

Measurement & Disclosure of the Environmental Efforts Taken by the Jordanian Industrial Companies: Liability Study on Jordanian Electricity Generating Company, and the Training Companies in Amman Financial Market

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Abstract

Consequently the interest in environment was increased recently by the global organization and authorities and the necessity to protect the universe from the waste of human communities and their civilization which badly impacts ozone layer. Negligence of environment is deemed collective suicide of human beings when they reached the point of no return.

Therefore, this study becomes important since the researchers tried, through studying and analyzing the audited financial statements of the Electricity Generating Company (the Sample of this research), to find out if they pay for reservation of environment, as well as if they take out measurement and disclose such environmental expenditure. The expenditure is still little due the lack of adequate interest and high cost in other hand.

The researchers tried to obtain to reach into a conclusion that the Electricity Generating Company, through answers of several questions posed in the research, really allocates adequate amounts to preserve the environment, but they do not disclose that in their financial statements. Specialists' views have been taken into account in the sample of the companies cause pollution to the environment, in respect of measurement, environmental disclosure and analyzing their responses to reach a set of results. It was found, theoretical side of the research, that there is a wide interest in international social accountability, in particular the payments on the protection of the environment and maintains it free of contamination and pollution control. It was also found that there are several factors and accesses in the measurement and environmental disclosure processes.

The researchers tried to make several of recommendations

of what the organizations must do, in general, and the Electricity Company in particular, with respect to the payments for environment preservation and disclose the same in their financial statements. The industrial institutions, that cause pollution to the environment, must be obliged to meet the environmental measurement requirements for the positive impact of such processes on the establishments to be socially accepted, and enhance their marketing position. The Institutions must disclose their efforts for the environment in their financial annual statements, particularly the statement of income and financial position.

Key words: Electricity generating company; Protection of the environment; International social accountability; Pollution control

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INTRODUCTION

Accounting plays the role of providing the decision makers, since it has been created, in relevant of investments and financing, with information or financial statements which assist them to take appropriate decisions. The accounting task is not constrained to the functions herein above, because it social science developed in accordance with changes take place in the society, i. e. the increase of the interest of individuals in the affects of such decision (which were made upon the facts and numbers of accounting) on the society. Thus, the concept of social accountability emerged, then sub system within

the accounting system, to obtain the information related to the social accountability of the plants, i. e. they deal with the cost and revenues. These were called the social costs, revenues and social benefits. Although there is bad need for such system, the social accountability is still unclear concept, which should be promoted by laws governing these plants, where they undertake to execute works which enhance the public interest; namely the society service and hold the society harmless.

(1) The Importance of the Study

The study derives its importance from consideration of the social efforts, relevant to the preservation of the environment and pollution control, are among the matters that occupy the interests of the governments and social organizations. The Business institutions (particularly the industrial ones) are requested to pay for these areas to maintain their position in the local society and avoid violation to the concerned laws the governments stated to legislate. These efforts require measurement processes and financial disclosure and expose the financial statements, which will improve the competitive position of these plants and increase the market value of their shares in the financial markets.

(2) Research problem

The comprehensive evaluation of the performance of the establishments must surpass the economical performance, to show up their contributions in the social area. Recently, a new concept argues to make the affect of the establishments consisting with objectives and aspirations of the society. The application of this concept faced a complicated difficulty, represented by the traditional performance of the establishment, judged by the economical results achieved. These accomplished results might be in contrary to the society priorities and needs, in addition to the diversities of the society needs and desires. The problem becomes more complicated when we know it is so hard to evaluate these needs and desires.

Hence, the role of accounting in the social responsibility is high lighted in terms if measurement and disclosure of this performance. It is noted that the industrial companies in Jordan neglect such type of accounting. So, they integrate the expenditure on social areas, i. e. what concerns the laborers and environments with their operational expenses. The question of the research can be identified though the following questions:

- Do the industrial plants pay for the environment and preserve it?
- How can we measure such expenses?
- Do the industrial establishments reflect /disclose their efforts in the enlivenment in their financial statements?
- Do the international accounting criteria, financial reporting and laws give any importance to accounting for its environmental efforts?
- Is it possible to change the objective of the industrial plants in Jordan from achieving profits to the interest in the social and environmental aspects besides the profits?

(3) Hypotheses of the Study

• First Hypothesis

The industrial establishment doe not measure the environmental efforts to prevent and control contamination in the view of the research sample members in the companies under measurement.

• Second Hypothesis

The industrial establishments do not disclose their efforts in their financial statements to prevent the pollution control in the view of the study sample respondents in the companies being measured.

• Third Hypothesis

The lacks of legislations enforce the industrial establishment to take into account to spend on the environmental efforts in the view of the study sample members in the companies being measured.

• Fourth Hypotheses

There are not accounting criteria governing the measurement process and disclosure of the environmental efforts in the point of view of the study sample members of the companies under measurement.

• Fifth Hypotheses

There is no difference in the trends of the study sample individuals about the following variables:

The industrial establishments do not carry out measurement to the environmental efforts tp prevent pollution and pollution control.

The industrial establishments do not disclose their efforts to prevent pollution and pollution control.

The lack of accounting criteria governing the measurement and disclosure of environmental efforts processes.

(4) The Objectives of the Study

The objectives of the study can be specified as follows:

- The presentation of theoretical frame and show up previous studies addressing the same subject.
- The measurement of the study sample individuals trends towards the following variables:
 - The industrial establishments do not carry out measurement process in the concern of pollution control and prevention.
 - The industrial establishments do not disclose their environmental efforts related to pollution control and prevention.
 - The lack of laws enforces the establishments to spend allocations for environmental efforts.
 - The absence of accounting criteria governing the measurement process and disclose the environmental efforts.
 - The measurement of the trends differences among the study sample individuals in the companies have been studied about the following variables:
 - Non performance of the environmental efforts measurement and pollution control by industrial establishment.
 - The industrial establishments do not disclose their environmental efforts to prevent and control contamination.
 - The lack of legislations which make the industrial establishment to be interested in spending on environmental efforts.

- The lack of accounting criteria governing the measurement disclosure of the environmental efforts processes.
- The presentation of a case study deals with the efforts being made by the Electricity Generating Company in Jordan in the area of measurement and disclosure of the environmental efforts for pollution prevention and control as an example to support the practical study.
- Diagnosing the difficulties and barriers which hinder the sample of this study companies, related to the measurement and disclosure of the environmental efforts to prevent and control contamination, as well as the impact of the lack of the legislations and accounting criteria on the measurement process, divulging the same, and attempting to develop a set of recommendations to address those difficulties.

(5) Community of the Study and Approach

The descriptive analytical and field analytical approach has been adopted in this study. In respect of the theoretical aspect, desktop and internet survey were conducted to review the theoretical and field studies and researches in order to develop the foundations and orientations based on the conceptual framework, and recognize the most important previous studies, which constitute a vital assistance in this study and its content in the areas of knowledge. For the field analytical study; all the data collected have been analyzed through the answer to the questionnaire, as well as through analysis of the financial statements, which have been collected from the Jordanian National Electricity Generating Company for the period of (2000 -2006), when the company had transformed the turbines and generators (transformers) power, run by heavy fuel which is harmful to the environment, to turbines and generators run by natural gas, which less harmful to the environment. The proper statistical, analytical, and financial methods have been used.

(6) The Tool of the Study and its Variables

A questionnaire was prepared to measure the variables of the study and achieve its objectives as follows:

- None measured environmental efforts to prevent and control pollution variable.
- Non-disclosure of the environmental efforts to prevent and control pollution variable.
- Lack of legislation to make installations concerned to

expenditure on environmental efforts variable.

- The lack of accounting standards governing the measurement and disclosure of the environmental efforts.

- Five point Likert Scale has been used as follows:

Very Strongly Agree level (5), Strongly Agree level (4), Average Agree level (3), Low Agree level (2), Very low agree level (1).

(7) Reliability of the Study Tool:

The Cronbach's Alpha co-efficient was derived to measure the reliability of the study tool. The value of Chronbach's Alpha coefficient value was 8.90 for all the questionnaire centers. This indicates the strength and high reliability and validity of the questionnaire and its phrases. For the variables of the study, the following table (Table 1) explains the reliability coefficients for each one.

Table 1
Reliability Coefficients of the Study Variables

Variable	Reliability Coefficient (Chronbach's Alpha)
Lack of measuring the environmental efforts to prevent and control pollution	74.9
None disclosure of the environmental efforts to prevent and control pollution	76.6
Lack of legislations makes the establishment concerned about spending on the environmental efforts.	
Lack of accounting criteria governing the measurement process and disclose of the environmental efforts	83.6

(8) Community of the Study:

The community of the study is represented by some of Industrial joint-stock companies, listed in Amman Stock Exchange, that cause contamination to the environment.

(9) The Sample of the Study:

The sample of the study represents a random sample including Managers of Finance and accountants working for the joint-stock industrial companies in Jordan, listed in the Amman Stock Exchange, which cause contamination to the environment. The sample also includes specialist professors in Accounting. Table 2, herein below, shows the numbers of questionnaires distributed and collected and those uncollected which are subject to analysis and its percentages.

Table 2
The Number of the Questionnaires Distributed, Collected and Uncollected, and Those Subject to Analysis and Its Percentages

The number of Questionnaires distributed		Number of the collected questionnaires		Number of uncollected questionnaires		Number of questionnaire subject to analysis	
Number	Percentage %	Number	Percentage %	Number	Percentage %	Number	Percentage %
120	100%	105	87.5%	15	12.5%	105	87.5%

(10) Statistical Methods Used in Analysis

SPSS Statistical Program of the humanitarian sciences will be adopted to derive the averages and standard deviation for each phrase of the questionnaire

and variables of the study in order to be able to describe the study variables. Chrobanch's Alpha Coefficient will be used to measure the reliability of the questionnaire. Moreover, One-Sample T-test will be used to measure the

difference of the trends among the study sample about the variables of the study.

1. THEORETICAL FRAMEWORK

1.1 The Accounting Concept of Social Responsibility

The definition of accounting for social responsibility requires specific resources for the social investments, which means rationalization of social performance. Accounting for the social responsibility also can be defined as the preparation of reports on the activities of the establishment and has social effects. For example, the impact of decisions taken by the establishment on the education and private health, in both aspects cause pollution of the environment, the consumption of resources spent on public security and preservation of individuals and groups rights, as well as other social aspects that fall within the framework of accounting for social responsibility (Ismail 1996, 2-6).

Syam defined it as the entire decisions, philosophy, actions and training methods which deem the well-being of the community as its target. Others defined it as important requirement, so that the installation becomes able to understand the economic system and fully recognized to achieve the wishes of the public and thus extending prosperity in the community (Noor & Siyam 1998, 2).

Al-Tuwaijri defined it as it is the duty of every establishment to work to achieve profits adequate to cover the future expenses, so that they can perform their commitments towards the environment (Al-Tuwaijri 1998, 36).

As defined by al-Tamimi as a system for measuring the activities of economic unit of social content and reporting through reports prepared by this unit for the attainment of its objectives and goals of the society, to ensure the continuation of its activities within the society in which it operates, whether the implementation of this activity is voluntary or mandatory under the laws (Al-Tamimi 23).

Noor and Shaker defined it as the means to specify and measure net social contribution of the establishment during fiscal period, which does not include elements of costs, private benefits and within the boundaries of the facility, but also external elements which have an impact on all sectors of society (Noor & Shaker, 2001, 261).

We can sum up the above-mentioned definitions and define it as the responsibility of the organization management, whether voluntary or compulsory, to carry out certain social activities toward the environment, society, its personnel, and classified goods or services provided, which bear the social costs do not offset by direct financial role.

1.2 Theoretical Introduction about the Environment and the Environmental Costs

1.2.1 The Concept of the Environment and Environmental Pollution

Environments can be defined as the total things that surround us and affect the existence of living organisms

on the surface of the Earth, including water, air, soil, minerals, climate and organisms themselves. It can also be described as a set of interlocking systems with each other to complex degree, which affect our survival in this small world, which we deal with on a regular basis" (<http://www.feedo.net>). It was defined by the Commission for the Environment Protection as a set of resources, living and non-living elements, which constitute an appropriate vital surrounding where living organisms can live. To revive the law on of Environment Protection (2006, 24), the concept can be summarized a set of vital natural, social, cultural and economic factors, which have, direct or indirect, impact on human and other organisms.

There have been many problems resulting from the human deal with the environment, which made the environment issues and its production to take urgent classification in the priorities. The environment issues, with its subsidiaries, have become a nightmare threatens the societies and individuals as well as a result of irresponsible human behavior toward the environment, which led to the destruction of the environment and its components. The "simple definition, which rises to the mind of any one of us: "The fact that the thing is not clean", consequently leads to harms and health problems to human, all living organism and the whole world. The concept of pollution can be considered as making a change in the environment surrounding the organisms by Man and his daily activities, leading to the emergence of some of the resources that are not compatible with the place in which the organism live and leads to deficiency.

Man essentially controls these pollutants, as a useful resource or converted to harmful; for example, we find the biological waste of animals are useful if used as compost for agricultural soil, but if disposed in water sewage will lead to the spread of diseases and epidemics. The outputs of economic activity of the human being participate with a huge part in the environmental contamination that does not continue to be locked in certain place in the framework of locally or internationally, because pollutants move across the layers of the atmosphere. In the other hand, the industrialization plays a role, not less than the outputs of the economic activity in converting the healthy environment to adverse environment and the emergence of a series of social and economic effects of the changes in all aspects of the environment; air, soil, rivers and lakes, whether near or far from the sources of pollution.

1.2.2 The Differences between the Theory of Financial Accounting and the Theory of Environmental Accounting (Ginoglou, 2005, P1-3)

The theory of financial accounting identifies and records the tangible assets in their market values or historical cost, whichever is less, i.e. it does not evaluate the use of natural resources as well as losses of income due to the decline of natural capital. Up today, we find a lot of environmental resources, such as water and air are deemed

free goods, their values do not appear in the financial lists in the financial accounting processes of the production and distribution of products or the provision of services, which their use requires direct materials and wages, indirect expenses, administrative and marketing expenses in addition to the cost of studies and development. On the other hand, the environmental expenses are considered within the administrative operational expenses, and have been recorded in separate accounts, but overhead. The theory of environmental accounting, it is attempting to correct the above-mentioned situation and open the Special Account includes all environmental profits and losses through exchanging the environmental revenues with the environmental expenditures.

The link between the green accounting and financial accounting can be obtained by the adoption of environmental management information systems that contribute to a more fundamental in linking the economic performance of the enterprise with environmental performance.

The green environmental accounting could be useful in the report of a number of subjects; such as the distribution environmental costs and green taxes. Generally, the beneficiaries of the green accounting system (environmental) are the individuals within the organization who carry out the management of project funds (managers and owners of funds), as well as the individuals outside the organization (such as investors, lenders and Tax Authority), who have direct and indirect concerns and all those who need true information aiming to:

- Identify the environmental opportunities and additional expenses which do not have the added value.
- Estimates the environmental expenses which we find in non direct industrial expenses.
- The implementation and follow-up the information ecosystem (information system and monitor the environment).
- Specify the future expenses and revenues for the execution of Environmental Monitoring Information System.

1.3 Definition of the Environmental Costs

The environmental costs represent the procedures taken or required to be taken to manage the environmental impacts of the activity of certain establishment to behave in environmentally responsible manner, as well as the other costs required by environmental objectives and requirements of the establishment. For example, the costs of waste disposal and avoidance, maintaining the quality of the air and its improvement, cleaning up spilled oil, conducting researches for better appropriate products suitable to the environment, as well as fines imposed on institutions as a result of their breach of the laws of preserve the environment (Al-Hayali, 2002, 130). United Nations defined the environmental costs as costs related to degradation of natural assets, actual or potential, as a result of the economic activities, so that the actual costs consist of a set of expenditures, which should be allocated

by the establishments as the costs spent on reduction of damages to human beings, and health.

The costs can be reviewed though the following concepts:

(1) Induced costs. They are the costs associated with economic units has caused or is likely to cause environmental degradation as a result of their activities.

(2) Potential costs. They are the environmental costs to be allocated by economic units, irrespective of whether they are actually cause or may cause environmental degradation. The actual environmental costs can be classified according to the natural use of environment:

(3) Drain costs. They are the costs which refer to the drain of the natural conditions in quantity as a result of the economic activities (for being raw materials).

(4) Costs of deterioration of quality. They are the costs which reflect the deterioration of the quality of natural environment as a result of economic activities or as a result of disposal the economic activities waste in the natural environment.

1.4 Methods of Accounting for Measurement and Accounting Disclosure (from an environmental point of view)

Environmental accounting measurement as per the environmental introduction:

1.4.1 Measurement of the Environment Expenditure

The companies allocate a set of costs and expenses items as a result of their commitment to the application of a range of activities to protect the environment from damages elements of environmental pollution called “the environmental costs”.

The environmental expenditure refers to all expenses and costs the company allocate for performing a legal responsibility in preserving the elements from the damages of the environmental pollution, as well as to achieve target growth rate and sustainable development. In general, the environmental expenditures consist of two types:

- Capital environmental expenditures
- ongoing environmental expenses

As a result of the multiple purposes of measurement and analyzing the environmental performance, these expenditures can be categorized and analyzed from multiple perspectives as follows:

1.4.2 In Terms of the Reasons of Occurrence and Their Allocation

The environmental expenditures allocated by the establishments can be divided according to reasons of occurrence into the following three groups:

(1) Occur for legal and organization reasons. These expenses are represented by the sacrifices allocated by the installation for reasons pertinent to the laws and environmental legislation, which are imposed on the facilities for environmental protection purposes. These expenditures are called the cost of compliance to laws and regulations; for example the sacrifices associated with the waste treatment and drainage, and prevention of harmful

emissions in air. This type of expenses is included in the compulsory or non optional expenses.

(2) Expenses generated for social and civilization reasons. These expenses are represented by the consequent sacrifices as a result of establishment work to improve its reputation and image, strengthen its relationship with the community as friendly establishment to the environment, which increases its competitiveness capacity. These expenses are called reputation and friendly relationship with the community cost. For example; the cost of the environmental reports, conferences, warning programs, development of the areas surrounding the enterprise, planting, education, health.etc.

(3) Expenses generated for reasons related to the consumer. Such expenditures are represented by the sacrifices allocated by establishment to meet the desires of the consumer to use non-harmful products, friendly products to the environment, easily disposed, easy handled and recyclable. For example; the cost of selecting industrial raw materials that holds the consumer harmless, such as some kinds of dyes in the textile industry.

1.4.3 In Terms of the Time Range of Benefiting the Cost
The expenses of the environmental performance, in this point of view, are divided into two groups, which are:

(1) Capital Environmental Expenditures. This group includes the expenses associated, directly or indirectly, with the economic benefits to be achieved by the installation by increasing other assets capacity owned by the installation or by improving their safety and efficiency, by preventing or by reducing potential environmental pollution which is likely to occur as a result of future operations or through the environment conservation. For example; the cost of installing filters and facilities in factories to prevent emission harmful gases to the environment, in addition to installing water treatment plants in the factories, re-use the water before drainage to underground water or rivers and seas. Therefore, it is the accountant responsibility to limit such costs and select the appropriate method of distribution over periods of benefit and products associated with these environmental costs.

(2) Environmental current Expenses. This set of expenses is related to the period in which the cost occur, i.e. it does not result to realization of benefits in the future or not be closely linked to future benefits to a certain degree makes it allowable to consider them capital expenditures. For example; the costs of operation and maintenance of the capital facilities associated with the environment, measurements and testing costs of inputs and outputs, the costs of waste treatment, fines and penalties for non-compliance with environmental regulations. This classification of the environmental performance expenditures (capital and current) is deemed essential to achieve the safety of allocating expenditures on products and period, where the first group is distributed (Capital Environmental Expenditure) on the periods of

utilization, while the second group (current environmental expenditures) is allocated on the periods in which the products activities cause their occurrence. Reporting and disclosure of capital environmental costs is of great advantage to the people interested in evaluating the establishment to identify the extent of its commitment to support the develop the environment, because the planned investment in environmental protection programs means the continual improvement of the establishment image and reputation, thus continuous improvement of their ability to make a profit.

1.4.4 In Terms of the Relationship of Expenditures with Product Life Cycle

According to the principle of accounting of costs based on the product life-cycle, represented by the environmental costs in all the sacrifices allocated by the establishment during the lifecycle of the product, i.e. from the beginning to the end. According to this principle, the environmental expenditures can be divided into three groups, namely:

(1) Production Environmental Expenses. These include all the sacrifices to be allocated by establishment in pre-production phase or the operation of the system, identifying the appropriate processes to achieve target quality environmental performance, identifying and describing the production inputs, evaluating alternatives and environment protection preparations. This group of expenditures should be studied, planned and to focus only on the operation the non-environmental costs, because none limitation to these costs and separation from the other costs of pre-production phase, as is the case in many of the facilities, will reduce the interest, and thus mislead the process of evaluation the efficiency and effectiveness of environmental performance.

(2) Periodical Environmental Expenses during the Stages of Operation. This group is represented by the sacrifices to be allocated by establishment during the stages of the production and marketing their product in order to improve the level of environmental performance; for example, the costs of testing, measurement, evaluation the cost of operation and maintenance the equipment and devices associated or related to the improvement the environmental performance, coast of removing damages right away...etc. For the purposes of the rationalization the decisions in the area of improving environmental performance, and the correct measurement of products costs, the accountant costs should select the appropriate method to limit and measure this group of costs, as well as connecting them to polluting products and not to treat them all at once within the additional burdens of an enterprise, or within a administrative group costs, as he case in many of the establishments. Among the useful inputs in such case, is the accounting input based on activity. This seems to be the appropriate reference to the current costs could be allocated to the establishment, but not linked neither to the current products nor current

period; such as compensation and fines related to previous periods. When we apply the sacrifices on the products, produced during the current period, the costs of these products – will be incorrect, which mislead the evaluation process of environmental performance in various periods, as well as misleads the pricing decisions and evaluating the profitability of the products on the other hand.

(3) **Dimensional Environmental Costs.** The dimensional costs include all confirmed sacrifices as well as the future sacrifices, as a result of the level of environmental performance of the business such as the costs of treatment and disposal of waste costs, remove environmental devices and equipment their purpose ends. As well as the costs of environmental compliance and commitment to environmental legislation, which has not yet been applied is expected to be applied in the future. Therefore it is necessary to study, inventory and the report costs by linking them to reduce environmental costs allocated by the establishment. Thus reduce the total costs of production. The ignoring and not studying this group of costs, not taken into account when examining and evaluating different products –particularly the new products - may lead to the selection of non-commercial alternatives (of products and methods of production) and ignoring more profitable alternatives.

1.4.5 In Terms of the Connection of Expenditure with the Environmental Performance

The activities related to environmental protection and improving the level of environmental performance of the enterprise can be divided into two major groups; the first of which activities aim to control the environmental performance and the prevention of damage, while the second group which address the environmental damages which the first group did not succeed to address. Accordingly, the environmental expenses can be divided into two groups, namely:

(1) **Control costs of environmental performance.** Control costs of environmental performance include all the sacrifices allocated by the establishment in order to prevent or minimize adverse effects on the environment resulting from the performance of the various activities of the establishment, which can be divided into two sub-groups as follows:

(2) **The costs of prevention or reduction of environmental impact.** These include the costs of activities specifically designed to work, which work to avoid the occurrence of negative effects on the environment; whether in pre-production stages (stages of designing products and operations, and inputs of activity) or in stages of production, packaging, and marketing until the product reaches the consumer. The costs of preventing those costs which add value because leads to reduce other costs of environmental performance. Thus, the increase profits of the establishment and improve its competitive capacity.

1.4.6 The Costs of Measurement and Evaluation Activities

The costs of the activities aim to follow-up and measure the various sources of environmental damages and reporting them right away; such as follow-up, measuring the harmful emission levels (smoke, gas and vapors) in and outside of the establishment. They also include the costs of office activities associated with the cooperation between the various agencies and bodies of environment protection.

1.4.7 The Costs of Failure to Control Environmental Performance

They are represented in all sacrifices allocated by the establishment (at this time and in the future) aiming to remove and treat the environmental damages resulting from the activities of the establishment which was not able to address them through the activities of control environmental performance. These costs include two types of costs; explicit costs allocated by establishment to treat the harmful environmental effects, such as compensation, fines, waste treatment costs, and the increase in the cost of health care for the establishment personnel, and implied costs or not explicit (these costs may be larger than the explicit costs in many cases). The implied costs are represented in the sacrifices allocated by establishment as a result of the lack of productive efficiency of work because of diseases caused by various forms of pollution, in addition to the workers' compensations and the costs of hiring and training new workers. They also include the implied resulting from the poor environmental performance of the establishment, sacrifices resulting from the reputation of establishment, shortage of its market share, and lower their competitiveness as a result of the failure to achieve the appropriate level of environmental performance.

The costs of failure to control the environmental performance arise from the default of control environmental performance in achieving the target level of environmental performance; i.e. it is unnecessary cost and adds no value. Thus, whenever possible to prevent their occurrence or reduce them, the lower total cost environmental performance and then the more profits establishment could gain. The analysis of the costs of environmental performance, costs of control environmental performance and costs of failure to control the environmental performance benefit in rationalizing the investment programs in control activities, improving environmental performance, identify expenditure level on the environmental performance, which is suitable for the conditions of the establishment. This clarifies the accountant's need to measure the costs of environmental performance, and analyze them in a manner that will rationalize the administrative decisions, because just mere inventory and measure the costs of environmental performance are deemed fruitless unless it leads to better decisions.

1.5 Accounting Measurement of Assets and Environmental Liabilities

The environmental assets represent the environmental expenditures that we make use of them for more than one

accounting period; for example, environmental machinery and equipment, environmental pollution processing elements systems, processing and recycling of sediments; liquid and sold, units. Generally, the environmental operations affect the assets and liabilities of the company, probably due to the difficulty in personal judgment at time of performing the accounting evaluation of accounting operations effects on the environmental assets and obligations of the company, in addition to the lack of accounting standards to assess and measure such effects.

The most prominent impacts on the environmental assets include:

(1) Accounting measurement of the technological systems that are intended to address the environmental pollution and its emission at the end of the production line. Some companies, in certain cases, add technological processing unit at the end of the production line for the purposes of prevention or reduction of environmental pollution resulting from the air and water emissions in the operation and manufacturing their products. The measurement of expenses related to the installation of the techno treatment unit is done, and this unit is dealt with as fixed environmental asset, as it provides economic benefits in the future (by preventing damage elements of environmental pollution and its treatment before being transforming into harmful elements to the society, economic and social interests of the company). The accounting evaluation of the unit should seek assistance of technical specialist, so that the fixed asset can be displayed separately in accordance with the transparency requirements to disclose the efforts of the management to limit the environmental risks that may affect the results of the company business, its financial position and cash flow.

(2) Assessment of the reduction the fixed assets or stock because of the following environment effects:

• **Stock environmentally damaged or outdated:** damage may occur in the stock as a result of the spread of environmental emission inside the company, which may affect the environmental change the technical key components of the stock units, makes it unfavorable for use, or may become obsolete. That stock are measured and treated in the accounting as environmental losses in the income column, consequently the value the inventory is reduced in the column of financial center in that environmental losses.

• **The shortage in the fixed assets due to environmental accidents:** Shortage may occur to one of the fixed assets due to the effects the environment and such shortage is treated as environmental losses, and this is closed in the column of the financial center by reducing the value of those assets in a value equal to the environmental losses.

• **Accounting measurement of the environmental obligations:** The environmental obligation is defined as the value of the company is committed to pay in the future

for the reform and treatment of the environmental damage caused by and generated by its industrial operations or productivity (as a result of water pollution of rivers, seas, and groundwater and the lack of commitment of those companies to prevent and reduce environmental pollution rates resulting from their activities).

1.6 Accounting Disclosure According the Environmental Definition

The essence of appropriate disclosure was determined by the American Chartered Accountants Academy in their discussion of the third standard (Report standard) of the auditing standards as following:

The data display information in the financial lists, in accordance with generally accepted accounting principles, requires providing appropriate disclosure element in these lists, for all physical items (core component). The disclosure element here means in close connection with the form and content of the financial lists, terminologies used, as well as the observations attached, to the extent of details in a way makes information value to those lists, from the point of view of these lists users.

We note that focus was on the core elements exercised by the Unit at disclosure. Since the economic unit operates in a particular society, it is imperative to disclose its social performance as being one of the core elements practiced. Al-Hayyali specified the concept of the social performance disclosure as "the manner or method by which the economic unit can inform the society, all parts, of their various activities of social implications. The financial lists or the reports attached are considered the proper tool to achieve that. Perhaps, the most prominent activities that have a direct impact on the community are those that achieve social benefits can be summarized as follows:

- (1) Consumer protection related activities.
- (2) Environment and natural resources protection activities.
- (3) Development of Human resources related activities.

Due to increasing importance of the criterion of accounting information disclosure, the International Committee of Accounting Criteria issued the standard No. 5, titled "the information which should be disclosed in the financial statements". Al-Hayyali, according to the above-mentioned, proposed to attach a statistical list to the financial lists annually published, showing the following elements:

- (1) The cost of each of the types of machinery and equipment used in the reduction of pollution.
- (2) Annual extinction for each type of machinery and equipment used in the reduction of pollution.
- (3) Expenses of removing the waste harmful to the environment at the completion of productive operations.
- (4) The cost of the study and development in the reduction of environmental pollution area.
- (5) The amounts paid to the state institutions responsible for environmental protection.

Such lists indicate the extent of the contribution of the economic unit in its performance towards the

social accountability represented by the limitation of contamination. It is possible to add information concerning the social activities resulting from the social transaction which do not have any financial values, to achieve disclosure of the social performance practiced in the following areas:

- (1) Employment-related areas.
- (2) Control of the environment related areas.
- (3) Areas relevant to the interaction with the community.
- (4) Areas pertinent to consumer protection.

1.7 Types of Reports Which Disclose the Environmental Costs

The accounting disclosure may be in separate accounts in the annual financial lists or may be in special reports as follows: (Lutfi, a source earlier, 59-60):

1.7.1 The Presentation and Disclosure in Annual Financial Lists in Separate Accounts

The presentation and disclosure in a separate group of the annual financial lists for the environmental accounts items; (for example expenses of protection air and water environment, or solid waste treatment expenses), and environmental revenues; for example the revenues of recycling waste, environmental assets and the environmental obligations).

1.7.2 Presentation and Disclosure of the Environmental Performance in a Special Annual Report

This includes the annual report of the data which disclose the environmental performance in terms of the following:

- (1) The company's environmental commitment in accordance with laws and regulations.
- (2) The compliance to the certificates and licenses requirements, which emphasizes the quality of environmental management system.
- (3) Environmental fixed assets, acquisitioned by the company in the fiscal year.
- (4) The company's environmental obligations.
- (5) Ongoing environmental expenditure items.
- (6) Environmental economic return achieved.

2. PREVIOUS STUDIES

2.1 Bahlul Study (2011) (Accounting Disclosure of Environmental Performance in Ahliya Cement Company in Libya - Survey)

This study aimed to define the extent of the Ahliya Cement Company commitment in disclosure its environmental performance and to identify the most important constraints which prevent the company to disclose its environmental performance. A questionnaire was design carefully to achieve the objectives of this study and 36 questionnaires were distributed to the finance and accounting departments' staff of the said company. The study concluded to a set of results; the most important are:

- (1) The company does not disclose in its accounting

the environmental performance.

(2) There are many obstacles that limit the company carry out accounting disclosure of its environmental performance. The most prominent constraints are the lack of educational programs to introduce the requirements of environmental performance, the non-availability of an accounting system that fulfils the purposes of disclosure regarding the environmental performance, the lack of binding laws to disclose their environmental performance, the difficulty to measure the environmental costs and the lack of desire to disclose all costs associated with environmental damages resulting from their operations, even if it can be measured.

2.2 Ba Mizahim Study (2008) (Accounting Measurement of the Environmental Pollution Damage Costs to Workers in the Oil Refinery Sector)

This study aimed the identification of the importance of the recognition of the environmental expenses in the oil refining sector, highlights the importance of accounting measurement costs of environmental costs in oil refining sector, and explanation how to measure the cost of the environmental pollution diseases that afflict the workers in the oil refinery industry.

The study concluded a group of the results; the most important are:

The possibility of measuring the cost of environmental pollution diseases of workers by measuring the cost of treatment, health care and the cost of the wages paid during the period of treatment and recovery. The possibility to measure the shortfall value of the productive energy due to the absence of workers, and possibility to measure the value of shortfall in capital value of human resources, as well as the possibility of measuring the workers early death reasons as a result of the environmental pollution illnesses in the company.

The study proposed several recommendations; most important was the development of the financial accounting system of the company where it is possible prepare environmental accounting reports and disclose the qualitative, quantitative and financial information when categorizing the industrial costs to include environmental costs.

2.3 Sho'aib Working Paper (2009) (The Concept of Environmental Accounting)

This paper aimed to identify the concept of environmental accounting, as well as the challenges facing environmental accounting. The problem was represented by the ill-use of natural resources and environmental degradation, which is one of the biggest problems facing the developing countries. It was noted that degradation of environmental led to weakening the economic development and diminishing its capacities. Development and environment are two sides of the same coin. The World Bank called for the need to introduce environmental accounting within the national income accounts or gross domestic product, which measures the economic activity of the community

as a whole. The most important recommendations of this paper were the change the prevailing trend toward the view that requires the need to allocate the environment preservation costs on the unit, as such costs were used to treated as social costs not allocated on the unit, thus the data were processed by the accounting function. Reports, lists, final financial statements should be included in the environmental activities, which lead to trust the data and accounting reports in addition to meet the needs of the community for accounting information concerning the environmental activities.

2.4 Al-Olaimat Study (2010) (Accounting Measurement for Social Responsibility Activities Costs & Disclosure in the Final Financial Lists) Applied Case, Jordan Petroleum Refinery Company Limited

This study discussed the problems of accounting measurement of Social Accounting activities as the social accounting is deemed a tool provides the beneficiaries with accounting information, as well as the decision makers with information about the social aspect related costs, to present an integrated image about the establishment performance, as it should include data relevant to the social performance. The question of this study was in the measurement and analysis the social performance in the Jordanian industrial plants which need further attention interest and study due to the impact of these facilities on the environment and society, in addition to the difficulties facing these facilities in measurement and analysis to their social performance, and the importance of measuring these costs to improve the quality of accounting information published in the financial lists of Jordanian Oil Refinery Co. and similar companies in the Jordanian market. The company of the study causes pollution of the environment in the highest levels universally allowed, leading to damages to workers, local community, atmosphere and wasting the post productive energy, and high costs of its property maintenance. Thus, becomes a heavy burden on the community in which it works, instead of contributing to community development. The researcher recommended the development of the company's accounting system, to include data and information relevant to the social activities, in particular, environmental activities, and imposing deterrent tax policy fiscal policy on the installations which comply with the permitted levels of pollution.

3. PRACTICAL ASPECT

Before talking about the analysis of the responses of the research sample members about the variables of the research and testing hypotheses, researchers will talk on the profile of the Ministry of the Environment and its role in supporting and encouraging companies carry out measurement and disclosure of their environmental efforts. We will talk about the Jordan Electricity Company in this area.

3.1 Ministry of the Environment in Brief

The Ministry of Environment, was founded 2003 under the law of environment protection, the Ministry's powers under the law of the environment:

(1) The ministry is the competent authority to protect the environment at the level of the Kingdom. The governmental private agencies must execute its legislations, instructions and decisions.

(2) The ministry is the competent reference, at the national, regional and international levels, with regard to all environmental issues and donors, in cooperation and coordination with competent agencies. (<http://www.moenv.gov.jo>)

3.2 The Environmental Legislations in Jordan

The ministry has issued the law of environments protection from Pollution No 52 of 2006 to replace the law No 12 of 1995, in order to state sanctions more clearly on those who transgress the environment, explanation of the environmental requirements from the different types of organizations. Some measures have been developed to reduce the environment pollution.

The Ministry developed some legal procedures against violators of the industrial companies, as well as illustrated the types of factories and installations violations. Some of these irregularities:

(1) Emission of environmental pollutants from factories and enterprises or workshops or any agency practicing activity of negative impact on the environment.

(2) Negligence or omission of industrial man or the head of a workshop to place machines or signals prevent works at emergency cases.

(3) The practice or the management any work or workmanship may cause damage to health or public comfort.

3.3 Central Electricity Generating Company

On 1/9/1996 was officially declared the establishment of the National Electricity Company, contribute to legal successor and realistic of Jordan Electricity Authority. It was preceded by the issuance of the Electricity Law No. 10 of 1996 to replace the law of electricity, by which the Electricity Authority was established 1986 (No. 16). The new Electricity Law includes the foundation of control body to regulate the electricity sector, develop the bases and rules that govern the relations between the private sector, in addition to granting licenses for generation, transport and distribution, and review the tariff system as well as development control system on the electricity services in terms of the adoption of the public safety, environment, consumer protection standards. Moreover, in order to complete the restructure of the electricity sector, the government decided on 4/10/1997 to restructure the national electricity company by separating the generating activity from transport and distribution activities, so that each activity works according to commercial bases through the foundation of independent company to each activity as follows:

3.4 National Electricity Company

The company remained fully owned by the government, assuming the activity of power transfer, control and purchasing electricity from the generating companies to sell to the distribution companies. Moreover, the company practices the activities of transferring and exchange power through the networks with the Arab states.

3.5 Electricity Distribution Company

It is full owned by the government for a transition period until privatized. The company assumes the activity of distribution electricity in the distribution areas of the national electricity company. The ownership of distribution networks outside the scope of concession of the two Joint Stock electricity companies.

3.6 Central Electricity Generating Company

It is wholly owned by the government for a transition period until privatized. It assumes the activity of generating power generation as all power generating plants in the Kingdom owned by the company.

The Central Electricity Generating Company was keen to the increasing loads through strengthening the capacity of power generation plants, where three commercial operation thermal units of (3 X 130) mega watt; Thermal Power Station in Aqaba on 1/5/2000, and the company has awarded tender to establish gas power plant in Rehab on 1/6/2001. The company adopted some measures to improve the production efficiency of the existing power plants. The followings are the most significant measurements:

(1) The implementation of automated preventive maintenance programs to all generating units and develop its application (MMIS).

(2) Installing continuous monitoring systems to test the performance of certain parts of the thermal plants (Performance online monitoring) to be generalized later to the other plants. Performing thermal efficiency tests are run by using very accurate measuring devices.

(3) Conducting technical studies related to power loss, rationalizing consumption of energy, analysis of statistical data of the power plants performance and comparing that to similar global data for the purpose of development and improvement.

(4) Raising the efficiency of company workers by training. These measurements led to raise the availability factor of the generating plants in 2006 to (85.21%) as well as the comprehensive efficiency of generating plants by 35.3%. <http://www.cegco.com.jo>

3.7 The Proceedings Taken by the Company to Maintain Environment

At the time the company established its power plants, it took in to consideration the negative impact on the environment since the design stage. It complies with the international standards in relation to the emissions and water produced by the power plant.

3.7.1 Aqaba Thermal Station

(1) Supply the boilers with a combustion system which raises the combustion efficiency and reduce emissions of nitrogen oxide, as well as providing them with rotating fans to improve the combustion efficiency and reduce unburned carbon.

(2) Provide the boilers with 125 m height chimneys to disperse gases and suspended solid, reduce its concentration and impact of the environment as possible.

(3) The adoption of the principle of non-exit of wastewater outside wall of the station, where the sewage is done as follows:

- The disbursed acidic boiler washing water is collected in the evaporation pond.
- The following drainage water is collected in a pond used for the plant landscape.
- Sewage water after treated in sewage water treatment unit.
- Sewage water around the devices and the devices after passing through oil-water separators to extract oil.
- Sewage water around the fuel tanks and reservoirs itself after passing oil-water separator to separate oil.
- Sewage waters from water treatment unit to boilers after equation its acids.

(4) Taking into account the protection of aquatic life in the Gulf of Aqaba, so that the reverted cooling water is discharged to the sea in a way that does not lead to a high temperature of the surrounding sea water unbearable to aquatic livings.

(5) The company has implemented a project of converting used fuel from heavy fuel to natural gas, expected to operate this year 2003, which will lead to reduce the emission of Sox to zero approximately instead of 5700 mg/m³, Nox gases to 300 mg/m³ instead of 500 mg/m³, in addition to the reduction of carbon dioxide emission Co₂ by 1, 500, 000 a year.

Thus, by the conversion projection from heavy fuel to natural gas, expected in 2003, the emissions of thermal Aqaba Plant will be less than the permissible limits of local and global environmental legislations and laws, and become eligible for ISO 14001 Certificate in the environment. It is intended to obtain that certificate in the coming years.

3.7.2 The Al-Hussein Thermal Plant

(1) The treatment of wastewater in accordance with the Jordanian specifications of wastewater No. 202 and retrieval of 50 % after the treatment in Ionic exchanges and reverse osmosis units.

(2) The use of heavy fuel conditioners which led to process 95% of sulfur trioxide gas SO₃, addition to reducing the emission of unburned carbon granules.

(3) Change the praying system boilers of the station of mechanical to evaporative system and changing the burner nozzles to improve burning and reduce Co gas as well as oxygen necessary for burning, leading to reduce SO₃ gas. <http://www.cegco.com.jo>

3.8 Environmental Projects in Contribution to Environment Protection

3.8.1 The Conversion of Burning from Heavy Fuel to Natural Gas at Aqaba Thermal Power Plant

The company has implemented a project of converting the fuel used for running the power plant from heavy fuel to natural gas, expected to start operation in this year 2003. This will lead to a reduction in the emission of sulfur gases Sox almost to zero instead of 5700 mg/m³, Nox to 300 mg/M³ rather than "500 mg/m³, and the reduction of carbon dioxide emission Co₂ (GHG) by 1, 500, 000 tons annually".

3.8.2 The Conversion of Rehab Generating Plant to the Combined Cycle Power with Natural Gas in the Future

This project aims to increase the efficiency of the plant from 34% TO 50% by using the thermal energy of gas turbine exhausts to promote the generating capacity of the plant to become 360 megawatts.

3.8.3 Wind Energy is Uses on a Limited Scale in Power Stations of Hufa and al-Irahimiyyah in the North of the Kingdom

The two stations produced about (3) GWT/hour in 2002, which represents (0.18%) of the power generated in the Kingdom in the same year. They intend is to install a wind-powered generating station of total power 30 MW in the coming years.

3.8.4 Biogas

The waste yard in Rusayfa city, in the central of the kingdom, has been utilized in the production of electric power with the ability of ...MW/hour by using the biogas extracted from the complete dump or the gas extracted from the treatment of the organic waste disposed therein. Moreover, the final production of the organics is used as natural fertilizer which is rich in nitrogen. The project was financed by UN Development Program (UNDP) and GEF. The Jordanian Biogas Company was established, equally owned by Central Electricity Generating Company and Amman Grand. Recently, they entered into contracts to expand the station to add new generating units of 5 MW capacities. The economic feasibility study pointed out the possibility of generating 30 MW/hour if the expansion is invested to utilize the complete capacity of the waste yard according to the biogas factory report. The continuous exploitation of this energy, which available, in 26 licensed waste yards in the Kingdom, aim to serve the environment

through the disposal of methane gas in addition to the production of electricity power.

3.8.5 Water Energy

By using the reversed water disposed to the sea, 6 MW/h is generated by hydraulic turbine, in Aqaba Thermal Plant and similar power is generated at King Talal dam.

3.8.6 Combined Cycle Power Project

(1) Samra' Generating Plant Project of combined cycle power system is to be generated with 300 MW capacities run by natural gas.

(2) Gas combined cycle Project to generate 150 MW at Al-Husseini thermal Plant.(<http://www.cegco.com.jo>)

4. ANALYSIS AND DISCUSSION OF THE RESULTS

4.1 Hypothesis Testing

The arithmetic mean and standard deviation were used in testing the hypotheses to analyze the responses of the respondents' answers of the research sample on all the phrases mentioned in the questionnaire. The answers were summarized as follows:

4.1.1 The First Hypothesis Test

Which states "The companies do not measure their efforts to prevent and control environmental pollution".

The analysis results to the responses of the research sample, as shown in the Table 3 herein below, indicate that there is general agreement on all the phrases of this variable. The arithmetic average of the answers on this variable was 3.6 which is higher than the average of measurement tool 3 by a standard deviation of 0.7. It is also noted that there is an agreement on the phrases of the variable, phrase by phrase, where the arithmetic averages of the answers were higher than the average of measurement tool 3. This means their agreement that the industrial establishments do not pay large sums to control and prevent pollution; they do not have qualified staff to measure the establishments efforts for environment, while there are certain efforts in the area of environmental conservation but cannot be expressed in monetary terms. The corporations do not deem the expenses on environment included in their priorities, the environmental expenditure does not improve the competitive position of the companies, and the lack of technical standards for measuring the environmental expenditure and separating it from the rest of the operational expenditures.

Table3
Arithmetic Averages and Deviation Standards of the Sample Respondents' Answers (Variable: None-Measurement of Environmental Efforts to Prevent and Control Pollution)

Ser.	The Phrases	Arithmetic Average	Standard deviation
1	The installations pay large amounts on the prevention and control of pollution	3.53	1.2
2	The installations lack qualified staff to measure their efforts in the area of environment	3.54	1.5
3	The establishment can not differentiate between its operational expenses and the environment expenses	3.47	1.2
4	There are some efforts in the environment preservation which can not be expressed in cash	3.84	0.92
5	The companies do not consider spending on environments included in their priorities	3.87	0.97
6	The environmental expenditure does not improve the competitive position of companies	3.33	1.25
7	There are no technical standards for measuring the environmental expenditure and separating it from the rest of the operational expenses	3.59	1.006
	The General arithmetic average of the variable	3.60	0.70

4.1.2 The Test of the Second hypothesis

Which states “the failure of companies to disclose their efforts to prevent and control environmental pollution”.

The results of the analyzing the responses made by the sample members respondents, show in Table 4 herein below, indicate that there is a general agreement on all the phrases related to this variable by the members of a the sample research; i.e. the companies do not disclose in the financial lists the their environmental efforts to prevent and control environmental pollution. The arithmetic average of the answers was 76.3 which is higher than the average of measuring instrument 3, with a standard deviation of 76.0.

It was found through their answers on the variable phrases, phrase by phrase, that there is also agreement on all phrases, where the arithmetic averages of the answers were above the average of the instrument 3. This means their agreement that the facilities do not deem the disclosure of their environmental efforts important, as well as do not separate the environmental accounts, thus they are not disclosed in the financial lists. Moreover, do not show the international standards pertinent to disclosure of environmental efforts, besides not requested by the competent agencies to do so. The disclosure of environmental efforts grants the company a competitive prestige.

Table 4
Arithmetic Averages & Standard Deviations of the Responses of the Research Sample Members to the Variable (None-Disclosure of the Efforts to Prevent and Control Environment Pollution)

Ser.	The Phrases	Arithmetic Average	standard deviation
1	The establishments do consider the disclosure of their environmental effort important	3.65	1.06
2	The establishments do not separate the environmental expenses, thus they are not disclosed in the financial lists	3.72	1.07
3	The competent agencies do not request the establishments to disclose the environmental efforts in the financial lists	3.80	1.04
4	The international standards pertinent to disclosure do not illustrate the place where the environmental disclosure should be	3.63	1.00
5	The disclosure of the environmental expenditure grants the establishment a competitive prestige	3.54	1.13
	The General Average	3.76	0.76

4.1.3 Test of the third hypothesis

Which states “The lack of laws that enforce the establishments be interested in the expenditures of the environmental efforts”.

The results of analyzing the answers of the research sample members, shown herein below in Table 5, reveal that here is a general agreement on all the phrases of this variable stated “the lack of laws and regulations that make the establishments be interested in the disclosure of the environmental efforts”, by the research sample members.

The arithmetic average of their answers was 3.85, which is higher than the average of measurement instrument 3 with a standard deviation 88.0. It was noted that their answers to the variable phrases, phrase by phrase, that there is agreement on all the phrases of this variable as the arithmetic averages of their responses were higher than the average of the measurement instrument 3. This means they agree that the Ministry of Environment do not oblige the establishments to be interested in the expenses of environment preservation and the valid regulations are

not enough to make the establishment binding to spend on the environment efforts. There is a need for regulation and laws include appropriate penalties enforce the establishments to abide to the environment preservation, combined with follow-up procedures for such compliance by the companies to the environment regulations. The

exchange stock must abide the companies to disclose their environmental efforts in their financial lists, so the investors could view. It is baldy needed to make the disclosure of the environmental expenses as a standard by which the companies would get banking and other facilities.

Table 5
Arithmetic Averages & Standard Deviations of the Answers Sample Respondents (Variable “the Lack if Laws make the Companies Uninterested in Spending on the Environmental Efforts”)

Ser	The Phrases	Arithmetic Average	Standard deviation
1	The Ministry of Environment does not abide the installations to be interested in the expenses of environment preservation	3.40	1.37
2	The prevailing laws are not enough to abide the installations to spend on the environment efforts	3.80	1.10
3	There is a need for regulation and legislations include appropriate penalties enforce the installations be more interested in the environment preservation	3.72	1.32
4	There must be proper procedures to follow-up the extent compliance of installations to their commitments related to environments	3.62	1.35
5	Amman Exchange Stock Market must bind The companies to disclose their environmental efforts in their financial list to be view by investors	3.46	1.39
6	Making the disclosure of the environmental efforts a standard by which the companies could get banking and other facilities.	3.49	1.27
	The General Average	3.85	0.88

4.1.4 The test of the fourth Hypothesis

Which states “The lack of accounting standards governing the measurement and disclosure of the environmental efforts”.

The results of analyzing the answers of the research sample members, shown herein below in Table 6, indicate that here is a general agreement on all the phrases of this variable stated “the lack of accounting standards governing the measurement and disclosure of the environmental efforts”, by the research sample members. The arithmetic average of their answers was 3.72, which is higher than the average of measurement instrument 3 with a standard deviation 68.0. It was noted that their answers to the variable phrases, phrase by phrase, that there is agreement on all the phrases of this variable as the arithmetic averages of their responses were higher that the average of the

measurement instrument 3. This means they agree that the accounting standards do significantly not care about the environmental efforts and as well as the International Accounting Standard No (1) does not include the environmental efforts, so there would be a need for an international accounting standard to measure the environmental efforts and disclose them. Amendment to the International Accounting Standard No (1) pertaining to environmental efforts is needed. The Organization interested in the environment also must make the disclosure of the environment expenses on pollution control on of their priorities and request the development of relevant criteria thereof. There is no international accounting standard to measure the environmental efforts in the industrial installations.

Table 6
Arithmetic Averages & Standard Deviations of the Research Sample Respondents' Answers (Variable: "The Lack of Accounting Standards Governing the Measurement and Disclosure of Environmental Efforts")

Ser	The Phrases	Arithmetic Averages	Standard deviation
1	That accounting standards do not care much on environmental efforts	3.60	1.00
2	The International Accounting Standard 1 doe not include the disclosure of environmental efforts	3.55	0.98
3	There is a need for an international accounting standard for measuring environmental efforts disclosure	3.88	0.93
4	Amendments to the International Accounting Standard 1, concerning the disclosure of environmental efforts	3.85	0.78
5	The organizations interested in environment must make disclosure of the pollution control one of their priorities and request the development of related standards	3.87	0.92
6	There is no international accounting standard for measuring environmental efforts in industrial installations	3.57	0.88
The General average		3.72	0.68

Test of the fifth hypothesis: "there is no variance in the attitudes of the study sample on all the following variables:

(1) The failure of the industrial installations to measure the environmental efforts to prevent and control environmental pollution.

(2) The failure of the industrial installations to disclose the environmental efforts to prevent and control environmental pollution.

(3) There no laws bind the installations be interested in the expenses on environmental efforts.

(4) The lack of accounting standards governing the

measurement and disclosure of the environmental efforts.

T-test results to of variances in the trends of the research sample on the variable shown in Table 7, herein below, indicate that there is no variance in their attitudes about the research variables. This result confirms the results of the statistical descriptive analysis of the research variables; i.e. they agree that the companies do not measure the expenses on the environmental efforts, they do not disclose that in their financial statements, and the absence of laws and standards governing the expenses on environments efforts.

Table 7
One Sample T-Test Results The Variances in the Attitudes of the Research Sample Towards the Variables

Hypotheses	T value	Degree of Freedom Df	Significance
The failure of measuring the environmental efforts to prevent and control pollution	8.77	104	0.000
Non-disclosure of the environmental efforts to prevent and control pollution by corporations	9.004	104	0.000
The absence of legislations to make installations concerned about the expenditure on environmental efforts	6.80	104	0.000
The lack of accounting standards governing the measurement and disclosure of the efforts the environment	10.86	104	0.000

CONCLUSIONS

(1) The research theoretical aspect shows that there is a broad interest in the international social accountability accounting, in particular the expenses of environment protection from pollution and pollution control. There are also several principles the environmental measurement and disclosure.

(2) The Electricity Generating Company spends large finds to preserve the environment. It changed the generating units run by diesel to gas and thermal units as well as wind-powered units.

(3) The company does not carry out the measurement of environmental costs and benefits accruing from spending these costs.

(4) The company doe not disclose its efforts in maintaining the environment in the financial lists as independent item.

(5) There is not international financial standard related to environments, the measurement of environmental efforts, and disclosure.

(6) The results of the analysis point out the views of the research sample members as follows:

- The failure of the industrial installations in measuring the environmental efforts to prevent and control pollution.
- The failure of the industrial installations to disclose their environmental efforts related to prevent and control pollution.
- There is a lack of legislations bind the installations be interested in spending on the environmental efforts.

• The lack of accounting standards governing the measurement and disclosure of the environmental efforts as well as there is no variance in attitudes on these variables.

(7) The Ministry of Environment, established since 2003, plays a significant role in a marked reduction of environmental pollution and control of Jordanian industrial companies to improve the climate in Jordan and the region.

RECOMMENDATIONS

Taking into account the results, researchers recommend the following:

(1) Binding the industrial installations which cause pollution to the environment to meet the environmental measurements requirements for the positive impact on thee installations and be socially accepted.

(2) The facilities must disclose their environmental efforts in their annual financial statements and lists, in particular, the income statement and list of the financial position.

(3) An amendment of the environment law to oblige the establishments to disclose their environmental efforts, develop environmental regulations more serious and strict to the violators, in addition to the increase of control the industrial companies in Jordan.

(4) Encouraging the companies adopted the accounting procedures to disclose their environmental efforts by granting them tax deduction.

(5) Working for, in coordination with the relevant authorities, the development of financial reporting standard, pertaining to the environmental efforts called the international environmental standards.

(6) The Ministry of Environment of Jordan must develop a particular law, based on posting certain slogan (green) or a particular code (green company) on their annual financial lists and reports indicate that those companies maintain the environments and are committed to the local and international environmental standards.

(7) The kingdom is playing an active role in environmental pollution, but the countries of the region, especially Arab countries, must coordinate to develop plans and conferences assisting to control and reduce pollution.

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