and the implementation of the organization’s strategy.

B. Second Approach: The Outside-In Approach

Under this approach, efforts to develop sustainability accounting are initiated by stakeholders, namely external parties. The organization is viewed as a social entity within society, and its social and environmental responsibilities are assessed accordingly. Therefore, it is necessary to identify stakeholders’ expectations and perspectives in order to meet them and provide them with the information they require.

C. Third Approach: The Dual Approach

This approach combines the first and second approaches. It recognizes that sustainability accounting should integrate the perspectives of both organizational managers and external stakeholders. According to this approach, sustainability accounting provides the following:

Monitoring compliance with environmental policies and legislation.

Supporting continuous improvement processes within the organization.

Providing information for internal decision-making purposes at the organizational management level.

Providing information for external disclosure and reporting to stakeholders.

2. The Role of Accountants in Achieving the Sustainability of Economic Institutions

Accounting studies have sought to improve and expand the areas of accounting measurement and disclosure by broadening the scope of professional accountants' work to include new issues, most importantly the measurement and disclosure of social and environmental contributions, alongside the economic contributions of economic institutions. Accordingly, the International Federation of Accountants (IFAC) has defined the general framework for accountants' work in the field of sustainability accounting as follows (**Farid, 2016, pp. 15-16**):

- a. Adopting a long-term orientation and developing policies to address environmental and social issues and communicating with stakeholders.
- b. Improving and evaluating non-financial systems that include sustainability performance data.
- c. Activating risk management, measuring performance management, and disclosing the economic, environmental, and social performance of the economic institution.
- d. Preparing external sustainability reports for economic institutions by providing accurate, relevant, and reliable information to stakeholders and shareholders.

3. Field Study

A. Field Study Instrument

In order to prepare the applied part of this study, a questionnaire was designed to collect primary data concerning the study variables. The questionnaire was developed based on the research problem and hypotheses and was divided as follows:

First dimension: The importance of applying sustainability accounting in economic institutions in Algeria.

Second dimension: Challenges and difficulties associated with the implementation of measurement and disclosure of sustainability accounting in economic institutions in Algeria.

It should be noted that the five-point Likert scale was used for all questionnaire items. This scale consists of five levels, respectively: Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree. These levels are presented in the following table:

Table 01: Distribution of Agreement Levels According to the Likert Scale

Class Interval	(1–1.80)	(1.80–2.60)	(2.60–3.40)	(3.40–4.20)	(4.20–5)
Degree of Agreement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Source: The researchers, based on SPSS results.

B. Population and Sample of the Study

The population refers to the entire group of people, events, or objects that the researcher is interested in and wishes to study (**Sekaran, 2016, p. 236**) In the present case, the study population consists of accounting professionals, including accounting experts, statutory auditors, certified accountants, as well as financial and accounting executives working in economic institutions in Algeria.

Given the inability to determine the exact size of the study population, the difficulty of covering all its members, and other reasons that make it difficult to conduct the research on the entire population, a sampling method was adopted by selecting a representative sample from the population and conducting the study on it.

A total of 50 paper questionnaires were distributed, either directly or with the assistance of family members and colleagues, by visiting the offices of accounting professionals, including accounting experts, statutory auditors, certified accountants, as well as economic institutions in Algeria. Of these, 42 questionnaires were retrieved, while 8 questionnaires were excluded because they were invalid, either due to failure to answer all the questions or because they contained inconsistent information.

In addition, an electronic questionnaire link was sent to all email addresses published on the website of the National Council of Accounting, in the lists of accounting experts, statutory auditors, and certified accountants. The link was also disseminated through social media platforms, particularly groups and pages dedicated to accounting professionals. A total of 83 electronic responses were obtained.

Accordingly, our study concerns an undefined population, and a random sampling method was adopted. Therefore, the sample covered by the study consists of approximately 117 respondents.

A. Assessment of the Validity and Reliability of the Research Instrument

The validity of the research instrument will be assessed from two perspectives: validity and reliability.

– Testing the Validity of the Instrument:

The validity of the instrument will be assessed through expert judgment validity and internal consistency validity, as follows:

• Expert Judgment Validity:

The validity of the questionnaire was verified by submitting it to five specialized professors with expertise in the field, from the Departments of Commercial Sciences and Management Sciences, for review and discussion. The questionnaires were then retrieved after incorporating their comments and observations regarding the questions included in the different sections, and the questionnaire was subsequently finalized in its final form.

• Internal Consistency Validity of the Questionnaire Sections and Items:

Internal consistency validity refers to the extent to which each questionnaire item is consistent with the dimension to which it belongs. The internal consistency of the questionnaire items was verified using the study sample of 117 respondents by calculating the correlation coefficients between each item and the total score of its corresponding dimension.

Table 2: Correlation Coefficients between the Mean of Each Item in the First Dimension and the Overall Mean of the Dimension

Item	Correlation Coefficient	Significance Level
Economic Dimension		
1- The application of sustainable accounting makes customers satisfied with the quality of products.	0.591	0.000
2- The application of sustainable accounting ensures customer loyalty.	0.595	0.000
3- The application of sustainable accounting helps the organization increase its sales volume.	0.613	0.000

4- The application of sustainable accounting contributes to supporting production and reducing economic costs.	0.668	0.000
5- The application of sustainable accounting ensures an increase in the organization's market share value.	0.610	0.000
Social Dimension		
6- The application of sustainable accounting provides occupational safety and accident-prevention measures.	0.562	0.000
7- Determining and measuring the organization's net social contribution should not be limited to the organization's internal and private costs and benefits, but should also include external social costs and benefits.	0.671	0.000
8- The application of sustainable accounting contributes to balancing the company's obligations toward shareholders and society and reducing conflicts among stakeholders.	0.700	0.000
9- Sustainable accounting enhances disclosure of the relationships that companies maintain not only with their customers and employees, but also with other community groups by meeting their needs.	0.752	0.000
Environmental Dimension		
10- The application of sustainable accounting requires the development of strategies addressing serious environmental impacts in order to protect the environment and control or reduce pollution.	0.593	0.000
11- The application of sustainable accounting contributes to monitoring and reducing environmental performance costs.	0.709	0.000
12- The application of sustainable accounting helps raise awareness of environmental risks and facilitates planning to address them and reduce their effects.	0.684	0.000
13- The application of sustainable accounting encourages the organization to adopt environmentally friendly technologies to reduce environmental degradation.	0.680	0.000

Source: The researchers, based on the results obtained from SPSS.

Table 2 presents the correlation coefficients between each item of the first dimension and the overall mean of its items. The results indicate that the correlation coefficients are statistically significant at the 0.05 significance level, as the significance level for all items is less than 0.05 and the calculated r-values are positive. Accordingly, all items of the first dimension are considered valid for measuring the constructs for which they were designed.

Table 3: Correlation Coefficients between the Mean of Each Item in the Second Dimension and the Overall Mean of the Dimension

Paragraph	Correlation Coefficient	Significance Level
1- The problem of measuring the costs and benefits of corporate social responsibility in economic institutions.	0.654	0.000

2- The difficulty of identifying environmental and social costs and distinguishing them from economic costs.	0.633	0.000
3- The absence of specialized bodies for measuring damage or monitoring pollution levels.	0.639	0.000
4- The lack of detailed information on environmental and social costs, which makes their measurement and disclosure difficult.	0.522	0.000
5- The limited attention given by professional bodies to the field of sustainability accounting.	0.662	0.000
6- The difficulty faced by the institution in measuring qualitative data related to environmental and social costs.	0.492	0.000
7- The inability of institutions to design an effective control system for environmental, social, and economic activities.	0.390	0.000
8- The absence of a clear method or accounting guide that includes the procedures, steps, and standards for sustainability accounting calculations.	0.494	0.000
9- The shortage of qualified personnel and expertise capable of applying measurement and disclosure in sustainability accounting.	0.449	0.000
10- The absence of regulatory bodies requiring disclosure of sustainability accounting information.	0.095	0.000

Source: (The researchers, based on the results of SPSS)

Table 03 presents the correlation coefficients between each item of the second dimension and the overall mean of its items. The table shows that the correlation coefficients are statistically significant at the 0.05 significance level, as the significance level for all items is less than 0.05, and the calculated *r* values are positive. Accordingly, all items of the second dimension are considered valid for measuring the aspects for which they were designed.

Table 04: Correlation Coefficients between the Mean of Each Dimension and the Overall Mean of the Questionnaire

Dimension	Dimension Content	Correlation Coefficient	Significance Level
First	The importance of applying sustainability accounting in economic institutions in Algeria.	0.939	0.000
Second	Challenges and difficulties of applying measurement and disclosure of sustainability accounting in economic institutions in Algeria.	0.826	0.000

Source: (The researchers, based on the results of SPSS)

Table 04 presents the correlation coefficients between the mean of each study dimension and the overall mean of the questionnaire items. It shows that the reported correlation coefficients are statistically significant at the 0.05 significance level, as the significance level for each dimension is less than 0.05 and the calculated *r* values are positive. Accordingly, all dimensions of the study are considered valid for measuring the aspects for which they were designed.

– Reliability of the questionnaire items: Reliability refers to the extent to which the items demonstrate internal consistency. There are several measures used to test the internal reliability of an instrument, the most important of which are Cronbach's Alpha coefficient and split-half

reliability. To verify the reliability of the questionnaire, reliability was calculated using Cronbach's Alpha coefficient. This coefficient is considered acceptable when it is greater than or equal to 0.60.

Table 05: Cronbach's Alpha Coefficient for the Different Dimensions of the Questionnaire

Dimension	Dimension Content	Number of Items	Cronbach's Alpha Coefficient
First	The importance of applying sustainable accounting in economic institutions in Algeria.	13	0.885
Second	Challenges and difficulties associated with the measurement and disclosure of sustainable accounting in economic institutions in Algeria.	10	0.691
All questionnaire items		23	0.883

Source: The researchers, based on the results obtained using SPSS.

It is evident from Table 05 that all reliability coefficients exceeded the acceptable threshold of 0.60. The coefficient was 0.885 for the first dimension and 0.691 for the second dimension, while the overall reliability coefficient reached 0.883. This indicates that these coefficients are high and appropriate for the purposes of the study. Therefore, it can be concluded that the research instrument is reliable.

A. Questionnaire Analysis: The questionnaire will be analyzed as follows:

Kolmogorov–Smirnov Normality Test: The Kolmogorov–Smirnov test will be used to determine whether the data follow a normal distribution. This is an essential test when testing hypotheses, as most statistical tests require the data to be normally distributed.

Table 06: Results of the Normality Test for the Questionnaire Dimensions

Dimensions	Significance Level
All study dimensions	0.200

Source: The researchers, based on the results obtained using SPSS.

Table 06 presents the results of the normality test for all dimensions. The significance level was 0.200, which is greater than 0.05. This indicates that the data follow a normal distribution.

Analysis of the Questionnaire Items: The respondents' answers relating to the questionnaire dimensions will be analyzed using the T-test to determine whether the mean response score reached the medium level of agreement, which is 3, or not. The arithmetic mean was also used to determine the degree of acceptance or rejection. The results are as follows:

Analysis of the Items of the First Dimension: The Importance of Applying Sustainable Accounting in Economic Institutions in Algeria

The items of this dimension will be analyzed using a set of statistical techniques, as presented in the following tables:

Table 07: Analysis of the Items of the First Dimension

Item	Arithmetic Mean	Standard Deviation	T-value	Significance Level
Economic Aspect				

1-The application of sustainable accounting makes customers satisfied with the quality of products.	3.9658	0.8801	11.869	0.000
2- The application of sustainable accounting ensures customer loyalty.	4.1026	0.8648	13.789	0.000
3- The application of sustainable accounting helps the institution increase its sales volume.	3.8376	0.8997	10.069	0.000
4- The application of sustainable accounting contributes to supporting production and reducing economic costs.	3.8889	0.8884	10.822	0.000
5- The application of sustainable accounting ensures an increase in the institution's market share.	3.6838	0.9344	7.914	0.000
Social Aspect				
6. The application of sustainable accounting provides means of occupational safety and prevention of workplace accidents.	3.8889	0.9894	9.718	0.000
7. Determining and measuring the institution's net social contribution, so that it includes not only the elements of the institution's specific and internal costs and benefits, but also the elements of external social costs and benefits.	3.9145	1.0551	9.375	0.000
8. The application of sustainable accounting contributes to achieving a balance in the company's obligations toward shareholders and society and to reducing the intensity of conflicts among stakeholders.	4.0171	1.0084	10.910	0.000
9. Sustainable accounting enhances disclosure of the relationships that companies establish not only with their customers and employees, but also with other community groups by meeting their needs.	3.9829	0.9283	11.453	0.000
Environmental Aspect				
10. The application of sustainable accounting necessitates the development of strategies addressing serious environmental impacts in order to protect the environment and control or reduce pollution.	3.8376	1.0418	8.696	0.000

11. The application of sustainable accounting contributes to monitoring and reducing environmental performance costs.	4.0085	0.9781	11.153	0.000
12. The application of sustainable accounting helps raise awareness of environmental risks, plan for addressing them, and mitigate their impacts.	4.0769	0.9482	12.284	0.000
13. The application of sustainable accounting encourages the institution to adopt environmentally friendly technologies in order to reduce environmental degradation.	4.0085	0.9965	10.957	0.000
The tabulated t-value at a significance level of 0.05 and 116 degrees of freedom is 1.980.				

Source: The researchers, based on the results of SPSS.

It can be observed from the above table that most of the items in this dimension have arithmetic means falling within the agreement category. Moreover, most of the t-values are greater than the tabulated value, while the significance level is less than 0.05. This indicates that the respondents agree that there is significant importance attached to the application of sustainable accounting in economic institutions in Algeria, whether from the economic, social, or environmental perspective, and that they have sufficient awareness of this importance.

Analysis of the Items of the Second Dimension

(Challenges and Difficulties of Applying Measurement and Disclosure of Sustainable Accounting in Economic Institutions in Algeria)

Table 08: Analysis of the Items of the Second Dimension

Statement	Arithmetic Mean	Standard Deviation	t-value	Significance Level
1- The difficulty of measuring both the costs and benefits of social responsibility in economic institutions.	3.9402	0.9763	10.416	0.000
2- The difficulty of identifying environmental and social costs and distinguishing them from economic costs.	4.0855	0.9788	11.995	0.000
3- The absence of specialized bodies for measuring damage or monitoring pollution levels.	3.8547	1.1391	8.116	0.000
4- The lack of detailed information on environmental and social costs, which makes their measurement and disclosure difficult.	3.8291	1.1164	8.033	0.000

5- The limited interest of professional bodies in the field of sustainable accounting.	3.8974	0.9133	10.628	0.000
6- The difficulty for the institution to measure qualitative data related to environmental and social costs.	3.9316	0.9259	10.883	0.000
7- The inability of institutions to design an effective control system for environmental, social, and economic activities.	3.9658	0.9090	11.492	0.000
8- The absence of a clear method or accounting guide specifying the procedures, steps, and standards for accounting for sustainable accounting practices.	4.0684	0.9443	12.237	0.000
9- shortage of qualified personnel and expertise capable of applying measurement and disclosure of sustainable accounting information.	4.0598	0.8836	12.973	0.000
10- The absence of regulatory bodies requiring disclosure of sustainable accounting information.	4.0513	0.6803	16.714	0.000
The tabulated t-value at a significance level of 0.05 and 116 degrees of freedom is 1.980.				

Source: The researchers, based on the results of SPSS.

We observe from the above table that all items in this dimension have arithmetic means falling within the agreement category. Moreover, the calculated t-values are greater than the tabulated value, while the significance level is less than 0.05. This indicates that the respondents agree that there are challenges and difficulties facing the implementation of measurement and disclosure of sustainability accounting in economic institutions in Algeria.

A. Testing the Study Hypotheses

The hypotheses are tested using the one-sample T-test (T-test), based on the following decision rule:

If the calculated t-value is greater than the tabulated t-value, the alternative hypothesis (H1) is accepted, and consequently the null hypothesis (H0) is rejected, and vice versa.

If the probability value (Sig.) resulting from the one-sample T-test is greater than the adopted significance level (0.05), the null hypothesis (H0) is accepted, and vice versa.

Testing the First Hypothesis

The first hypothesis states:

“The sample members are aware of the importance of implementing measurement and disclosure of sustainability accounting in economic institutions in Algeria.”

It can be formulated as follows:

(H0): There is no awareness among the sample members of the importance of implementing measurement and disclosure of sustainability accounting in economic institutions in Algeria.

(H1): There is awareness among the sample members of the importance of implementing measurement and disclosure of sustainability accounting in economic institutions in Algeria.

The results of this analysis are presented in the following table:

Table 09: Results of Testing the First Main Hypothesis

Hypothesis	Calculated t-value	Tabulated t-value	Probability Value (Sig.-t)	Decision
H1	16.402	1.980	0.000	Accepted
Adopted significance level: $\alpha = 0.05$; $df = N - 1 = 117$				

Source: Researchers, based on SPSS results.

It can be observed from Table 09 that the calculated t-value is 16.402, which is greater than the tabulated t-value of 1.980. Furthermore, the probability value is 0.000, which is less than 0.05. According to the decision rule, we therefore reject the null hypothesis (H0): “There is no awareness among the sample members of the importance of implementing measurement and disclosure of sustainability accounting in economic institutions in Algeria,” and accept the alternative hypothesis (H1), meaning that “there is awareness among the sample members of the importance of implementing measurement and disclosure of sustainability accounting in economic institutions in Algeria.”

Testing the Second Hypothesis

The second hypothesis states:

“There are obstacles and challenges facing the implementation of measurement and disclosure of sustainability accounting in economic institutions in Algeria.”

It can be formulated as follows:

(H0): There are no obstacles or challenges facing the implementation of measurement and disclosure of sustainability accounting in economic institutions in Algeria.

(H1): There are obstacles and challenges facing the implementation of measurement and disclosure of sustainability accounting in economic institutions in Algeria.

The results of this analysis are presented in the following table:

Table 09: Results of Testing the Second Hypothesis

Hypothesis	Calculated t-value	Tabulated t-value	Probability Value (Sig.-t)	Decision
H1	21.330	1.980	0.000	Accepted
Adopted significance level: $\alpha = 0.05$; $df = N - 1 = 117$				

Source: Researchers, based on SPSS results.

It can be observed from Table 09 that the calculated t-value is 21.330, which is greater than the tabulated t-value of 1.980. The probability value is also 0.000, which is less than 0.05. According to the decision rule, we therefore accept the alternative hypothesis (H1), meaning that “there are obstacles and challenges facing the implementation of measurement and disclosure of sustainability accounting in economic institutions in Algeria.”

Conclusion

Through this study, we sought to examine the nature of sustainable accounting and the importance of its application in economic institutions, as well as to identify the challenges associated with

measuring and disclosing sustainable accounting information, from the perspective of a group of accounting professionals and academics. Accordingly, we can conclude that the study reached the following findings:

The study sample members have sufficient awareness of the importance of applying sustainable accounting in economic institutions in Algeria. This importance is reflected in three main aspects:

- The economic aspect: The application of sustainable accounting contributes to customer satisfaction with product quality and ensures their loyalty. It also contributes to supporting production and reducing economic costs, thereby increasing the institution's market share value.
- The social aspect: The application of sustainable accounting provides means of safety and prevention against occupational accidents. It also enables the identification and measurement of the institution's net social contribution, which includes not only the institution's internal and private costs and benefits, but also external social costs and benefits. Furthermore, the application of sustainable accounting contributes to achieving a balance in the company's obligations toward shareholders and society and to reducing conflicts among stakeholders. Sustainable accounting also enhances the disclosure of the relationships that companies establish not only with their customers and employees, but also with other community groups by meeting their needs.
- The environmental aspect: The application of sustainable accounting contributes to environmental protection, raising awareness of environmental risks, and controlling such risks. It also helps strengthen the monitoring process and reduce environmental performance costs. Moreover, the application of sustainable accounting promotes the use of environmentally friendly technologies.

There are obstacles and challenges facing the measurement and disclosure of sustainable accounting in economic institutions in Algeria. These challenges hinder the proper and comprehensive implementation of sustainable accounting. They include the following:

The difficulty for institutions in obtaining accurate information for measuring environmental and social costs.

The difficulty of measuring both the costs and benefits of corporate social responsibility in economic institutions.

The difficulty of distinguishing between environmental and social costs and economic costs.

The absence of programs for environmental protection and for measuring environmental damage and its associated costs.

The limited attention given by professional accounting bodies to the field of sustainable accounting.

The difficulty of measuring qualitative data related to sustainable accounting costs.

The inability of institutions to design an effective control system for environmental, social, and economic activities.

The lack of clarity regarding the requirements for measuring and disclosing sustainable accounting information.

The absence of regulatory bodies requiring the disclosure of sustainable accounting information.

The lack of laws and regulations specifying how sustainable accounting should be implemented within the Algerian context.

The shortage of qualified personnel and expertise capable of implementing the measurement and disclosure of sustainable accounting information.

Based on the findings of the study, the following recommendations can be made:

Establishing a legislative framework that clearly defines the procedures and methods for implementing sustainable accounting.

Granting institutions that disclose their environmental performance and information incentives from the government, such as tax exemptions.

Organizing training courses and educational programs for accountants and specialists on how to deal with sustainable accounting costs.

Requiring institutions to pay compensation for any damage caused by their activities to the environment and society, while encouraging them to develop and provide environmentally friendly products.

Declarations

Ethics Approval: The study followed applicable institutional ethical standards.

Informed Consent: Informed consent was obtained from all participants.

Funding: No external funding was received.

Conflict of Interest: The authors declare no conflict of interest.

Data Availability: Data are available from the corresponding author upon reasonable request.

Author Contributions: Both authors contributed to the study and approved the final manuscript.

References

- Ajinomoto Co., Inc. (2024, February 27). *Sustainability Accounting Standards Board*. <https://www.ajinomoto.com/ar/sustainability/sasb.php>
- Al-Alimat, D. H. M. (2010). *Accounting measurement of the costs of social responsibility activities and their disclosure in final financial statements: An applied case study of the Jordan Petroleum Refinery Company Public Shareholding Limited* [Doctoral dissertation, Damascus University].
- Al-Fadl, M., Abdel-Nasser, N., & Al-Noughi, A. (2002). *Contemporary accounting problems*. Dar Al-Masirah for Printing, Publishing and Distribution.
- Al-Jubouri, A. K. K., Jaafar, N. J., & Ghali, H. Z. (2019). The possibility of applying accounting sustainability standards in financial reports to enhance the quality of financial reporting by private Iraqi banks in Basra Governorate. *Al-Muntada Journal*, (29).
- Awadi, A., Gouider, M. T., & Mezimesh, A. (2018). Challenges of accounting measurement and disclosure of environmental responsibility. *Al-Manhal Al-Iqtisadi Journal*, 1(2).
- Ben Al-Ayache, F. (2018). The extent of application of accounting measurement and disclosure of corporate social responsibility. *Daftar Economics Journal*, 10(2), 39–56.
- Eldon, H. (1992). *Accounting theory*. Richard Irwin.
- Elena, I., Flavio, L., & Nicoleta, P. (2021). Accounting measurement in light of historical cost recoverability and investment decisions. In *Accounting Management Information Systems (AMIS 2021)* (p. 194). Editura.
- Farid, H. H. (2016). The impact of accounting disclosure of non-financial information on social responsibility and sustainability accuracy. *Al-Riyada Journal for Business Economics*, 2(3).
- Gray, R., Lavers, S., & Kouhy, R. (1995). Constructing a research database of social and environmental reporting by UK companies. *Accounting, Auditing & Accountability Journal*, 8(2), 78–101.
- Kheniche, Y., Al-Hadi, D. M., & Hicham, L. (2018). An evaluative study of accounting measurement alternatives. *Idafat Iqtisadiya Journal*, 2(3), 175–197.

- Mahouat, L. (2015). *Accounting measurement of environmental costs and their disclosure in financial statements to improve environmental performance: A case study of a group of industrial enterprises in Algeria* [Doctoral dissertation, Mohamed Khider University of Biskra].
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill-building approach* (7th ed.). Wiley.
- Shahed, E., & Dafour, A. (2016). Accounting disclosure in financial statements according to the Financial Accounting System and International Accounting Standards. *Journal of Financial and Administrative Accounting Studies*, 153–154.
- Shaheen, A. A. (2011). *Accounting theory: An analytical and applied intellectual framework*. Afaq Library for Printing, Publishing and Distribution.
- Tanushri, K. (2023, August 8). *Five general sustainability themes of the Sustainability Accounting Standards Board*. Sigma Earth. Retrieved February 5, 2024, from <https://sigmacarth.com/ar/5-general-sustainability-themes-of-sustainability-accounting-standards-board>