

The Effect of Financial Reporting on Sustainability Accounting in Improving the Performance of Economic Units in the Iraqi Environment

Mays Mushtaq Abdulaaima^a, Ali Naser Thabet^b, Ahmed Saad Jari^c,
^{a,b,c}Accounting Department, College of administration and economics,
Mustansiriyah University, Iraq, Email:
^aMacemushtaq@uomustansiriyah.edu.iq,
^bAlialnoory88@uomustansiriyah.edu.iq,
^cahmedsaadjar006@uomustansiriyah.edu.iq

This research aims to shed light on the concept and importance of sustainability accounting and address the deficiencies in the outputs of the accounting system represented by financial reports by including in these reports information about the social, environmental, and economic responsibilities of economic units and indicating the impact of financial reporting on them to improve the performance of those units. The research methodology was based on the questionnaire list, and the questionnaire was analysed by using the statistical program STATA V.15. The questionnaire was distributed to the research sample which was represented by the financial division of the Doura Refinery Oil Refining Company. The research reached a statistically significant correlation relationship, as well as a significant effect between financial reporting for sustainability accounting and improving the performance of economic units in the Iraqi environment. The research recommended the need for financial reporting to sustainability accounting in economic units through the preparation of separate reporting on financial reports represented by lists of the final financial report. This recommendation was provided because these reports are important in meeting the needs of internal and external stakeholders for information on the environmental, social, and economic performance of the company that represents the research sample.



Keywords: *Sustainability accounting, Performance improvement, Financial reporting.*

Introduction

Accounting tasks are no longer confined to the incoming and outgoing accounts of an economic unit or the statement of their profits and losses. Furthermore, not only the bookkeeping process, but also their tasks and functions have gone beyond to include the measurement and disclosure of all environmental, social, and economic costs. In addition, determining the return from them because sustainability is one of the concepts that has received much attention as the interest in accounting has shifted from the concept of finance that crystallises in maximising the self-interest of owners to the concept of the accounting unit, which owners are one of the stakeholders in the company. Thus, achieving a balance between the rights and obligations of different stakeholders. Despite the existence of profit as the goal of economic unity, the achievement of this goal is governed by restrictions imposed by society. Financial reports are still the legal requirement for economic units throughout the world, as well as measuring non-financial results from current requirements related to the performance of economic units, which are known as reporting on the responsibility of the economic unit or sustainability reporting. Therefore, this research aims to study all these issues related to sustainability, especially the impact of sustainability accounting on financial reporting in improving the performance of economic units in the Iraqi environment.

Research Methodology

The Research Problem

The research problem is summarised by the lack of interest of the Iraqi economic units in financial reporting on sustainability accounting and their lack of awareness of its importance. Therefore, based on their lack of knowledge on the impact of this in improving their performance, the research problem can thus be summarised with the following two questions:

1. What is the impact of the elements of sustainability accounting (environmental, social, and economic elements) on financial reports in Iraqi economic units?
2. What are the obstacles and challenges facing the application of the elements of sustainability accounting in the Iraqi economic units?

Research Goals

1. Explain the effect of the elements of sustainability accounting on the financial reports of economic units in the Iraqi environment.

2. Knowing the obstacles and challenges facing economic units when applying to report to non-financial information.
3. Learn about the reality of applying the elements of sustainability accounting and its role in improving the performance of economic units in the Iraqi environment.

Research Importance

The research acquires its importance because the financial reporting on sustainability accounting has become an important factor in the world, especially among the economic units that are required to contribute to fulfilling social, environmental, and economic responsibilities. Thus, increasing awareness and motivating the responsible authorities within the management of the economic unit to undertake the treatment of the social, environmental, and economic impacts of their activities, is crucially important in improving the economic unit's future performance.

Research Method

To achieve the objectives of the research, the following approaches have been adopted:

1. *The deductive approach*: it was relied upon to prepare the theoretical side of the research through relying on Arab and foreign scientific references, as well as the use of the global network of information (Internet) to obtain the most recent findings of the world in the field of sustainability accounting and its relationship to the performance of economic units.
2. *Inductive approach*: researchers used this approach to analyse the results of the questionnaire that was reached.

Research Population and Sample

Research Population: the research population includes the economic units operating in the Iraqi environment. One of the most important justifications for choosing these units is to draw the attention of those parties interested in sustainability accounting to the negative effects these units have on society in general and to find solutions to these problems. In addition, to draw the attention of unit managers and decision-makers in economic units to the positive effects that can be obtained in improving the performance of economic units, and by adopting an effective role towards the society in which it operates in all its categories.

Research Sample: the research sample is represented in one of the important economic units of the Iraqi Ministry of Oil, which is the Al-Dora Refinery Company.

Theoretical Part

Inasmuch of the increasing global trend of sustainability accounting, and the impact of financial reporting on it, which is concerned with the economic, environmental, and social aspects of the performance of economic units, the World Council of Companies has identified sustainability reports and public reports that should be disclosed by companies to provide an accurate picture to stakeholders — from internal and external parties — of the companies' performance. Wherein, activities related to sustainability, and also related to economic, environmental, and social aspects, these reports should contain (Marimon, F., 2012):

1. An overview of the company and reporting on the framework of this report;
2. An executive summary of the company and the main indicators applied to sustainability reports;
3. The company's vision and how to prepare reports in terms of integrating economic, environmental, and social performance;
4. The company's social, economic, and environmental fields, and their impact on the surrounding community.

Therefore, reporting on sustainability accounting refers to how economic units deal with important financial and non-financial facts and determine what opportunities can affect the future performance of those units and their income and value. The primary goal of sustainability accounting is to measure the performance of the economic unit from an economic, social, and environmental point of view in order to achieve accountability, transparency, and disclosure of the effects of the economic unit activity and provide useful information for internal and external decision-making (Gray, R., 2010). On the other hand, sustainability accounting provides the following (Freedman M., 2009):

1. Information for internal users represented in the management of the economic unit to make decisions and help them in achieving the sustainability goals.
2. Sustainability accounting helps organisations include sustainability issues within the strategic planning of the economic unit, through the financial and non-financial information that it provides by sustainability accounting.
3. Achieving accountability, transparency, government, risk management, and creating a competitive advantage for the economic unit.

Accounting Measurement Indicators of Sustainability

These indicators reflect the economic, social, and environmental aspects. In order to achieve sustainability accounting, we must focus on these three aspects combined at the same level and importance. In addition, the financial reports according to sustainability accounting

express the economic units practices regarding economic, social, and environmental issues. If this is met, it will contribute to increasing confidence in the performance of the economic units (Abeysekera, 2013). Therefore, the importance of the accounting measurement of sustainability can be highlighted in many points, as follows (Abdalmanam, 2013):

1. The sustainability report is considered as a measure of the effectiveness of the initiatives launched and organised.
2. Explain what the economic units are doing towards society, the environment, the producer, and the consumer.
3. Establishing principles of governance in order to achieve sustainable development.
4. It contributes to increasing the ability to improve the level of influence upon society.
5. Accounting disclosure for sustainability.

Financial reporting on sustainability accounting reflects the contributions of the economic unit in achieving sustainable development, and therefore, the economic units resort to following the multi-dimensional measurement, by following a set of guidelines as follows (Xiaomei, L., 2004):

1. The beneficiaries of financial reporting on sustainability accounting should be several parties.
2. The language of accounting should be extended to other methods of expression in addition to the method of quantitative and cash expression.
3. The content of financial reporting should be related to the results of measuring the effects of activities whose essence revolves around the economic-environmental-social interest, and its effects on the performance of the economic unit.

It can be argued that there is an urgent need to disclose the sustainability accounting for the economic units because of the importance for the administration and investors, the external and internal parties to the units, in order to provide economic, social, and environmental information which is necessary to support management and investors in making their decisions. Furthermore, the benefits accrue to the economic units from this disclosure in the short term or in the long term, and this will ultimately have an effect on the activity and financial position of the economic unit. Sustainability information is disclosed in the form of sustainability reports that provide quantitative and descriptive information, financial and non-financial information, and provide that information to the stakeholders (Gray, 2010).

The Obstacles and Challenges Facing Sustainability Accounting

Financial Reporting Obstacles on Sustainability Accounting

The unified accounting system in the Iraqi environment suffers from a major deficiency. This is in terms of the main goals and concepts that were reflected in the methods of measurement and the disclosure of events and deals that are accomplished due to its lack of assimilation of political, economic, social, and technological changes, which negatively affects the quality and usefulness of the information provided (Ryan, B., Scapens, R. W., & Theobald, M., 2002). In addition, there is a fear of applying financial reporting on sustainability accounting for many economic units, due to the lack of confirmation of the importance of the application and its benefits, and also the lack of appropriate qualification for accountants to apply. Despite the importance of financial reporting on accounting sustainability, there are many obstacles that limit to apply the financial reporting. The most prominent of these obstacles are (Bayoud, & others 2012):

1. A lack of educational programs to introduce the requirements of financial reporting on sustainability accounting.
2. The absence of binding laws for financial reporting on sustainability accounting.
3. The difficulty of measuring the economic, social, and environmental aspects.
4. The lack of accounting standards related to financial reporting on sustainability accounting.

However, there are several attempts which are made by the American economic units to break down the barriers between economic, social, and environmental activities, daily operations, and decision-making strategies. The most prominent of these practices are appointing an executive director for these activities; linking wages and incentives systems with the results of evaluating those activities; measuring costs and benefits from those activities in the economic unit; providing and publishing various reports describing those activities; and trying to find different ways to convert those activities carried out by the economic unit into an added value in the interest of that unit (Hogan, C. E. & others, 2008; Sharaf et al., 2020).

Challenges to Financial Reporting on Sustainability Accounting

There are many determinants that make it difficult to collect and retrieve environmental and social and economic data and evaluate them efficiently. These determinants lead to the decision-making process suffering from incomplete, inaccurate, and misinterpreted information. The main challenges can be summarised as follows (Cormier, D., & Magnan, M., 2015):

1. The cultural differences and their effect on the development of communication between accounting and other professions.
2. The disappearance of information related to environmental, social, and economic costs within the indirect cost accounts.
3. Difficulty in tracking the costs of the flow and utilisation of resources.
4. Difficulty obtaining information on environmental, social, and economic costs from accounting records.
- 5.

The Practical Part

Brief Information on Al-Dora Oil Refinery Company

Al-Dora Refinery is an integrated industrial oil complex that is considered to be one of the oldest large oil refineries in Iraq. The foundation stone for Al-Dora Refinery was laid in 1953, and began work in 1955. The refinery produces gasoline for cars, liquid gas, jet fuel, gas oil and diesel, crude oil, grease, wax, asphalt, and other products. Furthermore, it also contains a sophisticated factory for the manufacture of plastic bottles for packaging produced oils.

Description of the Research Sample

The First Axis: A description of the demographic characteristics of the research sample

According to the questionnaire answers of the 35 respondents, the following is shown.

1. Distribution of the sample population according to the gender variable

The sample included both males and females. The number of males reached 25, with a percentage of 71.4 per cent, and the number of females was ten females with a percentage of 28.6 per cent, as shown in the following Table 1.

Table 1: Frequencies and percentages by gender variable

Sequence	Gender	Frequency	Percentages
1	Male	25	71.4 %
2	Female	10	28.6 %
Total		35	100 %

Source: the results of the statistical analysis of the questionnaire using the statistical program STATA 15.

2. Distribution of the sample population according to the age variable

The following Table 2 shows that the largest percentage of respondents tends to the age group of 26–35 years, where the number of respondents who indicated their affiliation with it reached 16 respondents with a percentage of 45.7 per cent. This was followed by the age group of less than 25 years, where its percentage reached 28.6 per cent. This means that a large percentage of the sample population is of young individuals that are characterised by experience and knowledge, while the age group of 46 years or more reached a percentage of 8.6 per cent, and represents the lowest percentage in Table 2.

Table 2: Frequencies and percentages by age group variable

Sequence	Age Group	Frequency	Percentage
1	≤25	10	28.6%
2	26–35	16	45.7%
3	36–45	6	17.1%
4	≥46	3	8.6%
	Total	35	100%

Source: the results of the statistical analysis of the questionnaire using the statistical program STATA 15.

3. Distribution of the sample population according to the academic achievement variable

We notice from the following Table 3 that the largest percentage of respondents are holders of a Master's degree, which consisted of 37.1 per cent of the respondents. This was followed by the percentage of respondents who hold a Bachelor's degree at 28.6 per cent. The percentage of those holding a Doctorate degree was 17.1 per cent, which was accompanied by those who hold a Diploma Certificate also at 17.1 per cent.

Table 3: Frequencies and percentages according to the academic achievement variable

Sequence	Academic Achievement	Frequency	Percentages
1	Diploma or less	6	17.1%
2	Bachelor's degree	10	28.6%
3	Master's degree	13	37.1%
4	Doctorate degree	6	17.1%
	Total	35	100%

Source: the results of the statistical analysis of the questionnaire using the STATA 15 statistical program.

4. Distribution of sample individuals according to the years of experience variable

We notice from the following Table 4 that the fourth category of 16 years and over is the highest percentage category at 37.1 per cent. It is followed by the 11–15 years category, with a percentage of 34.3 per cent. Lastly, the percentage of the categories of less than five years, and 6–10 years reached to 14.3 per cent, respectively.

Table 4: Frequencies and percentages for the years of service variable

Sequence	Years of Service	Frequency	Percentage
1	≤5	5	14.3%
2	6–10	5	14.3%
3	11–15	12	34.3%
4	≥16	13	37.1%
Total		35	100%

Source: the results of the statistical analysis of the questionnaire using the statistical program STATA 15.

5. Distribution of sample individuals according to the variable of academic specialisation

We notice from the following Table 5 that the academic specialisation of accounting is the highest percentage at 57.1 per cent, followed by the specialisation of banking and financial sciences at 17.1 per cent. The specialisation of economics sciences reached 14.3 per cent, and the specialisation of business administration reached 11.4 per cent.

Table 5: Frequencies and percentages for the categories of academic specialisation

Sequence	Academic Specialisation	Frequency	Percentage
1	Accounting	20	57.1%
2	Business Administration	4	11.4%
3	Banking and Financial Sciences	6	17.1%
4	Economics Sciences	5	14.3%
Total		35	100%

Source: the results of the statistical analysis of the questionnaire using the STATA 15 statistical program.

The Second Axis: Description and Diagnosis of Financial Reporting Indicators

Description and Diagnosis of Environmental Elements

The following Table 6 shows the percentages, arithmetic mean, standard deviations, coefficients of variations, and the relative importance of the paragraphs of environmental elements dimension, as 66.5 per cent of the respondents agree and fully agree with the

organisation's senior management support for this dimension, and that dimension has obtained an arithmetic mean of 3.886. It is higher than the value of the hypothetical mean, which reached 3, and the relative importance reached 77.72 per cent, which is a good percentage to motivate the top management of the organisation to support this dimension. Furthermore, the standard deviation is 1.105, which is considered as a value that reflects a weak dispersion in the answer. However, the value of the standard of the coefficient of the variation, which reached 0.284, indicates homogeneity in the answers of the sample examined in this dimension. By returning to the paragraphs environmental elements' dimension, we note the following:

Table 6: The statistical measures of the environmental elements' dimension

	Percentage for the assessment of the answers					Description			
	Totally Agree	Agree	Neutral	Disagree	Totally Disagree	Arithmetic mean	Standard deviations	Coefficient of variations	The relative importance
The paragraphs									
1	22.9	37.1	20.0	20.0	-	3.629	1.06	0.292	72.58
2	34.3	22.9	17.1	17.1	8.6	3.571	1.357	0.380	71.42
3	40.0	22.9	8.6	25.7	2.9	3.714	1.319	0.355	74.28
4	45.7	28.6	8.6	5.7	11.4	3.914	1.358	0.347	78.28
5	34.3	40.0	20.0	5.7	-	4.029	0.890	0.221	80.58
Environmental elements	36.1	30.4	14.3	17.1	2	3.886	1.105	0.284	77.72

Source: the results of the statistical analysis of the questionnaire using the STATA 15 statistical program.

1. From Table 6, we note that the answers of the sample, which related to the first paragraph, went towards agreement, where 60 per cent of the respondents believe that the organisation is reporting on any policies that it follows and relates it to accounting for costs. This indicator appeared with an arithmetic mean of 3.629. It is higher than the value of the hypothetical mean, which is 3, and the standard deviation was 1.06, which indicates a weak dispersion in the responses of the sampled individuals.
2. The responses of the sample for the second paragraph headed towards the agreement, where 57.2 per cent of the respondents agreed that the organisation is reporting in its financial reports about the costs of the disposal of waste that

leads to environmental damage. This indicator has appeared in an arithmetic mean of 3.571, which is higher than the value of the hypothetical mean, which was 3. Furthermore, the standard deviation of 1.357, and the value of the standard difference coefficient of 0.380, indicates a weak dispersion in the study sample answers regarding this dimension. The relative importance reached 71.42 per cent, which is a good percentage that supports this dimension.

3. The responses of the sample regarding the third paragraph tended towards agreement, where 62.9 per cent of the respondents were in agreement and full agreement that the organisation takes into consideration the environmental effects when making investment decisions. This indicator appeared with an arithmetic mean of 3.714, and the standard deviation was 1.319, which indicates a weak dispersion in the responses of the sampled individuals. The value of the standard difference coefficient was 0.355, while the relative importance reached 74.28 per cent, which is a good percentage that supports this dimension.
4. The responses of the sample to the fourth paragraph tended to agree, where 74.3 per cent of the respondents agreed that the process of identifying and classifying environmental costs helps to improve the quality of accounting information. This indicator appeared with an arithmetic mean of 3.914, which is higher than the average value. The hypothesis and the amount of 3, and the standard deviation of 1.358, and the value of the standard difference coefficient of 0.347, indicate a weak dispersion in the answer. The relative importance reached 78.28 per cent, which is a good percentage that supports this dimension.
5. The sample responses for the fifth paragraph tended towards agreement, where 74.3 per cent of the respondents were in agreement and complete agreement that the information about the environment provided by the organisation has a positive impact on performance. This indicator appeared in an arithmetic mean of 4.029, which is higher than the value of the hypothetical mean that reached 3. The standard deviation of 0.890, and the value of the standard difference coefficient of 0.221, indicates the agreement of individuals in the answer. The relative importance was 80.58 per cent, which is a very good percentage that supports this dimension.

Description and Diagnosis of Social Elements

The following Table 7 shows the percentages, arithmetic mean, standard deviations, difference coefficients, and the relative importance of the paragraphs that belong to the dimension of the social elements. A percentage of 54.29 per cent of the respondents agree and fully agree with the organisation's senior management support for this dimension. This dimension has obtained an arithmetic mean of 3.200, and it is higher than the value of the hypothetical mean which reached 3. The relative importance reached 64 per cent, which is a

percentage that motivates the top management of the organisation to support this dimension with a moderate degree. Furthermore, the standard deviation of 1.35, is a value that reflects the presence of dispersion in the answer, and the value of a coefficient. The standard difference was 0.422. Returning to the paragraphs that belong to the social elements' dimension, we note the following:

Table 7: The statistical measures of the social elements' dimension

The Paragraphs	percentage for the assessments of the answers					descriptions			
	Totally Agree	Agree	Neutral	Disagree	Totally Disagree	Arithmetic mean	Standard deviation	Coefficient of variation	Relative importance
1	14.29	25.71	20.0	28.57	11.43	3.029	1.27	0.419	60.58
2	20.0	22.86	11.43	28.57	17.14	3.0	1.43	0.477	60
3	25.71	28.57	8.57	22.86	14.29	3.286	1.45	0.441	65.72
4	28.57	25.71	8.57	14.29	22.86	3.229	1.57	0.486	64.58
5	31.43	34.29	2.86	17.14	14.29	3.514	1.46	0.415	70.28
Social elements	22.86	31.43	14.29	22.85	8.57	3.200	1.35	0.422	64

Source: the results of the statistical analysis of the questionnaire using the statistical program STATA 15.

1. The sample responses varied with respect to the first paragraph, as 40 per cent of the respondents agreed that the organisation views the social responsibility as random efforts. Meanwhile, a proportion of 40 per cent of the respondents did not agree on this. This indicator appeared in an arithmetic mean of 3.029, and the standard deviation was 1.27, indicating that there was a weak dispersion in the answers of the sampled individuals. The value of the standard difference coefficient of 0.419, and the relative importance of this paragraph was medium, as it reached 60.58 per cent.
2. The responses of the sample for the second paragraph tended towards disagreement, where 45.71 per cent of the respondents believed that the organisation does not report in its financial reports about the value of donations and aid provided to charitable organisations. This indicator appeared with an arithmetic mean of 3, the standard deviation reached 1.43, and the value of the standard difference coefficient amounted to 0.477, indicating the presence of dispersion in the study sample answers regarding this dimension. The relative importance was 60 per cent, which is an average percentage that supports this dimension.
3. The responses of the sample for the third paragraph were directed towards the agreement, where 54.28 per cent of the respondents were in agreement and complete agreement that the organisation discloses in its financial statements the costs it incurs

for the training of employees. This indicator appeared in an arithmetic mean of 3.286, and the standard deviation was 1.45, which indicates the presence of dispersion in the responses of the sampled individuals. The value of the standard difference coefficient reached 0.441, while the relative importance reached 65.72 per cent, which is an average percentage that supports this dimension.

4. The responses of the sample in relation to the fourth paragraph tended towards agreement, where 54.28 per cent of the respondents agreed that the company's salary and wages system is fair and equals the efforts made by workers. This indicator appeared with an arithmetic mean of 3.229, which is higher than the value of the hypothetical mean of 3. The standard deviation was 1.57, and the value of the standard difference coefficient reached 0.486, indicating the presence of dispersion in the answer. The relative importance was 64.58 per cent, which is an average percentage that supports this dimension.

Description and Diagnosis of Economic Elements

The following Table 8 shows the percentages, arithmetic mean, standard deviations, difference coefficients, and the relative importance of the paragraphs that belong to the economic elements' dimension. A percentage of 71.43 per cent of the respondents agree and fully agree with the organisation's senior management support for this dimension. This dimension obtained an arithmetic mean of 3.899, which is higher than the value of the hypothetical mean of 3. The relative importance reached 77.98 per cent, which is a percentage that motivates the top management of the organisation to support this dimension. The standard deviation reached 1.255, which is a value that reflects the presence of dispersion in the answer. The value of the standard difference coefficient was 0.314. Returning to the paragraphs that belong to the economic elements' dimension, we note the following:

Table 8: Statistical measures of the economic elements' dimension.

The paragraphs									
	Totally Agree	Agree	Neutral	Disagree	Totally Disagree	Arithmetic mean	Standard deviation	Coefficient of variation	Relative importance
1	37.14	31.43	5.71	14.29	11.43	3.686	1.409	0.382	73.72
2	45.71	17.14	5.71	17.14	14.29	3.629	1.555	0.428	72.58
3	31.43	42.86	8.57	11.43	5.71	3.829	1.175	0.307	76.58
4	48.57	17.14	17.14	8.57	8.57	3.885	1.345	0.346	77.7
5	51.43	17.14	11.43	20.0	-	4.00	1.213	0.303	80
Economic elements	42.86	28.57	5.71	20.0	2.86	3.899	1.255	0.314	77.98

Source: the results of the statistical analysis of the questionnaire using the STATA 15 statistical program.

1. From Table 8, we note that the answers of the sample with respect to the first paragraph went towards agreement, where 68.57 per cent of the respondents see that the organisation is reporting the costs that it pays to support and develop the national economy. This indicator appeared in an arithmetic mean of 3.686, which is higher than the value of the hypothetical mean of 3. The standard deviation was 1.409, indicating the presence of dispersion in the responses of the sampled individuals. The value of the standard difference coefficient was 0.382, and the relative importance of this paragraph was good, as it reached 73.72 per cent.
2. The responses of the sample in relation to the second paragraph were directed towards agreement, where 62.85 per cent of the respondents agreed that the organisation is documenting in its reports any risks that the organisation may face in the future. This indicator appeared with an arithmetic mean of 3.629, which is higher than the value of the hypothetical mean of 3. The standard deviation was 1.555, and the value of the standard difference coefficient amounted to 0.428, which indicates the presence of dispersion in the answers of the study sample regarding this dimension. The relative importance was 72.58 per cent, which is a good percentage that supports this dimension.
3. The responses of the sample for the third paragraph headed towards the agreement, where 74.29 per cent of the respondents were in agreement and full agreement that the organisation is introducing modern methods to raise the efficiency and economy of the company. This indicator appeared with an average of 2.329, and the standard deviation was 1.175. This indicates a weak dispersion in the responses of the sample. The value of the standard difference coefficient was 0.307, while the relative importance was 76.58 per cent, which is a good percentage that supports this dimension.
4. The responses of the sample in the fourth paragraph were oriented towards agreement, where 65.71 per cent of the respondents agreed that the organisation's administration follows correct economic principles to establish a plan to reduce costs. This indicator appeared with an arithmetic mean of 3.885, which is higher than the value of the hypothetical mean of 3. The standard deviation was 1.345, and the value of the standard difference coefficient amounted to 0.346, indicating the presence of dispersion in the answers. The relative importance was 77.7 per cent, which is a good percentage that supports this dimension.
5. The responses of the sample in the fifth paragraph tended towards agreement, where 68.57 per cent of the respondents were in agreement and complete agreement that the organisation's management can control the resources available in the organisation. This indicator appeared with an arithmetic mean of 4.00, which is higher than the

average value of the hypothesis that reached 3. The standard deviation was 1.213, and the value of the standard coefficient of difference reached 0.303, indicating the presence of dispersion in the answer. The relative importance was 80 per cent, which is a very good percentage that supports this dimension.

The Third Axis: The Description and Diagnosis of the Dimensions of Obstacles and Challenges Facing Sustainability Accounting and the Dimension of Performance Improvement

The Description and Diagnosis of the Dimensions of Obstacles and Challenges Facing Sustainability Accounting

The following Table 9 shows the percentages, arithmetic mean, standard deviations, difference coefficients, and the relative importance of paragraphs that belong to the obstacles dimension. A total of 60 per cent of the respondents agree and fully agree with the organisation's senior management support for this dimension. This dimension has obtained an arithmetic mean of 3.686. It is higher than the value of the hypothetical mean, which is 3. The relative importance reached 73.72 per cent, which is a percentage that motivates the top management of the organisation to support this dimension. The standard deviation reached 1.23, which is a value that reflects the presence of dispersion in the answer. The value of the standard difference coefficient was 0.334. Returning to the paragraphs that belong to the dimension of obstacles, we notice the following:

Table 9: The statistical measures for the dimension of obstacles of economic units

The paragraphs	Percentage for the assessment of the answers					Description			
	Totally Agree	Agree	Neutral	Disagree	Totally Disagree	Arithmetic mean	Standard deviation	Coefficient of variation	Relative importance
1	25.71	20.0	8.57	14.29	31.43	2.943	1.64	0.557	58.86
2	37.14	17.14	5.71	5.71	34.29	3.171	1.774	0.559	63.42
3	20.0	34.29	8.57	8.57	28.57	3.086	1.56	0.506	61.72
4	20.0	20.0	14.29	17.14	28.57	2.857	1.537	0.538	57.14
5	31.43	20.0	8.57	17.14	22.86	3.20	1.605	0.502	64
Improve the performance	34.29	25.71	22.86	2.0	15.14	3.686	1.23	0.334	73.72

Source: the results of the statistical analysis of the questionnaire using the STATA 15 statistical program.

1. From Table 9, we note that the responses of the sample with respect to the first paragraph were varied, with 45.71 per cent of the respondents agreeing that there are not enough government incentives to implement sustainability accounting policies. This indicator appeared with an average of 2.943, which is then the value of the hypothetical mean that reached 3. Furthermore, the standard deviation was 1.64,

indicating a large dispersion in the responses of the sampled individuals. The value of the standard difference coefficient was 0.557, and the relative importance of this paragraph was weak as it reached 58.86 per cent.

2. The responses of the sample for the second paragraph headed towards agreement, where 54.28 per cent of the respondents agreed that there are no penalties for companies that refrain from reporting social responsibility. This indicator appeared with an arithmetic mean of 3.171, which is higher than the value of the hypothetical mean that reached 3. The standard deviation was 1.774, and the value of the standard difference coefficient of 0.559, indicates the presence of dispersion in the answers of the study sample regarding this dimension. The relative importance was 63.42 per cent, which is an average percentage that supports this dimension.
3. The responses of the sample for the third paragraph went towards agreement, where 54.29 per cent of the respondents were in agreement and complete agreement that there is a difficulty in measuring some items of costs and benefits. This indicator appeared with an arithmetic mean of 3.086, and the standard deviation was 1.56. This indicates that there is a large dispersion in the answers of the respondents. The value of the standard difference coefficient was 0.506, while the relative importance reached 61.72 per cent, which is an average percentage that supports this dimension.
4. In relation to the fourth paragraph, the responses of the sample leaned towards disagreement, where 45.71 per cent of the respondents believed that there are sufficient financial resources to train and qualify all employees to implement the reporting on sustainability accounting. This indicator appeared with an arithmetic mean of 2.857, which is less than the value of the hypothetical mean. The standard deviation was 1.537, and the value of the coefficient of standard difference was 0.538, indicating a large dispersion in the answer. The relative importance reached 60 per cent, which is a weak percentage that does not support this dimension.
5. The responses of the sample for the fifth paragraph tended towards agreement, where 51.43 per cent of the respondents were in agreement and full agreement that the expected financial returns from reporting on the elements of sustainability accounting may be less than the costs of reporting them. This indicator appeared with an average of 3.20. It is higher than the value of the hypothetical mean of 3. The standard deviation is 1.605, and the value of the standard difference coefficient reached 0.502, indicating a large dispersion in the responses of the sampled individuals. The relative importance of this dimension is 64 per cent.

It is clear from the statistical results that the economic elements occupied the first rank in terms of relative importance according to the answers of the researched sample. This was followed by the dimension of environmental elements, the dimension of improving performance, and then the relative importance of the dimensions of social elements.

Respectively, they reached 77.98 per cent, 77.72 per cent, 73.72 per cent, and 64 per cent, as shown in the following Figure 1:

Description and Diagnosis after Improving Performance

The following Table 10 shows the percentages, arithmetic mean, standard deviations, difference coefficients, and the relative importance of paragraphs that belong to the obstacles' dimension to applying sustainability accounting. A total of 81.16 per cent of the respondents agree and fully agree with the organisation's senior management support for this dimension. This dimension has obtained an arithmetic mean of 4.108, which is higher than the value of the hypothetical mean. The relative importance reached 82.16 per cent, which is a percentage that motivates the top management of the organisation to support this dimension. The standard deviation was 1.04, which is a value that reflects the existence of a weak dispersion in the answer. The value of the standard difference coefficient was 0.25. With reference to the paragraphs that belong to the obstacles' dimension to applying sustainability accounting, we notice the following:

Table 10: The statistical measurements for the dimensions of obstacles in applying sustainability accounting

The paragraphs	Percentage for the assessment of the answers				Description				
	Totally Agree	Agree	Neutral	Disagree	Totally Disagree	Arithmetic mean	Standard deviation	Coefficient of variation	relative importance
1	57.1	28.6	5.7	8.6	-	4.34	0.94	0.22	86.8
2	40	37.1	5.7	17.1	-	4	1.08	0.27	80
3	42.9	40	5.7	5.7	5.7	4.09	1.12	0.27	81.8
4	28.6	48.6	14.3	8.6	-	3.97	0.89	0.22	79.4
5	48.6	34.3	8.6	-	8.6	4.14	1.17	0.28	82.8
The Obstacles	43.44	37.72	8	10	7.15	4.108	1.04	0.25	82.16

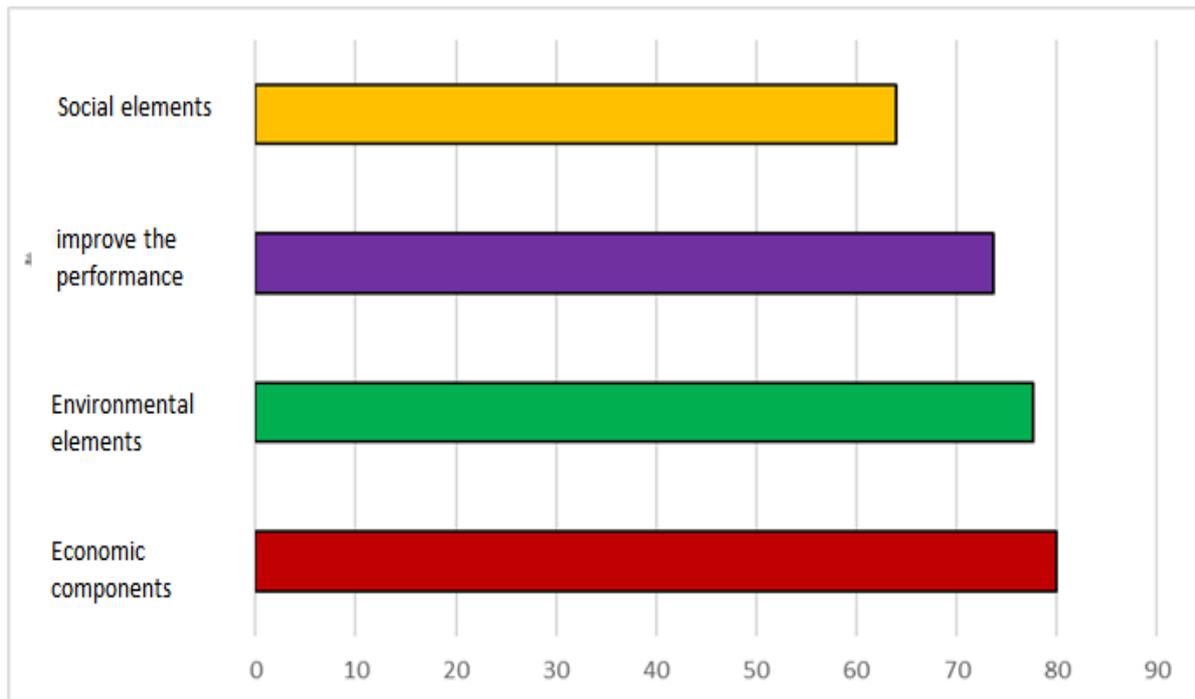
Source: the results of the statistical analysis of the questionnaire using the STATA 15 statistical program.

1. From Table 10, we note that the answers of the sample regarding the first paragraph went towards agreement, where 85.7 per cent of the respondents agree that financial reporting on the dimensions of sustainability shows what the economic unit is doing to improve the performance of the company. This indicator appeared with an average of 4.34. It is less than the value of the hypothetical mean, which is 3. The standard deviation was 0.94, which indicates that there was no dispersion in the responses of the sampled individuals. The value of the coefficient of standard difference reached

0.22, and the relative importance of this paragraph was very good as it reached 86.8 per cent.

2. The responses of the sample for the second paragraph headed towards agreement, where 77.1 per cent of the respondents agree that financial reporting on the dimensions of sustainability accounting shows the progress made by the company's management in the service of the surrounding community. This indicator appeared in an arithmetic mean that reached 4. It is higher than the value of the hypothetical mean of 3. The standard deviation was 1.08, and the value of the standard difference coefficient reached 0.27, indicating a weak dispersion in the study sample answers regarding this dimension. The relative importance was 80 per cent, which is a very good percentage that supports this dimension.
3. The responses of the sample to the third paragraph tended towards agreement, where 82.9 per cent of the respondents were in agreement and full agreement that the application of sustainability accounting is a guideline for future initiatives. This indicator appeared with an average of 4.09, and the standard deviation was 1.12. This indicates the presence of dispersion in the answers of the sample individuals. The value of the standard difference coefficient was 0.27, while the relative importance was 81.8 per cent, which is a very good percentage that supports this dimension.
4. The responses of the sample regarding the fourth paragraph tended towards disagreement, where 77.2 per cent of the respondents believed that the implementation of sustainability accounting helps the company management to obtain new investment opportunities in its business environment. This indicator appeared in an arithmetic mean which reached 3.97. The standard deviation was 0.89, and the value of the standard difference coefficient reached 0.22, indicating that there is no dispersion in the answer. The relative importance was 79.4 per cent, which is a good percentage that supports this dimension.

Figure 1. The relative importance of the financial reporting dimensions



The Environmental Elements, The Social Elements, The Economic Elements, and Improvement of the Performance

Testing the Research Hypotheses

The first hypothesis: there is a statistically significant correlation between financial reporting on sustainability accounting and improving the performance of economic units in the Iraqi environment.

In order to identify the nature of correlations between the dimensions of financial reporting on sustainability accounting and improving the performance of economic units in the Iraqi environment, Spearman's Rank Correlation Coefficients was measured to examine the existence of the relationship. A T-Test was also performed to test the significance of the relationship between the axes, as shown in Table 11, as follows:

Table 11: The value of Spearman correlation coefficients and T-Test

Financial Reporting Dimensions	Improving the Performance of Economic Units	
	R	Sig
Environmental Elements	0.509	0.001
Social Elements	0.533	0.001
Economic Elements	0.615	0.001

Source: results of the statistical analysis of the questionnaire using the statistical program STATA 15.

Table 11 indicates that there is a positive correlation at a level of significance of less than 0.01, between the environmental elements and improving performance, as the value of the Spearman correlation coefficient reached 0.509. Furthermore, this indicates that the more the organisation is committed to reporting in its financial reports on the policies that the organisation follows, the more the organisation is able to improve the quality of the performance of the economic units, and this supports the first hypothesis.

The second hypothesis: there is a significant effect of financial reporting on sustainability accounting in improving the performance of economic units in the Iraqi environment.

The regression analysis method was applied to test the validity of the second hypothesis, if there was a significant effect of the dimensions of financial reporting on sustainability accounting in improving the performance of economic units in the Iraqi environment. The results are shown in Table 12, as follows:

Table 12: The extent of the impact of financial reporting on improving the performance of economic units

Financial Reporting Dimensions	Improving the Performance of Economic Units					
	F	T	R ²	α	β	Sig.
Environmental Elements	6.328	3.719	0.578	1.312	0.362	0.03
Social Elements		2.839			0.430	0.04
Economic Elements		4.107			0.223	0.01

Source: the results of the statistical analysis of the questionnaire using the statistical program STATA 15.

Table 12 shows the values of the F-test, T-test, the coefficient of determination (R²), the slope of the regression equation (β), P-value, and the slope constant (α). The value of the F-test was 6.328, at the level of significance of 0.04. This is significant when the level of significance is less than 0.05, which supports the second research hypothesis. The value of the determination coefficient reached 0.578, which means that the dimensions of financial reporting explain 0.578 of the change in improving economic units, as indicated by the value of a coefficient (β_1) which amounted to 0.362. Furthermore, until changing the environmental elements by one unit leads to a change in performance improvement by 0.362. The value of the coefficient (β_2) reached 0.430, which indicates that the change of social elements T of one unit leads to a change in performance improvement by 0.430. The value of the coefficient (β_3) that reached 0.223, indicates that changing economic elements by one

unit leads to a change in performance improvement by 0.223. The value of the regression constant (α) reached 1.312. This result supports the second research hypothesis.

The Conclusions and Recommendations

The Conclusions

1. The sustainability accounting with all its dimensions has received a lot of attention in order to achieve the prosperity of society at the present time.
2. The financial reporting indicators of sustainability accounting are those that reflect the environmental, social, and economic dimensions that must be adopted.
3. The company is concerned with the research sample in preserving a healthy environment for workers and society.
4. The company is concerned with the research sample by disclosing social legislation and achieving social prosperity for workers and society.
5. There are several obstacles and determinants in the application of sustainability accounting and reporting in the financial reports of the company (the research sample), including:
 - Lack of awareness and training of workers in introducing the dimensions of sustainability accounting.
 - Lack of top management awareness of the importance of this issue because it is not only providing in-kind donations, but it is also a process of measuring, disclosing, and preparing reports and indicators on financial and non-financial information for the whole company.
6. There is a statistically significant correlation between financial reporting on sustainability accounting and improving the performance of economic units in the Iraqi environment.
7. There is a significant effect of financial reporting on sustainability accounting in improving the performance of economic units in the Iraqi environment.

The Recommendations

1. The necessity of spreading more awareness regarding the concept and importance of sustainability accounting and the effect of applying its three dimensions (environmental, social, and economic) to improve the performance of economic units.
2. Imposing penalties for economic units that refrain from financial reporting on the dimensions of sustainability accounting and are limited to preparing the final accounts represented by the annual financial reports.
3. Holding qualification sessions for workers periodically and continuously on the mechanism of financial reporting on the dimensions of sustainability accounting, as



well as developing performance standards in economic units to improve their financial and administrative performance.

4. Working to create incentives for economic units that initiate financial reporting on their environmental, social, and economic dimensions.
5. The necessity of financial reporting on the sustainability accounting in the economic units through preparing separate reports on the financial reports represented in the final financial lists because these reports are important in meeting the needs of stakeholders (internal and external) for information on the environmental, social, and economic performance of the company (the research sample).



REFERENCES

- Abdalmanam, O., & Al-Jabali, M. A. (2013). A Field Study of a Sample of Audit Offices in Jordan. *International Journal of Applied Engineering Research*, 8(1), 1-135-
- Abeysekera, I. (2013). A template for integrated reporting. *Journal of Intellectual Capital*, 14(2), 227-245
- Bayoud, N. S., Kavanagh, M., & Slaughter, G. (2012). Factors influencing levels of corporate social responsibility disclosure Libyan firms: A mixed study. *International Journal of Economics and Finance*, 4(4), 13-29.
- Bebbington J. and R. Gray , *An Account of sustainability : Failure – Success and Aresonseptulaization , Critical perspectives on Accounting , 2001, pp 557-587*
- Cormier, D., & Magnan, M. (2015). The economic relevance of environmental disclosure and its impact on corporate legitimacy: An empirical investigation. *Business Strategy and the Environment*, 24(6), 431-450
- Freedman, M. (2009). *Sustainability Accounting and Accountability*.
- Gray, R. (2010). Is accounting for sustainability actually accounting for sustainability... and how would we know? An exploration of narratives of organisations and the planet. *Accounting, organizations and society*, 35(1), 47-62
- Hogan, C. E., Rezaee, Z., Riley Jr, R. A., & Velury, U. K. (2008). Financial statement fraud: Insights from the academic literature. *Auditing: A Journal of Practice & Theory*, 27(2), 231-252
- Marimon, F., del Mar Alonso-Almeida, M., del Pilar Rodríguez, M., & Alejandro, K. A. C. (2012). The worldwide diffusion of the global reporting initiative: what is the point?. *Journal of cleaner production*, 33, 132-144.
- Pahuja, S. (2009). Relationship between environmental disclosures and corporate characteristics: a study of large manufacturing companies in India. *Social Responsibility Journal*, 5(2), 227-244
- Sharaf, H. K., Ishak, M. R., Sapuan, S. M., Yidris, N., & Fattahi, A. (2020). Experimental and numerical investigation of the mechanical behavior of full-scale wooden cross arm



in the transmission towers in terms of load-deflection test. *Journal of Materials Research and Technology*, 9(4), 7937-7946.

Ryan, B., Scapens, R. W., & Theobald, M. (2002). *Research method and methodology in finance and accounting*

Xiaomei, L. (2004). Theory and practice of environmental management accounting. *International Journal of Technology Management & Sustainable Development*, 3(1), 47-57.