



Environmental costs and its role in improving the quality of financial reporting: A case study in Libya

Ali Altug Bicer^a, Eman Ali Eldarewi^{b*}

^aIstanbul Ticaret University, Department of Accounting and Auditing, Istanbul, Turkey

^bBenghazi University, Department of Accounting, Benghazi, Libya



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ABSTRACT

This study aims to show the importance of environmental costs, and the role of these costs to improve the quality of financial reporting in Libyan oil companies and offering the suggestions to develop it. To achieve the objectives of the study, the researchers developed a questionnaire contains (35) questions, distributed to (100) of the officials of the financial departments, auditing, and costs and the parties concerned with the preparation of financial reports, collected and used in the analysis, a one-sample T-test was used. It seems to the researchers that there was the presence of environmental awareness and the company's strategy towards environmental issues, the study also showed there are obstacles that limit the application of measurement and disclosure of environmental costs. Moreover, it seems to the researchers that the measurement models for environmental costs increase the company's commitment to environmental responsibilities. The results of the study also showed the presence of a statistically significant relationship between environmental costs and the increase in the quality of the financial reports. Finally, there was a statistically significant relationship between environmental costs and decision making. The study suggested some recommendations to develop the application of accounting for environmental costs and disclosure to provide appropriate information to rationalize and take decisions in the oil companies in Libya, as well as the need for companies to protect the environment and provide funding and support to preserve the environment.

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Introduction

Considering the progress of the world, the problem of environmental pollution has emerged. In the past, companies were not required to bear the cost of pollution and precautionary measures against environmental pollution. In addition, high costs are not paid for the removal of waste from its activities because companies were not interested in the environment, they also considered the environment as a common public property open to all.

With the emergence of environmental laws and legislation, attention has been paid to industrial companies that carry out activities that are polluting the environment. Environmental protection organizations have begun to demand the need to preserve the environment and preserve their natural resources, through the disposal of companies' wastes in a scientific way does not threaten life. Since the environment cannot be protected and developed without costs, the role of the accounting profession has emerged in solving environmental issues and problems by providing financial information related to the environment which benefits related parties in making decisions.

* Corresponding author. ORCID ID: 0000-0003-1441-3773

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The development of environmental accounting led to the emergence of another branch, it is the accounting of environmental costs that deals with the measurement, analysis, and recording of data on environmental costs and their inclusion in financial reports, in order to be accurate and comprehensive results to assist management in evaluating performance and making decisions.

Environmental protection has become an international concern not only in developed countries but in developing countries for intense competition. With the advent of accounting for environmental costs which benefit companies in their decision-making process, has led to an increase in environmental spending at an ongoing pace. The company that has been interested in accounting for environmental costs can obtain ISO certification related to the environment developed by the International Organization for Standardization. In fact, environmental costs are a means to improve and develop the environmental performance of the company in the event of the application of environmental protection laws, also the lack of attention to information about environmental costs and disclosure in the financial reports clearly, and consideration of them within the cost of the product, that affect decisions of users of financial information.

The problem of the research can be highlighted by the following question: What is the role of environmental costs in improving the quality of financial reports in oil companies operating in Libya?

The importance of research stems from seeking to explain what environmental costs and causes are it's important for financial information users, and to highlight the role of accounting in the measurement and analysis of environmental costs and to include them in the total costs when determining the outcome of the activity and disclosure in the financial reports.

In fact, that companies are limited to the cost elements used in the production of goods and services, which are materials, wages, and services, no longer reflects the actual value of the factors of production used because the environment has become one of the most important factors that affect the cost of production and the need arose to the need to measure and analyze the environmental costs. Proposed hypothesis of the study are:

H1: The presence of environmental awareness and the company's strategy towards environmental issues contributes to the quality of financial reporting.

H2: The obstacles to the application of measurement and disclosure of environmental costs affect the quality of financial reporting.

H3: The application of measurement models to environmental costs increases the company's commitment to environmental responsibilities.

H4: There is a statistically significant relationship between environmental costs and an increase in the quality of financial reporting.

H5: There is a statistically significant relationship between environmental costs and the decision-making process.

The research relied on the use of more than one tool alone. It was based on two methods. The first was the adoption of the analytical descriptive approach to cover the theoretical side, which dealt with an overview of environmental accounting, environmental costs and its role in improving financial reports. While the second is the adoption of the field study approach to cover the applied side of the research. As the research is concerned with the outputs of the accounting system and the environment at the same time, the research population is determined by the officials of the financial departments, auditing and costs in the oil companies in the first place, as well as the parties concerned with the preparation of financial reports. All the data and information were based on the theoretical and practical aspects of various sources such as books, articles, and university theses, as well as field visits to the sites of study sample companies for the purpose of distributing the questionnaires to them.

Literature Review

This part deals with the concept of environmental pollution, its sources and effects, as well as the concept and importance of environmental accounting, nature and components of environmental costs, as follows:

Environmental pollution

Pollution is defined as "the negative change caused by the activities of industrial companies in a balanced environmental component (air, water, soil, human, animal). The effect may be direct or indirect (Qiao, Qing Li & Yu, 2017), defined by the Federal Environmental Protection Agency as: The components of the environment, so that they turn from useful elements into harmful elements for their loss in making life this is often done by human through neglect or misuse (Coker,2011). Pollution is a negative phenomenon that affects the safety of the environment and human health resulting from natural conditions or human's work. In other words, pollution may be natural outside the human will, such as volcanoes, earthquakes, hurricanes and natural disasters. Some climatic phenomena such as wind and rain also contribute to pollution, another is industrial pollution or human-induced innovation, which emerged as a result of the technological progress achieved in the field of industry, agriculture, service activities, entertainment and others to achieve well-being. Industrial pollution does not stop at the geographical boundaries of country and may be affected for several generations (Habicht, 1992).

In light of the above, environmental pollution is the occurrence of harmful changes to the environment that may threaten the lives of humans and other living organisms and adversely affect the economic resources, which may lead to risks and consequences impede

the development process. In the sense that there is an integrated reciprocal relationship between development and the environment, the environment cannot be protected if development neglects environmental damage and does not address it. Development cannot be sustained if the natural resources of the environment deteriorate. Researchers consider that what the company consumes from general economic resources such as water and air cannot be considered a free commodity, the company must compensate the society for what it takes from it (Mansouri & Ramzy, 2008). It should be noted that the oil industry is one of the most polluting industries to the environment, so it is necessary when the industrial development to seek sound environmental foundations to avoid the problems of industrial pollution and its effects on human health or environment.

Environmental accounting and its benefits

Environmental accounting is one of the branches of social accounting that applies the principles and methods of traditional accounting to cover the effects and social outcomes in addition to economic performance in order to conduct analyzes and provide appropriate solutions to phenomena and problems of an economic nature (Tanc & Gokoglan, 2015). There is a branch dealing with environmental pollution damage is called environmental accounting. An author defines it as "the extension of the traditional accounting system based on the analysis of the results and the causes of the cost to identify and determine the impact of the environmental costs caused by the unit (Peter & Roger K, 2000).

Environmental accounting is defined as: the process of determining and quantifying the value of environmental damage caused by a particular plant to the surrounding environment as a result of its operations or manufacturing, or as a result of producing a good that harms the environment when consumed, and then accounting for the value of such damages and reporting them in the financial reports (Yakhou & Dorweiler, 2002). The environmental accounting system is a method for measuring, analyzing and quantifying the cost of different activities of the company with environmental impact and preparing reports that meet the needs of all parties involved both inside and outside the company. The problem of environmental pollution and the abuse of natural resources has become one of the biggest problems facing the society as a whole after the effects of pollution humans, animals, air, soil and on the aesthetics of the environment and thus affected the economic development and decreased its potential.

Development and the environment are two sides of a single coin. Development cannot be based on degraded natural resources. The environment cannot be protected when the costs of destroying the environment are neglected.

Table1: Advantages of environmental accounting

Enable the management of the company to calculate production costs accurately, which is reflected in the accuracy of pricing.
A means to better understand environmental costs and thus help management to monitor and evaluate environmental performance and achieve some goals such as reduction or reduce many environmental costs.
Encourage the company to make a change in the production processes or to redesign and manufacture the products in a way that does not cause damage to the environment.
To ensure the accuracy of accounting information for all parties concerned to take administrative decisions for the purpose of rationalizing decisions by helping to choose between the available administrative alternatives and the extent of commitment to environmental programs.
Environmental accounting helps to support and manage environmental costs, which increases the likelihood of the company obtaining the ISO 14001 environmental certificate and thus achieving the company of competitive advantages through advertising and promotion of products with better environmental specifications. Studies have confirmed that Nokia TV has increased its market share by 57% because of the publication of research in the German consumer magazine was the result of the company to obtain the first place in environmental performance.
Enable the management of the entity to make comparisons of financial reports over previous years and between the various companies within the sector for the purpose of monitoring and performance evaluation.

Source: Ali, 2016; Judeh, 2014; Karna, Hansen & Juslin, 2003.

Environmental accounting deals with issues beyond traditional financial accounting; it seeks to include estimates of the external environment of relevance to cost-benefit analysis; which include environmental impacts from the operations of the company and which are legally permitted; but the companies causing them are not required to manage or afford them and release "Total cost accounting from an environmental perspective" (Tijani & Abdul Halim, 2008).

Table2: Environmental Dimensions in Accounting and its Reports

	Traditional Accounting at the company level	Environmental accounting at the company level
Criteria	The availability of financial accounting standards in the company's reports to external parties such as investors, tax interests and creditors.	Include environmental information in financial reports such as revenues and expenses resulting from environmental investments, expenses of the company's environmental obligations and any other expenses related to the performance of the environmental company.
	Financial reports of external parties are subject to local laws and international standards that govern how different financial accounts are handled. Financial reporting increasingly includes information on the environment and social performance. Some laws require some countries to disclose such information in financial reports while they are voluntary in other countries.	Some companies use environmental financial information for the purpose of preparing mandatory environmental reports, national reports, or voluntary reports on the sustainable environment.
Aim	The company develops financial and quantitative information to support operational and strategic decision making by managers	Environmental and economic performance management through management accounting systems that focus on physical information of energy, water, materials and waste flows; and financial information on costs and revenues.

Source: Tijani & Abdul Halim, 2008; Abdel Sayed, Sultan & Yousef, 2009.

Environmental costs

Environmental costs can be defined as the set of cost elements that arise as a result of measuring, controlling and correcting the effects of activities resulting from decisions that have potentially adverse effects on all components of the environment (Jing & Songing, 2011). A set of United Nations experts specializing in environmental costs defined environmental costs as "the costs of all cost elements of reducing the loss of services, energy and economic resources available, as well as the cost of recyclable waste (solid, liquid and gas), as well as the cost of environmentally friendly products. In other words, environmental costs are seen as having a positive impact for determining and measuring costs associated with available and used economic resources (Al Sufi, Al Qatish & Garageesh, 2012).

It can be supposed that environmental costs are the amounts spent to avoid and correct environmental degradation resulting from the practice of industrial companies for its activity. In 2003, the United Nations Division of Sustainable Development (UNSD) identified four techniques for the identification and allocation of environmental costs: input/outflow analysis, flow cost accounting, activity-based costing, and lifecycle costing (Magara, Aming'a & Momanyi, 2015). Environmental costs are becoming huge for some companies, particularly those operating in highly industrialized sectors such as oil production. In some cases, these costs can amount to more than 20% of operating costs. Such significant costs need to be managed (ICAI, 2002). The environmental data experts (Trucost) estimated that the environmental costs caused by human activity on a global scale were around US\$6.6 trillion, or 10.97% of world GDP, in 2008. By 2050, the figure could reach 17.78% of global GDP (IIRC, 2013). In the largest ever seizure related to an environmental conviction in the UK, a plant hire firm, John Craxford Plant Hire Ltd, had to not only pay £85,000 in costs and fines but also got £1.2m of its assets seized. This was because it had illegal burying of "massive volumes of unsuitable waste" as well as waste licence and pollution permit breaches (ICAI, 2002).

The case marks a major success for the Environment Agency, as well as its partner in the major investigation "Operation Cleansweep", the Assets Recovery Agency.

Types of environmental costs

Industrial costs shall be borne by the industrial companies as a result of their activities. These costs include environmental costs which can be classified by nature as follows: (Ali, 2016). Capital environmental costs: means the costs of equipment, construction and equipment that are added to the assets of the company for the purpose of treating environmental pollution or reducing harmful environmental emissions such as the emission of rotten air or for the recycling of production waste and is utilized for more than one financial period and is therefore amortized at appropriate rates.

Current environmental costs: Expenses incurred by the environmental conservation company are meant to be the operating costs of environmental protection systems and are to be utilized in the current period and have no future benefits. The Environmental Organization of Japan, which is interested in environmental management, has divided environmental costs into two types: (Kawano, et al, 2000). Costs of prevention of environmental pollution: The costs of prevention or reduction of pollution as the costs of improvement of raw materials so as not to use toxic substances or harmful to the environment and to improve the production requirements to meet the requirements of the environment.

Costs of removing environmental effects: The costs of removal of solid or liquid waste, fumes from different factories and fines resulting from violating environmental legislation. It is clear from the above that there are many classifications environmental costs

and enterprises have the right to choose the appropriate classification so as to facilitate the measurement and identification and use in the decision-making process.

Accounting disclosure on environmental costs

Disclosure of costs and other information is of great importance in determining the primary purpose of the entire accounting process, including clarifying and interpreting the data and figures in the financial reports and then the nature and significance of such data, where many of the paragraphs explain the company's deal with the environment. The main objective is to achieve efficiency for the decisionmaker in its environmental dealings. The detailed disclosure of the company's environmental information, including its environment, is essential to the company's work today and its responsibilities towards the society in which it operates (Haji, 2017). The most important disclosure requirements are the environmental costs to be met in the financial reports here is: (Saheen,2000)

- i. Describe environmental costs and environmental obligations, because identifying any of them requires the exercise of some kind of personal judgment, and the basis for measuring environmental obligations should be disclosed.
- ii. Determine the amount of environmental expenses charged to the income statement with the distinction between operating and other costs, and analyze them appropriately depending on the nature and size of the company and types of issues appropriate to the company.
- iii. Disclose any costs incurred by the company as a result of fines for non-compliance with environmental legislation and for compensations paid to third parties as a result of loss and injury due to previous environmental pollution. Also, the amount of expenses capitalized during the current period is disclosed separately.
- iv. Disclosure of environmental costs recorded as contingency expenses separately. As well as the disclosure of any incentives granted by a company such as grants and tax benefits to contribute to the cost of environmental protection borne by the company.

Environmental disclosure requires coordination between the efforts of professional organizations with environmental protection agencies and the needs of financial information users. Environmental disclosures determine whether an enterprise is aware of environmental issues that may affect the future of an enterprise and that users of the financial reports should be provided with information regarding the fulfillment of environmental obligations.

Environmental costs and their role in improving the quality of financial reports for decision-making

Accounting information plays a large and important role in the administrative decision-making process in all companies. Accounting information has become an important part of the work of the department and the main resource on which to base its decisions. Therefore, the departments have been keen to build a good accounting system to provide high-quality information in decision-making related to planning, oversight and performance evaluation.

The financial reports are an essential source of accounting information useful for decision making. In other words, accounting information is the means by which companies provide their financial position, performance and cash and non-monetary expenses. The technical means used to communicate information are financial reports which must be appropriate and well prepared, sufficient to be reliable and used in making appropriate decisions. (Alsufi, Alqatish & Qarqesh, 2012)

As a result of the size of the companies and the diversity of their activities and the increase in the levels of pollution in the environment, environmental organizations, associations and bodies have imposed some environmental demands in addition to environmental legislation and laws that require companies to use the means and methods to protect the environment from the effects of pollution.

This has led companies to incur additional costs to be disclosed in the financial reports to assist parties responsible for making decisions that enable efficient use of resources and environmental protection.

It is clear from the foregoing that the accounting system plays an important and effective role in providing information through financial reports, and in order to develop it requires the meeting of the new environmental information needs of the society to be used to make decisions that have economic, social and environmental implications, and to enable companies to use fair and efficient resources and protect the environment, this comes through the practical application of environmental accounting and the adoption of departments for the environmental management system. Accordingly, it will be reviewed the concept of environmental management, the role of information in decision-making and the role of environmental costs in decision-making.

Environmental costs management

Environmental management is rather to manage the interaction between modern humankind complexes and their impact on the environment. Therefore, environmental management is not for the preservation of the environment only for the environment but for the preservation of the environment for the benefit of humankind also.

Environmental management involves the management of all components of the biotic natural environment, due to a network of interrelated relationships between all types of organisms and their environments. There are several key aspects of environmental management: the moral side, the economic aspect, the social aspect, the technological aspect, those aspects that help to formulate principles and help in decision making, the preservation of the environment is a state of harmony between man and the earth or the environment. Environmental management is a process to create this harmony, both living beings and all elements of nature. (Moore,2008). Countries have begun to focus on environment and environmental management issues in order to preserve renewable and non-renewable resources, optimize resource utilization, and safeguard human beings as the ultimate goal and instrument of sustainable development. Industrial organizations are one of the major components of development, whose activities affect the environment in general through archeology (Human, animal, soil, water, air, etc.) (Whitelaw,2004). Attention has been paid to the existence of environmental regulations that are concerned with the management of the environment and to guide and control the activities of these organizations towards environmentally reconciling behavior. These systems are known as environmental management systems ISO 14000 (ISO 14000, 2009) .*The Environmental Management System* means a set of policies, concepts, procedures, commitments and action plans that will prevent the occurrence of elements of environmental pollution of all kinds and the understanding of the employees of different companies for that system in their respective fields, in addition to the application of these methods and procedures in practice and the preparation of periodic reports on the results of that application. (Haverkamp,2007). One of the most important ISO 14000 standards Issued by the World Organization for Standardization (ISO 14000, 2009).

- i. Standard 14001 deals with the development of environmental management systems, specifications with manual usage.
- ii. Standard 14004 deals with general guidelines for principles, systems and support modalities.
- iii. Standard 14012-14010 addresses environmental audit guidelines.

These standards seek to solve many environmental problems including: Reducing the negative impact on the environment and working to raise operational efficiency. Achieve a reduction in production costs by introducing waste recycling systems and rationalizing the use of petroleum and electric energy. Also, compliance with environmental conditions of chemical raw materials, packaging. Finally, compatibility with special environmental regulations for environmental markers at the product and waste level (Hanan, 2014).

Components of the environmental costs management system

The components of the environmental cost management system are as follows: (Russell, Skalak & Miller,1994; UN, 2000)

- i. Measurement of environmental costs: The objective of this phase is to measure the total environmental costs at the department or company level and then tabulate the environmental costs.
- ii. Preparation of environmental cost reports: The environmental cost management system extends beyond the mere cost measurement and tabulation where environmental cost studies require the preparation of environmental cost reporting systems, understanding, study and analysis of management decisions resulting in environmental costs (Russell, Skalak & Miller,1994), reports on the proportion of each type of environmental cost to the total of these costs can be prepared over a time series for comparison and evaluation purposes. These reports can help providing an answer to an important question regarding the relationship between prevention costs on the one hand, and measurement, control and failure costs on the other, does the increase in the cost of prevention to total environmental costs indicate a lower proportion of other cost components (Mansouri & Ramzy, 2008).

Reports on the percentage of environmental costs in total sales can be prepared at a time series level to clarify the relationship between environmental costs and total sales revenue because they are important and significant when many of the administrative decisions. In the case of the preparation of the company to balance the environmental performance, it is possible to prepare reports aimed at comparing the elements of actual environmental costs to the environmental costs specified in advance, and to identify the differences and analyze them for their types and causes helps to search for corrective actions and decisions. Environmental cost measurement and reporting are aimed at implementing environmental cost management methods. Environmental costs are rarely achieved or recorded in the section or department that caused this cost. For example, the cost associated with environmental activities such as waste treatment compliance with legal considerations and environmental insurance, this cost occurs in production and production services, while decisions on the quality of products, processes, and types of machines to be purchased, as well as decisions of selection the plant site is taken at the level of design departments, as well as at the level of capital budgeting committees. It is clear to us that there is a clear fact that environmental costs are part of the operating costs and that information on environmental costs is also important in the economic decisions.

Environmental costs and their role in decision-making

According to the study Al-Sofi and et al (2012), environmental costs play a role in rationalizing administrative decisions, the tremendous development witnessed by the fields of communications and information has reflected positively on industrial progress both in the field of technology, production methods, and administrative systems, as well as on the decision-making area in which the administration uses different and new ways and means to achieve rationalization based on information available from different

systems, this is the flow of information the fulcrum systems are very important to make these decisions (Al Sofi, Al Qatish, & Garageesh, 2012). Environmental protection decisions are not derived from financial terms, but from the requirements of international regulations and laws, especially in light of the need for environmental information by industrial companies as well as investors to make more informed decisions as such information affects them in the medium and long-term. To ensure that environmental information is prepared on the same basis and the same activities as those for which other information in the financial reports of the company. When determining the prevailing reporting requirements, the same regulatory limits should be used for reporting environmental information. For example, many jurisdictions require the use of IFRS for purposes of identifying activities to be included in the financial reports of corporate.

In some cases, environmental information may be disclosed outside the boundaries of the company's flagship reports as set forth in the (CDSB) Framework for, inter alia, but not limited to (CDSB, 2018):

- i. The reporting company is required to report on activities for which is responsible, for example, outsourced activities.
- ii. The nature of the contract for the operation or services procured from the entity, the reporting company is exposed to material risk, opportunity or financial impact.
- iii. The reporting company has the power to influence its environmental impacts. In such cases, information attributable to activities outside the company's mainstream reporting boundary should be clearly distinguished from information about activities within the boundary.

There is a reciprocal relationship between the environmental costs and the decision-making process of any company, where it is assumed to be the use of a database for environmental accounting and developed by the companies internally and externally. Therefore, the decision of the company to consider the cost within the environmental costs depends mainly on the purpose of this costs and its relevance to the environment. The decisions taken by the companies to implement and activate environmental accounting are as follows: (Nasser & Al kafaf, 2001)

- i. The important and vital elements of good project management by measuring environmental costs and their impact on the appropriate environmental and administrative standards for these costs, considering the principle of cost and reason.
- ii. The correct measurement of the value of the investment and the magnitude of environmental costs, to determine the impact of this investment on improving the effectiveness of performance and the construction of logical decisions by using the return/cost index.
- iii. Disclosure of environmental costs to assess the organization's trends towards environmental management by determining the ratio of the company's environmental costs to the total costs of the activities, enabling users to inform the activities of the company about the direction of environmental protection, which leads to the evaluation of the company itself.
- iv. Decisions to rationalize the use of resources. Environmental costs contribute to reducing the poor use of scarce resources, which increases the technical and economic efficiency of industrial enterprises.
- v. Decisions to determine the technology used in production, and the nature of production processes that minimize the size and level of environmental pollution.
- vi. Decisions on the costs of reducing and recycling raw and consumed materials.
- vii. Decisions related to environmental research and development costs.
- viii. Decisions on the costs of environmental conservation.
- ix. Decisions on the costs of environmental investment through spending on disposal of environmental damage.

From the above, it can be clarified the following decisions taken in the light of environmental cost information are more precise because those decisions are influenced by the type of information collected, and companies' managers select technologies and procedures that meet environmental requirements and build cost-benefit relationships.

Decision-makers are always looking for ways to describe the benefits and cost-effectiveness of environmental activities, which has led to the inclusion of environmental considerations in rational decision-making. This is a result of what follows:

- i. The increased investor need for environmental cost information to make investment decisions.
- ii. The impact of environmental cost information in the long or medium term.
- iii. When making decisions, the real costs of operations and product costs, including environmental costs, must be considered.
- iv. Increase the volume of expenditures on the quality of the environment, which emphasizes the need to consider when making the decision.

Role of environmental costs in the quality of financial reports

In the beginning, it should be noted that there is no final agreed definition among the researchers about the quality of financial reporting and its methods of evaluation. The concept of quality varies according to the viewpoints and objectives of the producers and users of financial reports. Many of the studies that dealt with the quality of the financial reports were interested in identifying and measuring them through the availability of quality and quality of accounting information, in the sense that it is a measure of the quality of financial reports.

The quality of financial reporting involves a set of characteristics of the financial information included in those reports. Initially, there is no agreement between organizations or researchers on a set of characteristics, there is agreement on a set of fundamental characteristics. These characteristics derive from the usefulness of accounting information in decision making, which depends on the degree of confidence in the information on the one hand, and on the appropriateness of that information on the other, the three factors combined contribute to improving the usefulness of accounting information for decision-making. Confidence in information depends on its representation of the facts, the fairness of the information and its applicability to the investigation, the appropriateness of the information depends on the timing of the information, its predictive value, and feedback (Dejean & Martinez, 2009). As a result of the evolution of the business environment, the complexity of the types of financial investments, and the tendency of many countries to develop and enrich the information in the financial reports in order to achieve transparency and application of the requirements of companies' governance it became necessary to develop the content of financial reports and lists to include non-traditional information to achieve transparency. On the other hand, previous developments have increased the need for disclosure of information that has helped decision makers to predict the future performance of companies in the context of the risks surrounding their business environment. Although these developments have called for the enrichment of financial statement and reports, these reports still lack information on risks companies, they do not show the role of company management in the face of these risks (Savage, et al, 2001).

As companies seek to join international capital markets, gain investor confidence and join the more developed countries, the company must apply risk measurement and disclosure within accounting practices. It is necessary to provide financial and non-financial information on the types of risks faced by these companies (Cormier & Magnan, 2007). Financial reports are not an end in themselves but are intended to provide information that is useful in decision-making, whether financial or non-financial, so there is a need to demand new standards for measurement and disclosure and to increase the amount of information disclosed to meet new information requirements, which leads to the development and improvement of the disclosure of information in financial reports, which increases the quality of financial reporting and the reliability of decision-making on improving environmental performance (Saleh, 2009). In August 2010, the International Integrated Reporting Council (IIRC) focused on the preparation of integrated business reports to meet the needs of users on a financial and management basis in a way that reflects the interconnectivity of the company's performance (Rabie,2017). The integrated reports of companies that combine financial and non-financial information include a minimum of dimensions: Economic, environmental, social, governance, ethical and risk factors, as well as company strategy, control, performance and expectations in a way that reflects their interest in improving sustainable performance (IIRC, 2013). The importance of company disclosure of its strategy and objectives according to these reports lies in transforming the strategy into performance indicators related to the company's operations and helps to assess its performance in all financial, environmental and social aspects (Rabie,2017). The presence of non-financial performance indicators enhances the presence of information disclosed in the company's integrated reports. These indicators confirm that the environmental impact on market value in terms of increased cash flow, brand value, risk management, cost reduction, and increased sales (IIRC, 2013). Environmental performance is part of the company's integrated reporting in order to assess its ability to create sustainable value, enabling users to make more efficient and effective decisions and making the market value of the company closer to its intrinsic value (IIRC, 2013). The integrated reports confirmed that reducing the waste generated in manufacturing may indirectly measure the improvement of the environmental performance of a company, thereby reducing the fines it pays for environmental violations. This, in turn, increases the importance of the environmental information provided by the company and thus enhances the confidence of investors and customers (Rabie,2017; IIRC, 2013). Disclosure of environmental information, whether in the financial reports or independently, will increase the quality of accounting information (Cormier & Magnan, 2007). Much of the information on future environmental costs, which could be relatively high-value information, is absent from accounting records because traditional accounting systems are concerned with the past. There is also a lack of disclosed information on less obvious environmental costs that may be difficult but at the same time cannot be neglected as costs incurred because of loss of access to markets that impose restrictions on products associated with environmental pollution, in addition to loss of access to insurance and financing services (Savage, et al, 2001).

That many of the decisions taken by managers are ineffective and the reason for the difficulty in identifying and tracking environmental costs, as part of these costs are not clear so are hidden in the indirect cost calculations and are not allocated to the products and processes and activities that cause them in line with a polluter pays principle that the manager can use to rationalize decisions. For example, the costs of removing environmentally polluting waste that may be high for a specific production line and lower for another production line. In this case, the allocation of removal costs based on production volume will be inaccurate. Taken as pricing decisions and other decisions taken based on this inaccurate information (IFAC, 2005). After the oil spill incident in Alaska in 1989 by the naval vessel Exxon Valdez, companies in the oil industry and many companies whose activities have an impact on the environment have increased and significantly improved disclosure of environmental information on cleaning costs in annual or environmental reports (Suttipun & Stanton, 2012). Incorporating environmental costs information into decision-making will help to accurately identify product costs, which has a reflected role in the decision-making process.

The impact of costs should, therefore, be tracked and determined whether these costs are environmental or non-environmental to build a good database that supports the information system and thus makes good decisions. Just limiting and measuring environmental costs is of no use unless it leads to better decisions (Alshehadeh, 2010).

Research and Methodology

The research aims at clarifying the role and importance of environmental costs in improving the financial reports quality to rationalize the decision-making process in the oil companies in Libya. As well as clarify the role and effectiveness of environmental accounting in providing appropriate information on environmental costs. The lack of disclosure of environmental costs in the financial reports results in inaccurate information and decisions based on the wrong basis and weakens the competitiveness of the company in keeping up with the challenges faced by companies in light of industrial and economic expansion. The hypotheses can be formulated as follows:

H1: The presence of environmental awareness and the company's strategy towards environmental issues contributes to the quality of financial reporting.

H2: The obstacles to the application of measurement and disclosure of environmental costs affect the quality of financial reporting.

H3: The application of measurement models to environmental costs increases the company's commitment to environmental responsibilities.

H4: There is a statistically significant relationship between environmental costs and an increase in the quality of financial reporting.

H5: There is a statistically significant relationship between environmental costs and the decision-making process.

The descriptive approach was adopted through the use of sources of articles and books related to the subject, and the analytical method was adopted to test the validity of the hypotheses through the questionnaire that was conducted on a sample of the oil companies in Libya.

The practical aspect of the study

The study population consists of officials of the financial departments, auditing and cost departments in the oil companies in the first place, as well as the parties concerned with the preparation of financial reports such as the sections of the preparation of budgets and financial statements, and staff working in these departments and sections in order to achieve the objectives of the field study

Sampling : Consists of a group of oil companies in Libya include:

- Al-KHALEEJ company of oil
- SURT company
- RASLANUF company
- EL-ZOATINA company
- EL-WAHA company
- EL -BREGA company
- UAE company
- AKAKUS company
- and EL-HAROGE company.

These companies are distributed in the cities of : (Benghazi, El-Braga, Raslanuf, Tripoli).

For the purpose of this study, the sample was taken in a random sample was selected from the study population, where the sample consisted of 100 samples.

Study tool and statistical methods used

The researchers developed the questionnaire after reference to theoretical literature on the importance of environmental costs and environmental disclosure to increase the quality of financial reports to rationalize administrative decisions. The questionnaire consists of 35 questions. The Scale fivefold Likert was adopted, this scale is consist of five degrees, and it measures the response of the questionnaire responders in the table 3:

Table 3: The Scale fivefold Likert

Response	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
Score	1	2	3	4	5

Source: Authors Compliation

The rule of decision-making was the adoption of the conditional mean 3. Therefore, if the arithmetic mean of the hypothesis is equal to or greater than 3, this means that the sample of the study tends to accept the hypothesis. If the arithmetic mean of a hypothesis is less than 3, the sample of the study tends to reject the hypothesis. The questionnaire consists of two parts:

Part I: Personal information about employees in terms of gender, qualifications, occupation, years of service and the department in which the respondent is employed.

Part II: The importance of environmental costs and its impact on the quality of financial reports.

Statistical methods

To achieve the objectives of the study, the statistical program was used (SPSS-IBM19) to answer questions and test their hypotheses through the use of statistical methods Alpha Cronbach, arithmetic mean, standard deviation and test (T) of samples.

Findings and Implications

Empirical data and analysis

Stability of the study instrument: Achieving consistency in the management of the study internal consistency was achieved by using the Cronbach-alpha equation, with a stability coefficient of 87.9%. This stability is acceptable for study purposes.

Table 4: Cronbach's Alpha

Cronbach's Alpha	N of Items
.879	30

Source: Authors Compliation

Table 5: All Characteristics of Responders

		Frequency	Percent
Gender	Male	63	63.0
	Female	37	37.0
Level of Education	Higher Diploma	19	19.0
	Bachelor Degree	65	65.0
	Master Degree	13	13.0
	Other	3	3.0
Profession	Financial Manager	1	1.0
	Accountant	67	67.0
	Account Manager	5	5.0
	Internal Auditor	17	17.0
	Other	10	10.0
Years of Experience	0-5 years	24	24.0
	6-10 years	25	25.0
	11-15 years	18	18.0
	More than 15	33	33.0
Job Department	Accounting (finance)	48	48.0
	Auditing	15	15.0
	Costs	19	19.0
	Reporting	12	12.0
	Other	6	6.0

Source: Authors Compliation

The demographic characteristics of the study sample were presented and analyzed as follows:

Gender: It was found that the highest percentage of those surveyed was 63% of males and (37%) of females.

The scientific qualification: The highest percentage of the sample of the study sample is 65% for holders of bachelor's degree, followed by holders of high diploma certificate 19%, followed by master's degree holders 13%. While the other degree holders 3% of them have a doctorate degree.

Profession: The highest percentage of the members of the research sample was the accounting specialization where the percentage 67% followed by internal auditor by 17%, while the other disciplines by 16%.

Years of experience: shows that the highest percentage of years of experience amounted to 33% of the sample with years of experience of 15 years and more followed by those with years of experience from 6 - 10 years 25% and then reached (18%) for those who have years The experience of 11-15 years while the proportion of 24% of the sample with years of experience less than 5 years.

Job departments: shows that the highest percentage was 48% by accounting department, followed by the cost department 19%, the auditing department (15%), while the percentage of other departments 6%.

The most important results related to demographic characteristics are analyzed by the data obtained from the sample as follows:

The highest percentage of males reached 63%.

The data showed that more than half of the sample are holders of bachelor's degree and amounted to 65%.

The percentage of the study sample members from the accounting specialization reached 67%.

The percentage of participants from the accounting department among the sample members reached 48%.

Most of the sample have experience and the proportion of those who have 15 years and more 33%.

All respondents have the ability to answer the questionnaire and can understand the subject of the study because the majority of the sample of the bachelor has specialized in accounting with experience for more than 15 years, so the answer to questions was highly professional.

As result, that strengthens the trust in their answers and then depend on them in the analysis.

The results of the study on environmental costs

Most of the respondents see the availability of environmental awareness and the company's strategy towards environmental issues where the arithmetic mean of most of the hypotheses reached more than (3), where the highest mean 4,29 of the expenditure clause on the treatment of environmental damage (treatment of oil spills) leads to reduced environmental damage to society. The researchers believe that the sample accepted the hypothesis, but there is a decrease in the paragraph the company's ISO 14000 certification for environmental quality and the arithmetic mean of this paragraph 3.18 the hypothesis can, therefore, be accepted as shown in figure and Table 6. Findings on environmental awareness and company strategy towards environmental issues are indicated in Table 6. Majority of the respondents agreed that the importance of training employees to possess multiple environmental skills to carry out environmental accounting (71%), also 70% agreed that measuring and disclosing environmental costs in the financial reports considerate as the perception of the firm about environmental issues, while majority 46% strongly agreed and 41% agreed that spending on remedying environmental damage (treatment of oil spills) leads to reduced environmental damage to society

However, 59% of employees are neutral in relation to the company obtaining ISO 14000 certification for environmental quality. The researcher is likely not to know the employees whether their company has a certificate or not.

Table 6: Environmental awareness and company strategy towards environmental issues

Question	N	Mean	Std. Deviation	Scores				
				1	2	3	4	5
Awareness among interested parties.	3	4.05	.66	1%	2%	7%	71%	19%
Training workers to have multiple environmental skills to do so.	2	4.06	.65	1%	2%	6%	71%	19%
Disclosure of environmental protection costs (such as afforestation costs) borne by the company will improve the image of the company in the eyes of environmental protection organizations and consumers.	4	3.96	.71	1%	2%	15%	64%	18%
Spending on remedying environmental damage (treatment of oil spills) leads to reduced environmental damage to society.	1	4.29	.81	1%	2%	10%	41%	46%
Your company has ISO 14000 certification for environmental quality.	6	3.18	.77	4%	7%	59%	27%	3%
Measuring and disclosing environmental costs in the financial reports considerate as the perception of the firm about environmental issues.	5	3.85	.82	3%	5%	9%	70%	13%

Source: Authors Compilation

The second hypothesis accepted which states obstacles to the application of measurement and disclosure of environmental costs, in order to test this hypothesis, the mean arithmetic mean and standard deviations were found, which included six questions. The paragraph obtained the complexity of the accounting measurement of environmental costs in the first place 4.04 and poor accounting awareness of the importance of applying environmental accounting where get the last rank and the mean arithmetic 3.02. As shown in the Table (7). The frequency distribution table was used to describe the obstacles to the application of measurement and disclosure of environmental costs distribution of respondents as shown in Table (7). With regard to the complexity of accounting for environmental costs, 56% agreed and 30% strongly agreed that it should be considered as one of the main obstacles to the application of measurement and disclosure of the distribution of environmental costs. while 66% agreed that accounting measurement and disclosure of environmental costs required the recording of environmental costs in clear and explicit accounts and separating them from the total costs of activity in oil companies. The researcher explained the high costs of environmental in oil companies, especially the costs of cleaning up because of environmental pollution caused by their activities on the environment.

In addition, 52% agreed with the weakness of the accounting awareness of the importance of implementing environmental accounting one of the main obstacles to applying the measurement and disclosure of environmental costs, on other the hand, 34% disagreed and 8% disagreed strongly with the same question, where it is clear that the views of the respondents were close between supporters and opponents on the basis of the weakness of accounting awareness as one of the obstacles. However, 69% of the employees agreed that the disclosure of environmental costs in the financial reports caused damage to the company's reputation, the researchers explained that the large costs incurred by the oil companies on environmental pollution because of their activities, may negatively affect their reputation.

As happened in the disaster of the well of Mexico and the disastrous consequences of the British Petroleum, which cost financial compensations paid to the affected since the beginning of the oil spill about 428 million dollars, in addition to the bill of direct costs to stop the oil spill, which amounted to mid-September 2010 about 5.9 billion dollars and is expected to rise at the end of 2010 to reach 61.6 billion dollars, which affected the reputation of the company (<https://www.usatoday.com/story/money/2016/07/14/bp-deepwater-horizon-costs/87087056/>). In general, the results are consistent with table (6).

Of the Table (8) note that the sample tends to accept the hypothesis the application of the measurement models for the environmental costs increases the company's commitment to the environmental responsibilities. The arithmetic mean of the sample members for this hypothesis is more than 3. The highest mean of the question contributes to the recognition of the environmental costs in the company's compliance with legislation and laws on environmental responsibility 3.93.

Table 7: Obstacles to the application of measurement and disclosure of environmental costs

Question	N	Mean	Std. Deviation	Scores				
				1	2	3	4	5
The complexity of accounting measurement of environmental costs.	1	4.04	.90	0%	12%	2%	56%	30%
Poor accounting awareness of the importance of applying environmental accounting.	6	3.02	1.1	8%	34%	6%	52%	0%
Accounting measurement for environmental costs and disclosure requires the recording of environmental costs in clear and explicit accounts and separating them from the total costs of activity in oil companies.	2	3.93	.71	1%	3%	14%	66%	16%
Disclosure of environmental costs in the financial reports causes harm of reputation of firm.	4	3.66	.81	0%	15%	10%	69%	6%
There is no clear way to disclose the environmental performance in the financial reports of the oil companies.	5	3.48	.96	4%	14%	19%	56%	7%
Applied Libyan financial accounting system does not fit with measurement and disclosure of environmental costs.	3	3.72	.92	3%	7%	21%	53%	16%

Source: Authors Compilation

The frequency distribution table was used to describe the apply measurement models for environmental costs to increase the company's compliance with environmental responsibilities of respondents as shown in Table (8).

Table 8: Apply measurement models for environmental costs to increase the company's compliance with environmental responsibilities

Question	N	Mean	Std. Deviation	Scores				
				1	2	3	4	5
Contributes to the recognition of the company's compliance with legislation and laws on environmental responsibility.	1	3.93	.64	1%	2%	12%	73%	12%
Helps to identify the company's interest in consumer affairs.	4	3.69	.79	1%	7%	24%	58%	10%
Contributes to the recognition of the company's compliance with international standards on environmental accounting.	2	3.89	.75	1%	5%	13%	66%	15%
Helps to identify the extent to which the company cares about the welfare of the community through donations.	5	3.52	.89	1%	13%	30%	45%	11%
Contributes to identifying the means and possibilities necessary to measure the negative external effects of the environmental pollution of the company.	3	3.88	.70	1%	2%	19%	64%	14%

Source: Authors Compilation

Table (8) shows that the majority of respondents agreed that the measurement models for environmental costs contribute to the recognition of the company's compliance with legislation and laws relating to environmental responsibility (73%), 66% agreed that contributes to the recognition of the company's compliance with international standards on environmental accounting, while majority 64% agreed that contributes to identifying the means and possibilities necessary to measure the negative external effects of the environmental pollution of the company.

Table (9) indicates the statistical means and standard deviations that show that there is a statistically significant relationship between the environmental costs and the increase in the quality of the financial reports. And the members of the sample of the study tend to accept the hypothesis, where the highest mean of the question of measurement and disclosure of environmental costs in financial reports the company can obtain quality certificates from international organizations to support their survival and sustainability 3.92. Table (9) shows the findings of the relationship between environmental costs and the increase in the quality of financial reports. The majority of respondents agreed that measuring and disclosing environmental costs in financial reports increases the quality of information affecting current and future investors' decisions (68%), and 65% agree that the use of different methods of measuring environmental costs enables access to information tailored to different needs for the users of the financial reports, while 69% agreed

that the accounting measurement of environmental costs and benefits and their disclosure in the financial reports can be used to obtain information that helps in assessing the extent to which the company fulfills its environmental obligations. The results were in line with the requirements of the report of CDSB, where stressing the need to disclose environmental information as accurately as financial information. Its, in turn, helps companies to provide investors with useful environmental information through their general report, which allows investors to assess the relationship between specific environmental issues and company strategy, performance and expectations, enabling them to make their decisions more efficient and effective.

Table 9: Relationship between environmental costs and an increase in the quality of financial reports.

Source: Authors Compilation

Question	N	Mean	Std. Deviation	Scores				
				1	2	3	4	5
Measuring and disclosing environmental costs in financial reports increases the quality of information that influences the decisions of current and prospective investors.	4	3.74	.76	1%	8%	15%	68%	8%
Using different methods to measure environmental costs enables access to information tailored to the different needs of financial reporting users.	5	3.74	.68	1%	3%	24%	65%	7%
The accounting measurement of environmental costs and benefits and their disclosure in the financial reports can be used to obtain information that helps in assessing the extent to which the company fulfills its environmental obligations.	3	3.84	.72	1%	5%	14%	69%	11%
Measuring and disclosing environmental costs in financial reports leads to information that enables the assessment of the environmental performance of the company.	2	3.88	.77	2%	5%	9%	71%	13%
Measuring and disclosing environmental costs in financial reports the company can obtain quality certificates from international organizations to support their survival and sustainability.	1	3.92	.79	2%	3%	14%	63%	18%
Measurement and disclosure of environmental costs in financial reports the company can enter quantitative data relating to environmental performance within it.	6	3.70	.66	0%	4%	29%	60%	7%
Information on environmental costs provided by the company positively affects the company's reputation and profitability.	7	3.67	.89	3%	8%	19%	59%	11%

Source: Authors Compilation

In addition, 13% strongly agreed, and 71% agreed that the measurement and disclosure of environmental costs in the preparation of financial reports lead to information that enables the assessment of the environmental performance of the company. 18% also strongly agreed, and 63% agreed that measuring and disclosing environmental costs in financial reports would help to obtain quality certificates from international organizations to support their survival and sustainability. While 60% agreed that measuring and disclosing environmental costs in financial reports enables the company to enter quantitative data on environmental performance within them. The company's environmental performance disclosure is part of the company's integrated reports to assess its ability to create sustainable value. In fact, reducing the value of the information gap improves the increased disclosure of investors' estimates of the intrinsic value of a company. The presence of information on environmental costs in the reports helps to assess and improve the environmental performance of the company, and this improves the image of the brand and the reputation of the company, which in turn enhances the company's ability to obtain quality certificates from international organizations.

Table (10) shows a statistically significant relationship between environmental costs and decision making where the question arises. The process of measuring and disclosing environmental costs increases the company's ability to meet current environmental obligations at the highest arithmetic mean (3.89). The study finds that the measurement and disclosure of environmental costs lead to the improvement of the environmental performance of the company by increasing the rate of return on environmental investments. And it also leads to effective planning and arrangement that leads to reduced unit cost. The researcher believes that most participants tend to accept the hypothesis.

The majority of respondents agreed that the process of measuring and disclosing environmental costs would increase the company's ability to meet current environmental obligations and also lead to effective planning and reduce the cost of the unit (67%), 66% agreed that the process of measurement and disclosure of environmental costs in companies oil to avoid the company to pay for environmental violations, while 60% agreed and 28% neutral that the measurement and disclosure of environmental costs lead to improved environmental performance by determining the technology used in the production and nature of production processes that reduce the volume of pollution. Integrated reports confirmed that minimization of waste generated in manufacturing may indirectly measure the improved environmental performance of the company, thereby reducing the payment of fines for environmental violations. In fact, the presence of non-financial performance indicators reinforces the presence of information disclosed in

sustainability reports for companies. The indicators confirm that the environmental impact on market value in terms of increased cash flow, tag value, risk management, cost reduction, and increased sales, The Gulf of Mexico disaster is the best example.

The T-test was performed for hypotheses: As shown in Table (11), the value of T-value of the first hypothesis 79.834 at the level of significance (0,00) is below the level of significance 0,05 . Therefore there is a significant correlation and thus accepted the hypothesis and so for the remaining hypotheses.

Table 10: Relationship between environmental costs and the decision-making process.

Question	N	Scores							
		Mean	Std. Deviation	1	2	3	4	5	
The process of measuring and disclosing environmental costs leads to evaluating and improving environmental performance by taking new decisions more rational, such close production line or open new ones the environmental performance.	4	3.79	.83	2%	4%	23%	55%	16%	
Measurement and disclosure of environmental costs lead to improving the environmental performance of the firm by increasing the rate of return on environmental investments.	3	3.83	.83	3%	3%	17%	62%	15%	
The process of measuring and disclosing of environmental costs lead to increasing the firm's ability to meet current environmental obligations.	1	3.89	.72	1%	4%	14%	67%	14%	
The process of accounting measurement and disclosure of environmental costs in oil companies to avoid the company to pay fines for violations of the environment.	5	3.79	.62	0%	3%	23%	66%	8%	
Measurement and disclosure of environmental costs lead to effective planning and arrangement which leads to reducing the cost of the unit	2	3.83	.65	0%	4%	19%	67%	10%	
Measurement and disclosure of environmental costs lead to improving environmental performance through determining the used technology in producing and nature of production processes that reduce the size of pollution.	6	3.69	.68	0%	5%	28%	60%	7%	

Source: Authors Compilation

Table 11: One-Sample Test for hypotheses

Hypothesis	T-value	N	Sig	Mean Difference	Accept/Reject
X1	79.834	1	.000	20.420	Accept
X2	66.867	2	.000	18.850	Accept
X3	55.822	5	.000	15.910	Accept
X4	65.559	3	.000	23.490	Accept
X5	65.854	4	.000	19.820	Accept

Source: Authors Compilation

Results and Discussion

Environmental pollution is the most important challenges of the current era, and pollution is caused by different human activities and industrial in particular. Companies, particularly those active in environmentally sensitive industries, have realized that they must include sustainable environmental aspects that improve environmental performance to achieve and sustain an environmental protection strategy. This is to ensure the survival of companies in a competitive market. As environmental awareness increased, the necessity and importance of integrating the environment into the financial system of companies were considered. Thus, environmental accounting is the key to achieving these goals.

Accounting for environmental costs is the expenses incurred by the company resulting from the use of technology that has a negative impact on the environment, as well as the treatment of damage and negative impacts the company was unable to prevent or control, and is also a set of principles that provide basic information for environmental management activities. The measurement and

disclosure of environmental costs in the companies, and their inclusion in the financial reports led to improved environmental performance in accordance with IAS 10, which emphasized expenditure on the future environmental costs of the company's activities, such as the costs of rehabilitation of some sites affected by the current activity or damage resulting from current environmental impact litigation. The disclosure of environmental costs is an important two-way indicator. It shows whether companies are aware of the environmental issues that may affect their presence on the one hand, and represent the users of the financial reports as a measure of environmental events and the companies' efforts towards the environment and their financial implications. Given the magnitude of environmental costs and their impact on the company's sustainability, reputation and market value, most companies recognize the need for sound environmental management systems to manage environmental issues effectively and proactively. This can be achieved only if the department has clear and accurate information about these costs. This study assessed the role of environmental costs in improving the quality of financial reports in Libya. The results of the study showed that the T value of all hypotheses was higher than the T-critical value, and the significance level (0.00) was below the significance level of 0.05. It is, therefore, possible to say that there is a role for environmental costs in improving the quality of financial reports. The most important results are the study on environmental costs, which was derived from the analysis of the data obtained as follows:

- a. 63% felt that measuring the environmental costs and disclosing them in the financial reports leads to obtaining information that enables the assessment of the environmental performance of the company.
- b. 76% of the sample believed that measuring and disclosing environmental costs in financial reports increases the quality of information that influences the decisions of current and prospective investors.
- c. 60% believed that the measurement and disclosure of environmental costs in the financial reports enable the company to enter quantitative data related to environmental performance within them.
- d. 59% of the sample agreed that information on environmental costs provided by the company positively affect the reputation and profitability of the company.
- e. 56% of the sample believed that there is the complexity of accounting measurement of environmental costs.
- f. 46% of the sample strongly believed that spending on remedying environmental damage (treatment of oil spills) leads to reduced environmental damage to society.

The study found that there is no clear way to detect environmental performance in the financial reports of the companies. Also, it's found that disclosure of environmental costs in financial reports is an awareness of the company on environmental issues.

Conclusions

The research concludes that (i) there is environmental awareness in oil companies in Libya the trend of environmental issues contributes to the quality of financial reports, (ii) the existence of obstacles to the application of measurement and disclosure of environmental costs affects the quality of financial reporting, (iii) the application of measurement models to environmental costs increases the company's commitment to environmental responsibilities, (iv) there is a statistically significant relationship between environmental costs and an increase in the quality of financial reports, (v) there is a statistically significant relationship between environmental costs and the decision-making process, (vi) the difficulty of measuring environmental costs in oil companies in Libya affects the evaluation of their performance.

The above-mentioned results demonstrate the importance of the role of environmental cost accounting in the quality of financial reporting.

Through the main results of the empirical study concluded also that (i) environmental cost accounting contributes to the quality of financial reports by providing information on costs related to minimizing waste of oil wastes, (ii) environmental cost accounting contributes to the quality of financial reporting by providing information on costs related to research and development projects on environmental issues, (iii) environmental cost accounting contributes to the quality of financial reporting by providing information on environmental protection costs that prevent environmental damage, (iv) environmental cost accounting assists in environmental disclosure by providing information on the company's environmental compliance in accordance with environmental protection laws and regulations, enabling it to obtain quality certificates from international organizations to support their survival and sustainability, (v) measuring and disclosing environmental costs improves the environmental performance of the company by increasing the rate of return on environmental investments.

The research, therefore, recommends that (i) Increasing the environmental awareness of the employees through the company of courses to learn about the harmful environmental effects and companies provide industrial security means related to the environment for workers (ii) the need for specialized training units in environmental accounting for the staff of the financial department and that these employees are fully aware of environmental accounting, (iii) the study recommends that companies should be obliged to protect the environment by producing environmentally friendly products, (iv) support research related to environmental protection, (v) the need to issue laws and legislation that oblige companies to protect the environment and to disclose the environmental effects ,(vi)

the need for the State to contribute to the provision of support for the preservation of the environment, (iv) allocate the necessary financial resources to protect the environment and deduct the proportion of companies profits to maintain.

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