

The commitment of The Jordanian Industrial Companies in Applying Environmental Accounting

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Abstract

Accounting ideology is becoming highly concerned with the environmental responsibility. This study diagnoses the importance of environmental accounting principles of all enterprises. Environmental commitment calls for the need to evaluate any project in terms of its contribution to its environmental responsibilities. This study aims at assessing the environmental responsibility unit of Jordan's Industrial Companies listed at ASE, and how the financial department in each company copes with the environmental aspects. Study results have indicated that all Jordan's Industrial Companies are in general committed towards environmental accounting and they keep pace to the developments in this field. Results also revealed that environmental accounting function in industrial corporations keeps pace with the developments in environmental accounting.

Key Words: Environmental Accounting, Hypothesis Testing, Validity, Reliability

JEL Codes: Q56, C12, C520, Q26

1-Introduction:

Economic accounting need to be broadened to include the use of non-marketed natural assets and losses in income-generation resulting from the depletion and degradation of natural capital. Conventional accounts do not apply the commonly used depreciation adjustment for human-made assets to natural assets. Since sustainable development includes economic At the stage of development that accompanied the phenomenon of economic stagnation, attention has been shifted the accounting concept into the accounting unity to be line with the transformation of the accounting managerial ideology which considered the owners are the stakeholders of the project ; and thus the responsibility of the administration is to achieve balanced rights and obligations between the various stakeholders, however, this goal is faced with restrictions imposed by the community which is the environmental responsibility, imposed via a legal obligation or those associated with self interest on the grounds that his failure to meet these responsibilities could threaten his/her survival and continuity. Growing pressures on the environment and increasing environmental awareness have generated the need to account for the manifold interactions between all sectors of the economy and the environment. Conventional national accounts focus on the measurement of economic performance and growth as reflected in market activity. For a more comprehensive assessment of the sustainability of growth and development, the scope and coverage of and environmental dimensions, it is essential that national accounts reflect the use of natural assets in addition to produced capital consumption (Integrated Environmental and Economic Accounting, An Operational Manual, 2000). The accounting ideology cared for the environmental responsibility for all prospective projects and increased the interest in the growth of the size of projects and the acceptance of the idea which calls for the need to evaluate any project on the basis of its contribution to environmental responsibility, however, this application of the accounting unity is still based on the assumption that the project is environmentally irresponsible even if the project is owned by the state, causing increasing attention of researchers of(erase) the need to provide information on the environmental impacts of the project and this call was based on the following rationale :

- 1- Shift towards the direction in which calls to consider the cost of maintaining and protecting the environment of the cost of production leading to environmental cost of entry in the circle of accounting function.
- 2- Accepted accounting community of community mandate to protect resources, necessitating the development of tactics to provide environmental information to be taken into account when making decisions upon the exploitation of such resources.
- 3- Call for continual reporting on the environmental information to be a part of the accounting principles and that the external auditor banner shows the extent of the application of environmental accounting restriction.

2.1-Study Objectives:

This study aims to identify the interests of the accounting unit within the Jordanian industrial companies, with environmental responsibility and in order to:

- 1 - Assess the efficiency and effectiveness of environmental accounting function in industrial companies by comparing the actual procedures applied with Jordanian Environmental Protection Act No. 52 of 2006.
- 2 - Statement of information facing environmental accounting function and to make suggestions and recommendations to address them.
- 3 - Examining the relationship between the degree of effectiveness of environmental accounting and variables of personal accountant (functional status, number of years of experience, the allocation of certificates of professional life).

2.2- Research problem

The problem with(replace by in) this study, is concerned with the extent to which the Jordan Industrial Companies administrations are in commitment with the environmental responsibilities imposed by the legal law (such as the Environmental Protection Act 2006 Jordanian) or with the commitment arising from moral responsibility.

This problem can be formulated in the following set of questions:

- 1- Is there a commitment by the Jordanian industrial companies with the environmental accounting?
- 2- Do financial departments in companies cope with the developments that arise in the laws and regulations issued by the official bodies.
- 3- Do corporate finance departments take into account environmental responsibility in their policies and strategies?

2.3- Research hypotheses

Based on the research questions, following are the research hypotheses:

HO -1: There is no statistical significant relationship in the commitment of Jordanian industrial companies with Environmental accounting.

HO- 2:There is no statistical significant relationship was found that environmental accounting function in the Jordanian industrial companies keep pace with developments in the global environmental accounting.

HO- 3: There is no statistical significant relationship was found between environmental accounting employment in the Jordanian industrial companies and their continuity.

Borders of Research:

This study was limited to industrial companies Listed on Jordan's ASE for the year 2012.

3-Literature Review

Environmental accounting: to incorporate both economic and environmental information. It can be conducted at the corporate level or at the level of a national economy. The environmental accounting and reporting (EA/ER) is a proposed discipline that deals with the consideration, and ultimately the inclusion into the customarily accounting procedures, general and specific issues related to environmental and social impacts, regulations and restrictions. Safe, environmentally sound, and economically viable energy production and supply policies should be essential part of any accounting and management issues (Peng, 2009). Many countries have their own policies for the implementation of EA/ER: One method for holding businesses responsible for their behavior is to require them to report on their actions. The level and breadth of business reporting on environmental matters have increased dramatically over the past 20 years or so as a result of governmental regulations, accounting standard setting, and voluntary reporting. Today, external reporting on environmental performance occurs primarily through Pollution Release and Transfer Registers (PRTR), as components of traditional financial reports or in stand-alone, corporate environmental reports (Chertow and Lombardi, 2005). Interested accountants began a few years ago to account for the environment and to start accounting for the negative aspects of the exploitation of the environment, and to disclose those aspects and describe their causes as a result of human exploitation of the environment, or the exercise of human activities. Several names have emerged in the field of environmental accounting including:

1. Green accounting: which is a type of accounting that attempts to factor environmental costs into the financial results of institutional operations. This term was first brought into common usage by economist Wolfgang-Peter Zingel in the 1980. National environmental accounting seeks to achieve the same results at the state level. It has been argued that the gross domestic products ignore the environment and therefore requires a decision maker to use a revised model that incorporates green accounting. This is a popular term for the accounting of natural resources and environment.

2. Environmental Accounting for Sustainable Development: It is a concept to include environmental resource use is made difficult because of the difficulties in measuring environmental damages. The challenge to the economics and accounting profession is to ensure interdisciplinary collaboration, development of a framework to

explicitly include the environment, development of credible valuation procedures for the environment, and inclusion of the various ethical positions advanced by various groups on the value of the environment (Gamini, H., 2005).

3. Environmental and economic accounting (SEEA): It is a framework to compile statistics linking environmental statistics to economic statistics. It is described as a satellite system to the United Nations System of National Accounts (SNA). [2] This means that the definitions, guidelines and practical approaches of the SNA are applied to the SEEA. This system enables environmental statistics to be compared to economic statistics as the system boundaries are the same after some processing of the input statistics. By analyzing statistics on the economy and the environment at the same time it is possible to show different patterns of sustainability for production and consumption. It can also show the economic consequences of maintaining a certain environmental standard.

Whatever the label is, it means the inclusion and integration of process measurement and accounting disclosure and economics of the activities and programs that affect the operation of environmental and exercised by the economic units to meet the needs of the various parties in the community. Others have expanded in defining the concept of environmental accounting to identify and measure the costs of environmental activities and use that information in making environmental management decisions aimed at reducing the negative environmental effects of activities and force environmental regulations to implement the principle of "polluter pays" (Al-Tikriti, et al, 34:1999).

The issues of caring for the environment, costs and revenues and benefits by topping a prominent place and very important around the world because of the close relationship with human welfare which led to the increasing need to provide appropriate cognitive data from the environment to the internal management of companies and to members of the community, for the purpose of addressing issues related to them to maintain the green environment and assess the performance of Jordanian companies in this sense.

Many of the scientific authorities have pursued the process of preparing documents and guiding manual on Managerial Accounting for the environment, such as:

1. Agency of preservation the environment in the United States in 1995.
2. Association of Management Accountants of Canada in 1996
3. Environment Canada Organization in 1997.
4. National Chamber for the defense of the quality of the environment in the United States in 1999.
5. Organization of the United Nations / Department of Sustainable Development, 2001.

Global EA/ER Concern: Some environmental experts suggest that mandatory reporting requirements at this stage in the development of EA/ER may be premature. If EA/ER is voluntary and companies are permitted to select what they report, some companies may report only the "good news", while firms that present the good with the bad news will be disadvantaged. Further, without standards, verification of EA/ER is problematic. The initial establishment of financial accounting standards began at a time when most business activities did not cross national boundaries. Thus, it was natural that accounting standards were highly country-specific. As a result, international financial accounting standards are being developed, albeit slowly, and, to some degree, are being accepted worldwide (Burritt, 2002; Nyquist, 2003).

The importance of environmental accounting: in the past few years the attention of scientists and researchers have escalated their studying the environmental problems and found appropriate solutions to overcome them. A prominent role in this regard, where the attached problems of environmental pollution and development careful attention through the United Nation Environmental Program who cared about environmental studies and researches and to find effective and positive solutions to protect our planet from environmental pollution (Environmental toxins, 1994, p 4). As the environmental issues represent a big challenge for accountants through their measurement and analysis of environmental costs which are added to other costs, giving a new dimension to the development of the profession that were previously taken as aspects of fiscal and monetary with neglecting the social aspect and liability environment for industrial companies. The challenge lies in that there is a difficulty in measuring some environmental costs and how to address them which requires innovative techniques and methods of measurement and analysis of the environmental obligations that arise from activities assumed by the Jordanian industrial companies which leads to the depletion of part of the surrounding environment (Abdel Nasser, 1999, pp. 30-31). Environmental management accounting uses standard accountancy methods to identify, analyze, manage and reduce these costs in a way that can benefit both the business and the environment. In addition to financial costs, you can use environmental management accounting to identify other issues such as non-compliance, negative public relations and health and safety problems. The process also enables you to identify which activities have the biggest environmental impacts and costs. This enables managers to set goals and priorities for managing these activities and reducing their impact.

3.1- Managerial Accountancy and EA/ER: While most cost-accounting textbooks do not even address environmental issues, Hansen and Mowen have constructed a model for inducing action. They suggest the preparation of a report in which costs are presented in four categories: (1) environmental prevention costs (those

aimed at preventing pollution and waste); (2) environmental detection costs (those associated with determining compliance with regulations); (3) environmental internal failure costs (those incurred in preventing pollution and waste from being discharged into the environment) and (4) environmental external failure costs (those incurred in cleaning the environment if pollutants are released). The costs classified above are then transferred to what might be called an environmental income statement where they are compared to the estimated annual benefits of expanded environmental action of eco-efficiency (EE). This EE is one further piece of ammunition available to management accountants trying to provoke a greater proactively on environmental issues (Hansen and Mowen, M, 2003).

3.2- EA/ER and Sustainable Development

Most governments are concerned with their ability to maintain sustainable development; which is usually defined as the development that meets the needs of the present generation without compromising the ability of future generations meeting their own needs. Governments have to establish an integrated comprehensive reporting requirement for newly established business that includes all the aspects of its nonfinancial performance and effects of its externalities. There are a large number of environmental, social and economic indicators being developed to assist with sustainability assessment (CRISP, 2003). Generally however, these indicators are usually used in isolation to analyze the performance of projects, companies, sectors and countries as they relate to one of the three dimensions of sustainability (i.e.: environmental, social and economic). No robust model that has integrated all three dimensions into a single framework currently exists. (Xing et al. (2009)). The Global Reporting Initiative's (GRI) have improved the reporting and that the sustainability reporting guidelines' updates guidance has become the basis for reporting sustainability performance by organizations worldwide.

The General Framework of Environmental Accounting

The recent presentation of the financial philosophical thought and its environmental impact will start from the operational definition of the environment as a natural one in addition to the cultural, economical and social fields. The accounting term is defined in an environmental point of view as: "a science looking on how the environmental aspects affect on the conventional accounting system and as it is an effective tool to measure and evaluate the environmental aspects of facilities (Sefcik & Soderstrom 1997). This definition is focused on the separation between the environmental accounting and the conventional accounting system and the environmental accounting affect on the conventional accounting systems which help to assess the facilities. It also includes the process of selecting variables, standards and procedures for measuring the social performance of the organization and the disclosure of the results to the involved parties in the community, whether such parties were within or outside the facility (Shaheer: 1998). Public attention in environmental issues was greatly and rapidly growing through the high costs which borne by industrial facilities in order to maintain environment, where a study conducted in the USA shows (Heuer et al, 1995) increasing in the environmental costs in the American companies for oil refining to reach the average of 22% of the gross operating costs after it was 3% during the first five years of the nineties. Therefore and as a result of inevitable high costs of environmental costs and financial obligations which must be borne by the companies that especially cause the environmental pollution. The disclosure of environmental costs including the costs of compliance with the environmental laws and expected financial obligations become a necessary matter. As a result of that, there was an allocation of facilities for single reports or parts of annual reports for the purpose of environmental performance disclosure. In order to increase the confidence in such reports, they must be audited by neutral and independent auditors, which would increase the burden on the auditors (Watson and Mackay, 2003).

3.3- Legislations of environmental accounting

The commitment and environmental orientation need adequate legislations organizing businesses. There is also a difference in the degree of abiding each country on its local legislations related to disclosure and environmental accounting measurement. Whereas the failure of legislations to respond to the needs of society and its development, and that the law has many complexities or significant gaps allow its infringement and the failure to provide appropriate financial and criminal proofs in the law that reduce the obligation of applying the law (Paul,C,et al,2001,). Each country should set necessary laws in order to oblige the economical institutions to disclose of its data and information related to pollution caused by their activities, and discloses the costs incurred in reducing environmental pollution, through the development of the published financial statements (Ricardo,E et al,2003). The Jordanian legislations confirmed on the necessity to protect the environment especially in the enforced Environmental Protection Act, and did not confirm that the companies should disclose the statement of its commitment to environmental protection in a report includes the value of expenditures on environmental Protection, (Environmental Protection Act: 2006).

3.4- Benefits of applying the environmental accounting

It is not possible to consider the high cost of applying the environmental accounting without taking into consideration the benefits achieved (Sekaran, uma. 2003). measuring the environmental performance costs will help in improving its performance, which in return enhances the economic performance of the organization

(1997, RUSSO), enhance the reputation of the establishment's value, and thus improve its competitiveness (Toms 2002). This reflects the need of measuring the environmental performance costs and analyzing it objectively. The natural resources and environment account systems aimed at assisting the competent authorities of the country in preparing plans for long-term future development (Alfsen, 1993). This will lead to a number of accounting reports that show balances and statistical data for the natural resources of the country in certain history, also show the organizations and international bodies, which enable the planning authority to allocate these resources among the different uses in order to achieve the largest possible return of those resources (Haan, 1993). The most important goals sought by the studies and research that is done through the United Nations of Environment Programme (UNEP) in the field of environmental accounting is an attempt to link actual, environmental and monetary accounting of the natural resources, and environmental impacts (Bartelmus, 1992). The provision of actual and financial accounting data for the operations and environmental activities can make the organs of the country to determine the funds needed to achieve effective management of the environment in the form of money.

3.4- Jordanian Environmental Protection Act No. 52 of 2006

A reminder of some articles of the law; we recall some of these items:

Article 3:

A. The competent ministry is to protect the environment in the Kingdom and the consequent civil authorities and the implementation of the instructions and decisions issued under this Act and the regulations issued pursuant thereto are subject to legal liability set forth herein or other legislation.

B. Ministry is the competent authority at the national level, regional and international levels with regard to all environmental issues and donors in cooperation and coordination with the relevant authorities.

Article 4:

To achieve the goals of environmental protection and improvement of the various elements in a sustainable manner, the ministry in cooperation and coordination with the relevant authorities the following tasks (recall some of them):

1. The development of public policies to protect the environment and the preparation of plans, programs and projects necessary to achieve sustainable development.

2. Preparation of specifications and standards for the elements of the environment.

3. Monitor and measure the environmental elements and components and pursued through educational centers to be approved by the ministry according to specific criteria.

4. Issuing instructions environmental crisis to protect the environment and its elements and conditions of the establishment of agricultural projects, development, and commercial, industrial, housing, mining, etc. and related services opt-out and adoption within the preconditions for licensing any of them or renew the license and from the assets of legal assessments. Difficulties in the application of environmental accounting in the Jordanian industrial companies include:

1. The lack of clarity and methodologies used in the calculations of environmental and especially water, and this does not help start-ups countries (developing) in this area.

2. The modern subject and lack of experience in this area would make it work on the themes of environmental and water accounts and this leads to walk at a slow pace.

3. Lack of control over environmental resources and the lack of an international standard for environmental accounting is applied in Jordanian industrial companies.

4. The lack of an environmental information system in the Jordanian industrial companies.

5. Many environmental resources do not have local or global prices defined.

6. Lack of sufficient attention to the public and decision Mtakvea to threads of the environment and natural resources in general and environmental accounts and the presence of her priorities more problems of the environment and natural resources in the Jordanian industrial companies.

3.5- Role of accountants and financial staff:

There are several ways in which accountants and financial staff can adapt their existing skills and usual job responsibilities to help businesses deal with environmental issues. Accountants have a direct interest in controlling and reducing business costs and increasing profits. They have the necessary skills and experience to:

- Monitor measure and control costs
- Manage information systems so that the outputs are accurate and reliable
- Identify and plan financial budgets for improvement projects
- Help formulate and implement strategy
- Provide highly regarded advice.

3.6- Significant Environmental Accounting Policies:

A premise of employing environmental accounting is that the goals of such environmental accounting activities should be made clear. It is necessary to ensure that the goals of environmental accounting conform

with the company's managerial policies and targets as related to environmental conservation. The following elements need to be defined.

- Target period
- Aggregation scope
- Calculation standards for environmental conservation costs
- Calculation standards for environmental conservation benefits
- Calculation standards for economic benefits associated with environmental conservation activities

In addition, when disclosing the results of environmental accounting procedures, should any changes be made to the aforementioned elements, the following factors must be disclosed, notification of a change, note of changes to content, the reason of the change and the impact of the change.

4.-Previous Studies:

A research conducted by Ball,A in how environmental accounting is used by employees to build an organizational response to environmental issues, and argues that beyond conventional legitimacy or organizational change perspectives, there is a further analytical possibility: environmental accounting as 'workplace activism'. The findings raise questions about how we evaluate environmental accounting interventions, and about a role for research in helping environmental movement adherents on the inside of organizations to stay engaged and avoid premature capture (Ball,A,2006).

A study conducted by Beck,C. and Van der Laan,S. on small and persecuted community seeking to reify this mysterious oddity that was social accounting. However, with increasing commercial and regulatory emphasis globally on environmental degradation and rehabilitation, climate change and the social responsibilities of the corporate world, this isolated, small community has not only gained a voice, but an increased profile and credibility for researchers in the area. As such, social and environmental accounting (SEA) research boasts both a history and a future as a stand-alone sub-discipline of accounting research. This paper questions the position of accounting in the provision of financial information and offers a suggestion to develop a more holistic, interdisciplinary approach to knowledge management in which accountants can play a crucial role as professional financial information providers (Beck,C. and Van der Laan,S, 2008).

Rahahleh,M aimed at shedding light on the most important items to be offered as tools for the application of environmental accounting also it included legislation, incentives and accounting staff as well as acknowledging general framework and concepts of environmental accounting. The study found out that the availability of these elements will contribute to the application of environmental accounting. The study recommended educating accountants and financial managers and corporate departments of the concepts of environmental accounting, and its general framework, also urged to endorse binding legislation and accounting standards guidance for their application. In addition to establishing a system of incentives, various tax and governmental exemptions, so that to encourage companies to implement environmental accounting (Rahahleh, M, 2011).

In a study on Green accounting in developing countries, Jahamani presented in his paper three environmental aspects, environmental awareness, environmental involvement, and environmental reporting. Developed countries have achieved a lot of progress in these fields. Developing countries such as Jordan and U.A.E. are still in their early stages. Two samples of corporate decision-makers in these countries were utilized to examine the above aspects. The results show that they are aware of environment protection issues, but their commitment to environment protection is still low. The results of Mann-Whitney test showed that there is no difference between Jordan and U.A.E. in terms of circumstances leading to environmental awareness, environmental awareness and involvement.

Study of Ragab,K , Technical Institute of Mosul, on the role of environmental accounting in warding off the threat caused by environmental pollution and disclosing this threat. The purpose of the study is to shed light on the accounting profession and its duty to improve the view of any economic unit and the development of the information which clarifies its role within its environment and its contribution to the provision of appropriate information to make decisions which have proceeds of optimal exploitation of resources, and the preservation of the environment and the prevention of danger in Iraq(Ragab,K ,2008).

In a study by Johnson which stresses on the term green accounting that has been around since the 1980s, and is known as a management tool used for a variety of purposes, such as improving environmental performance, controlling costs, investing in "cleaner" technologies, developing "greener" processes and products, and forming decisions related to their business activities(Johnson, 2009).

Omar S., study in the importance of accounting for environmental costs to improve the quality of accounting information. The purpose of the study was to indicate the role of environmental accounting tool to supply information to the accounting beneficiaries and decision-makers with the relevant information on the costs related to the environmental aspects to give a complete picture of companies' performance in this regard(Omar S.

2006).

Study by Sayed,N et,al in the role of the disclosure of environmental information on the accounting system .Study aimed at facilitating the evaluation of the activities of companies in protecting the surrounding environment carried by governmental and non-governmental organizations that aim to confirm the need for senior management to know

about the company's role in protecting the environment through their systems and to reflect their performance in this area, hoping to reach their main goal of protecting the environment from all kinds of pollution(Sayed,N et,al, 2009).

Study by Dripati,R., 2009 in the internal auditing role in assessing environmental performance. The aim of this study is to spell out the duties and responsibilities of internal auditors in evaluating the environmental performance of companies and the profitability statement and the qualifications required for internal auditors assigned to evaluate environmental performance and the encountering difficulties and the steps that must be followed to achieve the commitment of companies towards environmental responsibility (Dripati,R., 2009).

A study by Veronica ,et.al. finds that the degree of development of environmental accounting practices in Portuguese local entities is low. Organizational size and the degree of development of environmental management practices are positively and statistically related to the level of development of environmental accounting practices. However, the findings suggest that the existence of compulsory environmental accounting standards is not positively associated with the development of environmental accounting practices by Portuguese local entities(Veronica ,et.al:2010).

5-Methodology and Statistical Analysis:

5.1-Study Method and design:

This chapter deals with a description of the methodology of the study, and members of the community of study and appointed, as well as study tools used and the methods of preparation. This chapter includes a description of the procedures carried out by researchers at the legalization of study tools and their application, and statistical treatments adopted in the analysis of the study, in this chapter study procedures will be handled in detail and in the following manner:

This study depends on using two Scientific Research Approaches:

5.2-Descriptive approach: it is to indicate the most important literature related to the impact of environmental accounting in the industrial and service sectors, depending on references and periodicals, reports and scientific research and university studies and previous studies and relevant papers, also in conducting logical analysis and comparisons between literature as much as possible, so as to cover the theoretical framework of the study.

5.3-Field research approach: it is used to cover the practical side of this study in order to test the validity of hypotheses, and to answer its questions, draw results depending on questionnaire designed for the purposes of this study, in accordance to generally accepted scientific steps.

Access to data sources: researchers have been following the methods of data collection in different means: were distributed, 38 were retrieved, and 30 questionnaires were screened out for statistical analysis.

1- the theoretical framework of the study is primarily based on references, periodicals, reports, scientific research, theses and relevant previous studies.

2 - Field approach is used through measurement tools (i.e. questionnaire), which is the main measurement tool relied upon in this study to collect data from the study population in order to answer the study questions and test its hypotheses.

5.4-Society and study sample: The study sample consisted of 50 Jordanian industrial company individuals, Surveys analysis.

6-Analysis:

6.1- Characteristics of the study sample:

The demographical characteristics are described for the respondents and analyze their opinions and responses on the survey questionnaire; the arithmetic means and standard deviations were extracted from their responses for each field of the questionnaire and the results were as follows:

1-Education Level: Table (1): Distribution of study sample according to educational levels:

Qualification	Frequency	Percentage
Diploma	8	26.7%
Bachelor	20	66.7%
Master	2	6.7%
PHD.	-	
Other	-	
No response	-	
Total	30	100%

- The results showed in Table (1) :the distribution by academic qualification that the percentage of those who hold a diploma (26.7%), while the percentage who hold a bachelor's degree (66.7%), while the master's degree holders were accounted for (6.7%) of the sample. This indicates that the majority of respondents are well educated and are acquainted to the subject of study and thus are qualified to answer the questionnaire and can be trusted in their abilities and information.

2-Age: Table (2): Distribution of study sample according to age:

Age(years)	Frequency	Percentage
30 and below	13	43.3%
31-40	9	30%
41-50	5	16.7%
51-60	3	10%
No response	-	-
Total	30	100%

The results showed in Table (2) :the distribution of the study sample by age that the proportion of people aged 30 years and younger have reached (43.3%), (31-40) years old accounted for (30%), (41-50) years accounted for (16.7%) while the percentage of those aged 51-60 years accounted for (10%).This reflects that the majority of workers are relatively young and are energetic enough to hold such responsibility.

Specialization: Table (3): Distribution of study sample according to specialization:

Specialization	Frequency	Percentage
Accounting	12	40%
Business Administration	5	16.7%
Economics	5	16.7%
Finance and banking	2	6.7%
Other	6	20%
No Response	-	-
Total	30	100%

The results shown in the table (3):the distribution of the study sample by specialty that the percentage of those who specialize in Accounting are (40%), Business Administration and Economics (16.7%), Banking and Financial Sciences (6.7%),while other disciplines are (20%). This means that a total of 80% are allocated within the accounting and financial specialization which indicates they're acquaintance of the subject of study.

4-Career Level:Table (4): Distribution of study sample according to career level:

Career Level	Frequency	Percentage
Financial Manager	4	13.3%
Accounting section Supervisor	4	13.3%
Accountant	5	16.7%
Administrative employee	9	30%
Others	8	26.7%
No Response	-	-
Total	30	100%

The results showed in Table (4) : the distribution of the study sample according to the functional level that the proportion of financial managers amounted to (13.3%), and the same percentage for the Accounting Section Supervisor (16.7%) proportion of accountants, those who work as employees administrators amounted proportion (30%) and (26.7%) of those who do other jobs. This means that a total of 43.4% are within the accounting and financial careers which indicates that executive management is debatable about the subject study.

5-Years of Experience:Table (5): Distribution of study sample according to years of experience:

Years of Experience	Frequency	Percentage
1-3	5	16.7%
4-6	9	30%
7-10	7	23.3%
More than 10	9	30%
No Response	-	-
Total	30	100%

Results appear in Table (5) :Distribution of the study sample according to the years of experience, where the proportion of people who experience (1-3 years) was (16.7%), (4-6) years of (30%) and in the same proportion whose experiences are more than 10 years, while those with (7-10 years) experience were (23.3%), this indicates

that 53.3% are relatively old timers and have good experience in this field.

6- Vocational Certificates:Table (6): Distribution of study sample according to vocational certificates:

Vocational Certificate	Frequency	Percentage
Yes	4	13.3%
No	26	86.7%
No Response	-	-
Total	30	100%

The Table (6) relating to the distribution of the study sample according to holding a vocational certificate. Table indicates that (13.3%) of the sample were holders of vocational certificates, while (86.7%) did not. This reflects that the majority of respondents are non vocational which has a passive effect in the sample distribution.

7 - Does the company have an accounting information system?:Table (7): - Distribution of the study sample is according to having accounting information system:

Have accounting information system	Frequency	Percentage
Yes	21	70%
No	9	30%
No Response	-	-
Total	30	100%

Table No. (7) shows the distribution of the sample by having an accounting information system in the company. Table shows that (70%) of the study sample has this system while (30%) do not have. This advocates the demand for including environmental accounting in their system.

6.2- Validity and reliability of study tools

Reliability test:

To test the consistency, researchers have used the Cronbach's Alpha test to measure the reliability of measurement instrument according to the answers of the 30 individuals surveyed.

Table 8 shows the results of the test, where the value of the Cronbach's alpha for all the paragraphs of the study ($\alpha = 87.4$); however, this value is acceptable as it is higher than the minimum ($\alpha \leq 60$).

Table (8): α value extracted by testing Cronbach Alpha

Sample	Alpha(α)
30	87.4%

7- Study design and statistical treatment:

The researcher used the Statistical Package for the Humanities and Social Sciences (SPSS), based on the following statistical methods to answer research questions, as well as to test the assumptions contained therein, namely:

1. Frequencies and percentages to describe the characteristics of the study sample.
2. Averages and standard deviations: the researcher to extract averages and standard deviations for each paragraph of the resolution relating to the independent study variables and subsidiaries and to answer questions about the study.
3. Reliability factor (Cronbach's Alpha): To ensure the reliability degree of the measuring instrument.
4. One sample t- Test: In order to test the hypotheses of the study.

The arithmetic mean and the standard deviation of the study sample answers on the paragraphs of the study. This section aims to present the results of the use of some descriptive statistical methods and analytical data processing that emerged from the questionnaire in terms of means and standard deviations, and through descriptive answer questions covered by the study are as follows:

--Paragraphs relating to the commitment of the Jordanian industrial companies environmental accounting standards.

Table (9): Averages and standard deviations of the views of respondents about the commitment of the Jordanian industrial companies' to environmental accounting standards

Paragraph #	Paragraph	Arithmetic Mean	St.Deviation
1	There is a commitment Jordanian Environment Protection Act No. 52 of 2006	3.26667	1.014833
2	Keep pace with developments in Jordanian industrial companies that arise on the laws and regulations related to environmental responsibility	3.63333	0.850287
3	There is commitment to environmental and social responsibilities which are not imposed by laws	3.46667	0.776079
4	There is a formal follow-up by the environmental authorities of the Jordanian industrial companies	3.56667	.935261
5	There are internal laws and regulations in the Jordanian industrial companies to ensure the preservation of the environment and dealing with it.	4.03333	.927857
6	The company thing takes into account the social responsibility when it sets the human resources	3.86667	.973204
7	There is interest among decision makers certain concern about environment and the natural resources in general	3.63333	.999425

The results shown in the table (9) relate to the views of respondents about the commitment of environmental accounting standard installations. Answer trends were positive about all the paragraphs where the arithmetic mean is higher than the standard mean (3), and we note from the table that the paragraph number (5) got the highest average account (4.03) with a standard deviation (0.927), while paragraph number (1) ranked last where the arithmetic mean is (3.26) and standard deviation (1.014).

--Paragraphs related to environmental accounting function in industrial companies to keep pace with developments in the accounting function by using the computer.

Table (10): Means and standard deviations of members views of the sample on to keep pace with developments through environmental accounting function.

Paragraph #	Paragraph	Mean	St. Deviation
1	Availability of electronic accounting system to fulfill the purposes of Jordanian industrial companies requirements of disclosure of environmental performance	3.63333	1.033352
2	There are educational programs and courses held by Jordanian industrial companies to know the disclosure requirements of environmental performance	3.33333	.958927
3	Companies disclose their environmental performance via online networks	2.76667	1.006302
4	There are internal environmental control units to provide Jordanian industrial companies decision makers with information	3.46667	1.105888
5	companies are facing difficulties in measuring environmental costs based on the information provided via the environmental information systems	3.13333	.973204
6	There is an electronic system to provide the administration with financial lists related to environmental accounting	3.56667	1.278019

As shown in table (10), Results related to the views of respondents about keeping up with developments through the accounting function of environmental trends were positive about all the paragraphs as the average arithmetic is higher than the standard mean (3), with the exception of paragraph(3) where we got the lowest mean (2.76) with a standard deviation (1.006), and we noted through the table that paragraph (1) got the highest mean (3.63) with a standard deviation (1.033).

--Paragraphs relating to environmental accounting job in industrial companies and they check the efficiency and effectiveness of the work of companies.

Table (11): Averages and standard deviations of the views of respondents on achieving efficiency and effectiveness in the work through environmental accounting

Paragraph #	Paragraph	Mean	St.Deviation
1	There are feedbacks from customers reveal the importance of caring to environmental responsibilities	3.53333	1.074255
2	environmental costs are taken into account when calculating production costs	4.00000	.830455
3	Administrations are concerned with environmental responsibility when determining prices.	3.90000	.994814
4	Jordan Industrial Companies are concerned in disposal of industrial waste which distinguishes them from others.	4.10000	.922889
5	Companies are concerned about environmental responsibility by allocating a portion of their profits as donations to environmental associations.	3.50000	1.074789
6	Companies care about special needs individuals and identify aspects of care about them.	3.20000	1.095445
7	Companies' administrations are interest by the adequacy of lighting and colors in the production sites which helps to maintain the performance and stability of their staff.	3.56667	1.304722

The results shown in the table (11) relate the views of respondents on achieving efficiency and effectiveness in the work through environmental accounting. Answer trends were positive about all the paragraphs where the arithmetic mean is higher than the standard mean (3), we note through the table that paragraph(4) got the highest mean (4.1) with a standard deviation (0.922), while The paragraph(6) ranked last in terms of arithmetic mean (3.2) and standard deviation (1.095).

7.2-Hypothesis testing:

1 - (Ho1): There is no statistically significant relationship of Jordanian industrial companies' commitment to environmental accounting.

To test this hypothesis, researchers used one sample t-test as shown in the table (12) below:

Table (12): The validity of the hypothesis test the first null hypothesis

t computed	t tables	Significance	Degr. Of freed.	Result of H01
5.747	1.96	0.00	29	Reject

NOTE: Significance at $(0.05 \geq \alpha)$

One sample t-test is used to check the validity of the null hypothesis. As shown in Table (12). validity of the model is statistically significant in the interpretation hypothesis, as the value of the significance level is (0.00), while the calculated value of t (5.74) and tabular value (1.96), and the calculated value of t here is considered statistically significant at the level of significance (0.05), where the value is higher than the value calculated, and since the decision rule states that if the calculated value is higher than the spreadsheet, the calculated value of t considered statistically significant, and as a result we reject the null hypothesis and accept the alternative one, which states that there is a commitment by Jordanian industrial companies to environmental accounting standards.

2- (Ho2): There is no statistically significant relationship was found that environmental accounting function in the Jordanian industrial companies keep pace with the global environmental accounting developments.

To test this hypothesis, researchers used one sample t-test as shown in the table (13) below:

Table (13): Testing the validity of the second null hypothesis:

t computed	t tables	Significance	Degr. Of freed	Result of H02
2.6	1.96	0.015	29	Reject

NOTE: Significance at $(0.05 \geq \alpha)$

One sample t-test is used to check the validity of HO2 hypothesis. table (13)shows that the model is statistically significant in interpreting the hypothesis, as the value of the significance level is (0.015), while the calculated value of t (2.6) and tabular value (1.96), thus the calculated value of t is considered statistically significant at the level of significance (0.05), where this value is higher than the value calculated, and since the decision rule states that if the calculated value is higher than the spreadsheet, the value of t calculated is considered statistically significant, and as a result we reject the null hypothesis and accept the alternative hypothesis, which states that

Jordanian industrial companies keep pace with the global environmental accounting developments.
 3-(3Ho): There is no statistical significance was found that environmental accounting function in the Jordanian industrial companies will verify the continuity of these companies.

To test this hypothesis, researchers used one sample t-test as shown in the table (14) below:

Table (14): The validity of the hypothesis test the third null hypothesis :

t computed	t tables	Significance	Degr. Of freed	Result of H02
5.45	1.96	0.00	29	Reject

NOTE: Significance at $(0.05 \geq \alpha)$

One sample t-test is used to check the validity of HO3 hypothesis. table (14) shows that the model is statistically significant in the interpreting the hypothesis, as the value of the significance level (0.00), while the calculated value of t (5.45) and tabular value (1.96), and the calculated value of t here is considered statistically significant at the level of significance (0.05), where the value is higher than the value calculated tabular, and since the decision rule states that if the calculated value is higher than the spreadsheet, the value of t calculated is considered statistically significant, and as a result we reject the null hypothesis and accept the alternative hypothesis, which states that environmental accounting function realizes the effectiveness and continuity of the work of Jordan Industrial companies.

8- Study Results, Conclusions, and Recommendations

8.1- Study Results:

The study provided a number of assumptions and questions that have been answered.

Results of the study are:

1. Through this study most of the sample questions were answered positively, except for the paragraph concerned with "the company to disclose their environmental performance through online networks"; where trends towards it were negative.
2. Jordanian industrial companies' are committed towards the environmental accounting standards.
3. The environmental accounting function in industrial corporations keeps pace with the developments in the environmental accounting.
4. Environmental accounting function in the Jordanian industrial companies creates efficiency and effectiveness in the corporate work.

8.2- Conclusions:

The introduction to this paper suggested that environmental accounting might help accomplish several goals. One is to help steer the economy on a sustainable path or provide macroeconomic indicators that reflect the role of the environment in the economy. This turns out to be linked to one of the sources of tension that can run through development of the accounts, over the relationship between economics and statistics and whether to include valuation and modeling results in the accounts. A second goal of the accounts is to make it easier to analyze sectoral and macroeconomic issues, so that design policies will reflect more understanding of the relationship between the economy and the environment. A third goal is that of environmental advocacy groups, that the accounts may help make a case for increased environmental protection. A fourth goal is that the accounts and the process of building them will serve as a catalyst for organizing data in new ways, reconciling discrepancies in underlying data, and investing in new data collection. This is in some measure related to one of the other issues threading through much of the accounting work, of the relationship between the accounts and conventional environmental statistics.

8.3- Recommendations:

Researchers recommend the following:

- 1-Taking into account the commitment of the Jordanian Environment Protection Act No. 52 of 2006. The availability of relevant legislations relating to environmental activities for companies to apply environmental accounting those legislations binding to be applied with the need of finding sanctions provisions in case of non-application.
2. There is a need for awareness of the framework and the general concepts of environmental accounting and its applicable methods, and accounting systems.
3. The need for evidence and criteria to guide accountants about the practice of environmental accounting.
4. To keep abreast of developments that arise on the laws and regulations related to environmental responsibility.
5. Need to adhere to the responsibilities which might not imposed by environmental laws. Also the need for evidence and criteria to guide accountants about the practice of environmental accounting.
6. The research recommends that the companies are urged to disclose their environmental performance through

online networks.

7. The needs for industrial companies to sponsor the special needs groups and identify aspects of care about them.
8. Further research related to relevant environmental accounting for the benefit of decision-makers in industrial companies.

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