Environmental Disclosure in the Libyan Oil and Gas Sector

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In the name of Allah, Most Gracious, Most Merciful

Abstract

Since 1990, interest in environmental disclosure (ED) has grown, and it is now seen as one of the most important types of social disclosure (Islam et al., 2005). This attention has not come out of the blue; as environmental costs rise year on year, it has become increasingly important to disclose these costs, as they can significantly impact upon the decisions made by the users of financial statements. This is especially important in light of the fierce competition between local and global companies. Concerned investors have therefore started to press for environmental information to be disclosed in companies' annual reports.

The vast majority of studies in the field of ED have so far focused on developed territories such as Western Europe, America and Australia, neglecting developing countries. The present study is motivated by the lack of research in developing countries in general and Libya in particular. It is an empirical investigation into the ED practices of oil and gas companies operating in Libya. This study is the first to explore ED practices in the oil and gas sector in Libya. This sector, which is considered one of the most polluting industrial sectors, accounts for 70% of Libyan's Gross Domestic Product (GDP) and 98% of the country's exports (Central Bank of Libya, 2009a). The main objectives of the present study are to identify the current state of ED, as described in the accounting literature, to observe how it is represented in the annual reports of oil companies operating in Libya, and to investigate the determinants of and reasons for ED. In addition, the study attempts to clarify the influence of company characteristics on ED. The aim is to contribute to current knowledge by addressing the shortage of studies on ED in developing countries. To achieve these objectives, three data collection methods were employed: questionnaires, content analysis and interviews.

The results show that almost all companies provide some environmental information, although reports contain more positive and neutral than negative information. The respondents agreed strongly that some of the proposed drivers do indeed motivate companies to disclose environmental information, but they rejected others (see Table 6-10). When it came to identifying the obstacles that prevent companies from disclosing environmental information, local companies were consistent in accepting most of the proposed elements as barriers to ED, whereas a number of these elements were rejected by foreign companies (see Table 6-17).

It was apparent that although some environmental rules and regulations do exist, they are not applied fully and control of ED is still weak. There is a significant positive association between level of ED and company size, company privatisation and company nationality. The investigation provides further evidence that these characteristics are important and have an impact on the level of ED. On the other hand, the age of the company is insignificant; it is negatively related to the level of ED.

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Table of Contents

List of Tables

List of Figures

List of Abbreviations

CSR	Corporate Social Responsibility
CSRD	Corporate Social Responsibility Disclosure
ED	Environmental Disclosure
EU	European Union
GDP	Gross Domestic Product
GNC	General National Congress
HR	Human Resource
IAS	International Accounting Standard
IASB	International Accounting Standards Board
IASC	International Accounting Standards Committee
NOC	National Oil Corporation
NTC	National Transitional Council
SPSS	Statistical Package for the Social Sciences
UK	United Kingdom
UN	United Nations
USA	United States of America
WTO	World Trade Organisation

Chapter One: Introduction and Outline of the Thesis

1.1 Introduction

An economic project does not exist within a vacuum, but within a specific political, social and commercial environment, and its continuation depends on its ability to coexist with this environment. It can affect, or be affected by, the environment in positive or negative ways, since it needs raw materials and labour on the one hand, and it provides goods and services to the members of society on the other (Hamouda, 2007).

Consecutive developments in the economic world have started to force companies to modify their traditional economic models, built only on the philosophy of maximising profits, to take into account social as well as economic considerations (Violet, 1983). Increasingly, companies are being required by stakeholders, pressure groups, committees and the general public to contribute to the improvement of life in their communities in ways other than the provision of goods and services (Deegan and Rankin, 1997), and they are now finding that they are expected to balance their economic goals with the social objectives of the surrounding environment. Companies are essentially economic enterprises which must make profits to survive, but as they have come to appreciate the effect social and environmental factors can have on financial performance, the pursuit of profit has ceased to be their only concern. In response to growing pressure – both internal and external – companies have begun to take on social and environmental responsibilities alongside their economic activities. They are increasingly realising that they are responsible not only to investors and lenders, but to society as a whole. As companies have shown greater interest in social responsibility – with some even allocating a portion of their profits to put this responsibility into action – social factors and the extent of companies' commitment to social responsibility have become key factors in decision making, particularly in investment decisions (European Commission, 2001). It has therefore become necessary for annual reports and accounts to include data on the social and environmental performance of companies.

According to Gray et al. (1996, p.45), Corporate Social Responsibility (CSR) ''as a stakeholder oriented concept extends beyond the organization's boundaries and is driven by an ethical understanding of the organization's responsibility for the impact of its business activities, thus, seeking in return society's acceptance of the legitimacy of the organization''. Mainstream opinions and trends in regard to CSR will be discussed and analysed in some detail later. According to the numerous studies on the subject (American Accounting Association (AAA), 1975; American Institute of Certified Public Accounting, 1977; Epstein et al., 1976; Gao et al., 2005; Mashat, 2005; Williams, 1999), the scope and activities of CSR may be broken down into:

1- Activities relating to natural resources and environmental contributions (environment protection);
2- Activities relating to human resources (staff);
3- Activities relating to public contributions (society);
4- Activities in the energy field (energy saving); and
5- Activities relating to products or services (consumer protection).

Environmental protection is one of the most important areas of social responsibility, since environmental pollution is one of the most critical problems facing developed and developing countries alike (American Accounting Association (AAA), 1973). Industrial progress is considered a major cause of environmental pollution (Wang et al., 2004), along with population growth and humanity's increasing reliance on fossil fuel-based transport. Together, these have had a major effect on the environment, with pesticide residues, chemical fertilisers, oil residues on land and sea and other forms of pollution damaging the air, water and soil.

Environmental activities may have a more far-reaching impact than other social activities, given that pollution does not recognise political or regional boundaries and can travel from north to south or from a highly polluted country into one which produces little or no pollution of its own. Wind, clouds and water currents all contribute to the transfer of pollutants from one country to another. What is more, if radioactive materials leak from a nuclear reactor or oil spills into one of the seas, the impact will be felt not just in other countries but by all living objects as the pollutant finds its way into the global ecosystem. On top of its other harmful effects, pollution is also having an impact on global warming and the depletion of the ozone layer (Lee et al., 2002). The impact of the other social activities is generally limited and local; the relative importance of the environmental effect has made this field the most deserving of attention, study and research.

1.2 Research Problem

The environment may be defined as the physical enclosure that holds the earth's natural resources. The relationship between humans and the environment should therefore be a mutual one, whereby people obtain from the environment their means of sustenance, while taking care to maintain it. As the industrialisation of production systems advances in countries around the world, this is having a number of adverse consequences, among them the pollution of the word's natural resources. As a result, the issue of air, sea and water pollution and its minimisation has gained considerable global attention in recent years (Hamouda, 2007).

Although many companies claim that they follow international regulations and standards to protect the environment and minimise pollution, some still continue to violate these standards and abuse the environment by emitting harmful waste products into the surrounding atmosphere. It is important that companies responsible for polluting the environment acknowledge responsibility, abide by agreed standards of environmental protection and bear the true cost of the environmental damage they cause.

Other industrial companies, prompted by the general increase in environmental awareness and a growing sense that they are responsible to parties other than company shareholders, have begun to revise their strategic goals. Profit maximisation is no longer the sole purpose of these companies' activities. Instead, their focus seems to be on making reasonable profits while paying due attention to their future continuity and survival (Abd Elgaani, 2000). They have begun to show some social and ethical responsibility – specifically, an awareness that they must protect and sustain the environment. Faced with this new reality, the accounting profession worldwide has realised the importance of producing and disclosing accurate information about companies' environmental activities and costs, which can impact upon a company's assets and liabilities (Labib, 2002).

Although numerous studies have been conducted on the subject of social disclosure in general and ED in particular see for example (Blomgren, 2011; Cho et al., 2008; Cormier et al., 2005; Dedman et al., 2008; Deegan and Gordon, 1996; Dominguez, 2012; Gray et al., 2001; Johnson et al., 2011; Melo and Garrido-Morgado, 2012; Ness and Mirza, 1991; O'Dwyer et al., 2005; Patelli and Prencipe, 2007; Spence, 2007), controversy still surrounds many of the issues related to social and environmental disclosure. There is still disagreement as to what motivates companies to disclose their environmental information, and no consensus on the influence (or lack thereof) of factors such as the size of the company, its nationality or privatisation on the level and quality of ED. To the best of the author's knowledge, no previous studies have investigated the relationship between company age and the level of ED. Instead, they have concentrated on financial disclosure or disclosure of CSR, without specific reference to ED.

Furthermore, despite the fact that social and environmental disclosure has been a major topic of academic research for more than three decades, the vast majority of these studies have focused on the developed industrial countries of Western Europe, America and Australia. Even international studies have focused on these countries and neglected the developing countries. Many studies suggest that further research is needed in this area, especially in developing countries (Babiak and Trendafilova, 2011; Belal and Owen, 2007; Belal and Cooper, 2011; Gao et al., 2005; Gugler and Shi, 2009; Jamali, 2007; Sobhani et al., 2009). Belal (2001, p.274) argues that:

> ''Most of the corporate social reporting studies conducted so far have been in the context of developed countries. Very few studies are available on the CSR practices in developing countries. Given the different socio-economic context of developing countries it is argued that it is important to learn about the CSR practices in those countries."

Raman (2006) also observes that most CSR studies are carried out in the economic and organisational contexts of Europe and the USA. Just a few studies have looked at this subject in developing countries. Arevalo and Aravind (2011, p.399) reveal that:

> ‘‘In general, studies that have looked at CSR, specifically the levels of integration within the business sector in developing countries, are limited. As globalization continues to alter the traditional balance of power between developed and emerging nations, businesses from emerging markets are vigorously challenging the hegemony of their international counterparts. Given this scenario, scholars and researchers have consistently called for more research in the area of corporate responsibility and the growing influence of emerging markets and their leading companies.’’

A number of authors argue that, since the cultural, social, economic and political context can have an impact on accounting in general, and on social responsibility in particular (Archambault and Archambault, 2003; Dumontier and Raffoumier, 1998; Goodrich, 1986), it would be dangerous and wrong to apply the findings from studies conducted in advanced industrial countries to developing countries (Anderson, 1977; Gao et al., 2005; Tsang, 1998; Wallace, 1990). Scholars have pointed to the gap that exists in the accounting literature in terms of research related to environmental information, especially in developing countries (Adhikari and Tondkar, 1992; Belkaoui, 1983; Elnaby et al., 2003; Perera and Mathews, 1990; Saleh, 2004; Tsang, 1998). A number of suggestions have been made for future research in this area. Mashat (2005), in his examination of social responsibility disclosure in Libya, recommended that the disclosure of social information be examined, especially the disclosure of environmental information. He cited the shortage of studies on ED in Libya, apart from those conducted by Saleh (2004) and Ishwerf (2012).

The main objective of Saleh’s study, which was carried out on 13 industrial companies in Libya, was to identify how administrative decisions regarding ED can be influenced (or not) by the social, political and economic situation in the country. The main aim of Ishwerf’s study, on the other hand, was to investigate the perceptions and requirements of stakeholders towards ED in Libya. He adopted the single case study approach to examine the Ahlia Cement Company. These studies, conducted on local industrial companies, excluded the oil sector and foreign companies; in fact, no study of this sort has previously been conducted on the oil and gas companies operating in Libya. The present study is unique in focusing on this sector, which is considered the most polluting industrial sector, and which accounts for 70% of Libya's industry-generated GDP and 98% of its exports (Central Bank of Libya, 2009a).

Thus, the research problem is essentially the gap which currently exists in the accounting literature: that is, the lack of ED-related research focusing on developing countries in general and Libya in particular. Apart from the lack of studies set in developing countries, there is disagreement about the reasons why companies disclose environmental information and about the influence company characteristics have on environmental disclosure. Hence, the research problem also encompasses these disagreements; the study investigates what motivates companies to disclose environmental information and how company characteristics such as size, nationality, privatisation and age influence the level and quality of ED (as far as the author is aware, no previous studies have investigated the relationship between company age and the level of ED). The present study is motivated by the lack of research in developing countries in general, and in Libya in particular; it aims to bridge the gap in the accounting literature by exploring the issues, outlined above, surrounding ED by oil and gas companies in the country.

1.3 Research Aims and Questions

The main incentive for conducting this study is to address gaps in the research and the inconclusiveness of previous studies in regard to the disclosure of social responsibility in general and ED in particular. It has several aims:

1. To evaluate the current state of and recent developments in the field of ED and its presence in the annual reports of oil companies operating in Libya, and to identify the differences between foreign and local oil companies' disclosure practices.
2. To investigate how far Libyan environmental law and regulations are being followed by oil companies operating in Libya. In addition, the study aims to suggest effective ways of obliging companies to disclose environmental information.
3. To identify what motivates companies to disclose environmental information.
4. To determine the factors that prevent companies from disclosing environmental information.
5. To test and analyse the relationship between company-specific attributes such as size, privatisation, age and nationality and ED. This study undertakes to shed light on certain key company characteristics that may affect ED practice.
6. To identify the extent to which Libyan oil and gas companies are aware of corporate social responsibility and ED.

To achieve the research aims, and to contribute to the enrichment of the accounting literature, the study seeks to answer the following questions:

1. **Do oil companies operating in Libya practise ED? If so:**
   - A. Is there a difference in ED practice between local and foreign companies?
   - B. What type of environmental information is being disclosed in the annual reports of oil and gas companies?

2 **Why does ED practice in local and foreign companies differ?**

To answer this question, the following sub-questions will be asked:

A. To what extent are Libyan environmental regulations being followed by oil and gas companies operating in Libya?
B. Is there control over ED in oil companies in Libya?

3. What motivates companies to disclose their environmental activities?

To answer this question, the following sub-questions will be asked:

A. Is there an association between company reputation and ED?
B. Is there an association between legal requirements and ED?
C. Is there an association between meeting societal expectations and ED?
D. Is there an association between societal pressure and ED?
E. Is there an association between economic factors and ED?

4. What factors prevent companies from disclosing their environmental information?

5. Is there an association between company characteristics such as size, privatisation, age and nationality and ED?

To answer this question, the following sub-questions will be asked:

A. Is there an association between company nationality and ED?
B. Is there an association between company privatisation status (private or public corporation) and ED?
C. Is there an association between company size and ED?
D. Is there an association between company age and ED?

6. Is there understanding of CSR in general and ED in particular in Libyan oil and gas companies?

To answer this question, the following sub-questions will be asked:

A. Do financial managers in oil and gas companies in Libya understand CSR and ED?

B. Do employees in accounting departments in oil and gas companies in Libya understand CSR and ED?

1.4 Significance of the Research

The importance of the study stems from the belief of many writers, including the author, that improving the quality of ED necessitates investigation not just of the quality of current practice, but also of the influence of company attributes on disclosure and the obstacles that inhibit it. Its importance is highlighted by the fact that academics and international and local environmental organisations are calling upon governments with increasing urgency to pay more attention to environmental issues and to force companies to refocus their activities and do the same. The study contributes by identifying the quality of disclosure and the actual extent of ED in Libyan oil companies and foreign companies operating in Libya. It also determines the extent to which managers and employees in this most polluting of industries are aware of CSR in general and ED in particular. The study seeks to draw the attention of accounting practitioners within the oil industry and professional accounting bodies to the most important forms of environmental pollution, to environmental standards in general and international accounting standards in particular. In focusing on ED in a developing country, specifically Libya, the research addresses a need that has been highlighted in a number of studies.

1.5 Research Methodology and Methods

This section provides a summary of the research methodology and methods which were used to investigate the research questions above. The study evaluates ED in 43 local and foreign companies operating in the oil and gas sector in Libya. Given the small size of the population of the study, the entire population was surveyed. The author used the mixed-method approach, employing a combination of quantitative and qualitative methods (Fielding and Fielding, 1986). According to Hitchcock and Hughes (1995), whatever the research, ''it is possible for either qualitative methods or quantitative methods, or both to serve our purposes''.

The quantitative strand involved the use of content analysis to provide a preliminary picture of the quantity and nature of ED practised in the Libyan oil and gas industry. According to Neuendorf (2002), content analysis is the fastest growing technique in quantitative research. It has been widely used in prior studies of social disclosure in general and ED in particular see for example (Adams et al., 1998; Adams and Kuasirikun, 2000; Andrew et al., 1989; Belal and Kabir, 2010; Cho and Patten, 2007; Deegan and Gordon, 1996; Dominguez, 2012; Freedman and Stagliano, 2008; Gao et al., 2005; Gray et al., 2001; Guthrie and Parker, 1990; Islam et al., 2005; Johnson et al., 2011; Liu and Anbumozhi, 2009; Sobhani et al., 2009; Villiers and Staden, 2011; Williams, 1999). In the present study, social and environmental information was collected from annual reports issued by 43 oil and gas companies operating in Libya between 2002 and 2009. The second quantitative method was the design and distribution of a questionnaire. Four questionnaires were distributed to financial managers and accountants within each of the 43 oil and gas companies in the study population, making a total of 145 questionnaires. The qualitative strand consisted of interviews with company officials and personnel in charge of financial and environmental accounting. The interviews discussed managers' perceptions of environmental costs and liabilities as well as the current procedures for ED.

1.6 Thesis Structure

The thesis consists of eight chapters: **Chapter One** provides an introductory outline including the research problems and questions underlying the research. It highlights the rationale and motivations for this research and provides a summary of the research methodology.

The primary focus of **Chapter Two** is to highlight mainstream opinions and trends relating to CSR. It discusses and analyses current perceptions of the components of CSR before introducing the concepts of social accounting and disclosure of social responsibility.

The aims of **Chapter Three** are to review how ED is defined and the various types of ED, and to discuss the importance of disclosing environmental performance and how companies benefit from disclosing environmental information. This chapter describes ED from an international perspective before going on to review previous studies in the field of social and environmental disclosure.

Chapter Four outlines the Libyan background of the study, including the country’s political, economic and accounting system. This chapter is divided into eight sections: it starts with the Introduction; Sections two and three contain general information about Libya’s geographic location, population, land area and historical background; Section four deals with Libya’s political system; Section five provides an overview of the Libyan economic system; and Section six is concerned with the accounting system in Libya.

Section seven discusses the treatment of ED in Libyan law. The chapter ends with a general summary.

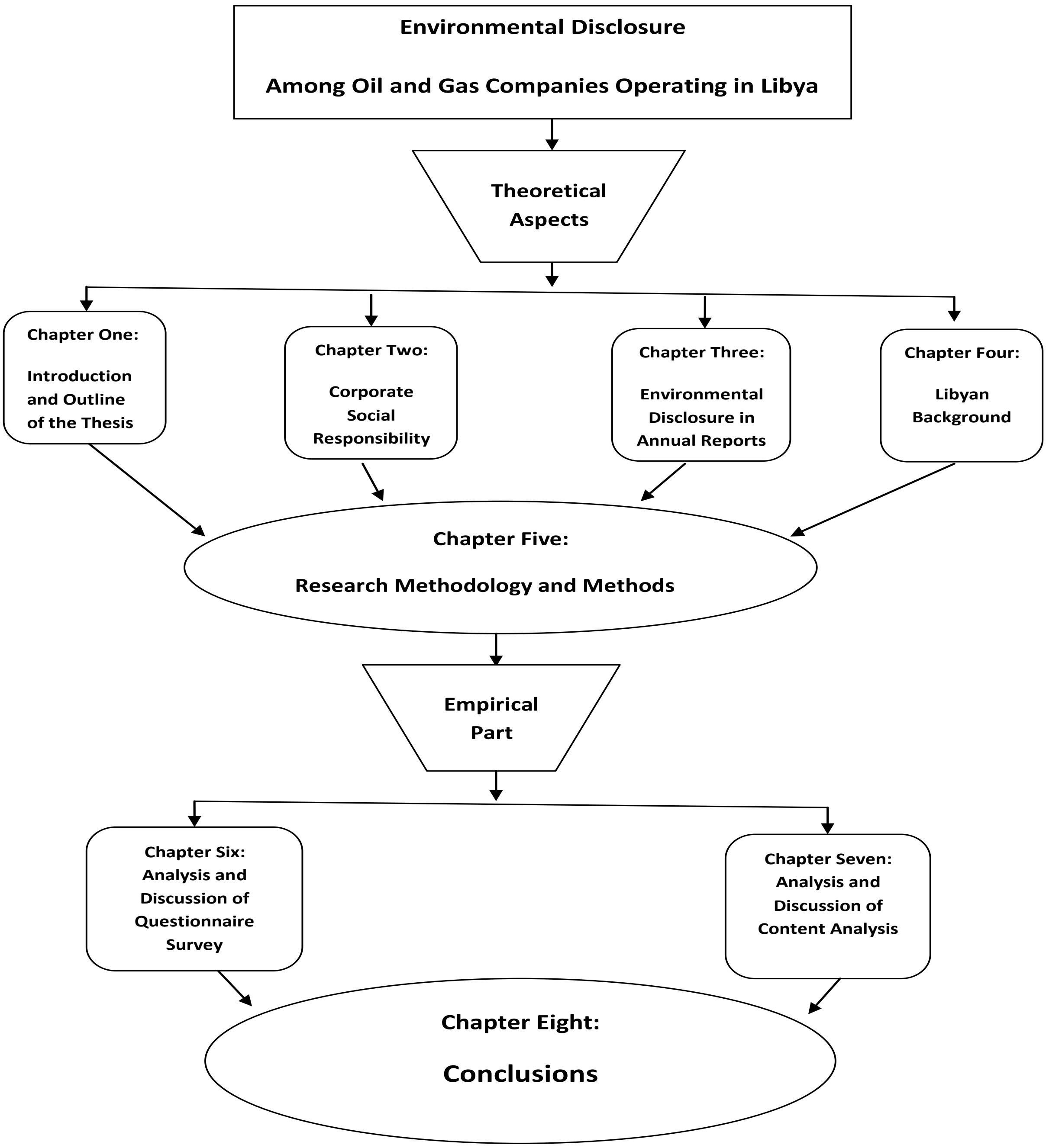
The overall objective of **Chapter Five** is to present an explanation of the research methodology, procedure and methods, demonstrating how these were designed to answer the research questions and hence achieve the research objectives. This chapter is structured as follows: the first section gives a brief presentation of the content of the chapter, the second section discusses the philosophical assumptions underlying the research, and the third section describes the choice of research paradigm and outlines the key characteristics of the quantitative and qualitative approaches. The fourth section looks at the methodology and methods of data collection and justifies the choice of the content analysis, questionnaire and interview methods. The fifth section explains the statistical methods used for data analysis, and the final section provides a summary to the chapter.

Chapter Six discusses the empirical results from the questionnaire, which was divided into two parts: part one gathered general information about the respondents, while part two illustrates ED practice by oil companies operating in Libya. Reference is also made in this chapter to the results from the interviews, where appropriate.

Chapter Seven focuses on the analysis and discussion of the data collated from the content analysis. The chapter is divided into two sections: the first describes the level and type of ED found in the sample population, while the second illustrates the association between company attributes such as nationality, size, privatisation and age, and ED.

Chapter Eight collates and discusses the key findings, in accordance with the research aims and questions, and summarises the results. It also offers advice and recommendations to anyone who may be interested in the results of this research.

Figure 1.1 Thesis Structure



Chapter Two: Corporate Social Responsibility (CSR)

2.1 Introduction

Over the years, companies have come to play a central role in the development process; indeed, many have been key drivers of economic growth in the developed countries. But since the mid-20th century, the role of business in society has been a matter of discussion (Babiak and Trendafilova, 2011); considerable concern has been expressed in countries around the world about the growing social costs of big business, the increasing pressure on the natural environment and worsening environmental pollution (Turker, 2009). This has given rise to new concepts such as CSR, with the result that these days, companies are not just assessed in terms of their profits, and their reputation is not built solely on their financial position (Glac, 2009; Okamoto, 2009; Vilanova et al., 2009). In the face of increasing societal pressure, many companies have disowned their previously isolationist attitude to embrace a wider range of values and activities, including activities aimed at improving social welfare (Maon et al., 2009). In return, they are more or less guaranteed the support and recognition of society and increased success.

It makes good sense for companies to dedicate part of their profits to social welfare activities, even though these may not provide any direct financial gains. But despite the interest that has been shown in the concept of CSR over the last three decades, there is no clear-cut agreement between the theorists on an appropriate and precise definition of the term. For this reason, the primary focus of this chapter is to explain CSR and its components. It will also briefly discuss social accounting and the disclosure of social responsibility.

2.2 Definition of Corporate Social Responsibility (CSR)

Since it first emerged in the 1950s, CSR has developed from a relatively uncoordinated, voluntary practice into an explicit, ongoing commitment (Klonoski, 1991). It has become central to the agenda of many organisations and a prominent concept in the literature (Amaeshi et al., 2008; Rajiv et al., 2004). It is important that annual reports and financial statements include social data, as both the internal social factors within a company and its commitment to social responsibility are of vital interest to decision makers, especially investors. A number of studies in this field have shown that many investors take into consideration social factors as much as economic factors when deciding on investment projects so as to avoid investing in areas which might damage the environment (Consultants and Australia, 1997; Deegan and Rankin, 1997; Ingram, 1978).

However, even after thirty years of research and debate among academics and practitioners, there is no consensus on how to define CSR; definitions vary according to the perspective of the individual and the form of responsibility being described (Carroll, 1991; Dahlsrud, 2008; Turker, 2009). Some authors have defined CSR as simply the commitment to abide by the social-related laws and regulations enacted by government (Davis, 1973; Friedman, 1970; Levitt, 1958). The proponents of this view suggest that companies pay their taxes so that the government can do its job of securing the social welfare of all members of society (Friedman, 1970), and that companies should not be burdened with the extra duty and expense of catering for the social needs of others. Contributing to the development process should not take precedence over the personal, profit-seeking interests of the owners. According to one Australian study, some managers believe that companies should only take on extra responsibilities, social or otherwise, to enhance their image and make more profit, not out of a sense of responsibility towards society (Deegan and Rankin, 1996). Managers, owners and staff can make personal financial contributions to social causes, but using company funds might lead to accusations that they are misappropriating the company's money (Wartick and Cochran, 1985).

A second group of commentators defines social responsibility as a commitment to improve social welfare. Spicer (1978), for example, defines it as a company's positive engagement to improve the social welfare of various social groups, while the World Business Council for Sustainable Development (2011) defines social responsibility as the obligation and commitment of corporate owners and shareholders to achieve sustainable economic and social development through the improvement of the living conditions of staff members, their families and the surrounding community.

Thus, there are two main trends in terms of definitions of CSR. One group sees CSR as subordinate to the company's commercial activity and its obligation to make profits for stockholders (Pava and Krausz, 1996), while the other emphasises the company's responsibility to contribute to social wellbeing. However, there is also a third group, which argues that definitions of CSR should also take into account the interests of stakeholders, and that there should be a healthy relationship between the company's goals, the interests of its proprietors and society's expectations and needs.

Gray et al. (1996, pp.45-46) recognise this relationship in their assertion that CSR "as a stakeholder oriented concept extends beyond the organization's boundaries and is driven by an ethical understanding of the organization's responsibility for the impact of its business activities, thus, seeking in return society's acceptance of the legitimacy of the organization".

McWilliams and Siegel (2001, p.117) define CSR as "actions that appear to further some social good, beyond the interests of the firm and that which is required by law", while according to the European Commission (2001, p.6), it is "the voluntary integration of social and environmental concerns into business operations and into their interaction with stakeholders". Turker (2009, p.413) agrees with Gray et al. (1996) and the European Commission (2001) that CSR is "corporate behaviours that aim to affect stakeholders positively and that go beyond its economic interest". These definitions all agree that social responsibility involves the company going beyond what is required of it by law or commercial self-interest, and that it implies a desire to limit the negative impacts of corporate activity and to find solutions to social problems, without affecting shareholders' or owners' interests in the process.

The above definitions all make it clear that social responsibility entails conforming to the laws and social regulations enacted by the government; in other words, companies have legal as well as economic responsibilities. According to the first group, the sole purpose of any company is to achieve the greatest possible profit under the existing laws and regulations; that is, its prime responsibility is economic (to serve the interests of shareholders). In this group's view, a company is being socially responsible simply by adhering to the government's minimum legal and regulatory requirements. The problem with this definition of social responsibility – that it is essentially no more than strict compliance with the law.

In contrast, the second group would prefer companies to be like charitable organisations, whose prime aim is to improve social welfare. However, in prioritising social responsibility ahead of economic responsibility, this group irrationally ignores the fact that companies are founded for the purpose of making profit, and cannot operate or survive without it.

The third group defines social responsibility in broader, more comprehensive and more realistic terms as a commitment to reduce the negative impacts of corporate activity and address social problems only in so far as it agrees with the interests of the owners. The definition takes into account the two main issues: the desire of owners to look after their interests and pursue profits (Holmes, 1976); and the increasing influence of social and environmental considerations, represented in the social goals to contribute to the social welfare of the community as a whole and minimise the negative impacts of corporate activity. A company should strike a balance between its numerous economic obligations and the interests of the society of which it is a part; this will not only strengthen its stability, competitiveness and sustainability, it will also promote the company as a values gatekeeper.

Evidently, CSR encompasses multiple sub-responsibilities, including economic, legal and ethical obligations. Improving social welfare also brings with it responsibilities, some of which are mandatory: at the very least, companies must not engage in activities which might be harmful to their society. All companies must comply with those laws and regulations which have been imposed by governments to ensure companies act in a socially responsible way, for example in areas such as environmental protection and energy saving.

Beyond this, companies can undertake voluntary activities to benefit society as a whole and improve the lives of its members. Social responsibility may thus be defined as a company's willing engagement in such activities, either in response to individuals, to social pressure, to pressure from its owners or as a contribution to raising social welfare. A number of studies argue that with the emergence of the ethical investor, profit has ceased to be the only standard or criterion by which a company's success is judged. For example, many investors have begun to look specifically for companies whose activities do not harm the environment (Belkaoui, 1980; European Commission, 2001; Stevens, 1991).

Thus, companies have acquired new responsibilities far exceeding legal and economic requirements and have started launching social programmes to contribute to the overall wellbeing of society. They might allocate funds to protect the environment from pollution, promote environmental issues and safeguard primary resources such as water, forests, air and rural areas. They might promote education and health by establishing educational institutions and charitable hospitals or by making regular donations to charity, or staff and their families might receive health insurance and free medical care.

But beyond this, companies should aim at tackling corruption, safeguarding human and workers' rights, regularly monitoring and controlling product quality to maintain standards, supporting development plans and social research, and developing the transport infrastructure to ensure that all members of the community benefit. It is worth mentioning here the role society can play in helping companies to carry out their social programmes; it can facilitate their work and provide moral support, allow them access to data, join in collaborative efforts and activities, encourage creative initiatives, and reward company owners with certificates of excellence and economic incentives.

To sum up, CSR entails a company undertaking those measures that are obligatory (for example in terms of energy saving and environmental protection) to minimise its potential negative effects, plus additional, voluntary measures of its own. It must attempt to tackle social issues without harming shareholders' interests and objectives, remembering that some social welfare activities may not yield direct economic benefits for the company.

2.3 Social Responsibility: Scope and Activities

Identifying social responsibility as a limited and specific, unchanged set of activities and areas runs counter to the very nature of such responsibility. These activities can change as soon as the economic, social and political scene does; they may differ from one year to another and from one country to another. The level of interest in social matters may vary across countries and environments see for example (Azzone et al., 1996; Gray et al., 2001), while the constantly changing nature of individual societies can make identifying social activities difficult.

This has been reflected in the many attempts to determine the scope of social activities and to place them into cohesive groupings. A number of writers have attempted to link the scopes of social responsibility with legal obligation on the grounds that social activities are undertaken by companies voluntarily and therefore exist outside their legal commitment. They argue that any activity imposed by law cannot still be social activity even if it has a social aspect or it is social in nature. Social activities are only social when there is no legal obligation; in other words, social responsibility begins where the law ends (Anderson, 1977; Davis, 1973; Gray and Lavers, 1995b).

While some focus on the legal obligation criterion in their definition of CSR, for others, it is the nature of the activity that determines whether or not it is social. Social activities encompass all those activities having social tendencies and aspects which are performed by the company in response to public pressure and which are in keeping with its social and environmental role. The company should not undertake these activities in the expectation of direct financial gain, regardless of whether they are legally binding or not. Similarly, the nature of the activities is the same whether they are undertaken voluntarily or forced on the company through laws and government regulation. According to this view, it is not the existence of legal obligation which determines whether the activity is social; rather, it is the nature of the activity itself (Gao et al., 2005; Gray et al., 1987; Mathews, 1993).

The nature of the activity criterion seems preferable to the legal obligation criterion for a number of reasons. Under the legal obligation criterion, a company's efforts to control pollution, for example, cannot be regarded as a social activity if they are undertaken to comply with the law. If the company goes beyond the legal requirements and takes additional, voluntary steps to curb its pollution, these extra efforts are considered social activities, according to the legal obligation criterion. Although the activity has acquired two aspects, legal and social, it is still the same activity. This paradox can be avoided by adopting the nature of the activity criterion.

Distinguishing between social activities and other activities on the basis of their nature rather than the involvement of the law makes it more likely that what is seen as a social activity in one country will be seen in the same way in other countries. In contrast, under the legal obligation standard, what constitutes a social activity will differ from one country to another, depending on local laws and regulations. Even in a single country, a change in the law may change an activity from social to non-social and vice versa.

2.4 Determining the Scope and Activities of Social Responsibility

As already mentioned, determining social responsibility in terms of activities and scope can be a daunting task. This can be seen in the many attempts that have been made so far. The National Association of Accountants (1974) produced a list of areas in which companies might undertake social activities, including general customer services, human resources, environment and material resources, and the provision of products or services. The American Accounting Association (1975) published a report identifying five areas of social activity: Environmental Controls, Minority Employment, Responsibility to Personnel, Community Activities and Product Improvement. Also noteworthy is the report by the American Institute of Certified Public Accounting (1977), which identifies six key areas: the environment, non-renewable resources, human resources, importers, clients and products, and society. From these reports and other relevant studies see (Epstein et al., 1976; Gao et al., 2005; Mashat, 2005; Williams, 1999), the generally agreed scope and activities of social responsibility may be summarised as follows:

Activities relating to natural resources and environmental contributions (environment protection)

This group of social activities aims at limiting the negative environmental impacts arising from the day-to-day running of the business and preserving the natural environment surrounding the company. They include: pollution control (air, water, land, noise, visual), preventing or repairing environmental damage, providing equipment to abate pollution and funding related operating costs, improving products to reduce their polluting effects, cultivating the immediate environment by growing trees and plants in order to promote healthy living and improve health standards, waste recycling, conserving natural resources, research and development, environmental auditing and developing environmental policy.

Activities relating to human resources (staff)

These are internal social responsibility activities, generally aimed at improving the working conditions and living standards of employees. This can be achieved by: employee training, employment of women, employment of minorities, employee assistance/benefits, providing transport for employees, employee remuneration, employee profiles, employee share purchase schemes and measures to improve employee morale and industrial relations.

Activities relating to public contributions (society)

This group of activities encompasses all contributions made to society as a whole with the aim of benefiting everyone. These may include: donations of cash, products or employee services to support established community activities, events, organisations, education and the arts; summer or part-time employment of students; sponsoring public health projects; aiding medical health projects; allowing university students to train at the site, building or setting up a nursery for local children; improving roads and transport services; sponsoring educational conferences, seminars or art exhibits; funding scholarship programmes or activities; other special, community-related activities such as opening the company's facilities to the public; supporting national pride/government-sponsored campaigns; and supporting the development of local industries or community programmes and activities.

Activities in the energy field (energy saving)

These activities include all those relating to the conservation and proper usage of energy. They include: conserving energy in the conduct of business operations, using energy more efficiently during the manufacturing process, utilising waste materials for energy production, disclosing energy savings resulting from products, discussing the company's efforts to reduce energy consumption, disclosing increased energy efficiency of products, research aimed at improving energy efficiency of products, disclosing the company's energy policies and voicing the company's concern about the energy shortage.

Activities relating to products or services (consumer protection)

This field relates to client relations and activities undertaken to increase customer satisfaction with products or services and customer loyalty. In terms of product development, this includes the publication of information on developments relating to the company’s products, including packaging, and information on any research projects established by the organisation to improve its products in any way. Product safety activities include disclosing that products meet applicable safety standards, giving customers details of schemes undertaken to make products safer, conducting research into the safety of the firm's products, disclosing information about improvements or more sanitary procedures in the processing and preparation of products, and publicising information on the safety of the firm's products. Consumer information activities include disclosing information about customer safety practices, handling customer complaints, cultivating consumer relationships (over and above the "duty to the consumer"), and making provision for disabled or elderly customers. Customer-related activities include making provision for difficult-to-reach customers.

2.5 Components of Corporate Social Responsibility (CSR)

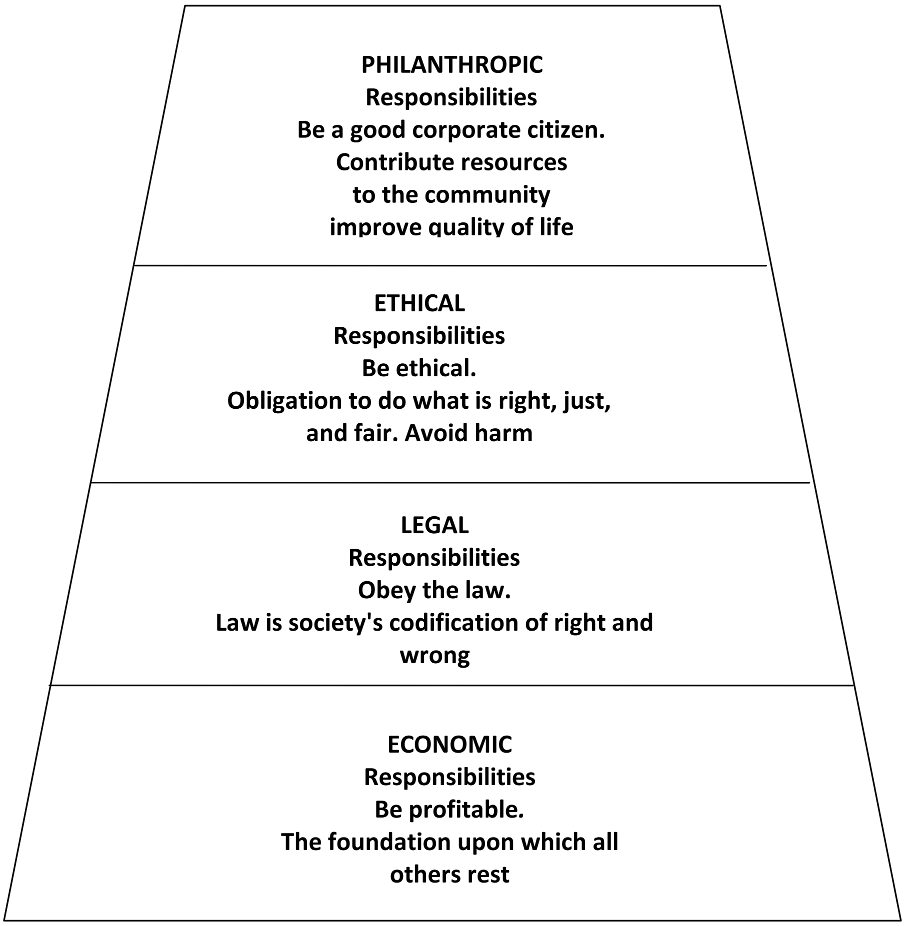
The lack of agreement on the definition of social responsibility has been reflected in the lack of agreement on the various components of this responsibility. A number of authors (group 1) have argued that to show CSR, a company need do nothing more than fulfil its legal and economic responsibilities (Holmes, 1976; Levitt, 1958). According to this group, companies aim to realise as much profit as they can while conforming to the laws of a government that also taxes them. They argue that it is the government's job to protect social well-being and that companies should be left to concentrate on making profits for their stakeholders (Friedman, 1970).

Supporters of this view argue that corporate entities in the free market are answerable to shareholders who demand the highest possible return on their investment, employees who need an adequate salary and clients and consumers who want high quality products (Crane and Matten, 2007). In a competitive free market, it is the company's responsibility to use its available resources and capacities to maximise its profits without resorting to fraudulent or deceptive tactics (Friedman, 1970).

But a second group of authors argues that companies have additional responsibilities on top of their economic and legal obligations: to work in an ethical way and to contribute to the welfare of society (Carroll, 1991). CSR not only entails fulfilling legal and economic duties, it also includes taking an interest in humanitarian, ethical, professional, environmental and health issues, training, rehabilitation, and contributing to the development and growth of the local community (Carroll, 1979; Wartick and Cochran, 1985). According to this group, companies themselves also benefit from taking an interest in social responsibility as it increases employee job satisfaction, dedication and productivity levels. It enhances the organisation's credibility with consumers and increases customer confidence, which will ultimately be reflected in profits (Clarkson et al., 2004; Hopwood, 2009).

This group divides social responsibility into four key components or dimensions: economic, legal, moral/ethical and philanthropic responsibility (Carroll, 1991; Crane and Matten, 2007; Schwartz and Carroll, 2003). It accepts that the main objective of any company is to make profit, as long as the company adheres to the ethical considerations and interacts with community aims. In its definition of CSR, this group is essentially calling for companies to strike a balance between caring for their community and serving the interests of owners and stakeholders by maximising profits. It is difficult to draw fine lines between these responsibilities as they overlap, but Figure 2.1 gives a broad indication of how they fit together.

Figure 2.1 The Pyramid of Corporate Social Responsibility (CSR)



Source: (Carroll, 1991, p.42)

2.5.1 Economic Responsibility

The financial aspect is central to any discussion of social responsibility. Its importance cannot be underestimated: commercial, economic and financial institutions are not charitable by nature; they all have the primary target of maximising returns and profits. As such, policies have to reflect the interests of the owners if they are to achieve their full potential and guarantee sustainability and growth, and enable the company to start playing a part in society (Friedman, 1970). Economic responsibility is regarded as one of the major corporate responsibilities; not only is the company responsible for maximising stakeholders' profits and providing adequate salaries for the staff, it must also ensure it produces the high quality goods demanded by consumers (Crane and Matten, 2007). In these circumstances, the company must dedicate its resources to making as much profit as possible, as this is the only way for it to grow and stay healthy in a highly competitive market (Crane and Matten, 2007). Most of the activities undertaken by companies are economic in nature; any that do not generate income, reduce losses or enhance share value, or that distract attention from these tasks, will eventually be seen as uneconomic (Schwartz and Carroll, 2003). Table 2-1 summarises the key features of economic responsibility.

Table 2-1 Economic Components of Corporate Social Responsibility (CSR)

No	Economic Components (Responsibilities)
1	It is important to perform in a manner consistent with maximizing earnings per share.
2	It is important to be committed to being as profitable as possible.
3	It is important to maintain a strong competitive position.
4	It is important to maintain a high level of operating efficiency.
5	It is important that a successful firm be defined as one that is consistently profitable.

Source: (Carroll, 1991, p.41)

2.5.2 Legal Responsibility

Companies are bound by the legislative framework of the society of which they are a part; in other words, they must conduct their activities within society's pre-agreed limits. Thus, legal responsibility represents corporate commitment and adherence to the laws and regulations enacted by society (Crane and Matten, 2007). These laws and regulations set out the standards to which companies must conform, and can be used to identify and limit any negative impacts on the local community.

A number of studies have shown that some companies view both voluntary and mandatory social activities as a waste of resources which could be used elsewhere and that in the absence of legal deterrents, companies have no incentive to engage in socially desirable behaviour (Mahapatra, 1984). In fact, there is a positive relationship between the legal prosecution of companies and their assumption of social responsibilities; companies tend to perform better in this regard when legal proceedings are issued against them (Deegan and Rankin, 1996). One study, conducted on some of the largest listed Australian firms, concluded that rules and legislation are one of the major factors behind companies meeting their social obligations (Trevor and Geoffrey, 2000). Thus, state laws and regulations are crucial in binding companies to their social responsibilities. Table 2-2 shows the key components of legal responsibility.

Table 2-2 Legal Components of Corporate Social Responsibility (CSR)

No	Legal Components (Responsibilities)
1	It is important to perform in a manner consistent with expectations of government and law.
2	It is important to comply with various federal, state, and local regulations.
3	It is important to be a law-abiding corporate citizen.
4	It is important that a successful firm be defined as one that fulfils its legal obligations.
5	It is important to provide goods and services that at least meet minimal legal requirements.

Source: (Carroll, 1991, p.41)

2.5.3 Ethical Responsibility

Ethical or moral responsibility entails adhering to a number of principles, values and general rules with the aim of guiding people's behaviour towards what is regarded as good and virtuous and avoiding what is regarded as bad or evil (Crane and Matten, 2007). The goal of ethics is to eventually improve human interactions and to ascribe a sense of social solidarity to human life. Unlike legal responsibility, which can be met simply by adhering to the set of regulations that underpin the legal framework, ethical responsibility is broader and more comprehensive (Schwartz and Carroll, 2003). In this case, the individual is accountable to his own conscience, rather than an external authority (Korner et al., 2006). Ethical responsibility might involve an ongoing commitment to fair competition, customer protection and transparency at work, and the avoidance of monopolies and administrative, financial and moral corruption. In contrast, legal responsibility changes constantly with the laws and regulations of the land. It is not an alternative to ethical responsibility: rather, the two should be complementary.

Even strict rules and regulations cannot always protect rights or societies, nor do they on their own provide security, trust and social welfare. If, on the other hand, they are operating within a social and moral environment, these rules and regulations can be effective at bringing about development and reform. Table 2-3 describes the key components of ethical responsibility.

Table 2-3 Ethical Components of Corporate Social Responsibility (CSR)

No	Ethical Components (Responsibilities)
1	It is important to perform in a manner consistent with expectations of societal mores and ethical norms.
2	It is important to recognize and respect new or evolving ethical/moral norms adopted by society.
3	It is important to prevent ethical norms from being compromised in order to achieve corporate goals.
4	It is important that good corporate citizenship be defined as doing what is expected morally or ethically.
5	It is important to recognize that corporate integrity and ethical behaviour go beyond mere compliance with laws and regulations.

Source: (Carroll, 1991, p.41)

2.5.4 Optional Responsibility (Philanthropic Responsibility)

Optional or philanthropic responsibility arises out of society's expectation that companies will do more (in terms of fulfilling their social responsibility) than is required by law. A company's choice to take on philanthropic responsibility may be influenced by the nature of the industry or society in which it operates (Carroll, 1979). In either case, companies that take on optional or philanthropic responsibility do not do so in the expectation of short-term profit (Crane and Matten, 2007).

Studies have shown that many senior administrators within these companies believe that they should voluntarily provide social services to the community, even if this leads to a slight reduction in profits (Deegan, 2002; Ostlund, 1977). Ultimately, firms can reap rewards for shouldering this type of responsibility, including greater long-term profits and an enhanced image among the general public, which will eventually be reflected in the value of their shares (Adams, 2008; Deegan and Rankin, 1996). Table 2-4 presents the major components of philanthropic responsibility.

Table 2-4 Philanthropic Components of Corporate Social Responsibility (CSR)

No	Philanthropic Components (Responsibilities)
1	It is important to perform in a manner consistent with the philanthropic and charitable expectations of society.
2	It is important to assist the fine and performing arts.
3	It is important that managers and employees participate in voluntary and charitable activities within their local communities.
4	It is important to provide assistance to private and public educational institutions.
5	It is important to assist voluntarily those projects that enhance a community's "quality of life."

Source: (Carroll, 1991, p.41)

2.6 Disclosure of Social Responsibility in Annual Reports

In accounting terms, this evolution of economic thought has been reflected in the growing interest in CSR disclosure. Since the 1950s, a number of researches have been conducted in this area (Gao et al., 2005; Gray et al., 2001; Hackston and Milne, 1996). For example, the American Accounting Group published a study in 1973 stressing the need to provide information relating specifically to the social effects of any project (American Accounting Association (AAA), 1973), while a study by the American Legal Accountants Group stipulated that one of the main goals of a financial statement should be to disclose the impact of corporate activities on society (American Institute of Certified Public Accounting, 1977). Various other studies have also attested to the importance of disclosure in exposing the extent to which CSR is fulfilled, arguing that it should have the same degree of importance as the disclosure of economic responsibility (Akhtaruddin, 2005; Beierle, 2003; Cormier et al., 2005; Liu and Anbumozhi, 2009; Patelli and Prencipe, 2007). Researchers have argued that accounting disclosure must be improved and expanded to focus not just on financial information but also on new areas such as the disclosure of corporate social contributions and the extent to which companies have met their social responsibility.

As a result of this increased interest in the disclosure of social responsibility, social factors have assumed great importance for decision makers, especially investors. Interestingly, a number of studies have shown that a large proportion of investors take into account social factors alongside economic factors when making their investment decisions (Deegan and Rankin, 1996; European Commission, 2001; Stevens, 1991). It is important then that all interested parties have whatever information they need, financial and non-financial, to guide them in making their decisions.

However, traditional accounting rarely provides sufficient information on social and environmental costs. An alternative is environmental accounting, which can assist in meeting the community's needs in terms of social and environmental data, enabling it to make more informed investment decisions. Environmental accounting is a valuable tool both for the disclosure of social and environmental information and for the preparation of reports for external parties. According to Spomar (2003), such a system of accountability within the corporate environment can bring a number of important benefits, especially improvement in environmental performance and the encouragement of investment. Given the strong correlation between social and environmental accounting and ED, the rest of this chapter gives a brief overview of social and environmental accounting.

2.7 Social and Environmental Accounting

Social and environmental accounting is a relatively recent phenomenon, which has become more clearly defined as modern economies have started to focus more on social welfare. Since accounting plays a crucial role in economic organisations, social and environmental accounting has become an essential factor in efforts to improve social wellbeing across communities.

Social and environmental accounting has developed alongside the concept of social and environmental responsibility. It is variously known as social accounting, environmental accounting and economic and social accounting. The first researcher to attempt to define social and environmental accounting was Linowes (1968, p.37). Using the term economic and social accounting, he defined it as "the implementation of accounting in social sciences through the development of traditional accounting methods to include sociology and eco-political sciences". This definition aimed at widening the scope of financial accounting, hitherto confined to financial operations, to encompass the social, economic and financial dimensions. The assumption was that if the financial accounting rules were properly developed, financial accounting could provide information on all economic and social activities. A few years later, Mobley (1970, p.762) produced a definition that was broader and more comprehensive in scope. He defined it as the identification, measurement and analysis of the social and economic implications of the activities of both public and private sectors.

These definitions generally focus on the social aspect since environmental matters were not distinguished from other social matters at the time. The accounting literature was undeveloped in terms of the environmental and social dimensions (Mathews, 1997); indeed, the environment has only attracted significant international interest in the last three decades (Everett and Neu, 2000; Parker, 2005), since the emergence of phenomena like ozone holes and global warming, and devastating environmental accidents such as Chernobyl and the Exxon Valdez oil spillage off Alaska (Lee et al., 2002). The shift in emphasis is evident in the definition of social and environmental accounting offered by Gray et al. in 1987 (p.ix) as:

> "The process of communicating the social and environmental effects of organizations' economic actions to particular interest groups and to society at large. As such it involves extending the accountability of organizations (particularly companies), beyond the traditional role of providing a financial account to the owners of capital, in particular, shareholders. Such an

> extension is predicated upon the assumption that companies do have wider responsibilities than simply to make money for their shareholders."

O'Dwyer (2006,p.233)described social and environmental accounting as "a mechanism aimed at enhancing corporate accountability and transparency to a wide range of external stakeholders, addressing the social, environmental and ethical concerns and values of individuals upon whom a business has a non-economic impact". Finally, Stanko et al. (2006, p.21) defined environmental accounting as "the identification, measurement, and allocation of environmental costs, the integration of these environmental costs into business decisions, and the subsequent communication of the information to a company's stakeholders". From these definitions, one can summarise the features of social and environmental accounting as follows:

1. Its most important functions are the measurement and disclosure of the social and environmental costs associated with corporate activity.
2. Social and environmental accounting is widely used as a tool to enhance corporate accountability and transparency to a wide range of external stakeholders; a business can use it to address the social, environmental and ethical concerns of individuals upon whom it has both economic and non-economic impact (Gray et al., 1987; Medawar, 1976; O'Dwyer, 2006).
3. Corporate environmental performance is an extension of social performance. Supplying information about both can help investors in their decision making. Corporate environmental and social performance can also be judged by how much a company invests in reducing pollution and contributing to public welfare; a low level of investment may indicate that the company does not pay due attention to

environmental and social matters or meet its commitments in this area (Clarkson et al., 2004).

4. The accounting function should evolve to suit developments in the surrounding environment and the changing needs of those using the accounting information. This can be achieved by modifying traditional methods of reporting to identify and measure the relationship between companies and society as well as the surrounding environment. A number of studies indicate that traditional accounting methods do not provide information on environmental costs, which can result in inaccurate measures and results (Epstein, 1996; Ouellette, 1996).
5. The capturing of social and environmental performance has become part of the responsibilities of the accountant; he has an obligation towards those parties interested in that performance. In practice, the analysis of environmental costs involves examining pricing decisions, cost control, performance, and investment decisions. This analysis can help enhance product quality and corporate efficiency (Baily and Soyka, 1996; Spomar, 2003).
6. Social and environmental accounting is a set of activities related to the measurement and analysis of a company's environmental and social performance, and the delivery of this accounting information to the interested parties. These can be internal parties wanting the information for administrative or decision-making purposes, or external parties such as investors, lenders and other interested groups.

2.8 Summary

There is disagreement regarding the definition of social responsibility, and this is clearly reflected in the lack of agreement as to the components of this responsibility. From the above discussion we can conclude that companies have a range of social responsibilities: economic, legal, ethical and philanthropic. In recent years, as the users of financial reports have demanded more information relating to corporate social and environmental responsibility, more companies have taken to disclosing their social activities. Where traditional disclosure has largely failed to meet the needs of those wanting this kind of information, social and environmental accounting is able to provide the data that enables communities to make better informed investment decisions. The scope of social responsibility disclosure encompasses: activities relating to natural resources and environmental contributions (environment protection), activities relating to human resources (staff), activities relating to public contributions (society), activities in the energy field (energy saving) and activities relating to products or services (consumer protection).

The environment is one of the most important areas of social responsibility, given that environmental pollution is a major problem facing both developed and developing countries (American Accounting Association (AAA), 1973). Rapid industrial progress, the development and increasing availability of transport, population growth, the emergence of highly condensed urban populations, and intensive agriculture with its pesticide residues and chemical fertilisers have all contributed to a deteriorating environment and caused air, water, soil and noise pollution. China's Environmental Protection Administration estimates that "in 2000, industry accounted for about 40% of the nation's water pollution and about 80% of its air pollution" (Wang et al., 2004, p.124). We might conclude then that environmental effects are far more important than other social effects (American Accounting Association (AAA), 1973). Accordingly, the next chapter will discuss the inclusion of ED in annual reports and why it is important.

Chapter Three: Environmental Disclosure (ED) in Annual Reports

3.1 Introduction

Since the second half of the twentieth century, and particularly over the last three decades, significant global attention has been paid to the issue of environmental protection and how to preserve the environment from the consequences of industrial activity (Anderson, 2006; Deegan, 2002; Watsonn and Mackay, 2003). At both local and international levels, committees have been set up to find ways of protecting the economic resources of society on the one hand and preserving the health and safety of generations to come on the other. The international community has held conferences and seminars and set up international conventions and legislation to protect the environment from the damage being caused by pollution, and to highlight the increasing demand for companies to do their part to control the pollution they create (Hochman, 1998). Individual companies have also started to adopt a more a positive attitude towards environmental sustainability and reducing environmental pollution (Ostlund, 1977), on the basis that making a positive contribution will not only benefit society, but also bring reward to the company in the long run.

However, despite the growing interest being shown in ED in developed countries such as the USA and the UK (Gamble et al., 1996), it is much rarer elsewhere; a number of studies have shown that many developing countries do not show any interest in ED (Arevalo and Aravind, 2011; Babiak and Trendafilova, 2011; Belal and Owen, 2007; Belal and Cooper, 2011; Gao et al., 2005; Gugler and Shi, 2009; Jamali, 2007; Sobhani et al., 2009). This begs the question of whether these countries yet understand the impact ED can have on decision making, or the benefits it can bring to companies. As a first step to clarifying these issues, this chapter discusses the definition of ED and the various types of ED, why it is important to disclose environmental information, and the benefits it can bring to companies. The chapter goes on to describe ED from an international perspective before considering previous studies in the field of social and environmental disclosure.

3.2 Definition of Environmental Disclosure (ED)

It is appropriate at this point to define the concept of accounting disclosure and outline its importance. The accounting literature has offered several definitions of accounting disclosure, but the popular consensus is that accounting disclosure means displaying information for investors, creditors and other interested parties in such a way that they can predict a company's future profitability and see that it is able to meet its obligations. The final outcome of this disclosure is the annual report or financial statement (Gibbins et al., 1990). It is vital that these annual reports or financial statements contain all the information necessary to give users a clear and accurate picture of the firm, and that they are freely available. Facts must be fully and clearly demonstrated; anything less may make the report misleading and might affect the decisions taken by its users and even impact share prices (Akhtaruddin, 2005). Full disclosure is essential for users of information to assist them in the rationalisation of their economic decisions (Marston and Shrives, 1991); within this, social disclosure enables them to evaluate the extent to which the company has upheld its social responsibilities.

Social disclosure attracted much interest particularly between 1970 and 1980, but since 1990, the focus has increasingly been on ED (Anderson, 2006; Deegan, 2002; Islam et al., 2005; Rezaee et al., 1995). Akhtaruddin (2005) argues that ED is one of the major components of social disclosure and plays a major role in meeting the needs of the users of reports and financial statements. It supplies users with information that helps them assess how efficiently organisations are using their economic resources and the extent to which they are fulfilling their environmental responsibilities.

ED has been defined as the disclosure of "the impact company activities have on the physical or natural environment in which it operates" (Berthelt et al., 2003, p.2). It has also been defined as the incorporation into annual reports of a set of clauses and information items describing a company's past, current and future environmental management activities and performance. Additional explanations attached to the report further facilitate the assessment of environmental performance and economic decision making (Berthelt et al., 2003; Gray et al., 1987).

3.3 Types of Environmental Disclosure (ED)

ED can be mandatory or voluntary. Mandatory disclosure is undertaken according to the requirements of accounting standards issued by the relevant organisations and the legislation and laws of the state. It commits companies to disclose the stipulated information to the users of financial statements and other annual reports (Akhtaruddin, 2005; Berthelt et al., 2003; Islam et al., 2005). The Securities and Exchange Commission, for example, obliges companies dealing on the stock market to provide a set minimum of information for investors (Beets and Souther, 1999; Stanko et al., 2006). Although there is a raft of legislation to commit companies to disclose environmental disclosure, in practice there is no total obligation for companies to disclose their environmental information (Cho et al., 2008; International Federation Accountants, 2004; Islam et al., 2005).

Voluntary or optional disclosure is undertaken without pressure from external parties, with the purpose of providing investors and other groups with additional information on environmental performance (Islam et al., 2005). At present, ED is more of a voluntary than mandatory activity (Villiers and Staden, 2011). This raises the question of why companies choose to publically disclose their environmental performance, exposing themselves to a number of risks and bearing unnecessary costs, when they know that they are not obliged to do so. To answer this question we should examine why ED is important and the benefits it can bring to companies.

3.4 The Importance of Environmental Disclosure (ED)

The importance of ED stems from the fact that the majority of information on environmental performance is financial and quantitative in nature, and it can have a direct impact on the financial performance of the company (Marston and Shrives, 1991). If they are to accurately portray the financial situation of a company, annual reports or financial statements should reflect the actual and potential costs (including environmental costs) of any lapse in adherence to environmental protection laws (Cornell and Apostolou, 1991). Environmental costs and obligations now account for a sizeable proportion of total corporate costs (Cormier and Magnan, 2003); according to estimates by the USA Environmental Protection Agency, almost 750 billion dollars were spent in 1991 cleaning up industrial waste disposal sites at an average cost of 25 million dollars per site. In the UK, environmental costs in that year were estimated at 14 billion pounds (Rezaee et al., 1995).

When the Exxon Valdez oil tanker ran aground on the Alaskan coast, spilling large quantities of crude oil into the sea, the company spent more than 2 billion dollars cleaning up the spill and restoring the coastal environment (Deegan et al., 2000; Patten, 1992). US oil company Amoco has estimated that environmental costs at its Yorktown refinery have risen to 22% of operating costs (Ranganathan and Ditz, 1996), while in Canada, the costs of cleaning up excavation sites for companies in the natural resource sector have been estimated at between 3 and 6 billion dollars (Li and McConomy, 1999). In the USA, spending on policies to protect the environment rose from 0.88% of GDP in 1972, to 1.59% of GDP in 1980, to 2.13% of GDP in 1995. It is expected to reach 5.2% of GDP in 2020 (Pickman, 1998; Rezaee et al., 1995).

Considering the importance and magnitude of environmental costs and the fact that they are increasing year on year, a pressing need has emerged to disclose these costs to the users of financial statements and reports, especially in light of the fierce competition between companies, particularly those trading shares on the stock market. Investors themselves have started to press for the disclosure of environmental information in published annual reports or in the notes accompanying these reports (Deegan and Rankin, 1997). The disclosure of environmental performance indicates two things: it shows whether companies are aware of their impact on the environment, and it represents a criterion by which stakeholders may judge the extent and magnitude of this impact, its financial implications and the efforts companies are making to minimise it (Akhtaruddin, 2005; Cormier and Magnan, 2003).

Companies meeting their environmental responsibilities and publicising this via ED may find themselves more trusted by the community; this trust may in turn encourage them to upgrade their activities and invest further (Beierle, 2003; Wang et al., 2004). In contrast, ED can increase the pressure on companies not meeting their obligations to limit their activities and address the damage they cause (Deegan and Gordon, 1996). Such is the importance of environmental matters for a growing number of companies that they occupy a major place within their financial details; for these companies, ED is physical proof of their commitment to environmental protection legislation (Ince, 1998). In contrast, not disclosing environmental information can lead to weakened trust in the data and information contained in annual reports, and eventually to reduced dependence on these reports as an indicator of corporate performance.

3.4.1 Corporate Benefits of Disclosing Environmental Performance

At first glance, adopting a policy of environmental disclosure may appear likely to have only negative impacts on a company's economic performance, as the additional burden may lead to increased production costs and reduced profits. However, a careful and comprehensive review of the literature on corporate environmental performance and disclosure suggests the opposite is true. A number of studies (see below) have indicated that corporate spending on ED does not necessarily have adverse effects on economic performance in the long run; on the contrary, it can bring numerous short- and long-term benefits for companies. These benefits may include increased volume of activity, expansion of investment, enhanced image within the community and greater competitiveness. They are described in more detail below.

1- The corporate entity is able to improve its image within the community within which it operates (Patelli and Prencipe, 2007; Solomon and Lewis, 2002; Villiers and Staden, 2011). This may be particularly important to companies whose reputation has been damaged as a result of an accident or an environmental disaster, such as the Exxon oil company (Patten, 1992), Union Carbide (following the chemical leak at its Indian plant in 1984) (The New York Times, 2012) or BP (the Gulf of Mexico oil spill in 2010) (BBC News, 2012). These companies may disclose some of their environmental information in an attempt to improve their image and counteract the negative effects of adverse publicity (Deegan et al., 2000; Patten, 1992).

2- Disclosing their environmental performance may open the door for companies to receive additional financial support, low-cost funding or special tax treatment (either exemption from or reduction in state imposed taxes), thereby lowering their production costs (Gibby and Patella, 1993). The USA and UK are leading examples of countries interested in encouraging companies to protect the environment. This is shown in the special treatment the USA and the UK's firms receive in terms of tax relief as well as other financial and moral support (Gamble et al., 1996; Gibby and Patella, 1993).

3- Society shows greater trust in and support for those companies that disclose environmental information (Deegan and Gordon, 1996). They enjoy better relationships with government, shareholders, employees, customers, suppliers, financiers and pressure groups. This ensures increased demand for their products and greater investment, which ultimately has an impact on the outcome of their activities and financial standing (Ince, 1998; Tilt, 1994).

4- Failure to disclose environmental information and programmes for improvement in this field can negatively impact upon a company's reputation and competitive position in the capital market. Thus, companies use disclosure as a means of achieving and maintaining a competitive advantage in their area of activity (Ince, 1998; Solomon and Lewis, 2002). The market value of their shares climbs because many investors prefer to invest in companies that disclose and show an interest in environmental performance (Arevalo and Aravind, 2011; Barth and McNichols, 1994; Ingram, 1978).

5- ED can be used as a tool for planning, monitoring and evaluating performance (Saida, 2009).

6- Spending on programmes to reduce pollution and disclosing these programmes in reports and financial statements has no negative impact on corporate economic performance (Freedman and Jaggi, 1994). On the contrary, it can help increase revenues (Sense, 1996). Studies have suggested that earnings are higher in financial periods when companies disclose environmental information than when they make no formal disclosure of these activities (Baily and Soyka, 1996; Islam et al., 2005). Moreover, the value of their shares in the capital market tends to be higher during these periods (Ingram, 1978).

3.4.2 Obstacles to the Disclosure of Environmental Performance

With so many advantages to be gained from ED, we might ask why some companies fail to disclose environmental information. The accounting literature provides several answers to this question. First, it is difficult to measure and assess the costs of environmental activities. The lack of legal regulation and accounting standards in this area, lack of staff and administrative difficulties can all make it difficult to accurately measure environmental costs (American Accounting Association (AAA), 1973; Arevalo and Aravind, 2011; Bae and Sami, 2005; Huizing and Dekker, 1992; Ishwerf, 2012; Rezaee et al., 1995; Stanko et al., 2006). It is difficult to establish the actual cost of removing the effects of pollution from a particular site, since the process may take twenty years in some sites (Barth and McNichols, 1994). Moreover, the cost of decontamination is influenced by a range of factors such as location type, the seriousness of the pollution and the number of years the site has been polluted (Barth and McNichols, 1994). Matters are further complicated by the fact that a large proportion of environmental costs may already be included in routine industrial expenses (Joshi et al., 2001).

The second problem is the lack of legislation, standards and accounting rules requiring companies to disclose their activities. As a result, accountants tend to ignore such activities, and they are omitted from corporate annual reports (Belal and Cooper, 2011; Islam et al., 2005; Rezaee et al., 1995; Roberts, 2006). Thirdly, there is no framework for distributing environmental costs among departments according to the level of damage they cause (Ahmada et al., 2003; American Accounting Association (AAA), 1973). Fourthly, companies pay greater attention to their economic activities than their environmental activities (American Accounting Association (AAA), 1973; Zubek, 2008), and finally, some stakeholder groups (such as shareholders and investors) may not really believe the social and environmental information that is disclosed (Ince, 1998).

3.5 Environmental Disclosure (ED) from an International Perspective

Attempts to set accounting standards at the international level started at the beginning of the last century. The first international accounting conference was held in the USA in 1904 under the auspices of the Federation of Associations of Chartered Accountants of America. The major talking point in that particular conference was the possibility of unifying accounting laws in countries around the world. A succession of such conferences followed. In 1992, the 14th International Accounting Conference was held in the USA. Attended by 2600 delegates representing 106 accounting bodies from 78 countries, the theme of the conference was to shed light on the role of accountants in a comprehensive economy (International Federation of Accountants, 2007).

These conferences, which took place as a result of mounting pressure from the various users of financial statements (including shareholders, investors, creditors, unions, trade associations, government agencies and international institutions and associations), led to the formation of several organisations whose aims were to set international standards and to create a suitable environment for the application of these standards. Some of the most important of these organisations are: the International Federation of Accountants, the International Accounting Standards Committee, which later became the International Accounting Standards Board (IASB), and the International Auditing Practices Committee (IAPC). The following sections focus on the publication by the IASB of the international accounting standards, particularly those directly related to accounting disclosure, in an attempt to ascertain the extent to which environmental and social disclosure feature therein.

3.5.1 International Accounting Standards Board (IASB)

The IASC was established in 1973 following an agreement between associations and professional pilot institutes in Australia, Canada, France, Germany, Japan, Mexico, the Netherlands, the UK, Ireland and the USA (International Federation of Accountants, 2011). The objective of the committee was to prepare and publish accounting standards and to encourage compliance within the accounting profession. By 2000, 41 international accounting standards had been published. In 2000, the committee was restructured along with its statute and renamed the International Accounting Standards Board (International Federation of Accountants, 2011). Since 2001, it has had sole responsibility for issuing international accounting standards.

The benefits of adopting international accounting standards, particularly for developing countries

Companies around the world prepare and present financial statements for users, but these statements differ from one country to another for social, cultural, economic, political and legal reasons (Belkaoui, 1983; Nahapiet, 1980). This has resulted in various criteria being employed and in different bases being used for measurement and disclosure (Adhikari and Tondkar, 1992; Elnaby et al., 2003). The building of norms to govern accounting policy is thus regarded as a strategic issue.

The IASB endeavours to narrow the differences by harmonising and coordinating local legislations and accounting standards and the procedures for preparing and presenting financial statements. However, accounting systems in many countries, especially developing ones, are underdeveloped and unresponsive to changing environmental conditions. The absence of norms governing accounting policies in many countries means that matters have been left to individual accounting speculation; operations and related financial events are treated in different ways, making it difficult to compare results and the financial position of different companies in a given period, or those of a single company over successive periods. Consequently, there is a discrepancy between the supply of information and growing global demand. This highlights the importance of organising and standardising accounting policies in developing countries, and developing their accounting systems. Standards and regulations on accounting disclosure are especially important because of the role they play in reducing guesswork and contradictions in practice, upgrading the financial reports of businesses, inspiring greater confidence in these reports, reducing variations in annual reports, and providing useful and timely information to users.

Obstacles to the consolidation of accounting standards

Building and consolidating criteria and harmonising accounting policy between nations is of paramount importance because of the direct and positive impact it has on planning, investment decisions, funding and the control of resources. However, the path to consolidation is blocked by a number of obstacles; notably the fact that accounting standards can be affected by environmental factors such as “differences in language, law, governments’ priorities and in societal concepts” (Turner, 1983). Many studies have concluded that economic, social, political and cultural factors and local accounting development activities may have a strong influence on the accounting system, particularly in developing countries, where these variables may differ significantly from those in the countries issuing the standards (Adhikari and Tondkar, 1992; Archambault and Archambault, 2003; Belkaoui, 1983; Elnaby et al., 2003). Zaman and Rahaman (2005) go so far as to suggest that the accounting standards of a developed country, or those issued by the International Accounting Standards Committee (IASC), may not be appropriate for developing countries.

3.5.2 International Accounting Standards and Environmental Disclosure (ED)

As corporate accounting disclosure has become more important, professional organisations in many countries, especially developed ones, have sought to publish disclosure criteria. These include the International Accounting Standards Committee, which issued a large number of accounting standards concerning disclosure and the form and content of financial statements.

The International Accounting Standards (IAS) focusing on disclosure are: (1) IAS No 1: Presentation of Financial Statements; (2) IAS No 24: Related Party Disclosures; (3) IAS No 30: Disclosures in the Financial Statements of Banks and Similar Financial Institutions; (4) IAS No 32: Financial Instruments: Presentation – Disclosure Provisions Superseded.

Other Standards also include special paragraphs and rules determining the conditions for disclosure in a variety of areas. However, IAS No 1 is the only standard to address the disclosure of environmental activities.

IAS No 1: Presentation of Financial Statements is one of the most important disclosure-related standards to have been issued by the IASC. Issued in July 1997, it came into effect in July 1998 (International Federation of Accountants, 2011). The standard addresses the way in which information should be disclosed in financial statements, balance sheets and their explanatory notes. It sets out the minimum level of information that must be disclosed to make the statement clear and understandable. In paragraph (9) of the standard, it states that companies should publish reports in addition to their financial statements, including reports on their environmental activities, particularly in industries where environmental issues are important.

Items (73) and (75) of the standard stipulate the information that should be disclosed in the budget and in the Statement of Comprehensive Income. These are: lands, buildings property, plant and equipment, other assets, sales and other operating revenues, investment revenues, interest revenues, interest expenses, unusual expenses, unusual income, net income, consumption and other financial transactions. Although the standard does not specify the type of data and environmental information to be disclosed (it seeks only to clarify the ways in which environmental activities can be disclosed separately from regular, official financial reports), it and the other international standards can be adapted to provide guidance for companies wanting to disclose their environmental information. For example, in accordance with IAS No 1 items (73) and (75), companies might prepare a list containing the following elements, to be included in the annual financial statement (Hayali, 1998):

• The cost of each type of property, plant and equipment used in the company's environmental activities and in reducing pollution.

• Annual depreciation for each type of machinery and equipment used in the company's environmental activities and in reducing pollution.

• Expenses associated with the removal of hazardous waste at the end of the production process.

• The cost of research and development activities in the environmental field and the reduction of environmental pollution.

• Amounts paid to government institutions responsible for protecting the environment.

IAS No 37: Provisions, Contingent Liabilities and Contingent Assets was issued in July 1998 and took effect from July 1999. This is another important standard for accounting disclosure, in spite of the fact that it makes no mention of ED (International Federation of Accountants, 2011). According to this standard, if a company is likely to have to pay a given sum in the future as a result of a past event or process, this commitment must be recognised and disclosed in its corporate financial statements. The standard can be applied to environmental disclosure: if a company has pledged to clean a polluted site or to address environmental damage resulting from its previous activities, and the cost of making good this pledge can be reasonably estimated, this should be considered an environmental commitment and disclosed in the financial statements.

Thus, the international standards can be adjusted to serve as a guide for the disclosure of environmental activities. However, social and environmental activities and their associated costs are important enough to warrant the issuing of special standards describing in detail how they should be disclosed. This disclosure is needed to provide users with the social and environmental information to help them make economic decisions, and to give them financial and non-financial indicators of the extent to which a company is limiting its environmental pollution and fulfilling its social obligations.

To sum up: although there are many international accounting standards addressing accounting disclosure and the presentation and content of financial statements, there is hardly any reference to ED. The one standard that does mention it does not specify the type of data and environmental information to be disclosed, but only sets out how environmental activities can be disclosed separately from the official financial report. Nevertheless, it is possible to adapt the international standards and use them as a guide for the disclosure of environmental activities.

3.6 Previous studies in the Field of Social and Environmental Disclosure (ED)

Appendix 3 provides a summary of previous studies in the field of social and environmental disclosure. These studies, which address a range of ideas and themes, fall into three groups. The first group is concerned with the concept and types of social responsibility see for example (Gray et al., 2001; Mcwilliams and Siegel, 2001; Turker, 2009; World Business Council for Sustainable Development, 2011). The second group focuses on the reasons why companies disclose social and environmental information and the obstacles that prevent companies from disclosing environmental information (Arevalo and Aravind, 2011; Elsayed and Hoque, 2010; Ishwerf, 2012; Villiers and Staden, 2011), while the third group deals with the importance of social and environmental disclosure, and how it is influenced by the characteristics of the company concerned (Galani et al., 2011; Gao et al., 2005; Gray et al., 2001; Liu and Anbumozhi, 2009; Rao et al., 2012).

First group: concept and types of Corporate Social Responsibility (CSR)

The first group of studies attempts to define the concept of social responsibility and to identify the most important kinds of social activities. The social role of organisations has been a contentious topic in the scientific and academic communities for more than thirty years, and there is still no clear consensus among researchers on how to define the concept of social responsibility. As a result, three perspectives have emerged. The first regards businesses and economic units as places for maximising profits only (Friedman, 1970). The second holds that organisations are social units which should play a social role in their environment (Spicer, 1978; World Business Council for Sustainable Development, 2011). Thus, the first perspective is based on economic principles, while the second has social dimensions and implications. The third perspective seeks to balance the objectives of maximising profit and fulfilling social responsibility. Proponents of this perspective claim that companies can simultaneously maximise performance and fulfil the social obligations imposed on them by law without losing their chance to compete and develop (European Commission, 2001; Mcwilliams and Siegel, 2001; Turker, 2009). This is also the view of the author: that social responsibility ideally strikes a balance between the interests of society and the interests of investors.

The different definitions of the concept of social responsibility have led to differences of opinion in other areas, including the activities and types of responsibility it involves. Studies focusing on the activities and areas of social responsibility have identified five broad areas (American Accounting Association (AAA), 1975; Gao et al., 2005; Williams, 1999). These are: activities relating to natural resources and environmental contributions (environment protection); activities relating to human resources (staff); activities relating to public contributions (society); activities in the energy field (energy saving); and activities relating to products or services (consumer protection).The most important pilot studies in this field are those by Carroll (1991) and Crane and Matten (2007), who identified the types of social responsibility as economic responsibility, legal responsibility, ethical responsibility and optional or philanthropic responsibility.

Second group: reasons why companies disclose social and environmental information and obstacles preventing disclosure

The second set of studies has focused on identifying the level of social and environmental disclosure in different countries. These studies have concluded that although many companies have significantly increased their level of ED, the amount and nature of information disclosed varies significantly between countries (Adams et al., 1998; Alciatore and Dee, 2006; Gray et al., 2001). The countries most willing to embrace ED have been the US and the UK (Gamble et al., 1996). Elsewhere, it has only recently been introduced, while in many developing countries there is little interest in ED at all (Andrew et al., 1989; Gamble et al., 1996; KPMG, 2002).

Attempts have been made to identify the reasons why companies undertake environmental disclosure. Many of these studies found that the most important reason for companies to disclose their environmental information is to improve their image and reputation with the public, especially if their reputation has been damaged by an accident or an environmental disaster. Social disclosure in general and ED in particular has a considerable, positive influence on public opinion (Deegan and Gordon, 1996; Deegan and Rankin, 1996; Pfau et al., 2008). Bayoud et al. (2012) argue that there is a strong association between the level of CSRD and company reputation. Many writers argue that reputation has a significant influence on the legitimacy of companies, and this is why they seek to enhance their image with the public by increasing their level of ED (Adams, 2008; Aerts and Cormier, 2009; Arevalo and Aravind, 2011; King and Whetten, 2008). According to Villiers and Staden (2011), firms with bad long-term environmental reputations will disclose more environmental information in their annual reports than other firms in an attempt to repair their image with the public.

Societal expectation has also been shown to be a motivation for companies to disclose social and environmental information. Many studies assert that organisations should consider the rights of the public at large, not merely those of their investors. These authors argue that, as society allows organisations to continue their operations only as long as they generally meet its expectations (Cho and Patten, 2007; Laine, 2009; Newson and Deegan, 2002; Tilling and Tilt, 2010), societal expectations should be considered an influential factor in social and ED.

On the other hand, other studies argue that the expectations of society are largely insignificant. Wilmshurst and Frost (2000) tested a number of possible reasons that might make companies disclose their environmental information, such as the need to meet legal obligations, the concerns of environmental lobby groups, the expectations of society, competitor response to environmental issues, and prosecution. They concluded that there is no positive correlation between ED and these reasons. Other authors suggest that it is too early to speculate on reasons and that further research is required into the relationship between these factors and ED (Bebbington et al., 2008).

As far as the Libyan context is concerned, Mashat (2005), in his examination of social responsibility disclosure, claims that information is only disclosed to those parties to whom the business organisation is legally accountable (i.e. central authorities) and not to the general public. In the same context, Saleh (2004) argues that Libyan companies prepare their annual reports for the purposes of communicating information to certain parties and groups, not to meet the expectations of society. Zubek (2008) also supports the view that societal expectations are an insignificant factor, although he examines other areas of social responsibility. He reveals that this factor was scored lowest by respondents as a reason for human resource (HR) disclosure.

Other investigations have examined the correlation between ED and legal requirements. Several authors argue that there is a positive correlation between social and environmental disclosure and legal requirements (Belal and Cooper, 2011; Gray and Bebbington, 2001); researchers have found that companies that have been prosecuted are subsequently more likely to comply with environmental laws and regulations and to practise ED (Deegan and Rankin, 1996; Liu and Anbumozhi, 2009; Warsame et al., 2002). This is less of a factor in Libya; Ishwerf (2012) points out that, as in many other countries of the world, ED is not a mandatory requirement in Libya. Other empirical studies conducted in various sectors in the Libyan economy have investigated the relationship between legal requirements and CSR in general and HR in particular. They confirm that companies consider the legal requirements as having no effect on their level of ED and HR (Mashat, 2005; Saleh, 2004; Zubek, 2008).

Attempts have also been made to study and analyse the relationship between disclosure of social and environmental information and social pressure. The findings reveal that companies do disclose social and environmental information in response to pressure from organisations interested in environmental performance and pressure groups as a whole see for example (Arevalo and Aravind, 2011; Cormier et al., 2005; Laine, 2009; Staden, 2009). Deegan et al. (2002), meanwhile, assert that “management releases positive social and environmental information in response to unfavourable media attention”. Other studies support the contention that there is a significant, positive relationship between social pressure and the level of social and environmental disclosure (Ahmad and Sulaiman, 2004; Deegan and Rankin, 1996; Solomon and Lewis, 2002; Wilmshurst and Frost, 2000; Zhang et al., 2008). According to Liu and Anbumozhi (2009), Chinese companies disclose environmental information mainly in response to pressure from the government; in contrast, there appears to be little pressure from other important stakeholders such as shareholders and creditors.

In terms of economic factors, several empirical studies have investigated the effect of profit on CSR in general and ED in particular. The results have been mixed; a number of studies support the idea of a positive relationship between profit as one of the economic factors and the extent of ED, while other studies have found no correlation. Gray and Bebbington (2001) argue that there is a positive correlation between social and environmental disclosure and economic factors, while Arevalo and Aravind (2011) suggest that the profit motive is an important driver for pursuing CSR, and a number of other studies have yielded evidence that corporate social and environmental disclosure is directly related to profit (Ahmad et al., 2003; Gray et al., 2001; Hossain et al., 2006; Stanwick and Stanwick, 1998).

On the other hand, Liu and Anbumozhi (2009) argue that "economic factors are not significantly related to ED activities", while Esa and Ghazali (2010) found that profit was not a significant variable affecting CSRD. A number of other authors have failed to find any significant positive correlation between social and environmental disclosure and profit (Cowen et al., 1987; Ditlev-Simonsen and Midttun, 2011; Hackston and Milne, 1996; Rao et al., 2012). This may mean that the decision to disclose social and environmental information is not influenced by the profit making factor.

Thus, the general consensus is that companies disclose environmental information primarily to improve their image and reputation (Adams et al., 1998; Cho and Patten, 2007; Deegan, 2002; Deegan et al., 2002; Gary, 2002; Patten, 1992; Tilling and Tilt, 2010), but controversy still exists as to the influence of other factors such as societal expectation, legal requirements, social pressure and economic factors on the Ed (Ahmad and Sulaiman, 2004; Campbell, 2000; Guthrie and Parker, 1989; Hogner, 1982; Islam et al., 2005).

A number of studies have investigated the barriers that may prevent companies from disclosing environmental information. According to Arevalo and Aravind (2011), CSRD is inhibited by: “barriers related to lack of resources, followed by barriers related to the complexity and difficulty of implementing CSRD and finally, lack of management support at both top and middle levels”.

Studies conducted in the Libyan context have highlighted additional factors. When Ishwerf (2012) analysed the perceptions of stakeholders regarding the lack of ED in Libya, he found that the reason most often cited was the lack of any legal requirement to disclose environmental information. Other reasons included lack of staff and administrative difficulties, the fear of potential adverse effects on economic performance and the sensitive nature of this kind of information. According to Saleh (2004), the real obstacles that prevent companies operating in Libya from disclosing environmental information are that (a) they lack the relevant expertise, qualifications and training; and

(b) there are no legal requirements or guidelines. Similarly, Mashat (2005) claims that possible reasons for the absence of social and environmental disclosure in Libyan annual reports are the lack of mandatory disclosure requirements, the weakness of the accounting profession in Libya, a lack of awareness of the importance and potential benefits of social and environmental disclosure, and a lack of demand or pressure to disclose this kind of information.

Third group: influence of company characteristics on disclosure of social and environmental information

A number of studies have been conducted to examine the link between ED and company-specific attributes such as firm size, age, nationality and privatisation. Numerous studies have identified a positive correlation between ED and company size, with ED increasing considerably in larger companies see (Abreu et al., 2012; Adams et al., 1998; Adams et al., 1998; Alnajjar, 2000; Alsaeed, 2006; Boesso and Kumar, 2007; Cormier and Gordon, 2001; Cormier et al., 2005; Deegan and Gordon, 1996; Galani et al., 2011; Gao et al., 2005; Gray et al., 2001; Hackston and Milne, 1996; Liu and Anbumozhi, 2009; Patelli and Prencipe, 2007; Trotman and Bradley, 1982; Zhang et al., 2008). In another area of social responsibility, Dominguez (2012) investigated the relationship between company characteristics and disclosure of HR in Spanish companies and found a correlation between company size and HR disclosure.

In contrast, other studies have found no positive correlation between ED and company size (Ahmed and Nicholls, 1994; Akhtaruddin, 2005; Archambault and Archambault, 2003; Esa and Ghazali, 2010; Halme and Huse, 1997; Lynn, 1992; Rao et al., 2012; Roberts, 1992; Villiers and Staden, 2011). Looking at HR disclosure as another area of social responsibility, Zubek (2008) found that in Libya, company size does not appear to be significantly related to HR disclosure practices. He argues that the total amount of HR information disclosed by small companies is greater than that disclosed by medium sized and large companies.

Having found that foreign companies do more ED than local companies, some researchers argue that company nationality is a key determinant of ED see (Saida, 2009; Zarzeski, 1996). Others have found the opposite see (Hossain et al., 2006; Moneva and Llena, 2000; Monteiro and Guzmán, 2010). Meanwhile, Jangou (2007) revealed that in Malaysia there was greater disclosure among local companies than among their foreign counterparts.

Very few studies have investigated the impact of privatisation on ED. This is an area that needs more attention and analysis. The majority of previous studies have concentrated on investigating the relationship between company privatisation and financial and CSRD in general rather than ED specifically. When Uwalomwa (2011) examined the relationship between company privatisation and CSRD, he discovered that it has a significant positive impact on the level of CSRD in firms. Zubek's (2008) examination of HR disclosure in Libya also showed that company privatisation is a significant determinant of the extent of HR disclosure. One of the few studies to investigate the influence of company privatisation on the level and amount of ED was conducted by Cormier and Gordon (2001), who found that privatisation status is likely to influence the amount of social and environmental disclosure within a company. For their survey of social and environmental reporting practices among Egyptian industrial corporate entities outside the oil sector, Rizk et al. (2008) reviewed a random sample of 60 annual reports in 2002. They found that there were significant differences in reporting practices between private and government-owned companies, with a greater proportion of privately owned companies including social and ED compared to the proportion of government-owned companies. Their findings lend support to the notion that a company's privatisation status affects its decision to report its environmental activities.

When Owusu-Ansah (1998) investigated the relationship between company age and the disclosure of financial information, he found that the age of a company has a positive effect on its disclosure practices. Again, others have argued the opposite (Akhtaruddin, 2005; Alsaeed, 2006; Galani et al., 2011; Singh and Ahuja, 1983). These authors do not support the contention that old companies provide more information than new companies but argue that company age is an insignificant factor. However, as far as the present author is aware, only a few recent studies have addressed the impact of company age on financial disclosure and CSRD, and none have considered its effect on the level of ED.

Four major studies have focused specifically on CSRD and ED in Libya. Mashat (2005) and Elmogla (2009) aimed to identify the influence of external social, political and economic factors on CSRD. The main objective of Mashat's study was to investigate CSRD practice across four Libyan business sectors (manufacturing, banks, insurance and other services such as external auditors) and how it was affected by the country's social, political and economic environment in the period 1999 to 2002. This study employed content analysis to investigate the annual reports of a range of organisations. The second strand of the study was a questionnaire survey which was distributed to 438 participants to explore their perceptions of CSR. The results indicated that most companies provided some measure of social disclosure, although the volume of information disseminated was low compared to their counterparts in developed countries. Mashat argued that social, political and economic factors have an impact on CSRD and confirmed that possible reasons for non-disclosure include the lack of mandatory disclosure requirements, the weakness of the accounting profession in Libya, and a lack of awareness of the importance and potential benefits of CSR disclosure.

In a similar vein, Elmogla's study investigated CSRD in Libyan companies' annual reports and how it was impacted by the economic, social and political environment between 2001 and 2005. Elmogla's sample included industrial companies, financial service enterprises (banks and insurance companies) and other service companies such as external auditors, and featured both private and government-controlled organisations. He also employed content analysis to examine annual reports and a questionnaire survey. Like Mashat, he found that Libyan companies generally disclose some information related to social responsibility, but that the amount of information is low compared with companies in developed countries. Employee and community involvement are the main themes in their disclosure, and companies prefer to place social information in the annual report, ideally in a separate section. Companies in the study accepted the need to disclose more social and environmental information and saw disclosure as yielding socioeconomic benefits at the macro level. Although these studies investigated the influence of external factors on CSRD in general, neither one made any specific reference to ED; both authors suggest that further research is required into the disclosure of social information, particularly environmental information, in the Libyan context.

The two studies that have focused primarily on ED in Libya have taken different approaches from the present study. Saleh (2004) studied the extent to which ED occurs in Libya, identifying how administrative decisions regarding ED were influenced by (but did not influence) the social, political and economic situation between 1998 and 2001. His study was carried out on 13 local industrial companies. The results indicated that the social context, including religion, influenced ED practice to some extent, but that the main determinants were the country's unique political and economic context, and manager attitudes and qualifications. The findings reflect the influence external (political, economic and social) factors can have on the disclosure environment.

A second study, by Ishwerf (2012), investigated stakeholders' perceptions and requirements of ED in the Ahlia Cement Company, a local company. Adopting the case study approach, Ishwerf collected data by means of face-to-face, in-depth personal and representative interviews with 30 stakeholders between mid-December 2008 and March 2009. The interviewees represented six stakeholder groups: regulators and policy makers, local government, shareholders, managers, employees and financial institutions. The results showed that stakeholders ranked environmental information as the highest disclosure priority, though they ranked environmental financial issues and energy issues last and second to last respectively. The results imply that regulators and policy makers, as well as companies themselves, should consider the policy implications of other stakeholders' views.

The above studies all focused on local industrial companies operating outside the oil and gas sector. In contrast, the present study focuses exclusively on this sector, which is generally considered the most polluting industry sector (Wang et al., 2004). This is also

Libya's most important industry in economic terms, accounting for 70% of GDP and 98% of exports (Central Bank of Libya, 2009a). Rather than limiting the focus to local companies, as previous studies have done, the present study examines the activities and attitudes of both local and foreign companies operating in the sector. Three out of the four Libyan studies above rely on data covering a three or four year period, since Ishwerf's study used case study. In contrast, this study uses longitudinal data covering the eight years between 2002 and 2009. This allows a meaningful analysis to be conducted of trends in ED over time. Finally, the above studies focus on external social, political and economic factors and their impact on CSRD in general and ED in particular, while neglecting the influence of company characteristics. In contrast, this study investigates the relationship between certain firm-specific characteristics and ED in Libya. In its attempt to clarify the determinants of ED, it assesses whether the reasons that have been advanced as motives for ED do in fact drive environmental disclosure, and identifies those obstacles that prevent companies from disclosing environmental information.

3.7 Conceptual Framework

This section presents the conceptual framework of the study, as developed from the review of recent literature on the effects of company characteristics on the amount and level of ED, and the reasons why companies disclose environmental information. It illustrates the link between the dependent and independent variables in this study and defines some of the key terms used.

A conceptual framework in general is not merely a collection of concepts but, rather, a "map" of the area of study. It is used in research to outline possible courses of action or to present a preferred approach to an idea or a system analysis project. It is usually enclosed in circles or boxes of some type, and relationships between concepts are indicated by connecting lines. Linking words or linking phrases specify the relationships between concepts (Novak and Cañas, 2007). Miles and Huberman (1994, p.18) define a conceptual framework as a visual or written product, one that "explains, either graphically or in a narrative way, the main elements to be studied, the key factors, concepts, or variables and the assumed relationships among them".

Despite the undoubted importance of previous attempts to identify why companies disclose environmental information, these studies have offered little in the way of conclusive supporting evidence. The identified reasons for disclosure include: to improve company reputation, to meet the expectations of society, to fulfil legal requirements, to respond to societal pressure, and economic factors. However, others have claimed that there is no positive correlation between ED and these reasons; thus, controversy still surrounds the reasons why companies disclose their environmental information.

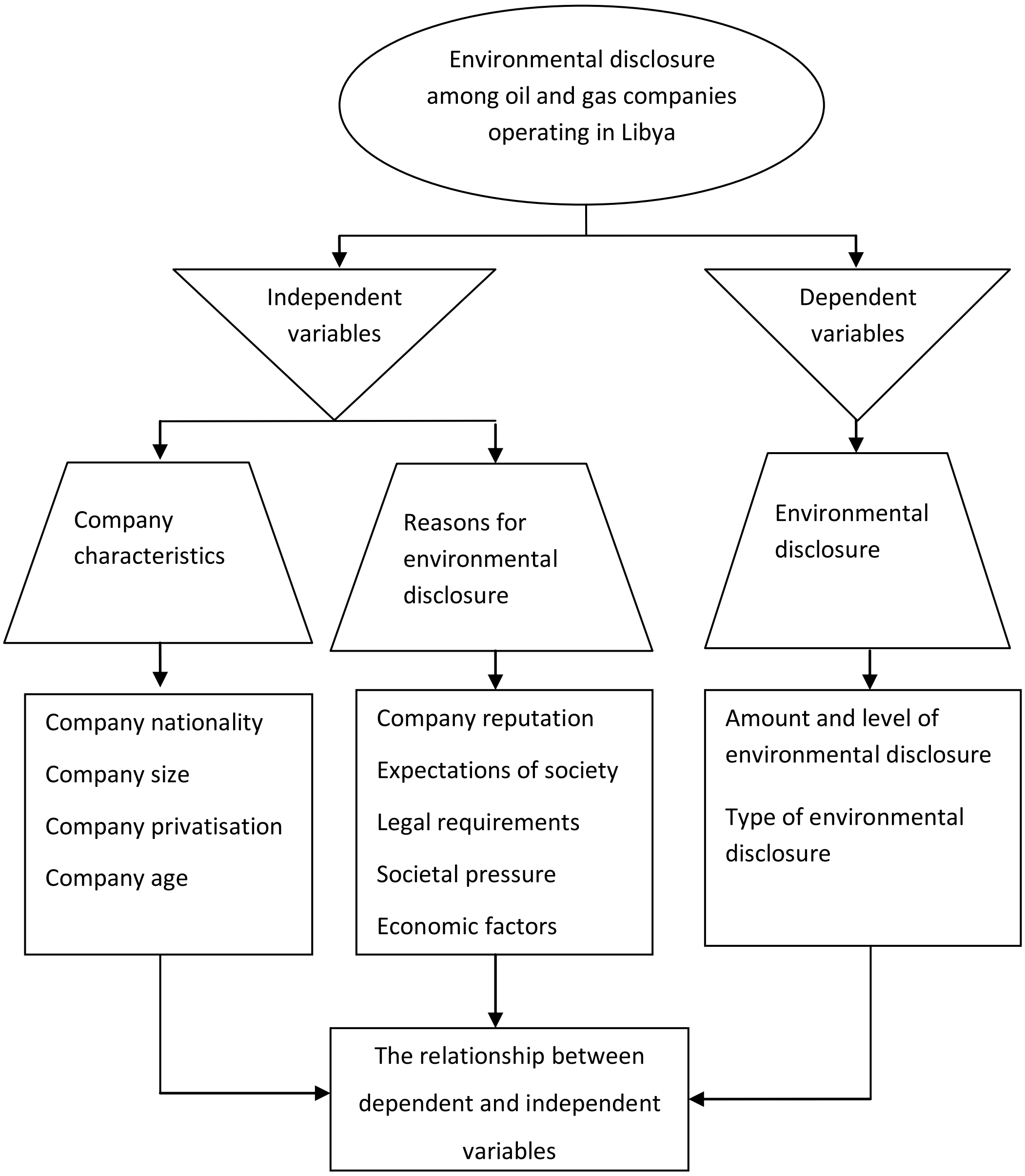
Previous studies have investigated the relationship between ED and company size, privatisation and nationality but arrived at no consensus as to the influence of these attributes on the level and quality of ED. Only a few recent studies have addressed the impact of company privatisation on financial disclosure and social and environmental disclosure in particular. Investigation of the influence of company privatisation on the level of ED would be especially timely for Libya as the country is currently being steered towards privatisation; one of the consequences of this shift from the public to the private sector is an increased demand for environmental information, particularly from current and potential investors. To the best of the author's knowledge, no previous studies have investigated the relationship between company age and the level of ED specifically; only a few studies have addressed the impact of company age on financial and CSR disclosure, so company age is being introduced for the first time by this study.

The majority of studies in the field of ED have focused on developed countries and neglected developing countries. However, many authors agree that it may be misleading to apply the results of western studies to other countries, since ED varies from one country to another and from one community to another as a result of economic, social, political and cultural differences (Adhikari and Tondkar, 1992; Archambault and Archambault, 2003; Belkaoui, 1983; Elnaby et al., 2003). Thus, the fundamental question arises of whether the reasons for disclosure cited by companies in developed countries are also significant in developing countries. For example, do companies in developing countries also practise ED in their annual reports in order to gain society's acceptance?

No previous study of this sort has been conducted in Libya. It is a response to the calls that have been made in a number of previous studies for further research to be undertaken in developing countries in general, and Libya in particular, to clarify the relationship between ED and firm-specific attributes, and the reasons why companies disclose environmental information.

Figure 3.1 depicts the conceptual framework used in this study. The study examines the relationship between company-specific attributes and ED, as revealed in annual reports. In addition, it investigates the reasons why companies disclose environmental information. Figure 3.1 shows that the dependent variable is the amount, level and type of ED in annual reports. The first group of independent variables are the company characteristics: nationality, size, privatisation and age. A number of annual reports from local and foreign oil and gas companies operating in Libya were analysed in order to precisely identify the influence of these factors on the level and type of ED. The second group of independent variables are the reasons why companies disclose environmental information: reputation, meeting the expectations of society, legal requirements, societal pressure and economic factors. These were measured by reviewing the responses given by staff working for local and foreign oil companies in Libya to a number of key statements. Using the conceptual framework, the study seeks to investigate the relationship between the dependent and independent variables in order to answer the research questions outlined in Chapter One.

Figure 3.1 Conceptual Framework of the Current Study



Source: (Author's own)

3.8 Summary

Full disclosure is the main way in which information about corporate activities is transmitted to the interested parties. Since 1990, interest in ED has grown to the point that it is now seen as one of the most important types of social disclosure. Aside from the ethical considerations, there are pragmatic reasons for this; as environmental costs become more significant each year, it is increasingly important to disclose these costs in financial statements and reports, as the users of these reports need this information to make effective decisions. The need is even more urgent given the fierce competition between local and global companies. As a result, investors themselves are increasingly pressing for environmental information to be published in annual reports.

Studies in the field of social and environmental disclosure have addressed various issues, from the concept of social responsibility and the types of activities associated with it, to the levels and amount of ED in different countries. Some have attempted to answer the question of why companies disclose environmental information, while others have examined the relationship between ED and company-specific attributes such as firm size, nationality and privatisation. Although important, these studies have not provided conclusive evidence to support their claims, and there is still disagreement as to companies' reasons for disclosing environmental information and the negative and positive effects of company attributes on ED.

There are also gaps in the literature: no previous studies have investigated the relationship between company age and the level of ED, and there has been little investigation of ED as it occurs in developing countries such as Libya. It is the aim of the present study to address these gaps and the inconclusiveness of previous studies. The study focuses on the Libyan context; accordingly, the next chapter gives background information about Libya's geography and history and outlines the nature of its political, economic and accounting systems.

Chapter Four: Libyan Background

4.1 Introduction

This research is concerned with ED in domestic and foreign oil and gas companies operating in Libya. Since not only accounting systems but also economic and political factors have a profound effect on financial disclosure in general and on ED in particular, it is appropriate here to give background information on Libya's economic and political context and its accounting systems. This chapter is divided into eight sections: after this introduction, Section two contains general information about Libya's geographical location, population and land area, while Section three gives some historical background. The political system is dealt with in Section four, while Section five provides an overview of the Libyan economic system. Section six addresses accounting practice in Libya and Section seven discusses the treatment of ED in Libyan law. The chapter ends with a general summary.

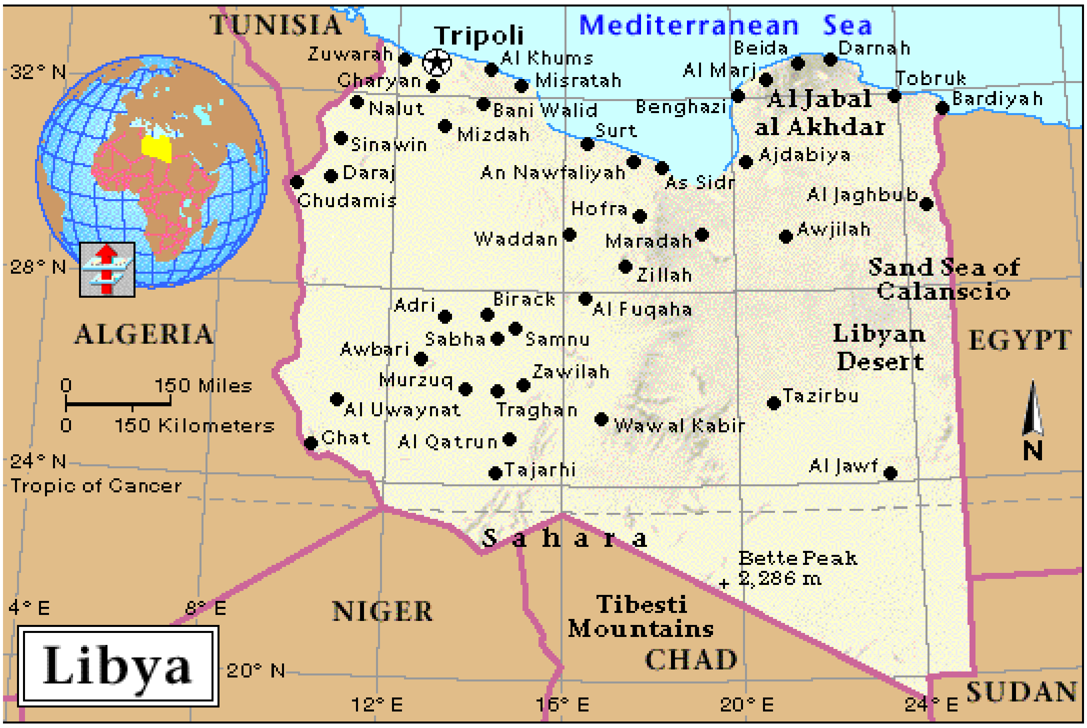
4.2 Geographical Location and Population

Libya is a developing Arab country which is located in North Africa on the southern coast of the Mediterranean Sea. It shares borders with Egypt to the east, Sudan to the south-east, Chad and Niger to the south, Algeria to the west and Tunisia to the north-west. Its vast territory stretches from the Mediterranean coast to the highlands of north-central Africa. It has a population of about 6,097,556 people, according to the 2005 census (General People's Committee of Libya (Council of Ministers), 2011), 51% of whom are men (Central Bank of Libya, 2005b). The population density is higher in coastal areas than in other regions, with an average of 45 inhabitants per square km. This is especially so in the north-west and the north-east, where the two largest cities are found: namely Tripoli (the capital) and Benghazi (Saleh, 2004). Elsewhere, the number of inhabitants is small compared with the geographical area of the country.

Arabic is the official language and the one most widely spoken by the population, with English as the second language, especially in businesses and universities. Local dialects differ slightly from one place to another due to the size of the country; at 1,774,440 square km, Libya is the fourth largest African country and the seventeenth largest in the world (General People's Committee of Libya (Council of Ministers), 2011). Libya also has the longest coastline (roughly 2000 kilometres) among the countries bordering the Mediterranean Sea. Ninety percent of Libyan land is either desert or semi desert with a desert climate, with the exception of the coastal strip, which has a moderate climate in both summer and winter (United Nations, Economic Commission for Africa, 1991).

The majority of Libya’s population follow Islam with 98% being Muslim and 2%, mostly non-permanent residents, belonging to other faiths (Mousa, 2005). There are no Shiite groups as the whole population are Sunni Muslims. Most of the Christian community are foreign refugees, Africans, Copts or Europeans working in Libya. They are provided with churches and places of worship, especially in the cities of Tripoli and Benghazi (Mashat, 2005). Although some of these religious groups wear their distinctive clothing and symbols all the time, there have not so far been any cases of religious discrimination or harassment. Figure 4.1 shows a map of Libya and its main cities.

Figure 4.1 Map of Libya's Cities



Source: (Saleh, 2004, p.125)

4.3 Historical Background

The territory in North Africa between Egypt and Tunisia was originally named after the Libo tribe who have inhabited this area for thousands of years (Abuarrosh, 1996). Libya has suffered long periods of foreign occupation, only achieving independence in 1951. Its history can be divided into stages, beginning with Ancient Libya, which emerged at least 5000 years ago. Over the following centuries, some of the Libyan tribes became so powerful that they were able to enter Egypt and form a family dynasty (Egypt's twenty second) which ruled the country from the tenth to the eighth century BC.

Libya's next stage was the stage of occupation, first by the Phoenicians, who established the cities of Oya, Sabratha and Leptis Magna in the eighth century BC, and then by the Romans in the seventh century BC (Bakar, 1997; Farley, 1971). During this period, one of the Ancient Libyans even ascended to the Roman throne to become the Emperor Septimius Severus. After the Romans came the Islamic phase, which began in 642 AD when the region came into the hands of ‘Umar ibn Al- ‘Aas at the time of the Caliph Umar Ibn Al-Khattab, may Allah be pleased with them. Islam spread throughout the country as the arriving Muslims integrated with the local population. Shortly after their arrival in Libya, the Arabs started to consolidate their rule and to establish security throughout the country (Steel, 1967).

In 1551, Libya entered a new era, called the Ottoman (Turkish) era by historians. This lasted till 1911 when Italy officially colonised Libya. Italy was the last European country to embark on a policy of colonial expansion; at the end of the nineteenth century, Libya was the only part of Arab North Africa still under Turkish rule and not occupied by a Western country. Italy took advantage of Libya’s geographic proximity to make military intervention the first step in its colonisation plan. It was not difficult for Italy to invent an excuse to occupy Libya; it simply declared war on Turkey in 1911. The Ottoman Turks found it extremely difficult to survive the Italian onslaught and were quickly forced to cede Libya to Italy. A treaty was concluded between the two countries, giving Italy sovereignty over Libya (Libyan Centre of Archives and Historical Studies, 2011).

Libyans across the country revolted, and the occupiers reacted with extreme brutality. Libyan resistance fighters, led by Omar Mukhtar, staged short, sharp attacks, but the balance of power was with the Italian military, who had sophisticated modern weaponry, multi-skilled and organised personnel and the support of other colonial powers. But despite the might of the Italian military and the Western alliance against the Libyan Arab people, the invasion was not easy for the Italians. It was resisted across Libyan society, and volunteers from throughout the Arab and Muslim world responded to the call to jihad and flowed into Libya to aid the Libyan people in their struggle. The resistance continued until the outbreak of World War II (Saleh, 2004).

When the Second World War erupted, the Libyans saw an opportunity to liberate their country. When Italy entered the war in 1940, Libyans joined the ranks of the Allies on the strength of the UK's promise that by the end of the war, Libya would no longer be under Italian control (Ellabbar, 2007). When Italy was defeated in 1943, sovereignty should have been restored to the local community, but the British and French denied them that privilege and maintained their occupation of Libya. Thus, the country entered a new era of occupation (Attir, 1992).

When the United Nations (UN) was established soon after the end of the war, the most powerful states were in agreement that Libya should remain under the guardianship of one of these countries. However, the different ambitions and interests of the major powers in the UN meant that they had different views on the nature of this trusteeship. The issue was finally decided through a vote by the UN General Assembly, at which it was agreed to conditionally grant Libya independence with territorial integrity in 1949. An international commission was to be set up to oversee the implementation of this resolution (Ellabbar, 2007), and international oversight would continue until 1952, at which time the country would be granted unconditional independence.

Libya formally received its independence on 24 December 1951. Taking the name the United Kingdom of Libya, it became a federal kingdom comprising the three provinces of Tripolitania, Cyrenaica and Fezzan. The head of state was King Mohammed Idris al-Sanusi, known as "Idris the first". Independence was followed by the enactment of the country's first constitution and the establishment of the first federal ministry, and by its accession into the League of Arab States and the United Nations.

Despite attempts by some of the colonial powers to keep Libya federal – and therefore divided and weakened – the people of Libya through their elected representatives amended their constitution in 1963 to establish a consolidated state. The country was renamed the Kingdom of Libya and Tripoli became its capital. After independence, the monarchy continued in Libya for eighteen years until 1 September 1969, when a group of officers in the Libyan army led a military coup against King Idris, seized power and, as the Revolution Command Council, declared Libya a sovereign country under the name the Libyan Arab Republic. A new government was announced and Colonel Muammar Gaddafi became President. Gaddafi ruled Libya as a totalitarian regime for 42 years until the revolution of 2011. The events of his rule and the 2011 revolution are dealt with in more detail in the following section.

4.4 The Political System

As mentioned above, after a long history of colonialism offset by a long history of struggle and resistance from the people of Libya, the country finally received its independence on 24 December 1951.On September 1, 1969, a group of army officers led military coup against the monarchy shifting the political system of Libya from monarchical into republican under the name of the Libyan Arab Republic with Colonel Muammar Qadhafi as its Chairman. In 1977, Colonel Gaddafi issued his Green Book, calling for the abolition of governmental institutions and their traditional legal framework, and their replacement with what he called "people's power". Accordingly, on 2 March 1977, the People's

Authority came into being (Mashat, 2005), bringing with it a period of radical political change for Libyans.

This development effectively separated the state from the revolution. The Revolutionary Command Council was suspended, and names familiar from the traditional democratic system were changed. Parliament was renamed the People's Congress, while the Council of Ministers became the General People's Committee, and its members went from being Ministers to Secretaries (General People's Committee of Libya (Council of Ministers), 2011). At the Extraordinary General People's Congress in March 1979, Gaddafi and the rest of his colleagues resigned from the General Secretariat of the General People's Congress.

By the end of the seventies and the early eighties, in theory, power rested with the people, through their representatives in the Basic People's Congresses, the People's Committees and the General People's Congress. These bodies ran Libya's day to day political and administrative affairs, among other responsibilities. However, in practice, Libya's political affairs, both internal and external, were run by Gaddafi. Libya got further away from democracy as the political system shifted from republic to autocracy.

This brutally oppressive regime lasted for 42 years, during which time, among other things, the Gaddafi family devastated Libya's natural resources. Torture by military and security entities and by armed militia groups operating outside the law was rife. One of the sparks that fired the eventual revolution was an incident that happened at Abu Sleem, a top security prison in Tripoli. According to human rights organisations, mistreatment and human rights abuses were common in prisons such as Abu Sleem. In

1996, the prison held approximately 1,200 prisoners, who had been sent there without trial and without the knowledge of their families. After years of illegal detention, the prisoners rebelled, demanding better medical care, outside recreation, family visits, clean clothes and an actual trial. Instead, they were rounded up in a courtyard and shot by Gaddafi's troops. Afterwards, the soldiers went through the bodies with pistols to shoot anyone still alive.

The Libyan Government rejected allegations of a massacre, and the vast majority of the families of the prisoners who were killed received no information about their relatives. In May 2005, the head of the Internal Security Agency told Human Rights Watch that the prisoners had captured some guards and stolen weapons from the prison cache. The prisoners and guards had died as security personnel tried to restore order. The Government finally opened an investigation on the order of the Minister of Justice, and the authorities offered compensation of 200,000 Libyan Dinars ($162,300) in exchange for assurances that family members would not pursue further legal claims in Libyan or international courts. Most of the families refused to accept compensation on these terms, insisting that they wanted to know the truth of what happened and to have those responsible prosecuted (Al-Sarraf, 2010; Human Rights Watch, 2009). Those who gathered to protest against the massacre faced harassment from security forces and even, at times, arrest. No one has yet been brought to justice for human rights violations, nor have there been any effective investigations into cases of torture and deaths in custody, but the protests did help trigger the eventual popular revolution (Human Rights Watch, 2009; Human Rights Watch, 2012).

Gaddafi's time in power was also characterised by turbulent relationships with the West. In January 1986, the USA cut off all economic and trade relations with Libya and froze Libyan assets in the USA, accusing the country of supporting terrorism (Mousa, 2005). On 21 December 1988, US passenger plane Pan Am 103, which was en route from London to New York, blew up over the village of Lockerbie in Scotland, killing 270 people. In November 1991, the USA and the UK accused two Libyan citizens of blowing up the aircraft. When Libya refused to hand over its accused citizens for trial in the USA or the UK, the UN, with support from these countries, imposed an embargo on the country in 1992. All international flights to and from airports in Libya were banned, and businesses were forbidden to supply Libya with aircraft spare parts, oil industry equipment, military equipment and services (Zubek, 2008). Following negotiations with the families of the Lockerbie bombing victims and an agreement that the two Libyan nationals could be extradited to a neutral court in the Netherlands to be tried under Scottish law, the embargo on Libya was lifted in April 1999.

In January 2001, a Libyan citizen called Abdelbaset al-Megrahi was convicted of blowing up the aircraft and sentenced to life imprisonment in Scotland. The other defendant was acquitted. In March 2003, the embargo on supplying spare parts for aircraft and the oil industry was lifted when Libya reached a political agreement with the USA and the UK, accepting civil liability and paying compensation to the victims' families.

In December 2003, Libya announced its intention to dispose of equipment, hardware and software that might be used in the production of internationally proscribed weapons, signalling its willingness to cooperate with international institutions looking for weapons of mass destruction in Libya. It signed the Convention on the Prohibition of Chemical

Weapons in January 2004. The move may seem surprising, but observers see it as the natural culmination of the intensive communication which has been on-going between Tripoli, Washington and London since agreement was reached on the Lockerbie case.

In September 2004, USA President George W. Bush formally ended the trade embargo imposed on Libya, and European Union (EU) foreign ministers agreed the following month to lift the ban on European arms exports to the country. In May 2006, the USA said it would restore full diplomatic relations with Libya. The decision to restore relations ended nearly thirty years of diplomatic isolation (although this did not pass without the use of force against Tripoli and Western accusations that Libya was involved in masterminding terrorist operations against USA targets). When relations resumed between Libya and Western countries, British and American companies started to return, with oil companies in particular coming back strongly to invest in the Libyan oil sector.

The protests against the Gaddafi regime began in February 2011 and escalated rapidly into a national popular rebellion. The forces opposing Gaddafi established an interim governing body, the National Transitional Council, with Mustafa Abdul Jalil as its President (Human Rights Watch, 2012; Mohamed et al., 2013). In August, rebel forces began their offensive against the capital city of Tripoli, which they eventually captured. Muammar Gaddafi remained at large until 20 October 2011, when he was captured and killed attempting to escape from Sirte city. On 16 September 2011, the NTC was recognised by the UN as the legal representative of Libya, replacing the Gaddafi government (Human Rights Watch, 2012; Mohamed et al., 2013). On October 23, the NTC declared the country liberated after the final defeat of Gaddafi's forces. The formation of a new, transitional government was announced on November 22, along with plans to hold parliamentary elections by 19 June 2012. Elections for a General National Congress (GNC) were finally held on 7 July (having been postponed from 19 June), and Mohamed el-Magariaf was elected President. Thus, Libya entered a new era, moving from one-man rule to a democratic, multi-party system.

4.5 The Economic System in Libya

At the beginning of the seventies, the public sector accounted for approximately 69% of the Libyan economy, with the private sector accounting for the other 31% (General people’s Committee, 2007). The disparity widened until the ratio of private sector businesses reached its lowest point in the eighties at approximately 10%. The problems associated with the public sector had a negative impact on the Libyan economy. These included low productivity and hidden unemployment or over staffing, public projects going into debt, and money being wasted on salaries and fees with little obvious return, rather than being put into large-scale economic development to raise living standards (General People's Committee for Industry, Economy and Trade, 2011).

In June 2003, Gaddafi called for the General People's Congress to privatise the public sector, including the oil sector and banks (Ellabbar, 2007). The pace of the privatisation programme, which had previously been slow, quickened and the ownership base expanded. In September 2003, the Secretariat of the General People's Committee (Libya’s Prime Minister) announced the privatisation of over 360 publicly-owned companies with effect from 1 January 2004 (Ellabbar, 2007). The number of economic units taken over by the private sector in the last five years has now reached about 105. Collectively valued at around two billion US dollars, they have changed hands through the transfer of ownership to employees or through negotiated sale to local or foreign investors. Since 2009, the Central Bank of Libya has allowed foreign banks to invest in Libyan enterprises up to a maximum of 49%; the remaining 51% stake must remain Libyan, but the foreign investor has full management rights (Central Bank of Libya, 2011).

This action is in keeping with the political leadership's approval of the policy to abolish the public sector. This policy, along with the Government's decision to create Libya's first securities market, is bringing about the largest and most important transformation of the country's economic structure and economic activity since the socialist transformation of the late seventies. The development of Libya's economy may thus be broken down into two stages, as outlined below.

4.5.1 The Pre-Discovery Phase: 1943 - 1962

Libya emerged from the Second World War with its infrastructure – modest as it was – completely destroyed. Built under Italian colonialism, this infrastructure was only meant to achieve the occupiers' purposes. The agricultural economy, the country's most valuable resource, was deeply affected by the destruction since it was based along the north coast of the country, where most of the fighting had taken place. When the British and French tightened their grip on Libya in 1943, they were left with a nation torn apart by war, and not yet qualified for self-government. Consequently, the British and French military authorities took charge of the country's affairs. In the late forties, the country was living in extreme poverty, with the average per capita income standing at 15 to 20 pounds sterling per year.

According to economist Benjamin Higgins, it was an exaggeration to describe Libya as even a developing country before the discovery of oil in the late 1950s. Higgins, who specialised in economic development and who worked as an economic consultant in Libya in early 1950, described Libya in that period as a country whose national progress was impeded by geographical, economic, political, social and technological obstacles, and in which there was no indication of significant economic development (Higgins, 1968). In the late 1950s, the World Bank assigned a team to assess the social and economic situation in Libya. The team reported that Libyans were living at subsistence level, eating the bare minimum and only managing to earn enough for life's necessities. The overwhelming majority of the population were farmers who consumed most of what they produced and who survived in extreme conditions. Many lived in huts and caves in small villages, relying on donkeys, camels and horses for transport (The International Bank for Reconstruction and Development, 1960).

The Libyan economy at that time was described as being a deficit economy, in the sense that the deficit also incorporated the state budget and balance of payments. Most state projects failed financially; literacy and health levels were poor (in 1952, approximately 90% of Libyans were illiterate); and natural resources were being inadequately exploited. Domestic production was not enough to meet domestic demand, even with the low living standards of the time. Assistance and grants from foreign governments, UN bodies and others were the only means of covering this deficit for many years (US Department of Commerce, Bureau of International Commerce, 1970). In 1952, Libya seemed to be an almost hopeless case; 70% of the population worked on the land (Mashat, 2005), making the agricultural sector the backbone of the economy, but it still accounted for little more than 26% of GDP. The sector was characterised by rudimentary production methods and management and hampered by infrequent rainfall and, consequently, lack of water.

Similarly, manufacturing in its modern sense did not exist; activity was confined to a few traditional industries that were dependent on the agricultural and pastoral sectors and therefore seasonal and unstable. These accounted for 11% of GDP, as shown in Table 4-1. The table shows the contributions made by different sectors to GDP in 1958 – before the discovery of oil. Public services such as education, health and transportation were at their lowest levels at this time due to limited state revenues in general and the limited funds they were allocated in the budget. At a time of widespread unemployment and economic stagnation, the lack of available capital in both public and private sectors was the main obstacle to raising the level of national income (estimated per capita income in 1952 was around 52 US dollars per year).

In July 1953, Libya signed a 20 year agreement with the UK, under which the UK would be allowed a number of military air bases in Libya in return for an annual payment to cover the budget deficit, the amount to rise over subsequent years (Fisher, 1971). In September of the same year, Libya signed a similar agreement with the USA. The Libyan Government subsequently signed treaties of friendship and trade agreements with France in 1955 and Italy in 1957 (Higgins and Jacqres, 1967).

Table 4-1 Industrial Origin of Gross Domestic Product (GDP) in Libya 1958

Industry	Value (LD million)	Share (%)
Agriculture, Forestry and Fishing	13.6	26.1
Mining and Quarrying	3.6	6.9
Manufacturing and Repairing	6	11.5
Construction	1.8	3.4
Electricity, Gas and Water	0.8	1.5
Transport, Storage and Communication	2.9	5.6
Wholesale and Retail Trade	7.3	14
Banking, Insurance, Dwelling and Social Services	9.5	18.2
Public Administrative Services	6.7	12.8
Total	52.2	100%

Source: (Aboulsayan, 2000, cited in (Mashat, 2005, p.35). LD = Libyan dinar

4.5.2 The Post-Discovery Phase: 1963 – To Date

Oil was first discovered in Libya in 1955, with bulk production starting in the late fifties and early sixties. In September 1961, the process of exporting crude oil began (Abozrida, 1981). Libya entered a new historical era with the inflow of foreign capital from international oil companies. As the oil revenues began to flow, the economy went from a state of deficit (which had lasted twenty years, from 1943 to 1962) to having the surplus to cover the balance of payments and the public budget (Bakar, 1997). The post-discovery phase can be divided into three periods as follows:

Surplus and financial abundance: 1963 - 1980

In 1963, the Libyan balance of payments saw a market surplus for the first time in its history. The period of prosperity and abundance lasted throughout the seventies as oil revenues flowed in, peaking in 1979 and 1980 as oil prices surged following the outbreak of the Iran-Iraq war. But despite the clear abundance of financial resources, which exceeded the absorptive capacity of the Libyan economy, there was no significant change in the economic structure. There was, however, an expansion in consumer spending, which grew from 159 million dinars in 1964 to 3877 million dinars in 1981.

In spite of the huge investment in agricultural and industrial development projects during this period, the economy could not escape its dependence on the oil sector, which led all Libyan exports from 1963 onwards (General People's Committee for Industry, Economy and Trade, 2011). The most important objective of the Government’s development plans – to restructure the Libyan economy as a non-oil-based economy – was not achieved. Table 4-2 presents the contribution made by the various sectors to GDP between 1962 and 1980.

Table 4-2 Contribution of the Different Sectors to Gross Domestic Product (GDP) from 1962 to 1980 (%)

Year / Sectors	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Agriculture, Forestry and Fishing	9.6	6.4	4.6	5.1	4.3	4.1	3.1	3.1	2.6	2.1	2.5	2.7	1.7	2.3	2.1	1.6	2.2	1.9	2.2
Oil and Natural Gas	24.4	42.3	53.7	54.9	56.1	53.8	60.5	61.7	63.1	58.2	52.5	51.9	62.9	53.4	57.7	58.4	51.1	59.8	61.8
Mining and Quarrying	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.5	0.5	0.5	.04	0.5	0.5	0.5	0.6	0.6	0.5
Manufacturing Industry	5.8	4.2	3.2	2.6	2.3	2.2	1.9	1.7	1.7	1.5	1.8	2.0	1.5	1.8	1.9	2.2	2.7	2.4	2.0
Electric and Water	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.3	0.5	.05	0.5	0.6	0.5	0.5
Construction	6.6	5.4	5.9	7.1	7.1	8.9	8.3	7.1	6.8	7.4	10.4	12.0	9.9	11.8	10.8	10.7	12.4	9.6	10.4
Trade, Restaurants and Hotels	9.1	7.1	5.5	5.1	5.2	4.8	4.2	4.0	3.7	4.8	5.5	5.7	4.9	6.1	5.5	5.2	6.2	5.0	4.9
Transport and Communication	5.5	4.8	4.1	3.8	3.9	4.2	3.7	3.3	3.4	5.5	5.7	5.9	4.1	4.8	4.1	3.9	4.6	3.8	4.0
Banks and Insurance	1.1	0.9	0.7	0.7	0.7	0.7	0.6	0.6	1.0	1.8	2.1	2.4	1.9	2.7	2.5	2.6	3.2	2.6	2.3
Housing	18.9	13.1	9.2	7.4	6.9	7.2	5.5	5.7	4.6	4.3	4.4	3.9	2.9	3.6	3.0	2.8	3.1	2.5	2.0
Public Services (Except Education and Health)	10.0	8.3	7.1	7.5	7.8	8.4	7.2	7.2	7.6	8.5	8.5	7.2	5.5	7.0	6.2	6.4	7.5	6.7	5.7
Education Services	3.2	3.0	2.6	2.6	2.6	2.6	2.4	2.9	3.1	2.9	3.5	3.3	2.5	3.3	3.1	3.1	3.4	2.7	2.2
Health Services	1.4	1.1	0.9	0.9	1.0	1.0	1.0	1.1	1.2	1.4	1.5	1.5	1.0	1.4	1.4	1.4	1.7	1.3	1.1
Other Services	3.4	2.6	1.9	1.7	1.6	1.5	1.1	1.0	0.6	0.6	0.5	0.5	0.5	0.8	0.7	0.7	0.7	0.6	0.4
	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Source: (The Secretary of Planning, 1997, cited in (Mashat, 2005, p.37)

Crisis and siege: 1981 - 1998

The USA, which took a massive 40% of Libya's total oil exports, launched its embargo on the importation of Libyan oil in 1981. In the ensuing years, the Libyan economy entered a crisis phase (Mousa, 2005). At the same time that political relations between the two countries were deteriorating, oil prices were dropping and Libya's oil production was declining (from 1.7 million barrels a day to about 1.39 million barrels per day). Oil exports accounted for almost all of Libya's exports, and the dropping prices and slowing production led to a long-term decline in foreign revenues. Infrastructure projects were postponed and Libya's efforts to restructure its economy from oil-based to other industries stalled (General people's Committee, 2007).

What deepened the crisis even further was that the drop off in oil income coincided with the Government's restructuring of the Libyan economy and virtual abolition of the private sector (General People's Committee for Industry, Economy and Trade, 2011). Eventually, the private sector accounted for less than 10% of the economy, while the public sector accounted for the remaining 90%. This oversized public sector was characterised by poor management, low productivity, overstaffing and debt, all of which had a negative impact on the Libyan economy.

The industrial sector was beginning to make more of a contribution to GDP, but this was largely down to the success of publicly-owned factories in industries such as iron, steel, chemicals and cement manufacture; most other factories still had very low productivity figures. Statistics compiled by the Secretariat of the People's General Committee of Industry on twenty factories in 1988 revealed that the rate of exploitation or "actual production" in these factories was between 4% and 61% of capacity, with 50% of the factories achieving an exploitation rate of less than a third (General People's Committee for Industry, Economy and Trade, 2011). Another study carried out by the National Authority for Scientific Research on 30 factories showed that the rate of productivity or "production achieved to maximum capacity" was no more than 29% in any of the factories, and that this had declined to 0% by the end of September 1989. This decline in the rate of productivity resulted in a widespread shortfall in supply. The market was unable to meet the growing needs of consumers, and a black market emerged which led to higher prices and a devaluation of the Libyan dinar (General People's Committee for Industry, Economy and Trade, 2011).

The crisis was further deepened by the embargo imposed on Libya in 1992 by the UN Security Council, supported by the USA and the UK, which involved the imposition of sanctions and the freezing of Libyan financial assets. As the sanctions took hold, supplies of goods and raw materials needed by the production sector, especially the oil industry, dried up. Libyan Airways ceased its international flights, further handicapping production. The slowing of foreign trade and the need to import essential goods through intermediaries incurred high costs for the Libyan economy, especially in the weakened oil sector. Table 4-3 shows the contribution made by different sectors to GDP from 1981 to 1996.

Table 4-3 Contribution of the Different Sectors to Gross Domestic Product (GDP) from 1981 to 1996 (%)

Year / Sectors	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
Agriculture, Forestry and Fishing	3.1	3.2	3.6	4.1	4.4	5.7	6.9	6.5	5.9	5.1	5.5	5.5	5.8	6.1	6.4	6.6
Oil and Natural Gas	50.0	47.4	44.9	41.1	44.6	35.6	28.8	24.7	27.0	35.4	33.0	28.3	27.1	25.8	25.3	24.0
Mining and Quarrying	0.6	0.7	0.8	0.7	0.6	0.9	1.2	1.4	1.4	1.4	1.3	1.4	1.5	1.7	1.5	1.8
Manufacturing Industry	2.9	3.0	3.9	4.6	5.4	5.3	7.1	7.3	6.7	7.1	6.7	7.8	8.3	8.8	9.3	9.4
Electric and Water	0.6	0.8	0.9	1.2	1.4	1.7	2.0	2.0	2.4	2.0	2.2	1.9	1.9	1.9	2.0	2.0
Construction	11.3	13.2	12.0	11.1	8.6	7.3	6.9	6.2	6.4	5.9	4.0	5.2	5.2	6.1	5.6	6.8
Trade, Restaurants and Hotels	7.4	6.6	5.7	5.5	7.3	9.4	11.1	11.7	11.0	10.2	10.4	10.6	10.8	11.1	11.2	11.4
Transport and Communication	5.6	5.2	5.4	5.9	6.0	7.2	9.3	9.5	8.4	8.3	8.3	8.5	8.8	8.5	8.7	8.7
Banks and Insurance	3.4	2.9	3.7	3.6	3.2	6.1	5.5	4.4	4.4	3.7	3.0	2.7	2.7	2.7	2.7	2.7
Housing	2.5	2.5	2.8	3.1	3.1	3.7	4.5	4.6	4.2	3.9	3.7	3.8	3.8	3.8	3.7	3.6
Public Services (Except Education and Health)	7.4	8.4	8.8	10.5	6.3	6.7	6.0	7.8	8.3	7.0	9.2	12.9	12.7	12.3	12.2	11.4
Education Services	3.1	3.9	4.8	5.4	5.5	6.3	5.8	8.3	8.3	5.5	7.3	6.2	6.1	5.9	5.8	5.5
Health Services	1.5	1.5	1.9	2.2	2.4	2.7	2.8	3.3	3.4	2.3	3.1	2.5	2.5	2.4	2.3	2.2
Other Services	0.6	0.7	0.8	1.0	1.2	1.5	2.0	2.2	2.1	2.2	2.4	2.6	2.8	2.9	3.3	3.9
	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Source: (The Secretary of Planning, 1997, cited in (Mashat, 2005, p.38)

Surplus and abundance once more: 1999 to date

This period has witnessed a relative transformation of the Libyan economy for the better. Sanctions were suspended in 1999 and then fully lifted in September 2003, but arguably more important was the USA's decision to lift its trade embargo on Libya in September 2004. The lifting of sanctions in 1999 and subsequent increase in volume of Libyan oil exports coincided with relatively high oil prices, which together helped support economic growth.

As Libya has opened up to the world, especially the Western countries and the USA, foreign companies have raced to enter its markets, investing in oil, tourism and trade. The authorities have encouraged investment by issuing a number of laws to ensure that foreign investors are granted their rights. The gates have been opened to local, Arab and foreign investors to invest billions of dollars in residential, real estate, hospitality and entertainment construction projects. Libya is now striving to encourage global capital investment in the country. There are already plans to build large residential projects and to restore many of the public hotels and reopen them under global hotel brands, as well as many other investment opportunities which will come into force within the next five years. There were an estimated 169 foreign investment projects underway in the country in 2010 at an estimated total cost of 17 billion Libyan dinars; foreign contributions accounted for 83.31% of this, with the rest being local contributions (Encyclopedia of Arab Africa Economic Integration, 2012). Economic growth is expected to continue in line with the anticipated rise in exports as oil production, fuelled by increased foreign investment, rises from the current 1.7 million barrels per day to about 3 million barrels per day by 2015.

During the sanctions, fluctuations in oil prices and unstable revenues forced Libya to diversify its economic structure and search for alternative revenue sources such as agriculture, tourism and manufacturing. As highlighted above, investment is now being channelled into a range of sectors; nevertheless, as Table 4-4 and Table 4-5 show, oil revenues remain the central plank of the Libyan economy.

Table 4-4 Libyan Exports in the Period 1996-2008

Year	Oil exports %	Non-oil exports %
1996	81.3	18.7
1997	92.1	7.9
1998	92.9	7.1
1999	93.5	6.5
2000	96.3	3.7
2001	95.3	4.7
2002	97.8	2.2
2003	94.9	5.1
2004	96.3	3.7
2005	97.3	2.7
2006	96.0	4
2007	96.6	3.4
2008	98.00	2.0

Source: (Central Bank of Libya, 2005a; Central Bank of Libya, 2006a; Central Bank of Libya, 2007a; Central Bank of Libya, 2008a; Central Bank of Libya, 2009a; Zubek, 2008, p.29)

Table 4-5 Contribution of the Different Sectors to Gross Domestic Product (GDP) from 1999 to 2008 (%)

Year / Sectors	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Agriculture, Forestry and Fishing	10.3	6.8	3.7	3.8	3.5	3.5	3.4	3.6	3.5	3.4
Mining and Quarrying (Including Oil and Gas)	30.0	45.9	54.1	50.3	53.6	53.5	52.3	51.5	49.6	49.2
Manufacturing Industry	6.1	5.4	4.9	5.2	5.3	5.3	5.1	5.1	5.2	5.3
Electric and Water	1.9	2.1	1.7	2.0	2.0	2.0	2.1	2.2	2.3	2.4
Building and Construction	5.7	6.2	5.1	6.1	4.7	4.8	5.2	5.3	6.3	7.1
Trade, Restaurants and Hotels	12.0	6.7	4.3	5.3	5.0	5.1	5.6	5.7	6.0	6.1
Transport and Communication	8.6	5.1	4.2	5.0	4.8	5.0	5.7	6.0	6.4	6.6
Financial Services	2.3	2.1	1.4	1.8	1.6	1.5	1.5	1.6	1.7	1.7
Real Estate and Renting and Business Activities	5.7	8.2	10.4	11.2	10.2	10.0	9.5	9.3	9.5	9.3
Public Services (Except Education and Health)	16.8	10.9	9.6	8.7	8.7	8.7	9.0	9.1	8.9	8.8
Education Services	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Health Services	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Other Services	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	100	100	100	100	100	100	100	100	100	100

Source: (Central Bank of Libya, 2006b; Central Bank of Libya, 2007b; Central Bank of Libya, 2008b; Central Bank of Libya, 2009b)

4.6 The Accounting System in Libya

As already noted, Libya was occupied by various colonists before it achieved independence in 1951. These included the Ottomans (Turkish) between 1551 and 1911, the Italians (1911-1945) and the joint administration of the UK and France (1945-1951). There was no accounting regulation in Libya during these periods. Most accounting practice was decided by foreigners in accordance with imported legislation and principles (Bait El-Mal, 1973). Libyan decision makers were excluded for several reasons, including the colonial situation, the language barrier, the poor educational level of locals and the nature of the prevailing economy, which tended to be driven by individual entrepreneurship.

From independence in 1951 until the discovery of oil in 1959, the state of the Libyan economy remained largely unchanged, keeping Libya among the poorest countries in the world logistically and financially, according to reports by the UN and the World Bank (The International Bank for Reconstruction and Development, 1960). The Italian occupiers had made no attempt to equip Libyans to manage their country by educating them or providing them with technical training. This led to a severe shortage of trained technical, financial and administrative personnel.

4.6.1 The Evolution of Libya's Accounting Legislation and Practice

The accounting and auditing profession was initially open to all Libyans, regardless of their professional qualification or experience or how little they knew of its origins, rules and ethics. The result was that the public had little trust in or respect for the profession (BenGharbia et al., 1987). To address the low status of the profession and clarify the responsibilities of accountants and auditors, a series of laws were enacted in 1953 in both public and private domains (Council of Ministers, 1954). However, in the absence of any local expertise, most of these laws were prepared by non-resident Arab experts (Egyptian, Lebanese and Iraqi) who had an inadequate knowledge of the Libyan environment. The 1953 Commercial Law cannot therefore be seen as representing a response to the requirements and interactions of the Libyan environment. In fact, it advocated a model of financial accounting that was rooted in the French experience (Council of Ministers, 1954).

The discovery and export of oil in the 1950s and early 1960s created a burst of economic activity that started to attract foreign investors, and the need arose for accounting services under temporary licence (Bait El-Mal, 1973). Most accounting and auditing offices were owned by non-Libyans (language problems and low levels of education among Libyans meant that they were largely excluded); accounting was done by external, non-national parties in accordance with imported legislation and principles.

At the beginning of the 1970s, the majority of Libyan companies and economic activities were nationalised, and most accounting and auditing offices were taken into public ownership. But there was still no legal regulation of the profession or standards governing accounting practice. The first Libyan attempt to regulate accounting practice was Law 116, passed in 1973 (Council of Ministers, 1974).

With the passage of this law, the profession became better organised. Among other innovations, the new legislation required practitioners to be qualified to an appropriate academic level and to have five years' experience (Council of Ministers, 1974). The Association of Libyan Accountants and Auditors was established as the first professional organisation in the field of accounting and auditing in Libya, with its first Council being formed in 1975. Also in 1975, Law 79 heralded the establishment of the Audit Bureau, an independent body tasked with achieving effective control over public funds (Council of Ministers, 1975).

By the end of the 1970s, the public sector dominated economic activities in Libya to such an extent that few perceived a need for an accounting and auditing profession apart from the Audit Bureau, which had responsibility for inspecting and reviewing public sector accounts. There were no significant developments at the local level, and the accounting and auditing profession in the private sector remained at a standstill during this period.

The increased burden being placed on the Audit Bureau obliged it to seek out auditors from the private sector, and in 1980, its President issued guidelines (56) pertaining to the classification and remuneration of accountants and auditors from outside the Bureau. The guidelines also covered a number of rules for the inspection and review of public companies (Audit Bureau, 1981). In 1996, Law 11 gave the Audit Bureau administrative and financial oversight over all public bodies; the Bureau was charged with detecting any crimes and financial or administrative irregularities.

Gradually, more and more accounting and auditing was done by private companies under the authority of the Audit Bureau. It was also carried out by auditors from the General People's Committee's Department for Financial and Technical Control. Legislation was introduced to strengthen the accounting and external audit functions; for example, Article 4 of Act No. 21/2001 stipulated that a company's financial statements must be reviewed by auditors before being submitted to the General Assembly for adoption (General People's Congress (Parliament), 2001), while Article 26 of Law 49 (2002) obliged joint stock companies to submit to an external audit. According to Law 1 (2004), economic entities could be individuals, families, cooperatives, shareholding companies – including holding companies and institutions – and public companies (General People's Congress (Parliament), 2004). Finally, Article 25 of Law 1 (2005) assigned a financial and technical watchdog to audit both the central and commercial banks in accordance with international standards in auditing and accounting (General People's Congress (Parliament), 2005).

4.6.2 Assessment of the Accounting and Auditing Profession in Libya

The Government’s efforts to promote accounting and auditing practice are in line with its general move towards a free market economy, as seen in the privatisation of the public sector, the encouragement of domestic and foreign investment and the establishment of a securities market. However, in the continuing absence of a set of integrated standards and rules or ethics of professional conduct, the indications are that these efforts have done little to raise the level of professional performance (Darwish and Ghali, 2006). A study conducted by a team from the Centre for Research and Economic Sciences to identify and assess current physical accounting practices in Libya (Bait El-Mal, (1990) highlighted clear differences between similar companies in terms of their application of current accounting principles. This leads to differences in the published accounting data and makes it more difficult to compare them. The majority of companies in the study did not attend to the basic rules when preparing financial reports, making the published accounting data less reliable and often delaying it. This data is of little help to those making economic decisions.

The study recommended the formation of an official party which would be responsible for the issuance of principles, rules and procedures governing the work of accountants.

Such guidance would also help accountants resolve technical problems and help develop the accounting profession and its systems.

A study conducted by Sratee (2002) of 13 industrial companies also found that the publication of financial statements by corporations is often delayed. These financial statements are usually limited to an income statement and balance sheet and exclude cash flow statements or clarifications regarding the sources and uses of the company's financial resources. Al-Arabi and Darwish's study (2003) on the appropriateness of accounting assessment methods for projects being offered for private ownership highlighted a number of problems with the validity of many of the principles and accounting rules being employed to make accounting adjustments and in the preparation of financial statements, particularly with regard to accumulates, allowances and merchandise inventory. The researchers attributed these problems to the lack of standards and local accounting rules. Reports issued by the Audit Bureau have made similar observations.

Al-Sharif (2006) conducted a study to investigate the reality of the accounting profession in Libya in order to identify the difficulties facing the profession and to make suggestions for its development. Having conducted personal interviews with a number of Libyan experts, he diagnosed a number of difficulties, most notably the weakness of the accounting education system, the absence of professional regulatory bodies and the lack of organised and binding accounting standards. He proposed the establishment of a professional governing body and the adoption of international accounting standards, adjusted to suit the local environment, until local standards can be issued.

Having resolved its problems with the USA and other Western countries, Libya requested to join the World Trade Organisation (WTO) in the second half of 2004. It was told that to do so, it must meet international conditions set out by the WTO, one of which is the institution of recognised professional qualifications (Mahaishi, 2006).

Efforts are indeed underway to raise the level of the profession and respond to the many challenges it faces. The first challenge is to restructure the profession and make it more organised. It has been largely absent from the professional arena over past decades; in an economy dominated by public enterprises, the accounting and auditing functions have been given over to the Audit Bureau. The second challenge is to respond to the trends within Libyan society. The public sector is being privatised, domestic and foreign investment is being encouraged, a securities market has been established and international accounting standards are being adopted by the banking sector and the stock market. Increasingly, Libyan accounting professionals are having to compete with foreign accounting firms entering the Libyan market.

Among the efforts made to promote the accounting/auditing profession in Libya are the introduction of Banking Law 1 (2005), which stipulates in Article 25 that Libyan banks must apply international accounting standards (General People's Congress (Parliament), 2005). Article 55 of the Statute of the Libyan Stock Exchange for 2006 states that companies seeking to list shares on the securities market in Libya must apply international accounting standards (Libyan Stock Market, 2011). Also in 2006, the Finance Minister issued Resolution No. 273, proposing the formation of a founding body or professional academic institution to be in charge of developing accounting and auditing in Libya. Accordingly, the Libyan Accounting Complex was set up to oversee the issuance of rules governing accounting and auditing. The hope is that this will foster an improvement in the quality of financial information.

4.7 Environmental Disclosure (ED) in Libyan Law

Since human beings and other living organisms depend on the environment for their survival, a legal framework is needed to protect and preserve it against pollution, and to determine responsibility for any pollution or damage that does occur.

Corporate environmental liability is determined by the extent to which companies comply (or not) with laws and regulations established by the relevant authorities, so it is imperative that these laws keep abreast of any changes arising from developments in technology. As interest in environmental issues has grown among pressure groups, environmental organisations, governments, investors and others, most countries have introduced legislation to protect and conserve the environment.

Libyan lawmakers have played a prominent role in preserving the environment and preventing pollution in its various forms through the issuance of a number of laws. One of the most important steps taken by the General People's Committee (Council of Ministers) to reduce pollution and identify corporate environmental responsibility was the issuance of Resolution No. 263 (1999). This established the Public Environment Authority as an independent body with a legal personality and independent financial status (under the auspices of the General People's Committee). The Authority has wide-ranging powers in its mission to protect the environment against pollution (General People's Committee of Libya (Council of Ministers), 1999). It is permitted to conduct investigations of individuals and public and private bodies, whether domestic or foreign, and to supervise and enforce their adherence to the regulations it sets. The Authority’s employees are known as

Judicial Officers, in accordance with the Criminal Procedures Act. The key legislation used by the Authority to protect the environment from pollution and determine corporate environmental liability is summarised below.

4.7.1 Act No. 7/1982 Regarding Environmental Protection (Libyan Secretary of Justice, 1982)

One of the most important laws to have been passed is Act No. 7 of 1982 for the protection of the environment. One of the first environmental protection laws in Libya was Act No. 8 of 1973, which was designed to prevent oil spills at sea (General People's Congress (parliament), 1973); however, it was limited in scope and as industrial technology developed, environmental pollution increased. Consequently, Act No. 7/1982 was passed and Act No. 8/1973 was redrafted to make it more comprehensive.

The first article of Act No. 7/1982 defines pollution as any event in which human health or the safety of the environment are threatened by contamination of the air, sea, water sources or soil; noise, vibration and odours; or any other pollutants generated by the activities of an individual or legal entity. It also confirms that the objective of this law is to protect the environment in which humans, along with all other organisms, live. It was designed to encourage individuals, institutions and national and foreign companies to make their best efforts to reduce pollution, and to compel anyone polluting the environment to report any incident of contamination.

The second article focuses on the prevention of atmospheric pollution, enjoining facilities and factories to prevent the emission of toxic gases into the air and stipulating that licences will only be granted where machinery and equipment meet all specifications and pass the relevant tests. The aim of Article 3 is to protect seas and marine resources: it forbids fishing using fire crackers, toxic and narcotic substances, or any other materials harmful to marine organisms; and ships are warned against dumping waste oil mixture into the sea. Article 4 relates to the protection of water from both surface and groundwater sources, while Article 7 concentrates on the protection of soil and plants. This article enjoins the relevant authorities to use agricultural land rationally and to improve the soil, to prevent the use of forests as landfills for oil and chemical wastes, and to increase green vegetation. The tenth article stipulates the penalties and sanctions to be applied to those who violate the law. Penalties start with fines and may even involve the confiscation of the tools and equipment used to commit the violation.

4.7.2 Act No. 13/1984 Regarding the Provisions for Public Hygiene (General People's Congress (parliament), 1984)

This act determines the procedures for the collection and disposal of garbage and waste and specifies who is responsible for performing these tasks. Article 3 prohibits individuals, committees, institutions, companies and public and private organisations, whether local or foreign, from disposing of any waste in places other than those allocated to them, while Article 5 requires companies and facilities producing environmentally harmful waste such as industrial and chemical remnants to collect their toxic residues and dispose of them through technically approved means, in accordance with local ordinances (city authorities usually allocate waste disposal sites for garbage and solid and liquid waste).

4.7.3 Act No. 15/2003 On the Protection and Improvement of the Environment (General People's Congress (parliament), 2003)

This act consists of eleven chapters, with each chapter pertaining to a specific type of pollution. Each chapter is divided into several provisions. In its first article, this law defines the environment as the context in which all living beings, including humans, live.

This environment comprises air, water, soil and food, whether in the context of home, work, or elsewhere. Pollution is defined as the condition or situation emanating from human or natural exposure to contaminated air, sea, water sources or soil; noise, vibrations and odours; or any other pollutants caused by the activities of individuals or organisations. Article 2 states that the purpose of the act is to achieve control over the environment with a view to protecting it against pollution and improving the quality of the water, soil and food upon which we and all other living organisms depend. It also aims to find practical ways to measure and prevent pollution and its harmful effects. Article 3 states that all committees, organisations, local bodies, individuals and public and private firms, national and foreign, are required to endeavour to reduce the spread of pollution from whatever source. Anyone contributing to the pollution of the environment in any way should take the necessary measures to rectify the issue. Furthermore, the listed parties should apply all measures stipulated in this and other environmental laws.

The fifth article requires all public and private, national and foreign companies to include in their urban and industrial development plans measures to maintain the balance of the environment. These corporate organisations are also bound by special conditions to prevent noise pollution. Article 8 states that the Public Environment Authority possesses the right to inspect and supervise all parties in respect of environmental protection, while Article 9 authorises the Authority to create a sub-department called the Environment Police (its members to be known as Judiciary Officers) to carry out these environmental inspections. In Article 11, factories emitting air pollutants are required to keep a special register to submit to the relevant authority detailing the type, components and amounts of these pollutants. They are also under a legal obligation to adopt preventative measures to reduce and deal with any type of pollution, and to disclose the measures they are taking to minimise pollution and its impacts.

Contained in the eleventh chapter are fifteen articles covering the penalties for breaking these laws, from the imposition of fines to the confiscation of machinery and equipment causing pollution.

4.8 Summary

The last 60 years have seen Libya go from being under the control of others, to become an independent monarchy, an Arab Republic, a totalitarian regime and finally, a multi-party democracy. In the course of this politically tumultuous period, Libyans have witnessed a military coup, Government-perpetrated atrocities and a popular revolution. In economic terms, the crucial turning point in this period was the discovery of oil and its exportation in large commercial quantities. This turned Libya from a deficit economy, in which 70% of the population were forced to work on the land and most Libyans lived at subsistence levels, into an economy of surplus, in which oil revenues cover both the balance of payments and the public budget.

Overall, the most important facets of the Libyan economy over the past four decades have been its dependence on the public sector and on oil revenues. In some years, these revenues have accounted for more than 60% of GDP and more than 98% of total exports. Despite implementing a number of public development projects in the seventies and eighties, the Government has largely failed to improve the productivity of other sectors such as agriculture and industry.

A review of accounting and audit practice in Libya highlights the relative weakness of the country in this professional field. Numerous attempts have been made to raise the level of professional performance, but they have had only marginal effect due to the absence of a set of integrated standards and rules or ethics of professional conduct. Nevertheless, efforts continue to bring accounting practice into line with developments in Libyan society such as the privatisation of the public sector, the encouragement of domestic and foreign investment and the establishment of a securities market. Among these efforts is the introduction of laws and statutes stipulating that Libyan banks and companies wanting to list their shares on the securities market must apply international accounting standards.

Chapter Five: Research Methodology and Methods

5.1 Introduction

The literature reviewed in the previous chapters (2, 3 and 4) shaped the theoretical framework for this study and helped determine its methodology. The objective of this chapter is to set out the research methodology, procedure and methods, demonstrating how these were designed to answer the research questions and achieve the research objectives. The chapter is structured as follows: it begins by discussing the definition of research, the philosophical assumptions that underlie research and the various research paradigms. It goes on to describe the types of research that can be undertaken, outlining the key characteristics of the quantitative and qualitative approaches. It then describes the methodology and methods of data collection adopted in the present study, justifying the choice of the content analysis, questionnaire and interview techniques. This is followed by an explanation of the statistical methods and techniques that have been used to analyse the data.

5.2 Research Philosophies

5.2.1 Definition of Research

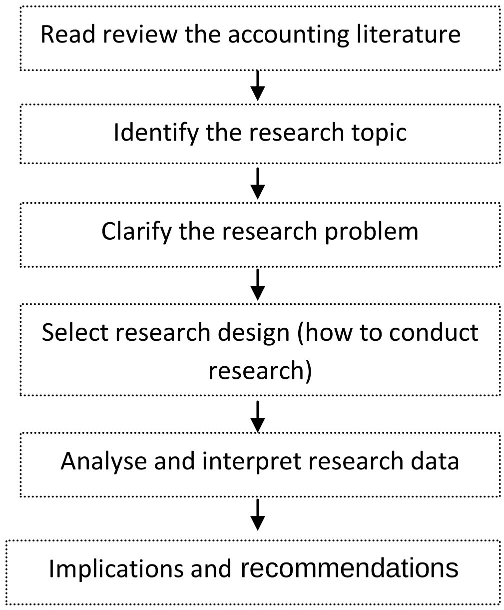
Research is important for achieving progress and development in all fields of knowledge; it employs methods and instruments to help find solutions to life's problems. Any society seeking to develop or achieve intellectual, social and scientific advancement should pay attention to research as one of the most essential sources of knowledge. Scientific research has been defined in a number of ways, with definitions varying in terms of objectives and scope.

Research has been defined as a process of investigation: finding out things in a systematic way so as to solve practical problems and increase knowledge (Saunders et al., 2012). It has also been defined as something undertaken to find a solution to a particular problem.

Although research is of interest to both academics and business, there is disagreement in the literature as to how it should be defined. One reason for this is that it means different things to different people (Hussey and Hussey, 1997). However, the vast majority of definitions agree that research is the study of a problem using scientific methods with a view to identifying it and finding solutions. Research may be undertaken with the aim of reviewing and synthesising existing knowledge, investigating the nature of situations or problems, offering solutions to problems, discovering and analysing more general phenomena, constructing new procedures or systems, explaining a new phenomenon, creating new knowledge, or a combination of any of these (Hussey and Hussey, 1997). The scientific methods employed should therefore be flexible enough to suit a variety of objectives and purposes: generating new knowledge, describing, interpreting, forecasting, providing evidence to link causes and consequences and giving insight into the relationship between event variables (Ellabbar, 2007).

The first step is to understand the nature of the problem. Subsequent steps are taken to collect information, analyse the data and determine the elements that are related to the problem. According to Sekaran (2003), the problem can be solved if the right corrective action is adopted. The first step here was the review of the accounting literature, which allowed the definition of the research problem: the lack of studies on ED in developing countries, particularly Libya, and the lack of consensus as to what drives companies to disclose (or withhold) environmental information. The second step was to collect data from the research population; the third was to analyse this data and delineate the factors that are associated with the problem; the final steps were to draw conclusions and recommend possible solutions to the defined problem. Figure 5.1 presents a simplified summary of the stages in the present research.

Figure 5.1 Fundamental Stages Adopted in the Present Research



Source: (Author's own)

5.2.2 Philosophical Assumptions

The association between theory and data has been a matter of discussion among philosophers for long time. Failure to understand the philosophical issues may have a negative impact on the quality of the research (Smith et al., 2012). There are many reasons why an understanding of philosophical issues is helpful. For example, knowledge of philosophy can help to clarify research design. This not only involves considering what sort of evidence is required and how it is to be gathered and interpreted, but also how this will give reasonable answers to the questions being raised in the research. Knowledge of philosophy can help the researcher to recognise which designs will work and which will not, to recognise and recreate designs that may be outside of their experience, or suggest ways in which they might adapt research designs according to the constraints of different subjects or knowledge structures (Smith et al., 2004).

Every piece of research is based on specific philosophical assumptions, which are either implicitly or explicitly expressed (Hanafi, 2006). These assumptions have direct implications for the research strategy and the methods chosen for data collection. Thus, the researcher must consider the philosophical assumptions underlying their research before they design their study (Creswell, 2009). The researcher must decide their stance on the nature of reality (ontology), how they know what they know (epistemology) and the role of values in the research (axiology).

5.2.3 Research Paradigms

In simple terms, a paradigm is a set of propositions, beliefs and dictates which explain how the world is perceived. It encompasses a world view and a way of breaking down the complexity of the real world, telling researchers and social scientists in general what should be studied, what is important, how research should be conducted and how results should be interpreted (Bryman, 1988; Sarantakos, 2005). There are two main research paradigms: qualitative and quantitative. Some authors prefer to use the term phenomenological or interpretivist rather than qualitative and positivistic or experimentalist rather than quantitative. The present research adopts the terms qualitative and quantitative because they are more common (Hussey and Hussey, 1997). In the literature, a variety of terms are used to describe these paradigms. They are summarised in Table 5-1 and discussed in further detail throughout the chapter.

Table 5-1 Alternative Terms for the Main Research Paradigms

Positivistic paradigm	Phenomenological paradigm
Quantitative	Qualitative
Objectivist	Subjectivist
Scientific	Humanistic
Experimentalist	Interpretivist
Realism	Nominalism
Determinism	Voluntarism
Nomothetic	Ideographic

Source: (Hussey and Hussey, 1997; Smith et al., 2004; Smith et al., 2012)

Ontology

Ontology is concerned with the nature of reality (Saunders et al., 2003), including the nature of social entities and their characteristics (Creswell, 2007). Ontological assumptions and commitments affect the ways in which research questions are formulated and how research is carried out. If a research question is formulated in such a way as to suggest that organisations and cultures are objective social entities that act on individuals, the researcher is likely to emphasise the formal properties of organisations or the beliefs and values of members of the culture. Alternatively, if the researcher formulates a research question so as to stress the tenuousness of organisation and culture as objective categories, it is likely that emphasis will be placed on the active involvement of people in reality construction (Bryman, 2001). Researchers following the qualitative paradigm are embracing the idea of multiple realities; that reality is subjective and perceived differently by each study participant (Creswell, 2007). On the other hand, researchers employing the quantitative paradigm view reality as objective, singular and external to the researcher (Hussey and Hussey, 1997). Table 5-2 summarises the relationship between research paradigms and ontology as one of the philosophical assumptions.

Epistemology

The word epistemology comes from two Greek words: "Episteme which means 'knowledge' or 'science' and Logos which means 'knowledge', 'information', 'theory' or 'account'"(Johnson and Scholes, 1997, cited in (Elmogla, 2009, p.112). Epistemology is "a general set of assumptions about the best ways of inquiring into the nature of the world" (Smith et al., 2012, p.18). It is a crucial philosophical concept for social scientists as it is concerned with the study of knowledge. It involves the examination of the relationship between the researcher and that which is being researched, and whether the two can be separated (Hussey and Hussey, 1997).

According to the proponents of the quantitative paradigm, only phenomena which are observable and measurable can be regarded as knowledge (Hussey and Hussey, 1997), and the researcher should maintain a distance from what he is researching. Proponents of the qualitative paradigm, on the other hand, minimise the distance between the researcher and the researched, arguing that the researcher should try to get as close as possible to the participants. In practice, the qualitative researcher conducts their study in the field – where the participants live or work – as the context is the key to understanding their views and opinions (Creswell, 2007). The relationship between the research paradigms and epistemology as one of the philosophical assumptions is summarised in Table 5-2. Healy and Perry (2000) p117) argue that "ontology is the reality that researchers investigate, epistemology is the relationship between that reality and the researcher, and methodology is the technique used by the researcher to investigate that reality”.

Axiology

Axiology is a branch of philosophy that studies judgements about value (Saunders et al., 2003). As the science of human values, it enables us to identify the internal value systems that influence our perceptions, decisions and actions – to clearly understand why we do, what we do and how we go about doing it. Supporters of the quantitative paradigm argue that science and the process of research are value-free and unbiased, and that they are unaffected by the researcher’s choice of what to study and how to study it (Hussey and Hussey, 1997). In other words, the research is determined by objective criteria rather than by human beliefs and interests. At the other extreme, the supporters of the qualitative paradigm argue that the researcher brings their values to a study, even if these are not explicit (Creswell, 2007). Thus, the research is inherently biased and value-laden. The relationship between research paradigms and axiology as one of the philosophical assumptions is also summarised in Table 5-2.

Table 5-2 Relationship between Research Paradigms and the Philosophical Assumptions

Philosophical assumptions	Question	Quantitative paradigm	Qualitative paradigm
Ontological	What is the nature of reality?	Reality is objective, singular and external to the researcher.	Reality is subjective and multiple as seen by study participants.
Epistemological	What is the relationship of the researcher to the researched?	Researcher is independent from that being researched.	Researcher interacts with that being researched.
Axiological	What is the role of values?	Value neutral Value-free inquiry.	Value-laden and biased.
Methods	What are the methods used for data collection and analysis?	Quantitative, mathematical, extensive use of statistics.	Qualitative with less emphasis on statistics; verbal and descriptive analysis.
Data analysis	What are the analysis methods?	Analysis is based on the statistical testing of given theories.	Analysis is based on verbal, action and description, from which theory evolves.

Source: (Creswell, 2007; Hussey and Hussey, 1997; Sarantakos, 2005)

5.2.4 Types of Research Paradigm

As mentioned above, there are essentially two contrasting views of how social science research should be conducted; these may be classified as the qualitative and quantitative paradigms. Research projects may employ one or the other, though some researchers prefer to use both, arguing that this facilitates triangulation. These paradigms are discussed in further detail below.

Quantitative paradigm

The quantitative methods used in social science are drawn from natural science (Morgan and Smircich, 1980). In quantitative approaches (sometimes known as research surveys), the quantum of the item under investigation is measured and the collected data presented statistically (Saunders et al., 2012). Hussey and Hussey (1997) identify the quantitative paradigm as an objective approach involving the collection of numerical data and its analysis by means of statistical tests. Quantitative research grows out of a strong academic tradition, which places considerable trust in the ability of numbers to represent opinions or concepts (Amaratunga et al., 2002). According to Patton (2002, p.14), quantitative methods entail "the use of standardized measures so that the varying perspectives and experiences of people can be fitted into a limited number of predetermined response categories to which numbers are assigned".

Although the quantitative approach has many advantages, such as objectivity and reliability (Hussey and Hussey, 1997), it is heavily reliant on statistical methods in the analysis (Saunders et al., 2012). These methods may be unable to secure answers to some questions, especially those relating to opinions and views.

Qualitative paradigm

The qualitative paradigm attempts to understand behaviour and institutions by getting to know the persons involved and their values, rituals, symbols, beliefs and emotions (Nachmias and Nachmias, 2008). Corbin and Strauss (2008) argue that qualitative research, broadly defined, means any type of research that produces findings not arrived at by means of statistical procedures or other means of quantification; instead, this type of research uses a naturalistic approach that seeks to understand a phenomenon in context-specific settings. Thus, it produces findings obtained from real-world settings where the "phenomenon of interest unfolds naturally" (Patton, 2002, p.39).

The qualitative approach is based on the study of a natural phenomenon in context and uses words and images as its data rather than numbers. It depends on the analysis of empirical data (Saunders et al., 2012), which is collected directly from observation and through the extensive examination of documents. The operations that are observed may be more important than the results. According to Hussey and Hussey (1997), it is a subjective approach which involves examining and reflecting on participants' perceptions in order to gain an understanding of human social activities.

Researchers conduct qualitative research when they need to understand a complex issue in detail. This detail can only be gathered by talking directly with respondents, sometimes in their homes or offices, and allowing them to express their views and opinions. These views and opinions can then be examined to gain insight into the phenomenon under investigation (Cassell and Symon, 1994; Corbin and Strauss, 2008; Hussey and Hussey, 1997).

Qualitative methods facilitate the collection of information which would be difficult to express in quantitative or statistical terms. They can help to answer "how" and "why" questions but are less helpful with "what" questions. In contrast, quantitative methods can help to answer the "what" questions but are less helpful in answering the "how" and "why" questions (Momin, 2006). Yin (1993, p.57) states that "qualitative research is characterised as being 'soft', as social science is interested in 'mushy' processes and deals with inadequate evidence, while quantitative research is considered hard-nosed, data-driven, outcome-oriented, and truly scientific". A number of authors have identified the differences between the qualitative and quantitative approaches:

- The aim of the enquiry differs. Qualitative research is mainly interested in understanding the complex interrelationships between different variables, while quantitative researchers are primarily concerned with arriving at an explanation.

- There is a distinction between knowledge discovered and knowledge constructed. Qualitative researchers believe that knowledge is constructed rather than discovered. Proponents of qualitative research see this approach as a useful tool to discover meanings and interpretations.
- There is also a distinction in terms of the role of the researcher. Researchers have a limited influence on the research setting in quantitative research, while it is more strongly pronounced in qualitative research.
- Approaches to data analysis differ: in quantitative research this is conducted through the use of diagrams and statistics, while analysis in qualitative research is accomplished by means of conceptualisation (Saunders et al., 2012; Silverman, 2006; Stake, 1995).

Triangulation

The quantitative approach is characterised by numerical data and information which can lead to quantitatively measurable results; however, calculating numbers and obtaining results without the support of qualitative methods may lead to less effective and less accurate outcomes. It has been argued that it is far more effective to apply both approaches – quantitative and qualitative – and gain the advantage of triangulation (Yin, 1993).

Hussey and Hussey (1997, p. 74) define triangulation as "using different research approaches, methods and techniques in the same study thus overcoming the potential bias and sterility of a single-method approach", while Denzin (1970, p.297) calls it "the combination of methodologies in the study of the same phenomenon". Silverman (2006) agrees that triangulation usually refers to the combination of multiple theories, methods, observers and empirical materials to produce a more accurate, comprehensive and objective representation of the object of study. The use of triangulation in the social sciences can be traced back to Campbell and Fiskel (1959, cited in Jick, (1979, p.602), who argued that "more than one method should be used in the validation process to ensure that the variance reflected is that of the trait and not of the method".

It has been argued that triangulation allows the researcher to achieve a deeper and broader understanding of the phenomenon under study than a single methodological approach, while adding to the transparency, validity and reliability of the research (Cameron and Price, 2009; Denzin, 1970). Creswell and Clark (2011) even argue that mixed method research helps answer questions that cannot be answered by qualitative or quantitative methods alone. It may therefore be argued that triangulation is integral to good research design; it cannot, however, be used to compensate for poor research design (Hussey and Hussey, 1997).

5.3 Methodology and Method

Methodology has been defined in numerous ways. Saunders et al. (2012) define methodology as the theory of how research should be undertaken. It has been called the science of means – those standards and principles which guide the choice, structure, process and implementation of methods (Sarantakos, 2005). Method, meanwhile, refers to those means by which data can be collected and/or analysed (Hussey and Hussey, 1997), or the tools and procedures used to obtain data (Saunders et al., 2012). Thus, methods are different from methodologies. Methodology refers to the overall approach to the research process, from the theoretical underpinning to the collection and analysis of data. Like theories, methodologies cannot be true or false; only more or less useful (Silverman, 2006). Methodology is concerned with a number of key issues: how the data to be collected is chosen, the sort of data collected, where it is to be collected from, when and how it is to be collected and how it is to be analysed (Hussey and Hussey, 1997).

The most commonly used methods are interviews, questionnaires, panels (including focus groups), observation, documents and databases. It is common but wrong to make an easy connection between research methodology and particular methods, because most research methods can be used to collect either qualitative material (words) or quantitative material (numbers). For example, it is often assumed that quantitative methodology uses questionnaires and databases, whereas qualitative methodology uses interviews, observation and documents (Fisher, 2004; Silverman, 2005). In order to choose the best method for data collection, the researcher should have a good understanding of what type of data is needed (qualitative or quantitative) and the characteristics of the research population. Quantitative data is collected in numerical form and analysis is done by means of statistical testing, while qualitative data is non-numerical and analysis focuses on verbal responses, action and description (Hussey and Hussey, 1997).

Although the interview method is often associated with the gathering of qualitative data, it can also be used to gather quantitative data (Bryman and Bell, 2011). Structured questions which only allow interviewees to choose from a limited range of answers can produce numerical data for statistical analysis. However, if the researcher wishes to obtain answers to a number of fairly simple questions, then a questionnaire might well be more appropriate (Cameron and Price, 2009). When using interviews to collect quantitative data, it is important to take the sample size into consideration. Generalisability will be improved by using a larger sample, but the labour-intensive nature of interviews may make them unsuitable in this case (Cameron and Price, 2009). In practice, researchers can use any of the research methods with any of the approaches. Table 5-3 shows how the various research methods may be employed in qualitative and quantitative research.

Table 5-3 Use of Research Methods in Different Paradigms

Method	Quantitative	Qualitative
Questionnaire	Large random samples, fixed-choice questions	Used for initial mapping, open-ended questions
Interview	Large random samples, mainly fixed-choice questions	Open-ended and unstructured questions to small samples
Document	Content analysis, e.g. counting in terms of researchers' categories	Understanding participants' categories
Observation	Preliminary work, e.g. prior to framing questionnaire	Fundamental to understanding another culture

Source: (Fisher, 2004; Silverman, 2005)

The methodology and methods employed in this study are discussed in more detail in the next section.

5.4 Methodology and Methods of this Study

The study employs a combination of quantitative and qualitative methods to achieve triangulation on the grounds that convergence or agreement between results derived from two different methods enhances their validity and reliability (Fielding and Fielding, 1986; Hitchcock and Hughes, 1995). Although quantitative methods have the advantages of objectivity and reliability (Hussey and Hussey, 1997) because they rely on statistical methods in the analysis, they are unable to provide answers to some questions, especially those questions relating to opinions and views. Qualitative methods are commonly believed to give a deeper understanding of social phenomena than would be obtained from purely quantitative methods (Silverman, 2005); they are also believed to be helpful in obtaining information which would be difficult to express in quantitative terms (popular among qualitative methods is the open-ended interview, in which questions may be formulated to allow participants to answer in their own words).

In the present study, qualitative methods helped the researcher to probe the merits of and justifications for corporate disclosure of environmental activities, and to gather the respondents' experiences of CSR and corporate environmental reports, their views on whether these should be important to companies, and how they see the future of CSR and corporate environmental reporting in Libya. The mixed method approach thus helped answer questions that could not have been answered by either qualitative or quantitative methods alone.

The quantitative strand comprised **a)** content analysis to enable a preliminary assessment of the quantity and nature of ED practice in the Libyan oil and gas industry; and **b)** a questionnaire administered to financial managers and accountants in foreign and local oil companies operating in Libya. The questionnaire was designed to elicit information about these companies' environmental activities, and the present procedures for disclosing information about such activities and their associated costs. The qualitative strand consisted of interviews with company officials and personnel in charge of financial and environmental accounting. The interviews discussed managers' perceptions of environmental costs and liabilities as well as the current procedures for ED.

5.5 Population and Sample

The study evaluates ED by local and foreign companies operating in the oil and gas industry in Libya. Forty-three oil companies are represented in the study population: 13 are national companies, while the remaining 30 are affiliated to foreign companies (see Appendix 2). A total of 145 questionnaires were distributed to two groups (financial managers and employees in accounting departments); 115 of these questionnaires were collected. In addition, a total of 126 annual reports were collected from 24 local and foreign companies covering an 8 year period from 2002 to 2009.

The rest of this chapter discusses in further detail the content analysis, questionnaire and interview methods that were employed to answer the research questions, showing what steps were taken to ensure data reliability.

5.6 Content Analysis

Content analysis is one of the most widely recognised research methods in the social sciences (Krippendorff, 2004). The content analysis method was first used by non-accounting social scientists (Rosenberg et al., 1990; Saleh, 2004). One of its first uses was in World War II when it was applied to analyse the content of newspapers (also known as quantitative newspaper analysis) and radio news. It has since also been applied to films and television programmes (Saleh, 2004). The study by Ernst and Ernst (1976) was probably the first well-established survey of CSR literature using content analysis (Momin, 2006).

Many definitions of content analysis have emerged over the years. One of the earliest definitions came from (Holsti, 1969, p.14), who defined it as “any technique for making inferences by objectively and systematically identifying specified characteristics of messages". Wolfe (1991) defines it as a systematic procedure for studying the content of written documents or transcribed spoken presentations, while according to Krippendorff (1980), "content analysis is a method of codifying text into various categories based on selected criteria. In content analysis, it is assumed that frequency indicates the importance of the subject matter" (Petty et al., 2004, p. 287).

Content analysis is useful for exploring an organisation's social relationships with other parties. It highlights the symbols and events that occur frequently in company communications, especially written documents (Momin, 2006). Essentially, it contributes to knowledge by facilitating the study of textual meanings and messages and the quantification and analysis of the emerging patterns.

The fastest growing technique in quantitative research (Neuendorf, 2002), it has been widely used in studies of social disclosure in general and ED in particular (Adams et al., 1998; Adams and Kuasirikun, 2000; Andrew et al., 1989; Belal and Kabir, 2010; Cho and Patten, 2007; Deegan and Gordon, 1996; Dominguez, 2012; Freedman and Stagliano, 2008; Gao et al., 2005; Gray et al., 2001; Guthrie and Parker, 1990; Islam et al., 2005; Johnson et al., 2011; Liu and Anbumozhi, 2009; Villiers and Staden, 2011; Williams, 1999). Table 5-4 shows a number of studies which have used the content analysis technique as a data collection method.

Table 5-4 Characteristics of Selected Papers Employing Content Analysis

Papers	Documents analysed (Annual report)	Measurement method (Measurement unit)				
		No of words	No of sentences	No of lines	No of pages	% of pages
Dominguez, 2012	×		×			
Ishwerf, 2012	x	x	x			
Villiers and Staden, 2011			×			
Esa and Ghazali, 2010	×	×				
Belal and Kabir, 2010	×		×			
Elmogla, 2009	x	x				
Sobhani, 2009	×		×			
Zubek, 2008	x				x	
Dahlsrud, 2008			x			
Islam and Deegan, 2008	×	×				
Silberhorn and Warren, 2007	×					
Raman, 2006	×		×			
Gao et al., 2005	x	x				
Mashat, 2005	x				x	
Xiao et al., 2005	x	x				
Saleh, 2004	x	x				
Anuar et al., 2004	x		x			
Campbell, 2004	x	x				
Thompson and Zakaria, 2004	x		x		x	
Campbell et al., 2003	x	x				
Holland and Foo, 2003	x		x			
Nuhoglu, 2003			x			
Andrew, 2002	x	x				x
Nikam and Wickramarachchi, 2002	x	x				
Belal, 2001	x			x		
Abu-Baker and Nassr, 2000	x					x
Belal, 2000	x			x		
Campbell, 2000	x	x				
Imam, 2000	x			x		
Williams and Pei, 1999			x			
Buhr, 1998	x		x			
Choi, 1998	x			x		
Neu et al., 1998	x	x				
O’Dwyer and Gray, 1998	x					
Tsang, 1998	x		x			
Burritt, 1997	x	x				
Ince, 1997		x				
Deegan and Ranking, 1996	x	x				
Deegan and Gordon, 1996	x	x				
Hackston and Milne, 1996	x		x			
Thomas and Kenny, 1996	x					
Adams et al., 1995	x					x
Gray et al., 1995	x					x
Zeghal and Ahmed, 1990	x	x				
Cowen et al., 1987	x	x				
Trotman and Bradley, 1981	x					
Ernst and Ernst, 1978						x

Source: (Unerman, 2000) and Author’s own)

According to many writers, content analysis has a number of advantages (Sarantakos, 2005; Wolfe, 1991; Zubek, 2008):

- Content analysis is unobtrusive; neither the sender nor the receiver of analysed messages is aware that the messages will be analysed. This also means that the texts are more likely to be an undistorted and fair reflection of reality.
- Content analysis of documents produced on a regular basis enables the development of longitudinal data.
- Content analysis is used in cases where it is not possible for researchers to connect directly with their respondents. It enables the researcher to access a variety of data and information from people who might not be available for personal interviews.
- Content analysis is regarded as valid and reliable as it is assumed that the same conclusions would be reached if the analysis were to be conducted again, or if the same data were used in another research. In the present study, for example, the researcher was able to re-analyse financial statements to confirm the results. The findings were identical.
- The nature of content analysis means that data can be gathered without compromising the anonymity of the respondent, in line with ethical considerations.
- It is a low cost and convenient method of analysis. Content analysis is more economical than most other types of research, and the researcher can return to the data at any time for as long as they wish.

5.6.1 Stages of Content Analysis

For content analysis to be effective, certain technical requirements must be met (Guthrie and Mathews, 1985; Silverman, 2006; Weber, 1994; Wolfe, 1991). Firstly, the question(s) to be investigated must be identified; secondly, the sampling units must be determined; thirdly, the categories for classification must be clearly defined. The fourth stage is to determine the method of measuring each relevant disclosure; that is, to establish the recording unit. The fifth stage is to establish a coding scheme, and the sixth is to test the coding on a sample text. The final stage is to assess the reliability and validity of the coding scheme. The following sections discuss how these technical requirements were met in this study.

Identifying the question(s) to be investigated

According to Krippendorff (2004), when research is motivated by a specific question, analysts can proceed more expeditiously from sampling relevant texts to answering the given question; content analysts who start with a research question read texts for a purpose, not for what an author may think or what is said in an abstract. Moreover, content analysis that is conducted in pursuit of specific research questions is more empirically grounded. All answers to research questions entail truth claims that must be supported, if not by direct observation then at least by plausible argument based on relevant observations.

For the purpose of content analysis, research questions must have the following characteristics: they must be answerable (abductively inferable) by examining a body of texts; they must delineate a set of possible (hypothetical) answers; and they must concern currently inaccessible phenomena and allow for validation – at least in principle–

by acknowledging another way of observing or substantiating the occurrence of the inferred phenomena (Krippendorff, 2004).

In the present study, content analysis was employed to investigate whether ED is practised by oil and gas companies in Libya and to identify any differences in disclosure practice between foreign and local companies (Research Question 1 – see Section 1.3). It was also used to assess whether there is any association between company characteristics such as size, privatisation, age and nationality and ED (Research Question 5).

Determining the sampling units

The sampling units are the units that are selected for analysis (Krippendorff, 2004). There are two steps to determining the sampling units: selecting the source of the text to be analysed and deciding upon the components to be analysed.

Text sources

Annual reports are one of the most important data sources for social and environmental information. They are primary data sources for investors, creditors, employees, environmental groups and governments (Neu et al., 1998). Annual reports are: "a permanent expression of those social issues which top management regard as important and wish to communicate to shareholders and the public, and so are a record of the entity's historical social consciousness" (Macintosh, 1990, p.168). They have been used by many studies in the social sciences in general and in the field of social and environmental disclosure in particular as the main information source see for example (Abdo, 2006; Adams et al., 1998; Adams and Kuasirikun, 2000; Andrew et al., 1989; Belal and Cooper, 2011; Cho and Patten, 2007; Deegan and Gordon, 1996; Dominguez, 2012; Elmogla, 2009;

Esa and Ghazali, 2010; Gao et al., 2005; Gray et al., 2001; Guthrie and Parker, 1990; Ishwerf, 2012; Liu and Anbumozhi, 2009; Mashat, 2005; Saleh, 2004; Sobhani et al., 2009; Williams, 1999; Zubek, 2008).

There is much discussion in the accounting and CSR literature of the importance of the annual report as a document for analysis. It is the only document that all prior ED studies have in common (see Table 5-4). This may be because annual reports, which are published and freely available to all users, are easier to access than other corporate reports (Epstein and Freedman, 1994; Tilt, 1994; Unerman, 2000). They are also the only form of corporate disclosure that is institutionalised and provided on a regular basis year after year (Buhr, 1998). As many studies have indicated, annual reports are a major source of information, environmental and financial, for all users (Deegan and Rankin, 1997; Epstein and Freedman, 1994; Tilt, 1994) and they are widely recognised as possessing a high degree of reliability and credibility (Tilt, 1994; Unerman, 2000).

Gray et al. (1995a) support the use of annual reports which provide financial and social information in a single document. They suggest that in an annual report, an organisation has the chance to demonstrate how it reconciles the often conflicting financial and social images of itself. Adams and Harte (1998, p.784) say there is justification for using only annual reports:

> "Our acceptance of the social importance of the annual report stresses its potential (rather than fact) to be influential. Corporate annual reports can therefore be of interest as much for what they do not report, as for their actual content. This focus on the corporate annual report is also consistent with previous social disclosure studies, since the corporate annual report is the main form of corporate communication and particularly in the case of quoted companies is made widely available."

Separate environmental reports are still not common in Libya; companies in the country generally use annual reports to disclose social and environmental information (Mashat, 2005). For this reason, and for those given above, annual reports were adopted as the source texts for the present study. Social and environmental information was collected from the reports of 43 oil and gas companies operating in Libya, covering the years 2002 to 2009.

Components for analysis

The second step in determining the sampling units is to define what aspect or part of the text to analyse. Any form of text or transcribed spoken presentation can be chosen as a source. If corporate annual reports are chosen, the researcher has to decide which part or parts of the reports are to be analysed: for example, internal reports, external reports or the whole document. Having chosen external annual reports as the data source for this study, it was decided to analyse the full text of these reports, excluding pictures, captions and diagrams (content analysis assumes that the importance of the subject matter is indicated by word frequency only).

Determining the content categories

The third important phase in content analysis is the construction of a classification scheme. This involves the selection and development of categories into which content units can be classified (Tilt, 2001). According to Tilt (1998), cited in Mashat (2005) these categories must be precise and unique. In the present study, the categories were constructed around the dimensions and components of ED identified in the literature see for example (Ahmad and Sulaiman, 2004; Gray et al., 1995a; Gray and Lavers, 1995b; Guthrie and Parker, 1990; Hackston and Milne, 1996; Saleh, 2004). The content categories and disclosure categories together encompassed nine testable dimensions and components of ED. The incidence of ED in the annual reports was measured by the number of words given over to each category. The categories are summarised below.

Content categories: Environmental policies, environmental audit, products and processes, energy, health and safety and others (miscellaneous related items).

Type of disclosure: Good, neutral and bad news.

The categories were defined according to the following criteria:

Content categories:

1. **Environmental policies**: These indicate an actual statement of policy; formal statements of intention; objectives and general statements, for example “the company will” or “the company does”; standards and directives complied with; and the intention to standardise.

2. **Environmental audit**: References to environmental review, scoping, audit, assessment, including independent attestation.

3. **Products and processes**: References to environmental degradation, waste(s), packaging, product development, air emissions, water discharge, land contamination and remediation; references to prevention or repair of environmental damage.

4. **Energy**: References to energy saving and conservation, the use/development/exploration of new sources, efficiency and insulation.

5. **Health and safety**: References to health and safety at work, toxic hazards to employees and the public, accident statistics and any reference to health and safety law.

6. **Others**: References that cannot be classified into the above categories, including mention of environmental awards, sustainable development, landscaping, public amenity provision, environmental education schemes, compliance with the ISO 14001 standards, general information on lawsuits relating to environmental issues, discussion of the impact of new environmental laws and regulations.

Type of disclosure:

1. **Bad**: Any statements that reflect/might reflect discredit on the company, including, for example, amount of air pollution and any increase in accidents.

2. **Neutral**: statements of policy, recommendations or statements of intent to meet statutory minimum requirements (but giving no details of how); statements of facts which reflect no obvious credit/discredit on the company and which are unaccompanied by editorial comment.

3. **Good**: statements describing activity that goes beyond minimum requirements, including specific details which reflect creditably on the company; any statements which reflect creditably on the company; upbeat analysis/discussion/statements.

By examining the frequency with which these categories appeared in the annual reports, it was possible to identify the amount and type of ED being practised in each company.

Determining the recording unit

One of the most essential phases in content analysis is setting the means and units for measuring disclosures (Unerman, 2000). Gray and Lavers (1995b, p.83) recognised that "the preferred units of analysis in written communications tend to be words, sentences and pages". Previous studies suggest various types of measurement, such as number of words (Deegan and Gordon, 1996; Zeghal and Ahmed, 1990), sentences (Hackston and

Milne, 1996; Milne and Adler, 1999; Tsang, 1998), lines, or length of reference as a proportion of a page (Gray et al., 1995a).

There are advantages and disadvantages to each of the above. Those who use the word as a measurement unit argue that it captures incidences of detailed description and that it is easier and more accurate to use (Gray and Lavers, 1995b; Ince, 1998; Zeghal and Ahmed, 1990). Other researchers prefer to infer meaning from the number of sentences rather than counting individual words (Hackston and Milne, 1996). However, both word and sentence have the disadvantage of ignoring non-narrative CSRD (i.e. photographs and figures) and may thus under-represent the total amount of disclosure (Unerman, 2000). The practice of counting proportions of a page has been criticised as introducing subjectivity into the mensuration process (Gray and Lavers, 1995b). Milne and Adler (1999) suggest that page proportion measured by means of a grid sheet (tenths or hundredths) does not convey much meaning and thus reduces the quality of the recording.

The present study assesses the development of disclosure practice and the adherence of oil and gas companies operating in Libya to the legal and standard professional requirements in this regard. It employs quantitative content analysis, taking words rather than lines or pages as the unit of analysis. This is a more accurate and reliable approach, because it reduces the scope for human error: the smaller the recording unit, the more reliable it is (Ince, 1998). Many prior studies have used the word as a recording unit; see for example (Deegan and Gordon, 1996; Esa and Ghazali, 2010; Gao et al., 2005; Ince, 1998; Islam and Deegan, 2008; Saleh, 2004; Wilmshurst and Frost, 2000).

Determine the coding mode

The literature review suggested that coding can be done manually, by computer, or by a combination of the two (Ince, 1998). Software such as the Oxford Concordance program may be used to find the frequency distributions of all words appearing in a given document; however, these do not work for the Arabic language (Saleh, 2004). Since the annual reports used in this study were written in Arabic and the researcher was only allowed to view them on company premises and not to make any photocopies, the coding had to be done manually.

Test code a sample of text

Coding a sample of the text may increase the validity of the coding of all the text. Sample testing may solve operational problems like conceptual ambiguity and oversights concerning categories. It also provides the researcher with practical experience, which may further increase reliability (Ince, 1998; Weber, 1994).

The researcher in the present study was able to re-code the annual reports more than once to confirm the results. Moreover, when eight of the annual reports were independently coded by both the researcher and two colleagues, the findings were identical.

Assess reliability and validity

Most researchers are probably already familiar with the need to test reliability; the objective is to be sure that, if a later researcher follows exactly the same procedures as described by an earlier researcher and conducts the same investigation, they will arrive at the same results and conclusions (Yin, 1994). Reliability refers to the extent to which a measuring procedure provides the same results on repeated trials (Neuendorf, 2002). If I get on the scale and read my weight, then get off and get on again, I have a reliable scale if it gives me the same weight each time. The goal is to maximise reliability by minimising the errors and biases in a study (Yin, 1994). Although perfect reliability and validity are virtually impossible to achieve, they are the ideals to which researchers aspire (Neuman, 2006).

Content analysis is reliable; it is assumed that the same conclusions would be reached if the analysis were to be conducted again, or if the same data were used in another study. As Weber (1990) suggests, the classification system must be reliable in terms of consistency and reproducibility. This reproducibility meant that the researcher in the present study was able to re-code the annual reports more than once to confirm the results. To being reliable, the process used needs to be valid, in the sense that it measures or represents what the researcher intends it to measure (Weber, 1990). In this study, the validity of the categorisation process was enhanced by the fact that the author drew heavily on categories and dimensions already defined in the literature.

5.6.2 Stages of Data Collection in Content Analysis

The first step in the data collection process was to send emails to the oil and gas companies operating in Libya, asking them to send their annual reports to the researcher by post or email. A number of attempts were made to contact staff by email and telephone over a six month period, without success. However, this was not surprising; the researcher was aware that in Libya, things get done through personal contacts. Accordingly, between July and September 2010, the researcher went to Libya and collected annual reports in person from the oil and gas companies.

There were a number of difficulties with both local and foreign companies. The main problem was their reluctance to make these supposedly “confidential” reports available to the public; this was despite attempts to persuade officials that many companies, especially in developed countries, publish their annual reports on the internet, making them available for all users. Another problem was that some companies had no annual reports at all for certain years, or if they did, they were incomplete. Some, particularly the foreign companies, refused to give information to a student. Staff who had initially given the researcher a warm welcome and approved his request for the reports changed their minds when they learned he was a student seeking information for his research. Showing them documents provided by Nottingham Trent University and the Libyan Embassy, asking the oil companies for their cooperation, made little difference. There were long days when the researcher was left waiting and then told to come back the next day because staff were too busy to help. After many visits to companies, the researcher was able to get permission from the General Director of the National Oil Corporation (NOC) to obtain annual reports. On condition that the names of companies would remain confidential, the researcher was allowed to view the annual reports on company premises, but not to make any photocopies. This meant staying at the companies from 9am to 6pm.

The frequency of ED in each company was recorded on a specially designed form. Table 5-6 shows the information recorded, including the name of the company, the year of the annual report and the mentioned content categories (environmental policy, products and processes, environmental audit, health and safety, energy and others). ED frequency within each company was measured by counting the number of words given over to disclosure in each content category.

The initial plan was to obtain annual reports for 43 local and foreign companies operating in the oil and gas industry in Libya, covering a 10 year period from 2000 to 2009. However, this turned out to be impossible as several reports were missing. Complete annual reports were available for 2008 and 2009 (2 years), but some reports were missing for 2002 to 2007 (6 years). Many of the companies, especially the foreign ones, were not established until 2005, while others, particularly local companies, did not have reports for some years. In the end, 126 annual reports were collected from 24 local and foreign companies covering an 8 year period from 2002 to 2009 (see Table 5-5).

Table 5-5 Number of Annual Reports Collected

Names of companies and nationality	2002	2003	2004	2005	2006	2007	2008	2009	Total
No. of annual reports from local companies	3	5	7	6	9	8	10	10	58
No. of annual reports from foreign companies	3	3	3	6	11	14	14	14	68
Total	6	8	10	12	20	22	24	24	126

Table 5-6 Environmental Disclosure (ED) Instrument within Reports of Surveyed Companies

Company code: ....

Company type: …………………………………………..

Year: ....

Disclosure in words	Environmental policy	Environmental audit	Products and processes	Energy	Health and safety	Other	Total
Bad news							
Neutral news							
Good news							
Total number of words							

Source: (Gray et al., 1995a; Gray and Lavers, 1995b; Guthrie and Parker, 1990; Hackston and Milne, 1996; Saleh, 2004)

5.7 Questionnaire

The content analysis method has many advantages, but it also has some flaws; specifically, it is unable to tell us much about participants' opinions and viewpoints. For this reason, a questionnaire was designed to find the answers which were inaccessible through the content analysis method.

Questionnaires are a scientific research tool which is widely used to obtain data or information relating to people's conditions or attitudes (Babiak and Trendafilova, 2011; Mitchell and Hill, 2009; Smith et al., 2008; Vaus, 2002). A questionnaire generally contains a series of questions to be answered by individual participants without help or interference from anyone. Saunders et al. (2003, p.236) define a questionnaire as a "preformulated written set of questions to which respondents record their answers, usually within rather closely defined alternatives", while according to Hussey and Hussey (1997, p.161), it is "a list of carefully structured questions, chosen after considerable testing, with a view to eliciting reliable responses from a chosen sample. The aim is to find out what a selected group of participants do, think or feel". Similarly, Kumar (2005) describes it as a written list of questions, used as a tool to collect data on a specific research subject, the form being filled in by the respondent.

The questionnaire has several advantages compared to other methods:

- It helps obtain information from a large number of individuals from a wide geographical area in a short time.
- This method of data collection ensures a high response rate, accurate sampling and a minimum of interviewer bias.

- Questionnaires are not affected by the problem of non-contact (i.e. respondents being unavailable at the time of the study, a common problem with interviews).
- The questionnaire provides sufficient time for respondents to think about the answer, giving them the opportunity to consult their records, confer with colleagues, or conduct research before answering, and it can be completed in their home or work place, which reduces pressure on them and pushes them to check their information, whereas the interview situation normally does not.
- The questionnaire is less expensive than other methods and it does not require as much skill to administer. As the researcher does not interview respondents, it saves time, human and financial resources.
- It assures anonymity as there is no face to face interaction between respondents and interviewees and most surveys do not bear the name of the respondent. Respondents might therefore be more willing to provide socially, ethically or politically undesirable answers, or answers that violate norms.

5.7.1 Types of Questionnaire

The form of questions is extremely important in a research instrument as it has an effect on the type and quality of information obtained. Questionnaires can be based on open-ended and/or closed-ended questions; both are commonly used in the social sciences (Kumar, 2005). All researchers have to make a fundamental decision when designing a questionnaire: whether to choose questions that are open or closed-ended, or a mixture of the two. These types of questions are discussed in the next section.

Open-ended questions

Some of the questions that researchers ask are likely to be factual, while others seek opinions. Open-ended questions allow the respondent to give a personal response in their own words (Hussey and Hussey, 1997); for example, to give their own views on the topic being researched or to raise a grievance (Bell, 2005). In closed-ended questions, on the other hand, the respondent's answer is selected from a number of predetermined alternatives (Saunders et al., 2012).

Open-ended questions enable the researcher to probe more deeply and to gain an insight into participants' perspectives on an issue (Oppenheim, 1996). They are phrased so as to encourage respondents to provide a wealth of information (by answering each question in a sentence, a paragraph, a page or more, depending on the survey). However, respondents may struggle to express themselves, so information can be lost (Kumar, 2005). Moreover, the resulting data can be more difficult to compare and analyse. A further disadvantage of open-ended questions is that the response rate for these surveys is lower than for closed-ended questions, because open questions tend to deter busy respondents from replying to the questionnaire (Colorado State University Online, 2012).

Closed-ended questions

Closed-ended questions limit the respondent's answers to a survey. Participants are allowed to choose from a pre-existing set of dichotomous answers, such as yes/no, true/false, or given a multiple choice with an "other" option, or asked to rank their responses on a scale (Saunders et al., 2012). Kumar (2005) comments that the strength of closed-ended questions is that they are more specific and more likely to communicate similar meanings. For this reason, they are convenient for collecting factual data. They are also usually quicker and easier to complete and analyse as they require minimal writing (Hussey and Hussey, 1997; Saunders et al., 2012). A further advantage of closed-ended questions is that they take less time than an interview for the participant and the researcher, making this a less expensive survey method. The response rate is also higher in surveys that use closed-ended questions than in those using open-ended questions (Colorado State University Online, 2012).

The main problem with closed-ended questions, according to Kumar (2005), is that the information obtained through them lacks depth and variety. The simplistic and limited response options may not offer the respondents choices that actually reflect their real feelings. Closed-ended questions do not allow the respondents to explain that they do not understand the question or do not have an opinion on the issue. Indeed, false opinions may result if respondents are given a limited range of options from which to choose or if they are prompted with “acceptable” answers (Zubek, 2008).

Neither approach is right or wrong, and neither is universally suitable (Vaus, 2002). A researcher does not have to use either closed or open-ended questions exclusively; many employ closed-ended questions at the beginning of their survey to introduce the issue and “warm up” the respondent before moving on to open questions which allow for more expansive answers (Colorado State University Online, 2012). Vaus (2002) suggests that the choice of open or closed-ended questions depends on many factors, such as the question content, respondent motivation, method of administration, type of respondent and the amount of time available to develop a good set of unbiased responses. The current study employs both styles in order to achieve the research objectives and benefit from their respective advantages.

5.7.2 Pilot Study

A pilot study involves the use of a small number of respondents to test the suitability of the questions. It is important to check that the questions are understood by the respondents and that there is no ambiguity or confusion in the wording or measurement (Sekaran, 2003). In this testing phase, respondents are informed that the questions are still being developed and that they are being asked to help improve them (Gall et al., 1996). According to Saleh (2004), the main purpose of the pilot study is to obtain participant feedback which might be used to improve the main study. The pre-test questionnaire should therefore provide space for respondents to make criticisms and recommendations for improving the questionnaire. The pilot study also enables the researcher to carry out a preliminary analysis to see whether the wording and format of questions will present any difficulties when the main data is analysed (Bell, 2005). It allows the researcher to review the questionnaire before the main distribution.

Care was taken to develop a good questionnaire for the present study. It underwent two developmental stages. In the first stage, a draft of the questionnaire was discussed with the supervisory team and with postgraduate students from the same discipline in a number of universities in the UK. This stage helped the researcher to refine the questionnaire before the second stage, which was conducted in Libya. At this stage, 20 copies of the revised questionnaire were delivered to managers and employees working in accounting departments in local and foreign oil companies. Fifteen copies of the questionnaire were also distributed to academic members of staff in accounting departments at a number of Libyan universities and to postgraduate students at the Academy of Graduate Studies in Tripoli. The rate of response was 85%. Several modifications were made in light of comments on the first and second stages; some terms and sentences were rephrased and irrelevant or less important questions were removed. As some of the managers and study population were English speakers, the final questionnaire was distributed in both Arabic and English. The Arabic and English versions of the questionnaire may be found in Appendixes 1.1 and 1.2.

5.7.3 Content of the Questionnaire

The length of a questionnaire is an important concern in research design. There is a widespread view that long questionnaires should be avoided. Short questionnaires, it is often suggested, result in higher response rates than longer questionnaires. The reasoning is that long questionnaires increase the burden on respondents and this leads to increased reluctance to participate and non-responsiveness (Dillman, 1978; Linsky, 1975; Vaus, 2002). There is no uniform standard to determine the number of pages, but the common advice is not to make it longer than is really necessary (Vaus, 2002). Accordingly, the questionnaire for this study was restricted to 7 pages and 14 items.

Some authors believe that classification questions about the respondent's age, education and experience are best placed at the beginning, so that respondents can gain confidence from answering easy questions (Kumar, 2005; Oppenheim, 1996; Saunders et al., 2003; Zubek, 2008). The questionnaire used in this study was divided into two parts:

Part one sought general information about the respondent's education, place of education, type of educational qualification, place of last educational qualification, present occupation, length of experience and attendance at training courses on environmental management or environmental accounting. The purpose of these questions was to identify the background of the respondents. It was felt that greater confidence could be placed in the results if they were based on answers from respondents with a high educational level, more experience or relevant training.

Part two was designed to examine the participants' perceptions regarding ED. It covered seven sections:

- **Sections one and two** were designed to collect general information concerning the attitudes of financial managers and accounting department employees towards CSR and ED. These sections were intended to establish whether oil and gas companies in Libya understand CSR and ED (Research Question 6 – see Section 1.3).
- **Section three** was designed to examine the participants' perceptions of ED. It was intended to investigate whether oil companies operating in Libya practise ED, and what type of environmental information is being disclosed in the annual reports of these companies (Research Question 1).
- **Section four** investigated the participants' perceptions regarding what motivates companies to disclose environmental information (Research Question 3).
- **Section five** investigated the participants' perceptions regarding the factors that might prevent companies from disclosing environmental information (Research Question 4).
- **Sections six and seven** were designed to investigate participants' perceptions regarding the measures in place to control ED, and their views on **which means and methods could be helped to oblige** companies to disclose environment information (Research Question 2).

5.7.4 Administration of Questionnaire

Questionnaires can be posted to respondents or personally distributed. The most common approach is to send the questionnaire to prospective respondents by mail, because this has the advantage of allowing the researcher to reach a large sample population spread over a wide geographical area (Kumar, 2005; Miller and Salkind, 2002). Mashat (2005) maintains that mailed questionnaires cost half as much and are less time-consuming than interviews and personally administered questionnaires.

On the other hand, mailing questionnaires has a number of disadvantages. One of the major problems with this method is the low response rate, especially in countries that have a weak mail system, as is the case in many developing countries (Miller and Salkind, 2002; Sekaran, 2003). Moreover, it is impossible to check on incomplete responses or explain any ambiguous questions (Sekaran, 2003). Mashat (2005) and Sekaran (2003) argue that a personally administered questionnaire has many advantages. It is the best tool for data gathering when the survey is confined to a local area; the researcher or a member of the research team can collect all the completed responses within a short period of time; incomplete questionnaires can be checked and any ambiguity explained; and it gives the researcher a chance to introduce the research topic, explain the purpose of the inquiry, encourage respondents and motivate them to give frank answers. For these reasons, it was decided to personally administer the questionnaire in this study.

5.7.5 Stages of Data Collection by Questionnaire

After the pilot study had been completed, the researcher returned to Libya to distribute the final questionnaire, remaining there from December 2010 to February 2011. The researcher had undertaken research before in Libya during his Master's degree and used questionnaires as a data collection method, so he was not surprised by the delay in response and the difficulties he encountered. Although this task was a little easier than collecting annual reports, there were a number of problems. Libya's huge size and the geographical dispersion of the oil companies meant it was necessary to travel long distances, sometimes more than 1000 miles, to distribute the questionnaires and collect responses. As described earlier, some companies (especially foreign companies) refused to cooperate, claiming staff were too busy, or that they did not deal with students. Often, several visits to the same company were necessary to collect the responses.

In the final survey, four questionnaires were distributed to each company, making a total of 145 distributed questionnaires. The total response rate was 79% (see Table 5-7).

Table 5-7 Response Rate for the Questionnaire Survey

Group	Distributed Questionnaire	Useable Questionnaire	Rate of response
Managers of accounting departments	31	24	78%
Employees of accounting departments	114	91	80%
Total	145	115	79%

5.8 Personal Interviews

As indicated earlier, the current study employs a combination of quantitative and qualitative methods. The (quantitative) questionnaire was able to give some insight into participants' perceptions regarding CSR and ED, but it was felt that the (qualitative) interview method would enable a deeper understanding of the key issues. Accordingly, interviews were conducted with managers and accounting department employees with the aim of gathering their stories and personal opinions. The interview method has been used widely in previous studies of social disclosure, particularly ED see (Babiak and Trendafilova, 2011; Hanafi, 2006; Mitchell and Hill, 2009; Spence, 2007; Tuodolo, 2007).

5.8.1 Definition and Advantages of the Interview

The oral interview is one of the most popular techniques in social research. It is considered one of the most effective data collection methods because the interviewer can communicate directly with respondents (Nunan, 1998).

According to Kumar (2005) and Sarantakos (2005), any interaction between two or more individuals that is conducted with a specific purpose in mind may be called an interview. Cannell and Kahn (1968, cited in Cohen et al., (2001) define the research interview as a two-person conversation initiated by the interviewer for the specific purpose of obtaining research-relevant information. The interviewer focuses the exchange according to their research objectives (systematic description, prediction or explanation). Others define the personal interview as a face-to-face interpersonal situation in which an interviewer asks respondents questions designed to elicit answers related to the views or attitudes or feelings or motives pertinent to the research hypotheses (Nachmias and Nachmias, 2008).

Cohen et al. (2001) suggest that an interview can serve three purposes: firstly, it may be the principal means of gathering information that has direct bearing on the research objectives; secondly, it may be used to test hypotheses or as an explanatory device to help identify variables and relationships; and thirdly, the interview may be used in conjunction with or to validate other research methods. Interviews can help researchers to gather valid and reliable data that is relevant to the research questions and objectives (Saunders et al., 2003).

According to a number of writers, interviews have several advantages compared to questionnaires. Primarily, they give the questioner an opportunity to observe non-verbal behaviour (Marshall and Rossman, 1999; Miller and Salkind, 2002; Nachmias and Nachmias, 2008; Sarantakos, 2005; Saunders et al., 2003). Other advantages include:

- The interview as a qualitative method is better able to yield evidence relating to opinions and viewpoints. In the present research, the researcher was able to ask respondents about their understanding and opinions of CSR and ED.
- More complex questions can be asked and misunderstandings corrected when the interviewer is present to clarify any ambiguity in the wording or further explain the question.
- Interviews offer flexibility; the researcher is able to re-word questions and raise new queries during the meeting, in response to the interviewee's answers. The researcher can also get in-depth information by asking open-ended questions. In the present study, respondents were asked open-ended questions about whether companies should pay attention to CSR and why (or why not). They were also asked about their own experiences of CSR and ED.
- Interviews are easily administered; respondents are not required to read or handle complex documents or long questionnaires, so they are a useful way to get large amounts of data quickly.

Despite its evident advantages over some other methods of data collection, however, the interview technique does have some drawbacks:

- The major disadvantage of the interview is that it yields lower response rates compared to other methods. It is difficult to conduct personal interviews with respondents, especially at higher levels. Most of the accounting department managers contacted in this study refused the request for an interview, saying they were too busy. In the end, only ten interviews were conducted.

- Interviewing can be expensive to implement, especially when respondents are widely dispersed geographically. This was especially so in this study because of Libya's huge area (about 1,774,440 square kilometres) and the wide dispersal of the oil companies.
- It is less effective than other methods when sensitive issues or confidential information are being discussed. This is because in some cases, people prefer to write about sensitive issues or confidential information than to talk about them. A number of the respondents in this study asked the researcher to leave written questions instead, since a questionnaire ensures anonymity.

5.8.2 Content of Interviews

The interview questions were designed to elicit information – including personal narratives and opinions – that could not be accessed through the content analysis and questionnaire methods.

The interview questions were divided into three parts (see Appendixes 1.3 and 1.4):

- **Part one** was designed to collect general information concerning understanding of CSR and ED among financial managers and accounting department employees (Research Question 6 – see Section 1.3).
- **Part two** investigated the participants' perceptions regarding companies' motivations for disclosing environmental information (Research Question 3).

- **Part three** investigated participants' perceptions regarding the factors that might prevent companies from disclosing environmental information (Research Question 4).

5.8.3 Stages of Data Collection by Interview

After a preliminary analysis of some of the questionnaires and discussion of the interview questions with the supervision team, the final form of the interview questions was determined. These focused on managers' and employees' perceptions of CSR and ED as well as the current procedures for ED (as at January/February 2011). It was initially intended to interview all the managers and accounting department employees in the sample companies. However, data collection in this way in Libya is extremely difficult. Respondents turned down interview requests on the pretext that the information was confidential, and the researcher was eventually forced to use his personal contacts to find interviewees. Even those managers who had agreed to be interviewed subsequently cancelled appointments (or several appointments), citing their busy schedule. In some cases, it was only the researcher's patience and refusal to give up that led to the interview finally being granted. In the end, it was only possible to conduct ten interviews. Table 5-8 shows the number of interviews that were conducted in foreign and local companies.

Table 5-8 Interviews Conducted in Local and Foreign Companies

	Local companies					Foreign companies			Total
Companies	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	
Number of managers	1	0	0	1	0	1	0	0	3
Number of employees	1	1	1	0	1	1	1	1	7
Total interviews	2	1	1	1	1	2	1	1	10

5.9 Statistical Methods Used for Data Analysis

The next step towards achieving the research aims and answering the research questions was to analyse the data collected from the research population by means of the questionnaires, content analysis and interviews. There were a number of statistical methods and techniques to choose from.

One of the main methods of data collection was the questionnaire. This was designed using five-point Likert items. A number of authors have stated that Likert items should be considered ordinal, not interval, scales and that they should be analysed accordingly. They argue that non-parametric tests should be employed if the data is ordinal (Carifio and Perla, 2008; DeWinter and Dodou, 2010; Jakobsson, 2004; Jamieson, 2004; Vigderhous, 1977). According to Kuzon et al. (1996), the first of the seven deadly mistakes of statistical analysis is using parametric analysis for ordinal data. Accordingly, non-parametric statistical tests were employed to analyse the data from the questionnaires.

It was also important to determine whether the data collected by content analysis satisfied parametric or non-parametric assumptions before testing. According to a number of authors, parametric statistical tests require data to be normally distributed. If it is not normally distributed, non-parametric statistical methods should be employed. They argue that the values of skewness and kurtosis should be zero in a normal distribution; the further the value is from zero, the more likely it is that the data is not normally distributed (Field, 2012; Harnett, 1982; Pallant, 2010) [(1)]. In order to ascertain

1) Positive values of skewness indicate a pile-up of scores on the left of the distribution, whereas negative values indicate a pile-up on the right. Positive values of kurtosis indicate a pointy distribution, whereas negative values indicate a flat distribution.

whether the data collected by content analysis is normally distributed or not, the normal distribution test was used. ED (the dependent variable in this section) is the main variable in this section. The normal distribution test indicated that the data/variable does not follow a normal distribution, with skewness and kurtosis tests giving results of 0.535 and -0.924 respectively [(1)]. This is in line with non-parametric assumptions so the data was analysed using non-parametric statistical tests.

The normal distribution test, though useful, only indicates whether a data distribution deviates from normal. It does not indicate whether this deviation is statistically significant. Fortunately, the kolmogorov-Smirnow test identifies whether these differences are statistically significant or not. A p-value greater than 0.05 indicates that the distribution of the data is not significantly different from a normal distribution. If, however, the test is significant ($p<0.05$), then the distribution is significantly different from a normal distribution, which means that it is a non-normal distribution (Field, 2012). When the kolmogorov-Smirnow test was applied, it gave a p-value=0.007 [(2)], a highly significant result indicating that the distribution is not normal. This means that the data collected by content analysis is non-normally distributed and non-parametrical analysis should be employed.

5.9.1 Descriptive Statistics

Research results do not speak for themselves; they should be arranged in ways that allow researchers and readers to understand their meaning quickly. Descriptive statistics present research results clearly and concisely (Healey, 1990). They are a way of

1) For more details about the normal distribution test, see Appendix 5.1.
2) For more details about the kolmogorov-Smirnow test, see Appendix 5.2.

summarising large sets of quantitative (numerical) information; each descriptive statistic reduces a large volume of data into a simpler summary (Berenson and Levine, 1992). If the researcher has a large number of measurements, words or data that have been collected by means of a survey or from a historical record, useful ways to summarise them are percentages, frequencies or a graph.

Descriptive statistics are used to describe the basic features of the data. They provide simple summaries of the sample and the measures (Healey, 1990). Graphical summaries and frequency distributions show the spread of the data, while numerical summaries give measures of central tendency, which usually include the mean, median, standard deviation and minimum and maximum values (Curwin and Slater, 2008; Pallant, 2010). These methods were employed in this research. Healey (1990) defines frequency distributions as tables that summarise and display the entire distribution of some variable. It is very common to construct these tables for each variable of interest as the first step in a statistical analysis. The readability of the frequency distribution is enhanced by adding columns for percentages, cumulative frequency and/or cumulative percentages.

Descriptive statistics have been widely used in the field of social disclosure and ED; see for example (Elsayed and Hoque, 2010; Gray et al., 2001; Liu and Anbumozhi, 2009; Zubek, 2008). The data analysis in this research has been done using the Statistical Package for the Social Sciences (SPSS). It begins with a presentation of the standard descriptive statistics such as frequencies (counts and percentages), measures of central tendency (means and medians), dispersion (standard deviations) and minimum and maximum values. These provide an overview of the entire data set, enabling the researcher to describe the attributes of the studied sample and to know the frequency distributions of the variables under investigation (Field, 2012).

5.9.2 The Mann-Whitney Test

The Mann-Whitney test is a non-parametric test and a very useful alternative to an independent two sample t-test when the assumption of normality is not satisfied (Curwin and Slater, 2008). It allows for testing the null hypothesis that two groups of underlying samples belong to the same population (Siegel, 1988). The Mann-Whitney U test is used to identify if there is a statistically significant difference between the two population means (Zikmund, 2002). In general, 1%, 10% and 5% are the most popular significance levels. Levels higher than 10% are very uncommon (Norwegian Social Science Data Services, 2012). In the social sciences, a 95% level of confidence is acceptable; the p-value (significance level) associated with a 95% confidence level is 0.05 (Silver, 1992).

The normal rule and statistical tables for the standard normal distribution indicate that 95% of observations will lie within ± 1.96 standard deviation from the mean. Using a 0.05 level of significance, the null hypothesis of equal means will be rejected if Z is less than -1.96 or greater than +1.96. In other words, if a calculated Z value is between -1.96 and +1.96 then the p-value will be larger than 0.05, and the null hypothesis will be accepted. If the calculated Z value is below -1.96 or above +1.96 the p-value will be small to reflect this. In this case, it is possible to reject the null hypothesis in favour of the alternative hypothesis (Curwin and Slater, 2008).

The p-value tells us that there is a 5% probability that the result could be down to chance; the results are 95% confident. Thus, if the researcher chooses 5% likelihood as a criterion, there is a 5% chance that the results might refute a correct null hypothesis. If the researcher thinks that a 5% chance of making such an error is too high, they can choose a smaller significance level, say a 1% level.

The Mann-Whitney test was used to identify whether the differences between pairs of variables (local and foreign companies; large and small companies; large and medium companies; medium and small companies; public and private companies; old and new companies) for each year are significant or not. If the p-value is less than 0.05 we can say that the differences are statistically significant. In line with a number of studies in the social sciences (for example (Curwin and Slater, 2008; Silver, 1992), the present study was conducted at the 5% level of significance and 95% level of confidence.

5.9.3 The Kruskal-Wallis Test

The theory underlying the Kruskal-Wallis test is very similar to that of the Mann-Whitney test. It is a non-parametric test equivalent to the one-way ANOVA and an extension of the Mann-Whitney test to allow the comparison of more than two independent groups (Field, 2012). When the data is non-parametric, the Kruskal-Wallis test can be used to test and compare three or more independent groups that have been drawn from the same population (Huizingh, 2007; Pallant, 2010; Zikmund, 2002). It was employed in this study to identify whether or not the differences between three variables (small, medium and large companies) for each year are statistically significant. In line with a number of studies in the social sciences (Curwin and Slater, 2008; Silver, 1992), the study was conducted at the 5% level of significance and 95% level of confidence. If the p-value is less than 0.05 we can say that the differences are statistically significant (Pallant, 2010).

5.9.4 Cronbach's Alpha

Cronbach's alpha is one of the most common measures and pervasive statistics in research; it helps to investigate the internal consistency (reliability) of a questionnaire (Cortina, 1993). It is widely used as a measure when the researcher has multiple questions in a survey/questionnaire that form a scale and they wish to determine if the scale is reliable (Cronbach, 1951).

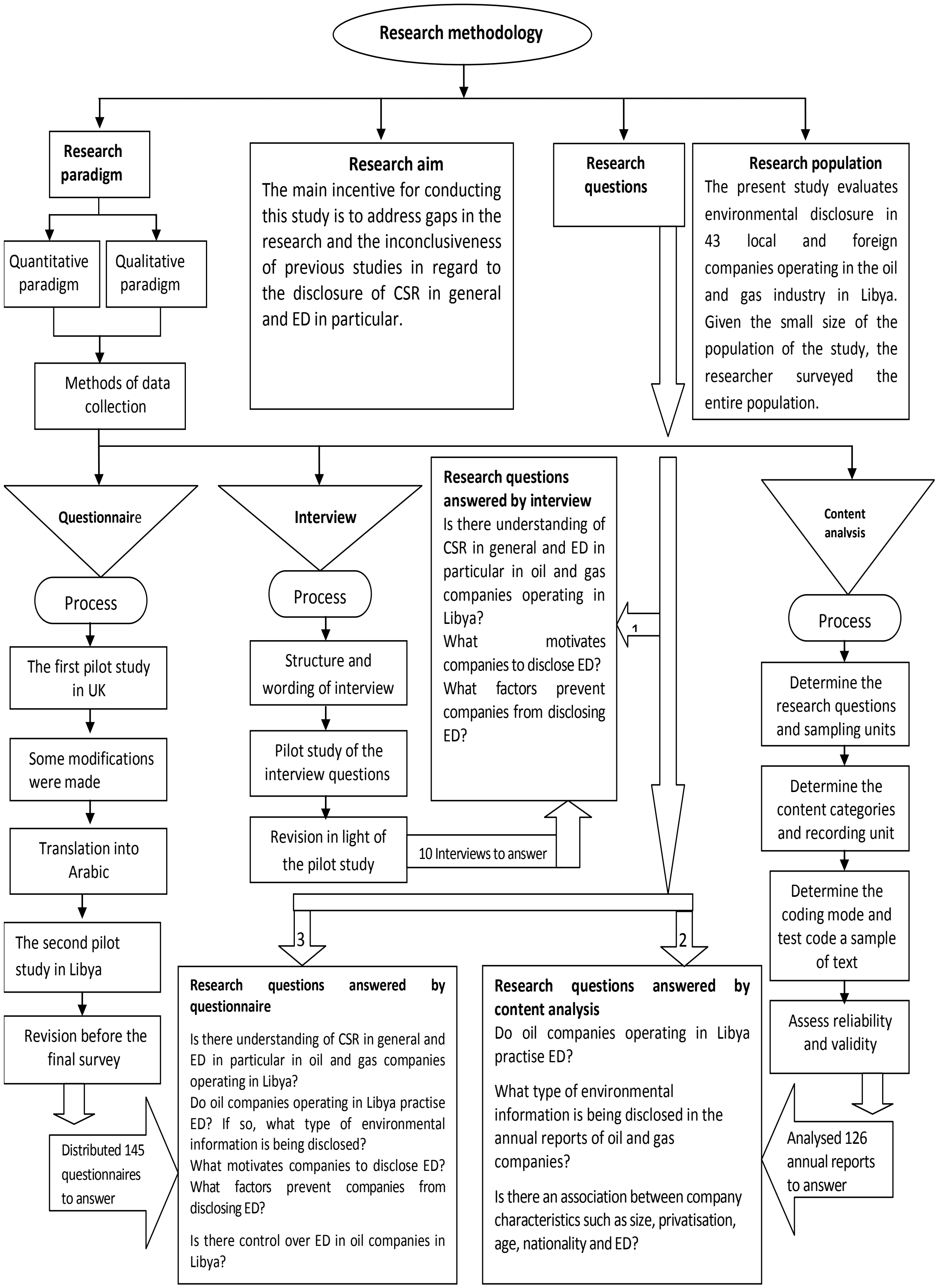
The reliability coefficient of alpha ranges between 0 and 1. If the value of the reliability coefficient is 0, this means there is no internal consistency between the items, while if the reliability coefficient of alpha is 1, the items have relatively high internal consistency. A reliability coefficient of alpha 0.70 or higher is considered acceptable in most social science research (Cortina, 1993). Cronbach's alpha has been widely used in previous social disclosure studies see for example (Turker, 2009; Vitell et al., 2003; Waldman et al., 2006).

5.10 Summary

To answer the research questions and achieve its aims, the present study employs a combination of quantitative and qualitative methods in the belief that this will facilitate triangulation and enhance the validity and reliability of the results (Fielding and Fielding, 1986; Hitchcock and Hughes, 1995). Three methods of data collection were employed: questionnaires, content analysis and interviews. Six steps were followed to make the questionnaire ready for the main distribution. These steps started with the first pilot study in the UK and ended with the revision of the questionnaire before the final survey. A total of 145 questionnaires were distributed to two groups (financial managers and accounting department employees), and 115 were collected for analysis. Since the study population was relatively small (it comprised 43 oil and gas companies, 13 of which are Libyan and 30 of which are affiliated to foreign companies), the entire population was surveyed. In addition, a total of 126 annual reports were collected, covering an eight year period between 2002 and 2009. These came from 24 local and foreign companies operating in the oil and gas industry in Libya. Finally, the researcher was able to conduct ten interviews with oil company staff, following assurances that their anonymity would be preserved. Figure 5.2 presents a comprehensive overview of the research methodology and the various stages within the research process.

The collected data has been analysed using SPSS. The analytical techniques employed include standard descriptive statistics and non-parametric tests such as the Mann-Whitney test and Kruskal-Wallis test. The presentation of the results begins in the next chapter.

Figure 5.2 Summary of the Research Methodology



Chapter Six: Analysis and Discussion of Questionnaire Survey and Interview

6.1 Introduction

The first five chapters having presented the theoretical framework and background to the study, the remainder of the thesis is concerned with the empirical results. This chapter analyses and discusses the results from the questionnaire survey, while Chapter Seven presents the results of the content analysis. As mentioned in the methodology chapter, the interview method was used as a supplement to the content analysis and questionnaire methods to clarify any points of confusion and provide additional explanation. The results from the interviews are presented throughout the course of this chapter.

The first part of this chapter describes the response rate for the questionnaire and tests the reliability of the questions. The second part presents the general information of respondents, and the third sets out the findings regarding ED practice among oil and gas companies operating in Libya. The questionnaire employed five-point Likert items; the resulting dataset was coded and entered into a spreadsheet. To determine the length of the five scale cells (i.e. their upper and lower limits), the extensity was calculated (5-1 = 4) and then divided by the number of cells in the scale to get the proper length of the cell (4 / 5 = 0.80). This value was added to the least value in the scale to determine the maximum limit of the cell. Thus, from 1 to 1.80 represents *strongly disagree*, from 1.81 to 2.60 represents *disagree*, from 2.61 to 3.40 represents *neutral*, from 3.41 to 4.20 represents *agree*, and from 4.20 to 5 represents *strongly agree* (Malhotra and Birks, 2007, cited in (Algeru, 2012).

6.2 Response Rate and Test of Reliability

The prime focus of this section is to highlight the total response rate to the questionnaire and to investigate its internal consistency (reliability) using Cronbach's alpha test.

6.2.1 Response Rate

The study was conducted on 43 companies operating in the oil and gas industry in Libya. A total of 145 questionnaires were distributed to two groups (financial managers and accounting department employees); out of these, 115 questionnaires were collected. Thus, a total response rate of 79% was achieved (see Table 5-7).

6.2.2 Results of Cronbach's Alpha Test of Questionnaire Reliability

Reliability refers to the extent to which a measuring procedure provides the same results on repeated trials (Neuendorf, 2002); the goal is to minimise errors and bias (Yin, 1994). Cronbach's alpha is commonly used to investigate the internal consistency (reliability) of questionnaires (Cortina, 1993), particularly when the survey/questionnaire has multiple questions that call for a scale-based response and the researcher wishes to determine if the scale is reliable (Cronbach, 1951). Accordingly, the test was conducted in this study. As Table 6-1 illustrates, the Cronbach's alpha values for the five groups of ED elements were calculated as 0.760; 0.722; 0.801; 0.787 and 0.747. The total value of Cronbach's alpha for all five groups was 0.771. A reliability coefficient of alpha 0.70 or higher is considered acceptable in social science research (Cortina, 1993). As the results are within the acceptable range, we can have confidence in the results of the analysis.

Table 6-1 Results of Cronbach's Alpha Test of Questionnaire Reliability

N	Groups of environmental disclosure elements	The final survey
1	Reasons that might encourage companies to disclose environmental information	0.760
2	Reasons that might prevent companies from disclosing environmental information	0.722
3	Measures for controlling environmental disclosure	0.801
4	Measures to oblige companies to disclose environmental information	0.787
5	Elements representing attitudes of management and employees towards social and environmental disclosure	0.747
	Total	0.771

6.3 Characteristics of Research Population

This section illustrates the general information gathered in regard to the respondents' education, including type and level of educational qualification, place of last educational qualification, present occupation, length of experience and attendance at environmental management or environmental accounting training courses. The assumption underlying these questions was that the background and experience of the respondents is likely to affect the level of confidence we can have in their responses.

6.3.1 Distribution of Managerial Responsibilities

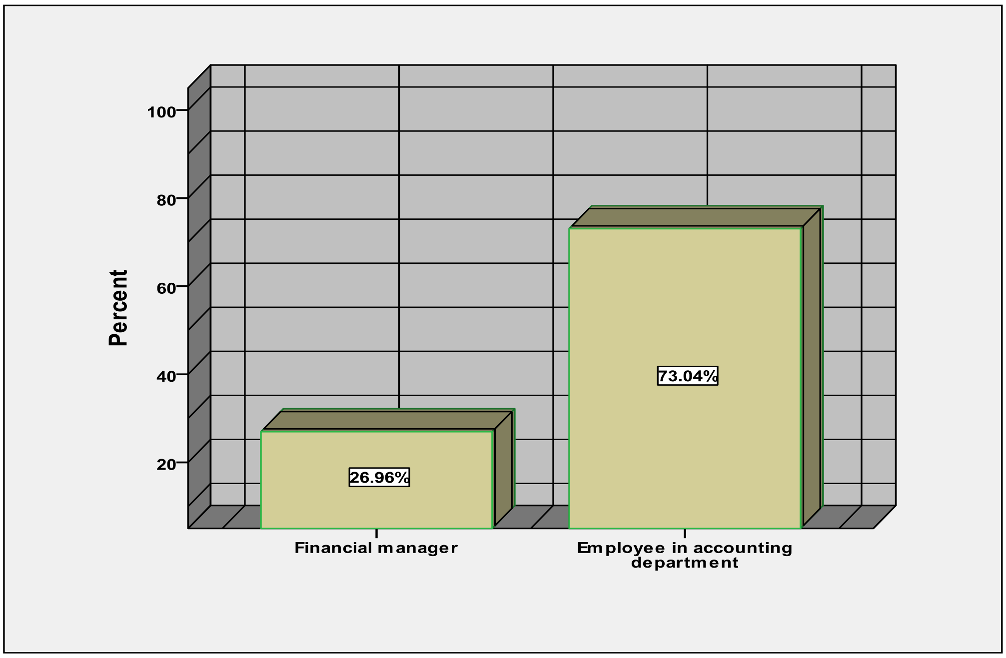
As can be seen in Table 6-2, the population of the study fell into two groups: financial managers and accounting department employees in local and foreign companies operating in the Libyan oil and gas sector. The table shows that more accounting employees than financial managers took part in the study (84 and 31 respectively).

Table 6-2 Present Occupation of Respondents

	Number	%
Financial manager	31	26.96
Employee in accounting department	84	73.04
Total	115	100.0

Nearly three-quarters (73.04%) of respondents were employees in accounting departments, while the remaining 26.96% were financial managers; this is depicted in Figure 6.1 below.

Figure 6.1 Present Occupation of Respondents



6.3.2 Academic Qualification of Respondents

The analysis reveals that the vast majority of respondents held a Bachelor's degree, with many also having a Master's degree. The same percentage of respondents held a PhD as held an Intermediate Diploma (see Table 6-3).

Table 6-3 Academic Qualification of Respondents

	Number	%
PhD	6	5.2
Master	31	27.0
Bachelor	72	62.6
Intermediate Diploma	6	5.2
Total	115	100

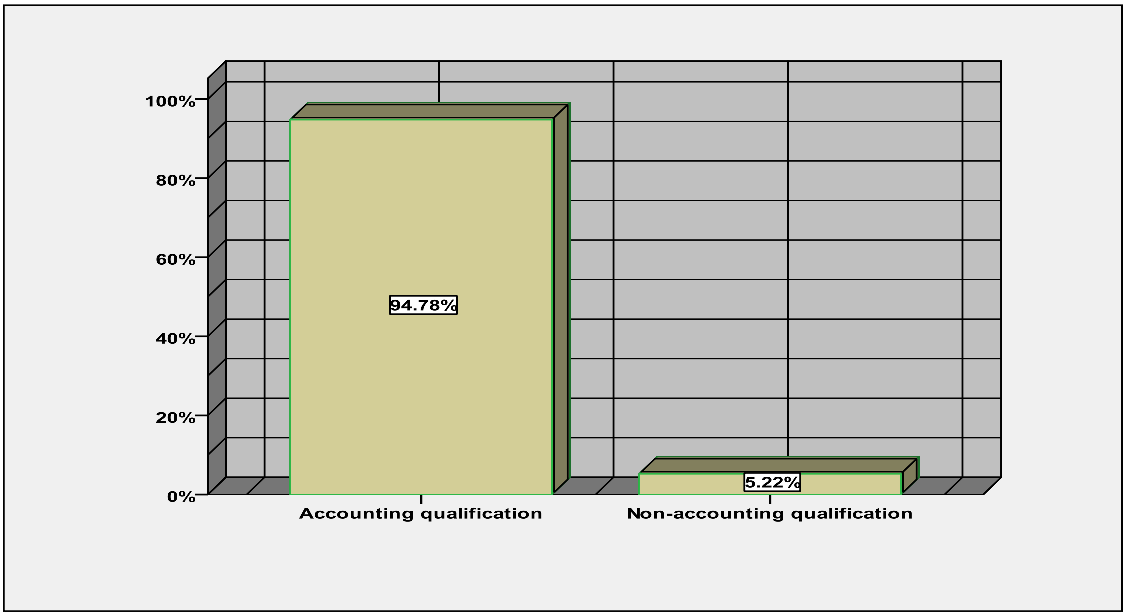
Nearly two-thirds (62.6%) of the research participants held a Bachelor's degree, with 32.2% also holding a postgraduate (Master's or PhD) degree. A relatively small number of respondents (around 5%) held an Intermediate Diploma.

Based on the above it is clear that all the respondents who participated in the study were highly educated. That the questionnaires were answered by such respondents should increase our confidence in the results of the analysis.

6.3.3 Type of Qualification and Where the Final Qualification was Obtained

The vast majority of respondents – nearly 95% – had an accounting qualification, as Figure 6.2 shows. A relatively small proportion (about 5%) held a non-accounting qualification. It is thus reasonable to assume that the respondents understood the issues under investigation and were able to give an informed opinion.

Figure 6.2 Type of Educational Qualification



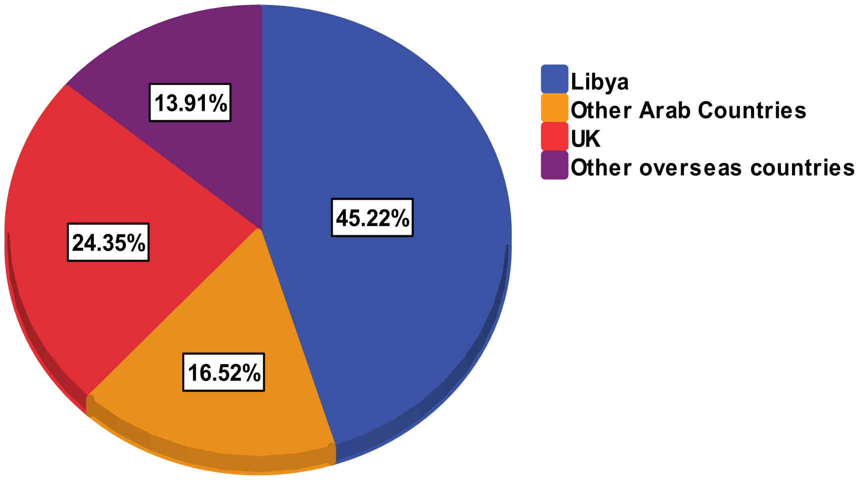
Regarding the place of education, the findings confirm that participants obtained their degrees from a variety of countries (see Table 6-4 and Figure 6-3). Whilst a large number of them (52 respondents or 45.2%) obtained their qualification from Libyan universities, the remainder (63 or 54.8%) obtained their qualification from foreign universities.

Table 6-4 Place of Final Educational Qualification

	Number	%	Cumulative %
Libya	52	45.2	45.2
Other Arab countries	19	16.5	61.7
UK	28	24.3	86.1
Other overseas	16	13.9	100.0
Total	115	100.0	

A relatively high percentage – about a quarter of the population – obtained their qualifications from UK universities. The remaining quarter obtained their degrees from other Arab or foreign countries.

Figure 6.3 Place of Final Educational Qualification

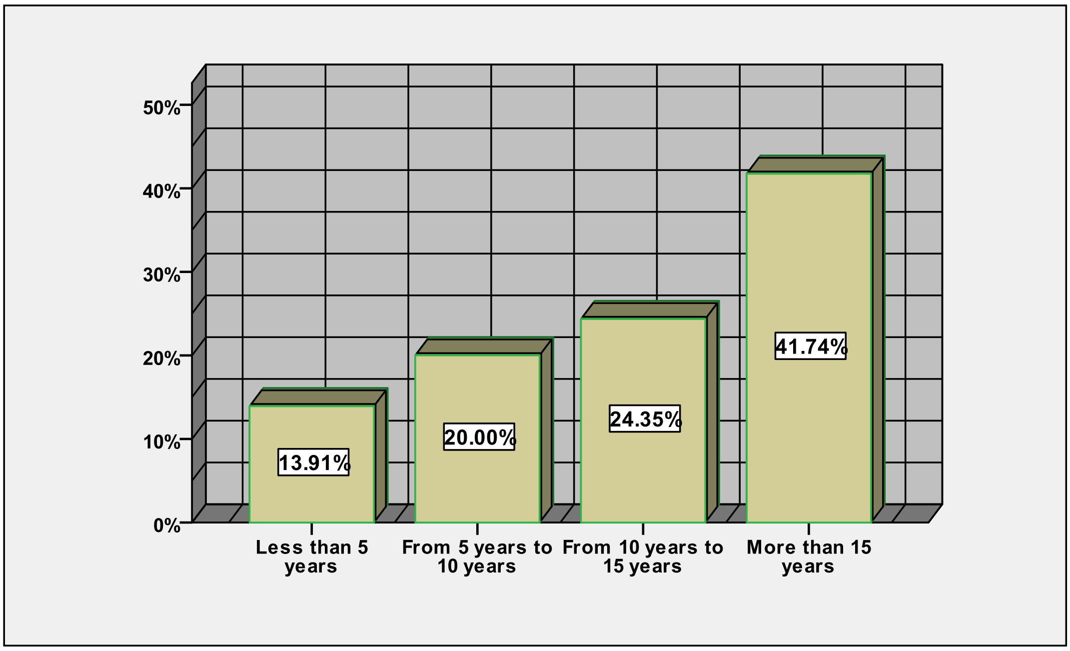


The above results indicate that a number of respondents received their qualifications in developed countries such as the UK and USA, where the interest in ED is strongest (Gamble et al., 1996). It may be argued that these respondents were better able to understand the problem of the research, again increasing confidence in their responses.

6.3.4 Length of Experience and Attendance at Training Courses

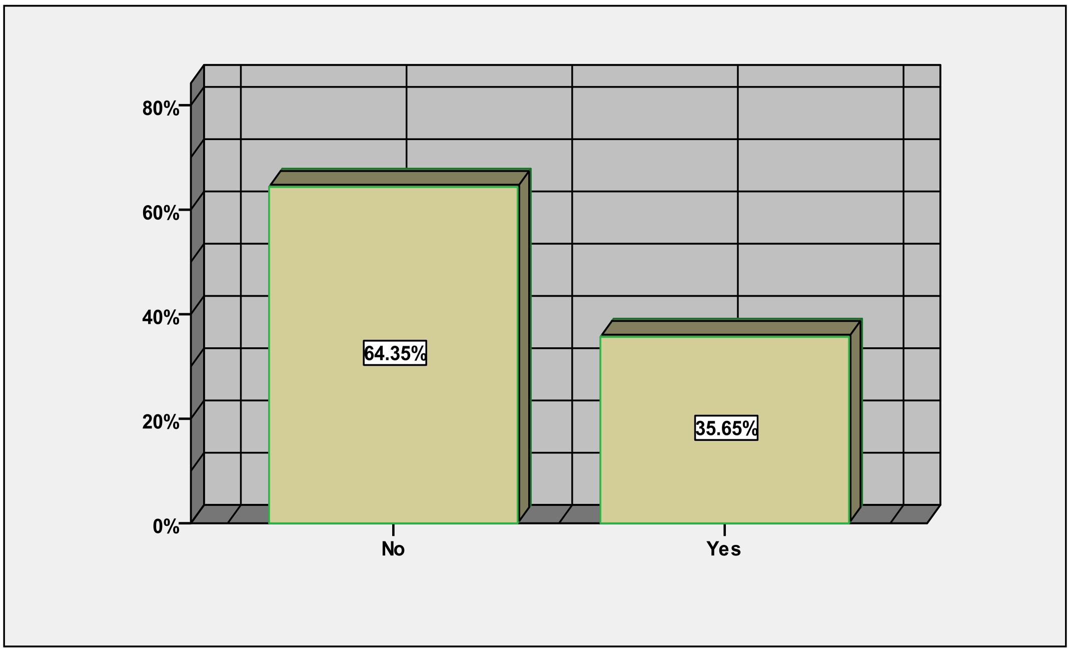
As can be seen from Figure 6.4, nearly two-thirds (66%) of respondents had practical experience of more than 10 years, while the remaining respondents had less than 10 years of experience. One can therefore conclude that participants were generally experienced in their present occupation.

Figure 6.4 Length of Experience in Present Occupation



More than a third of respondents (nearly 36%) had attended courses related to environmental accounting in general and environmental management in particular, as Figure 6.5 illustrates, again increasing confidence in the results.

Figure 6.5 Attendance at Training Courses on Environmental Management or Environmental Accounting



When respondents were asked about the date of their attendance at these courses, it was found that nearly two-thirds (60%) had attended courses between 2005 and 2010, suggesting that oil and gas companies have been showing increasing interest in environmental management and environmental accounting training over the last six years (see Table 6-5).

Table 6-5 Date of Training Course

		Number	Valid percent	Cumulative percent
Valid	1996	1	3.1	3.1
	1997	1	3.1	6.3
	1998	1	3.1	9.4
	1999	1	3.1	12.5
	2000	2	6.3	18.8
	2001	2	6.3	25.0
	2002	2	6.3	31.3
	2003	2	6.3	37.5
	2004	1	3.1	40.6
	2005	3	9.4	50.0
	2006	3	9.4	59.4
	2007	3	9.4	68.8
	2008	4	12.5	81.3
	2009	3	9.4	90.6
	2010	3	9.4	100.0
	Total	32	100.0	

Recent attendance at training courses by employees indicates that they have up-to-date knowledge about the issues related to environmental management. This should have helped them to understand the problem of the research and to provide more informed answers to the questionnaire questions. This should increase our confidence in the results.

6.4 Perception of Environmental Disclosure (ED)

This section discusses and analyses the findings relating to the participants' perceptions of ED practice, including their attitudes towards CSR and ED, their assessment of the level and type of ED being practised, their views on the elements that encourage or discourage environmental disclosure, and their views on how ED might be controlled.

Descriptive statistics were used to describe the basic features of the data and to identify any differences between local and foreign companies in terms of their attitudes towards ED. The Mann-Whitney test was used to identify whether these differences are statistically significant or not. A p-value of less than 0.05 indicates that the differences are statistically significant. In line with previous studies in the social sciences see for example (Curwin and Slater, 2008; Silver, 1992), the present study was conducted at the 5% level of significance and 95% level of confidence.

As the data collected by the questionnaire was ordinal, the median was adopted as the best way to assess the companies' attitudes towards the statements addressing disclosure. The median is usually preferred to other measures of central tendency when dealing with ordinal data (Harnett, 1982; Hayslett, 1974; McClave and Sincich, 2011; Silver, 1992). The inter-quartile range was computed to assess the consistency of the companies' answers for each statement. A value of zero for any given statement means that all local (or foreign) firms tended to give the same answer for the statement.

6.4.1 Attitudes of Management and Employees towards Social Responsibility and Environmental Disclosure (ED)

The primary focus of this section is to highlight the attitudes of financial managers and accounting department employees in oil and gas companies operating in Libya towards CSR and ED. The questionnaire contained a series of statements, the design of which was influenced by a number of previous studies (Arevalo and Aravind, 2011; Mashat, 2005; Zubek, 2008). These statements were designed to reveal managers' and employees' perceptions of

CSR and ED and to identify whether these differed between local and foreign companies (see Table 6-6).

There was a general consensus amongst the respondents on the majority of the suggested elements. The median of answers from respondents who agreed or strongly agreed with the elements ranges between 3.5 and 5. Elements No. 2,3,4,5,6 and 7 received median scores from both local and foreign companies, and the inter-quartile value was 1 for the majority of these elements. This indicates consistency across the companies for each statement. However, there is significant inconsistency among local and foreign companies on whether concern for the environment should be a priority for companies even if it reduces their profits. This is evident in a high inter-quartile score of 3 (see Table 6-6). This means that while some respondents strongly agreed, others strongly disagreed.

Table 6-6 indicates that the respondents attached the highest importance to the proposal that companies should disclose environmental performance alongside economic performance and prepare environmental reports to accompany financial statements and notes (element No. 7). The median score of 5, *strongly agree*, and inter-quartile score of 1 reflect consistency in the answers of local and foreign companies about statement No. 7. Respondents believed that this element needs to be given the most weight. Element No. 1 was ranked the lowest, with a median score of 1, *strongly disagree*, by both local and foreign companies. The inter-quartile score of 1 again indicates consistency across the companies for this statement. This suggests that virtually all the respondents understood the importance of ED to both organisations and stakeholders and strongly rejected the idea that the sole responsibility of an organisation is to seek to maximise stakeholders' wealth.

Table 6-6 Medians and Inter-quartile Ranges for the Attitudes of Management and Employees towards Social Responsibility and Environmental Disclosure (ED)

No	Propositions	Foreign			Local			P value
		Median	Inter-quartile range	Scale	Median	Inter-quartile range	Scale	
1	The sole responsibility of the organisation is to maximise shareholders' profits.	1	1	strongly disagree	1	1	strongly disagree	0.207
2	Companies should consider social and environmental responsibility in equal proportion to their economic interests.	4	1	agree	4	1	agree	0.344
3	Business organisations should bear greater environmental and social responsibilities to justify their presence in the community.	4	1	agree	4	1	agree	0.697
4	Concern for the environment should occupy high status within the company even if it could lead to reduced profits.	4	3	agree	3.5	3	agree	0.582
5	The relevant accounting parties need to determine what companies should disclose regarding their environmental performance.	4	1	agree	4	1	agree	0.667
6	Accounting bodies such as the Libyan Association of Accountants and Auditors should prepare environmental disclosure standards.	4	1	agree	4	1	strongly agree	0.631
7	The company should disclose environmental performance parallel to its economic achievement through the preparation of environmental reports alongside financial ones.	5	1	strongly agree	5	1	strongly agree	0.717

The analysis above indicates that there are no differences between local and foreign companies in terms of their awareness of CSR and ED. This finding is supported by p-values which range between 0.207 and 0.717 for all elements; the fact that they are greater than 0.05 means there are no significant differences in the answers of the respondents.

In order to precisely identify the extent of respondents' awareness and understanding of CSR and ED, they were given the opportunity to explain their opinions in their own words. For this purpose, the respondents were asked open-ended questions regarding CSR and ED. In their answers, respondents tended to accept the need for greater disclosure of social and environmental information and that companies in Libya should take account of social and environmental issues. However, they acknowledged that although environmental rules and regulations exist, they are not widely applied. The answers of respondents are summarised in Table 6-7. This table suggests that there was a high level of understanding and awareness among respondents, ranging between 73.9% and 76.5%. The finding supports the results derived from the closed-ended questions.

Table 6-7 Descriptive Statistics for Respondents' Answers Regarding Understanding of Corporate Social Responsibility (CSR) and Environmental Disclosure (ED)

No	Questions	Number and %	Understand	Do not understand	Scale
1	What does corporate social responsibility mean?	Number	88	27	High
		%	76.5	23.5	
2	What does environmental disclosure mean?	Number	85	30	High
		%	73.9	26.1	

When asked in the interviews what they took CSR and ED to mean, the managers and employees offered a range of answers. However, their definitions showed a clear understanding of the concept.

F1 defined CSR as:

> *…the commitment of companies to meet the requirements of society, taking into consideration the expectations of society, the interests of employees and the environment. And it goes beyond the economic and legal requirements. In addition, concern for social responsibility should occupy high status within the company; it should strike a balance between the concern for social responsibility and the economic interests of the company.*

H2 said:

> *I think CSR and ED are voluntary and compulsory: corporate behaviours towards society that aim to achieve social welfare in the various social fields. For instance, the company can play an active part through allocating some of the proceeds to protect the environment from pollution. This can also be shown in developing and*

promoting health education programmes for their staff and their families in particular and society in general. So companies should consider social and environmental responsibility in equal proportion to their economic interests; at least, abide by the requirements of the law.

On the same theme, A1 indicated:

CSR is committing to reduce the bad results of the company's activities and contributing to solve social problems. For example, companies should aim at tackling corruption and protecting the environment. So it should go beyond its mandatory duties to take on voluntary ones, but only in so far as it is in line with the interests of the shareholders.

These respondents believed that CSR involves doing more than the simple legal or economic minimum and that it aims at limiting the negative results of corporate activities and finding solutions to the many problems of society, without affecting shareholders' and owners' interests in the process. All but one defined CSR as the commitment to undertake both voluntary and compulsory tasks; only C2 disagreed, suggesting that social responsibility is a purely mandatory responsibility and that it is fulfilled simply by conforming to the laws and social regulations set by the government:

In my view, CSR is how companies manage their business to fully meet their social responsibility as required by law.

When asked to explain their understanding of ED, the interviewees gave broadly similar answers. They described ED as one of the major components of social disclosure, explaining that it is the main way of setting out environmental facts in annual corporate reports or in special reports, and that it can be voluntary or compulsory depending on laws or environmental regulations. According to G2:

ED is one of the most important types of social disclosure, it is related to environmental activities and may be voluntary or mandatory. It supplies users with environmental information, which helps them to take their investment decisions and evaluate organisations.

These results confirm those from the questionnaire survey, where almost all the managers and employees showed awareness and understanding of CSR and ED. This might perhaps have been expected, given that the majority of respondents who participated in the study are highly educated and that businesses are showing increasing interest in reporting environmental practices.

The finding is not consistent, however, with those of previous studies conducted in Libya. Mashat (2005), for example, believes that one possible reason for the low level of social disclosure in Libyan companies compared to their counterparts in developed countries is a lack of awareness of the importance and benefits of CSRD. This result also disagrees with Saleh (2004), who indicated that Libyan managers are ill-equipped to handle environmental issues, including ED, as they do not have adequate awareness or understanding. He ascribed this to the fact that none of the managers in his study had taken part in any training courses or programmes to improve their knowledge of environmental management and/or accounting.

The difference in findings may be due to a number of factors. As important as Saleh's results were, his study was carried out on 13 industrial companies within the Libyan environment outside the oil sector, more than ten years ago (1998-2001). At the time, Libya was still subject to UN-imposed sanctions and its overseas financial assets were frozen. The sanctions were not suspended until 1999 or fully lifted until September 2003 [(1)]. Thus, the majority of industrial companies were suffering from financial hardship and problems during this period. In these circumstances, there was no great interest in training courses apart from in the oil sector. The

1) For more information about this siege, see Section 4.4.

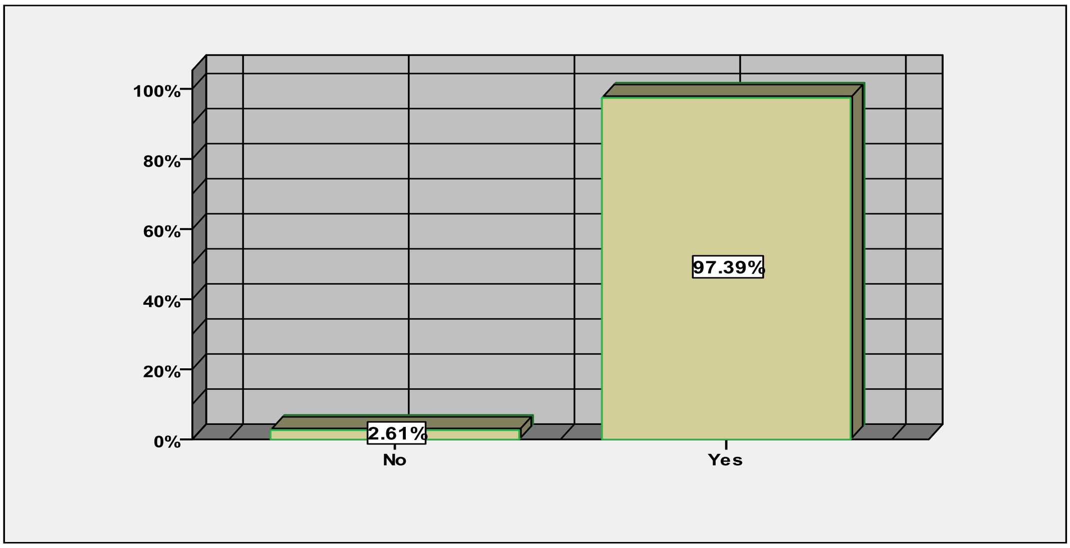
oil industry has historically been assiduous about training its employees; it arranges in excess of 400 training courses annually. In 2002, for example, nearly 2500 staff attended training courses in the UK and throughout the world (Zubek, 2008). The oil sector's continuing support for training is evident in the finding that more than a third of respondents (nearly 36%) had attended courses related to environmental accounting in general and environmental management in particular (see Section 6.3.4). Moreover, nearly two-thirds (60%) of these had attended courses between 2005 and 2010, suggesting that over the last six years, interest in environmental management and environmental accounting training has grown among oil and gas companies. The finding indicates that these managers and employees have up-to-date knowledge of the issues surrounding environmental management.

6.4.2 Environmental Disclosure (ED) in Annual Reports and the Type of Disclosure

The aim of this section is to establish whether ED is being practised by oil and gas companies operating in Libya, and if so, what type of environmental information is being disclosed in the annual reports.

Descriptive statistics were used to identify whether ED is being practised by oil and gas companies operating in Libya and to investigate the type of environmental information being disclosed in their annual reports. When respondents were asked whether their company disclosed environmental information in its annual reports, almost all the participants (nearly 98%) confirmed that their company engaged in ED to some degree (see Figure 6.6). A very few respondents (not quite 3%) said that their company made no ED in its annual reports.

Figure 6.6 Environmental Disclosure in Annual Reports



When the study participants were asked about the type of ED provided by their companies, their answers varied. Disclosure seems to be dominated by good news: the results indicate that all the companies reflect upon good news in their annual reports (see Table 6-8) in an attempt to maintain a positive image with the public. The vast majority of respondents (nearly 95%) agreed that their companies also disclose neutral news in their annual reports, while more than a third of the study participants (35.7%) suggested that their company discloses even the bad news. According to Adams (2002), it is generally agreed that reporting bad news actually enhances corporate credibility and image, although some hold the view that no further benefit is gained by going into detail.

Table 6-8 Type of Environmental Disclosure (ED)

N	Type of environmental disclosure	Number	%
1	Disclosure related to bad news	41	35.7
2	Disclosure related to neutral news	109	94.5
3	Disclosure related to good news	115	100

These results were generally confirmed by the interview results. Interviewees were asked a series of related questions:

Does your company disclose any environmental information in its annual reports?

If yes, what type of disclosure?

If no, does your company have an environmental policy?

If yes, why does your company not disclose these policies?

If no, does the company intend to establish an environmental policy in the near future?

The majority of interviewees confirmed that their companies provide some environmental information in their annual reports. In addition, they indicated that more attention is given to good news than bad or neutral news. D1 indicated that:

> *As a result of the benefits of ED our company has started to disclose some environmental information in its annual reports since 2002. It is still interested in good news more than bad news. Although in the beginning it focused on the good, however, now it reports some bad and neutral news.*

H2 believed that:

> *Although society is not interested in environmental information, maybe this is because they are not aware of the importance and the necessity of this information. Also there are no legal requirements that oblige companies to disclose their environmental information. Our company's interested in voluntary disclosure and it discloses social and environmental information of the three types: good, bad and neutral. Frankly, good news gets more attention than other types of ED.*

However, E2 claimed that:

> *Our company is not interested in environmental and social disclosure although it has many social and environmental activities and this is because the environmental costs are already included in the industrial expenses and it is difficult to separate them. In addition, there is an absence of environmental laws, standards and accounting rules that require companies to disclose environmental information. Also, society is not interested in environmental and social information. Hence, companies prefer to charge the costs of their environmental activities to production costs.*

When this interviewee was asked whether his company has an environmental policy, he reported:

> *Yes, our company has many social and environmental activities and it is starting to regularly set environmental policies which will be applied in the future to meet some of the environmental laws and regulations issued recently. Although in practice there is no total or real obligation, these policies will be disclosed in the near future.*

From the results above it is evident that almost all of these companies disclose some social and environmental information. The vast majority make some disclosure of environmental information in their annual reports or have policies to disclose this information in the near future. Although there is some disclosure of bad and neutral news, the vast majority of this disclosure focuses on good news.

The results above are not consistent with Saleh's (2004) finding that Libyan industrial companies readily disclose negative news. Saleh explains this by the fact that the vast majority of Libyan industrial enterprises are public entities whose main objective is to provide goods and services to the public rather than to make profit. Freed of the pressure to increase their market value, especially in the absence of a stock market, managers in these companies do not have to use disclosure to justify their company's continued existence, enhance its image or avoid social pressure. Hence, they do not hesitate to disclose bad news.

6.4.3 Motives that Encourage Companies to Disclose Environmental Information

There is plenty of environmental legislation in Libya, but no binding obligation for companies to disclose their environmental information [1]. This begs the question of why companies take on the cost and potential risks associated with public disclosure when they know it is more voluntary than

1) For more information about Libyan laws and international accounting standards relating to ED, see Sections 3.5 and 4.7.

obligatory. This section attempts to identify what motivates companies to engage in ED and whether these motives vary between individual companies and between foreign and local companies. A number of potential motives were included in the questionnaire for the respondents to accept or reject. These reasons were compiled and classified following consultation of a number of previous studies see for example (Cormier et al., 2005; Liu and Anbumozhi, 2009; Mashat, 2005).

The respondents' answers, which are summarised in Table 6-9, fall into three groups. The first group comprises those motives for disclosure which were accepted as valid by both local and foreign companies; the second group are the motives which were accepted by foreign companies but rejected by local companies; and the third are those motives which were rejected by both local and foreign companies.

Group one: propositions accepted by local and foreign companies

As can be seen from Table 6-9, respondents tended to agree or agree strongly with the majority of the defined elements and to consider them the main reasons for corporate disclosure. In these cases, there was general agreement among both local and foreign companies. The medians for these answers range between 3.5 and 5 (agree and strongly agree). Although many elements received high median scores from both local and foreign companies, respondents from the foreign companies tended to show stronger agreement than those from the local companies.

The inter-quartile range is 0 to 2 for foreign companies, which means that there is consistency across these companies for all of the statements; in other words, foreign firms tended to give similar answers. In contrast, there is significant variance in the answers of local companies about propositions No. 1, 4, 5, 9, 13 and 14. This is evident in the higher inter-quartile scores

(3). For example, while some local companies strongly agreed that ED is undertaken to improve company image and meet pressure from customers and external parties, others strongly disagreed. The resistance of some local companies may be attributable to the fact that all local companies are public enterprises, and as such do not have shareholders or shares traded on a stock market. They are therefore less likely to be influenced by the need to maintain a reputation or to respond to pressure from customers and other users – issues that are of greater importance to the foreign companies.

The p-values of the Mann-Whitney test for these elements range between <.001 and 0.917, meaning that some are greater than 5%, while others are smaller than the 5% level of significance. In other words, there are no significant differences in the opinions of the two groups about some elements, but there are significant differences about others. This is probably because there is significant inconsistency in the answers of local companies for some statements, as shown by the high inter-quartile values. Although there are some differences among the local companies, it can generally be concluded that the respondents from both foreign and local companies were consistent in accepting about half of the propositions as being key motivations for the corporate disclosure of environmental information (see Table 6-10).

Table 6-9 Medians and Inter-quartile Ranges for Respondents' Answers on Reasons Why Companies Disclose Environmental Information

	N	Propositions	Foreign			Local			P value
			Median	Inter-quartile range	Scale	Median	Inter-quartile range	Scale	
Reputation	1	Environmental disclosure helps the company to improve its image and reputation before public opinion.	5	1	strongly agree	4	3	agree	0.252
	2	Environmental disclosure helps the company to give an impression of the extent of its commitment to environmental laws.	5	1	strongly agree	4	2	agree	0.413
	3	The company discloses environmental information in accordance with its social and moral responsibility.	5	1	strongly agree	5	1	strongly agree	0.917
	4	The company discloses environmental information to increase transparency.	4	2	agree	3.5	3	agree	0.617
Expectations of society	5	Environmental disclosure helps the company to meet the expectations of society as a whole and to give its activities greater legitimacy.	4	0	agree	3.5	3	agree	0.001
	6	The right of the firm's employees to receive environmental information and to identify the level of pollution resulting from production processes.	4	0	agree	3.5	2	agree	0.004
	7	Investors and other external parties have the right to receive environmental information to assist them in making appropriate investment decisions.	4	1	agree	1.5	1	strongly disagree	<.001
	8	The company discloses environmental information to satisfy consumers and moral investors.	4	1	agree	1.5	2	strongly disagree	<.001
Legal requirements	9	Environmental disclosure helps the company to avoid lawsuits being filed against it.	4	1	agree	3.5	3	agree	0.003
	10	The company discloses environmental information in response to legal obligations.	4	1	agree	2	1	disagree	0.001
	11	The company discloses environmental information as required by the National Oil Corporation.	2	1	disagree	2	1	disagree	0.552
	12	The company discloses environmental information as required by Libyan environmental laws.	2	2	disagree	2	1	disagree	0.225
Pressures	13	Environmental disclosure helps the company respond to pressure from organisations interested in environmental performance.	5	1	strongly agree	4.5	3	strongly agree	0.138
	14	Environmental disclosure helps the company respond to pressure from users and customers.	5	1	agree	3.5	3	agree	<.001
	15	The company discloses environmental information to increase its competitiveness.	4	0	agree	2.5	2	disagree	<.001
	16	The company discloses environmental information because there is a relationship between this type of disclosure and its continuation in Libya.	2	1	disagree	2	2	disagree	0.062
Economic factors	17	Environmental disclosure can be used as a tool for planning, monitoring and evaluation of performance.	5	1	strongly agree	2	1	disagree	<.001
	18	The company discloses environmental information to get priority in terms of new contracts for oil exploration in the future	2	2	disagree	2	2	disagree	0.679
	19	The company discloses environmental information as a result of moral incentives.	5	1	strongly agree	2	1	disagree	<.001
	20	The company discloses environmental information as a result of financial incentives.	5	1	strongly agree	2	3	disagree	<.001

Group two: propositions accepted by foreign companies and rejected by local companies

The second group is those items that were accepted by foreign companies and rejected by local companies (see Table 6-10). As can be seen from Table 6-9, there was a general consensus among foreign companies on elements No. 7, 8, 10, 15, 17, 19 and 20. The medians for these answers range between 4 and 5 (agree and strongly agree), indicating that foreign companies regard these elements as motives for environmental disclosure. Moreover, the inter-quartile score for these answers ranges from 0 to 1, which indicates a high level of consistency. Thus, all foreign companies tended to give the same answer for these statements. In contrast, these reasons were rejected by local companies, as shown in Table 6-10. Table 6-9 shows that the medians of local respondents' answers to these statements range from 1.5 to 2 (disagree and strongly disagree), while an inter-quartile range of between 1 and 2 for most of the elements indicates consistency among the local companies' answers. In contrast, the inter-quartile range for one element related to financial incentives was 3, indicating that while some respondents from local companies strongly agreed, others strongly disagreed. Thus, it may be argued that some local companies undertake ED in the belief that it will yield both short- and long-term benefits.

The analysis reveals that the two groups, local and foreign companies, differ in what they perceive as being the main reasons behind their environmental disclosure. To check whether this difference is significant or not, the Mann-Whitney test was used. The p-values for these elements are all <.001, which is less than the 5% level of significance. This means the differences are statistically significant. It is evident then that there are some elements which foreign companies consistently accept as major reasons for environmental disclosure, but which are rejected by local companies (see Table 6-10).

Group three: propositions rejected by local and foreign companies

The third group is those elements rejected by both local and foreign companies. There are four such elements: No. 11, 12, 16 and 18 (see Table 6-10). Table 6-9 shows that there was consensus among both local and foreign companies, with the medians of all answers being 2, disagree. This leads us to reject these elements as motives for environmental disclosure. An inter-quartile range of between 1 and 2 means both foreign and local companies were consistent in their answers to these statements. The Mann-Whitney test yielded p-values ranging from 0.062 to 0.679, greater than the 5% level of significance, confirming that there is no significant difference between the two groups in terms of their rejection of these elements.

Table 6-10 Acceptance and Rejection of Potential Disclosure Drivers by Local and Foreign Companies

N	Propositions accepted by local and foreign companies.	Propositions accepted by foreign companies and rejected by local companies.	Propositions rejected by local and foreign companies.
1	Environmental disclosure helps the company to improve its image and reputation before public opinion.	The company discloses environmental information in response to legal obligations.	The company discloses environmental information as required by the National Oil Corporation.
2	Environmental disclosure helps the company to avoid lawsuits being filed against it.	Investors and other external parties have the right to receive environmental information to assist them in making appropriate investment decisions.	The company discloses environmental information as required by Libyan environmental laws.
3	Environmental disclosure helps the company to meet the expectations of society as a whole and to give its activities greater legitimacy.	The company discloses environmental information to satisfy consumers and moral investors.	The company discloses environmental information to get priority in terms of new contracts for oil exploration in the future
4	Environmental disclosure helps the company to respond to pressure from organisations interested in environmental performance.	The company discloses environmental information to increase its competitiveness.	The company discloses environmental information because there is a relationship between this type of disclosure and its continuation in Libya.
5	Environmental disclosure helps the company to give an impression of the extent of its commitment to environmental laws.	Environmental disclosure can be used as a tool for planning, monitoring and evaluation of performance.	
6	Environmental disclosure helps the company to respond to pressure from users and customers.	The company discloses environmental information as a result of moral incentives.	
7	The right of the firm's employees to receive environmental information and to identify the level of pollution resulting from production processes.	The company discloses environmental information as a result of financial incentives.	
8	The company discloses environmental information in accordance with its social and moral responsibility.		
9	The company discloses environmental information to increase transparency.		

6.4.4 Discussion of Disclosure Drivers

This section discusses the potential motivating factors identified above. In line with previous studies, they are grouped into categories: reputation, legal requirements, meeting the expectations of society, societal pressure and economic factors.

Reputation

Corporate reputation is an intangible way to differentiate one's services and products from those of one's competitors. Reputation is built not just upon the product or service but also upon the company's ethics and morality, history, public image and HR management (Siltaoja, 2006, cited in (Heikkurinen, 2010). The objective of this section is to understand the relationship between company reputation and ED; in other words, whether companies are motivated to disclose their environmental information by the belief that this will enhance their reputation.

There was general agreement among local and foreign companies that company reputation is a motive driving the disclosure of environmental information. Table 6-11 shows that the median of foreign companies' answers for this element is 4.25, with an inter-quartile score of 1. This indicates that foreign companies strongly agreed that improving reputation is a disclosure motive, and that there was no significant difference between them in terms of their responses to this statement.

Table 6-11 Medians and Inter-quartile Ranges for Respondents' Answers on Whether Reputation Motivates Companies to Disclose Environmental Information

	Foreign			Local			Mann-Whitney	
	Median	Inter-quartile range	Scale	Median	Inter-quartile range	Scale	Z	p-value
Reputation	4.25	1	strongly agree	3.875	2.75	agree	-1.757	0.79

Similarly, there is evidence that local companies also consider company reputation to be a determinant of ED and one of the main purposes of corporate disclosure. Table 6-11 shows that the median of local companies' answers for this element is 3.875 (agree), although an inter-quartile score of 2.75 indicates inconsistency. Table 6-9 also indicates that although local companies on the whole agree with the proposition, there is significant variance in their responses to the statements that ED helps companies to improve their image and increases transparency. High inter-quartile scores (3) indicate that some respondents from local companies were in strong agreement, while others strongly disagreed. The disagreement of some companies is probably due to the fact that, as public companies, they do not have shareholders or shares traded on the stock market, and their reputation does not have much effect on their performance or Balance Sheet value. They are less concerned with improving their reputation and transparency than the foreign companies.

Table 6-9 shows that all items related to company reputation yielded high median scores for both local and foreign companies and that there were no significant differences between their responses. Respondents from the foreign companies tended to agree more strongly with the importance of company reputation than did those from the local companies, but as Table 6-11 shows, the level of agreement between foreign and local companies is significant at the level (Z- statistic = -1.757, p-value = 0.79); the calculated Z value is between -1.96 and +1.96 and the p-value is larger than 0.05. In other words, there is no significant difference between the two groups of companies in terms of their opinions about company reputation; both see it as a motive that encourages them to disclose environmental information.

The findings from the interviews confirm this result; when asked why companies should disclose social and environmental information, interviewees argued that, among other things, ED helps companies improve their reputation and foster goodwill with the public. This is especially the case among foreign companies, who face local perceptions that they have come to steal the host country's wealth. A number of participants pointed out that CSR and ED can have a double return. As much as it is for the benefit of the community, it is also of extreme advantage to the company. D1 made the following comment:

> *Yes, companies receive several advantages by carrying out their CSR and ED. CSR and ED result in positive effects that will accrue various benefits for companies in the short term as well as in the long term. For example, increased volume of activity, increased investment, building and enhancing a positive public image for the company, the achievement of some competitive benefits and protection from certain legal risks. These advantages may be seen as reasons that make companies disclose social environmental information.*

In this connection, F2 demonstrated a good understanding of the benefits of CSR and ED when he said:

> *CSR and ED are important for increasing the company's transparency, raising the value of the company's shares and protection of companies from certain legal risks. In addition, they help companies to improve their image and reputation before the public. However, if they are to receive the maximum*

benefit from CSR and ED, there should be legislation, standards and accounting rules to guide companies in how to do it.

As in the questionnaire, interviewees representing foreign companies tended to agree more strongly with the propositions addressing reputation than did those from local companies.

These results are completely consistent with many empirical studies which suggest that the most important reason for companies to disclose their environmental information is to improve their image and reputation before the public. A number of authors argue that there is a positive correlation between firm reputation and the level of CSRD and ED. For example, Bayoud et al. (2012) confirm that a high level of CSRD is strongly associated with company reputation. Deegan and Rankin (1996) investigated the environmental reporting practices of a sample of 20 Australian companies during the period 1990-1993. The findings indicated that Australian companies will only provide environmental information which improves their corporate reputation. Melo and Garrido-Morgado (2012) examined the relationship between corporate reputation and CSR in a sample of 320 American companies from 2003 to 2007; their results also indicate that there is a positive association between CSR and corporate reputation, leading them to conclude that CSR has a significant impact on corporate reputation.

Other authors argue that reputation has a significant influence on company longevity and that this is why companies seek to enhance their reputation and image with the public (Adams, 2008; Aerts and Cormier, 2009; Arevalo and Aravind, 2011; King and Whetten, 2008). Villiers and Staden (2011) reveal that firms with a bad long-term environmental reputation will disclose more environmental information in their annual reports than other firms, in an attempt to correct the reputational damage. Other studies have shown that campaigns run to publicise a company's good deeds can have a considerable, positive influence on public opinion, enhancing people's perceptions of the company's image, reputation and credibility (Pfau et al., 2008).

Meeting the expectations of society

The purpose of this section is to examine whether the respondents perceived a relationship between the need to meet societal expectations and the disclosure of environmental information. Table 6-12 suggests that local and foreign companies differ widely on this issue. Respondents from foreign companies agreed strongly that one main purpose of corporate disclosure is to meet the expectations of society. They ranked this highly as a motive, giving it a median score of 4.25 and a very small inter-quartile score of 0.05. This means that there is strong agreement and consistency among the foreign companies on this element.

Table 6-12 Medians and Inter-quartile Ranges for Respondents' Answers on Whether Meeting the Expectations of Society Motivates Companies to Disclose Environmental Information.

	Foreign			Local			Mann-Whitney	
	Median	Inter-quartile Range	Scale	Median	Inter-quartile range	Scale	Z	p-value
Expectations of society	4.25	0.50	strongly agree	2.375	1.25	disagree	-8.140	<.001

On the other hand, the findings indicate that local companies are less enthusiastic; Table 6-12 shows that they attribute less significance to this driver – it has a median score of 2.375 and a low inter-quartile score of 1.25.

It is apparent that there is a significant difference between local and foreign companies in terms of their views on the importance of this driver. To see whether this difference is significant or not, the Mann-Whitney test was carried out. The results reveal that there is a significant difference between local and foreign companies at the level (Z- statistic = -8.140, p-value = <.001); the calculated Z value is below -1.96 and the p-value is less than 0.05. One can therefore conclude that while the foreign companies consider the need to meet society's expectations a genuine motive for disclosing environmental information, it is not considered as such by local companies.

The result suggests that foreign companies feel they should be seen to consider the rights of the public at large, not merely those of their investors. The proposition assumes that society allows organisations to continue operations so long as they generally meet its expectations. If an organisation does not appear to be operating within the bounds of what is considered appropriate by society, then society may act to withdraw that organisation's rights to continue operating (Cho and Patten, 2007; Newson and Deegan, 2002; Tilling and Tilt, 2010). Other empirical studies confirm this result; for instance, Heard and Bolce (1981) and Laine (2009) argue that corporate leaders recognise the need to respond to public expectations because failure to do so may threaten a company's existence. These studies posit that the expectations of society can be considered an influential factor in social and environmental disclosure.

However, the present study also indicates that Libyan companies consider the expectations of society to have no effect on the level of social and environmental disclosure, a result that is consistent with those of other Libya-based empirical studies. For instance, Mashat (2005) claims that in Libya, information is only disclosed to those parties to whom the business organisation is legally accountable (i.e. central authorities), not to the general public. He argues that this is due to the fact that most Libyan companies are either fully or partially state-owned and not traded on a stock exchange; therefore, maximising market value is not the companies' main objective. Furthermore, there is a lack of awareness of the importance and benefits of CSRD in Libya and little demand for this kind of information from pressure groups. In the Libyan context, information is disclosed on a need-to-know rather than a right-to-know basis.

Similarly, Saleh (2004) argues that, in the absence of the “right to know” and any conception of stakeholder interests, Libyan companies prepare their annual reports for the purposes of communicating information to specific parties and groups, not to meet the expectations of society as a whole. Zubek (2008) agrees that the expectations of society are an insignificant factor not just in ED, but also in other areas of social responsibility. In his study, the societal expectations factor scored lowest when it came to reasons for HR disclosure. According to his respondents, there are two reasons for this: the public knows little about HR issues, and most organisations are more interested in emphasising their economic performance.

That the results in the present study are in line with those of the above studies supports their validity. They provide evidence that whilst meeting the expectations of society is a key driver for foreign oil companies operating in Libya, this is not the case for local oil companies. While local companies are accountable mainly to the state, all foreign companies are private and they are accountable to stakeholders and society. It is not surprising then to see foreign companies adhering to the expectations of society, while local companies pay these expectations less attention.

Legal requirements

The next proposition sought to uncover the companies' views on the relationship between legal requirements and ED practice, and whether legal requirements are one of the main drivers behind environmental disclosure.

It can be seen from Table 6-13 that there is disagreement between local and foreign companies regarding the influence of legal requirements on ED. The respondents from foreign companies agreed that legal requirements are a driver encouraging companies to disclose environmental information. This is indicated by a median score of 3.5, agree, and a high rate of consistency in their answers, as is evident in the low inter-quartile score of 0.75. This means foreign companies tended to give the same answer for this statement.

Respondents from local companies, in contrast, showed a high propensity to reject the proposition. This is confirmed by the low median score of 2.25. The consistency in the answers of local companies is very high; the inter-quartile score of 0.75 means there are no significant differences between the local companies on this issue.

Table 6-13 Medians and Inter-quartile Ranges for Respondents' Answers on Whether Legal Requirements Motivate Companies to Disclose Environmental Information

	Foreign			Local			Mann-Whitney	
	Median	Inter-quartile range	Scale	Median	Inter-quartile range	Scale	Z	p-value
Legal requirements	3.5	0.75	agree	2.25	0.75	disagree	-6.089	<.001

The Mann-Whitney test was used to assess whether the differences between local and foreign companies in regard to this proposition are significant or not. The results reveal that there is a significant difference between local and foreign companies at the level (Z-statistic = -6.089, p-value = <.001); the calculated Z value is below -1.96 and the p-value is less than 0.05.

Again, the results are matched by the findings from the interviews. When asked what they thought were the real reasons behind ED, financial managers and accounting department employees from foreign companies asserted that ED shows the company's commitment to environmental laws and that it is a way of responding to pressure from environmental organisations and pressure groups. In the words of F2:

> *ED helps the company to satisfy environmental regulations and respond to pressure from users, organisations interested in environmental performance and pressure groups as a whole. I believe that there is no good and adequate ED without pressure from the community, especially in the absence of environmental regulations and laws that oblige companies to disclose environmental information in their reports.*

On the other hand, a number of respondents from local companies commented on the lack of legal requirements and accounting standards forcing companies to disclose environmental information. E2 argued that:

There are no significant advantages of corporate social responsibility and environmental disclosure that justify exposing companies to many risks and bearing unnecessary costs. Especially in light of the absence of legal legislation, standards and accounting rules that require and oblige companies to carry out corporate social responsibility and disclose their environmental information.

The results indicate that, although there are a number of environmental laws in Libya, local companies are under no real obligation to disclose environmental information [(1)] and so do not see adherence to regulatory requirements as a driver of environmental disclosure. However, the legal requirements are an influential driver of ED practices among foreign companies. This may not be surprising, given that foreign companies are obliged by law to disclose environmental information in their origin countries.

This result is consistent with those of other empirical studies. Gray and Bebbington (Gray and Bebbington, 2001) reveal there is a positive correlation between social and environmental disclosure and legal requirements. They list the absence of a legal requirement as one of the contributing factors in non-existent or inadequate environmental disclosure. Similarly, Belal and Cooper (2011) identified the lack of legal requirements as one of the main reasons for non-disclosure of social and environmental information in Bangladesh. Other studies have found that companies that have been prosecuted are more likely to engage in ED to ensure that they are in compliance with environmental laws and regulations (Deegan and Rankin, 1996; Liu and Anbumozhi, 2009; Warsame et al., 2002).

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1) For further explanation of Libyan law on ED, see Section 4.7.

The local companies' rejection of the idea that legal requirements are a driver of ED is also consistent with the findings of other empirical studies. Ishwerf (2012) confirms that there are several important reasons for non-disclosure of environmental information in Libya, the main one being the absence of a legal requirement; the prevailing managerial attitude is that companies will only comply if they are legally bound to do so. Similarly, studies conducted by Saleh (2004) and Zubek (2008) indicate general agreement among their respective respondents that there are a number of reasons for the low commitment to disclosure among organisations in Libya, but that the lack of legal obligation is particularly important in terms of ED and HR. Mashat (2005) echoes this view, claiming that many obstacles prevent Libyan companies from disseminating social information, and that the lack of mandatory (i.e. statutory) disclosure requirements is a key barrier. Others have suggested that the lack of legal requirements has prevented CSR issues from being properly addressed in the annual reports of Libyan companies and precluded these organisations from being socially and environmentally transparent (Elmogla, 2009).

Societal pressure

This section discusses the perceptions of the respondents in regard to whether societal pressure motivates companies to disclose environmental information. It can be seen from Table 6-14 that the respondents from foreign companies tended to agree more strongly than those from the local companies that societal pressure influences the amount and level of ED, though both groups saw it as significant. It was ranked the highest by foreign companies, as confirmed by the median score of 3.75. There was a high level of consistency among the foreign companies with regard to this statement: Table 6-14 shows an inter-quartile score of 0.50. In other words, foreign companies tended to give the same answer for this statement. Societal pressure was given almost as much emphasis by local companies; it achieved a median score of 3.625 and an inter-quartile score of 1.

Table 6-14 Medians and Inter-quartile Ranges for Respondents' Answers on Whether Societal Pressure Motivates Companies to Disclose Environmental Information

	Foreign			Local			Mann-Whitney	
	Median	Inter-quartile range	Scale	Median	Inter-quartile range	Scale	Z	p-value
Societal pressure	3.75	0.50	agree	3.625	1	agree	-1.575	0.115

The Mann-Whitney test revealed that there is no significant difference between local and foreign companies in terms of their perceptions of the role played by societal pressure in motivating corporate disclosure, at the level (Z- statistic = -1.575, p-value = 0.115). The calculated Z value is between -1.96 and +1.96 and the p-value is larger than 0.05. The results support the contention that there is a positive significant relationship between societal pressure and the level of ED. This may not be surprising if we look at the activities of environmental organisations and other pressure groups.

These results are also consistent with the interview findings; many interviewees believed that undertaking ED is proof of a company's commitment to respond to outside pressure.

According to F2:

> *ED helps the company to satisfy environmental regulations and respond to pressure from users, organisations interested in environmental performance and pressure groups as a whole. I believe that there is no good and adequate ED without pressure from the community, especially in the absence of environmental regulations and laws that oblige companies to disclose environmental information in their reports.*

A1 observed that:

> *The concern with ED in oil and gas companies in Libya increased after the establishment of many foreign companies in 2005. Many local companies are trying to follow or to catch up with foreign companies regarding disclosure of their environmental information in their annual reports or in other reports. In my opinion, it has become fashionable and meets new environmental regulations to disclose some environmental information. I am sure that companies will get some benefits from ED – at least it will put local companies in the right way to compete with foreign companies, although the current disclosure is not enough and not available to the general public.*

This observation suggests that it is not just societal pressure that is influencing local companies to engage in ED; competition is also playing a key role. This finding illustrates one advantage of having companies of various nationalities competing in the same market; in this instance, it is driving domestic companies to raise their standards to international levels.

The above findings are consistent with those of studies by (Cormier et al., 2005; Laine, 2009; Staden, 2009), who claim that companies disclose social and environmental information to respond to social and institutional pressures and to maintain a legitimate position in society. Deegan (2002) and Deegan et al. (2002) assert that managers release positive social and environmental information in response to media attention. They argue that one of the main motives for disclosing environmental information might be the company's desire to maintain its legitimacy in society. Other authors have identified pressure from stakeholders as a motivation for CSR, alongside the desire to enhance profits and reputation. Stakeholder pressure has been shown to be the most important motivation in Indian firms (Arevalo and Aravind, 2011).

Other studies show that companies disclose social and environmental information in response to pressure from environmental organisations and other pressure groups (Ahmad and Sulaiman, 2004; Babiak and Trendafilova, 2011; Belal and Owen, 2007; Deegan and Rankin, 1997; Solomon and Lewis, 2002; Wilmshurst and Frost, 2000). Tilt (1994) investigated the role of pressure groups, showing that they have a definite impact on corporate social disclosure, while Zhang et al. (2008) claim that members of the supply chain, customers and communities all play positive roles in engaging firms to improve environmental management performance and disclosure.

Economic factors

This section seeks to investigate the impact of economic factors on the level and amount of ED in the sample companies. Table 6-15 shows that the majority of foreign respondents seemed to think that economic factors are an influential element. It received a median score of 4 from foreign companies, with an inter-quartile score of 0.5. In contrast, local companies tended not to see economic factors as a key motivator; they gave this element a median score of 2.75 and a low inter-quartile score of 0.75. The view among respondents from foreign companies that economic factors are a motive for disclosing environmental information is not surprising; it is consistent with the belief that ED brings short- and long-term benefits such as increased volume of activity, expansion in investment and competitive advantage, which can increase share value (investors prefer to invest in companies that disclose and show an interest in environmental performance). The fact that the local companies downplayed the significance of economic factors may be ascribed to their being public corporations without shareholders or a presence on the stock market. Thus, these companies are not motivated to disclose environmental information by the need to maximise their economic returns.

Table 6-15 Medians and Inter-quartile Ranges for Respondents' Answers on Whether Economic Factors Motivate Companies to Disclose Environmental Information

	Foreign			Local			Mann-Whitney	
	Median	Inter-quartile range	Scale	Median	Inter-quartile range	Scale	Z	p-value
Economic factors	4	0.5	agree	2.75	.75	agree	-7.709	<.001

A Mann-Whitney test was carried out to understand whether the difference between local and foreign companies on this proposition is significant. Table 6-15 shows that the level of agreement between foreign and local companies is insignificant at the level (Z-statistic = -7.709, p-value = <.001); the calculated Z value is below -1.96 and the p-value is less than 0.05. This means there is a significant difference in the views of local and foreign companies: while the foreign companies see economic factors as having a significant impact on the level and volume of ED, this is not the case for the local firms.

Once more, the findings from the interviews support these results. When the financial managers and accounting department employees were asked what they saw as being the real reasons behind ED, interviewees from the foreign companies suggested that economic factors are indeed a motive encouraging these companies to disclose environmental information.

According to G2:

> *The main reason for disclosure of environmental information is to increase revenues, because the value of their shares in the capital market tends to be higher with ED. So by carrying out ED, the company builds a sense of confidence among its clientele, which helps to increase the number of investors.*

Similarly, F2 commented that CSR and ED benefit companies by "raising the value of the company's shares". In contrast, a number of respondents from local companies strongly rejected the idea that economic factors drive companies to disclose environmental information. E2 did not see CSR and ED as offering any significant economic advantages compared with their cost, arguing rather that they may lead to increased costs and reduced profits. In his view, social responsibility and ED are a waste of resources which could be used elsewhere. He made the following comment:

> *There are no significant economic advantages of CSR and ED that justify exposing companies to many risks and bearing unnecessary costs. Especially in light of the absence of legislation, standards and accounting rules requiring companies to carry out CSR and disclose their environmental information. In my opinion, CSR and ED are a waste of time, effort and money. They have no real economic benefit for companies compared with their cost.*

Although some interviewees believed that the costs of CSR and ED may outweigh their benefits, many others were aware of their importance. This result is consistent with the findings of previous empirical studies which have investigated the effect of economic factors on CSR in general and ED in particular, in that they too have yielded mixed results. Many have argued that there is a positive correlation between social and environmental disclosure and economic factors (Cormier and Magnan, 2003). Arevalo and Aravind (2011) assert that firms practise CSR in the hope of achieving profitability and that corporate social and environmental disclosure is directly impacted by the level of profitability of the firm. Other studies have concluded that a strong relationship exists between economic factors and corporate social performance (Ahmad et al., 2003; Hossain et al., 2006; Stanwick and Stanwick, 1998).

On the other hand, other empirical studies, like the local companies here, have disputed the significance of economic factors. In order to understand the ED mechanism from the corporate perspective, Liu and Anbumozh (2009) identified the determinant factors affecting the disclosure level of corporate environmental information in Chinese listed companies. They found that, in Chinese companies, economic performance is not significantly related to ED; in other words, economic factors are not drivers of environmental disclosure. Similarly, when Esa and Ghazali (2010) examined the association between profitability and the extent of CSRD in Malaysia, their analysis failed to find any relationship, leading them to discount profitability as a significant variable affecting CSRD. Rao et al. (2012), in their investigation of the relationship between environmental reporting and corporate governance attributes of companies in Australia, found no significant positive relationship between profitability and corporate social and environmental disclosure. Other authors coming to the same conclusion include (Cowen et al., 1987; Ditlev-Simonsen and Midttun, 2011; Hackston and Milne, 1996).

At first glance, CSR and ED may appear to have only a negative impact on the economic performance of companies, since they can lead to increased production costs and reduced profits in the short term. However, the author believes that a careful and a comprehensive view of corporate environmental performance and disclosure will show the opposite to be true [(1)].

1) For more information about the importance of ED, see Section 3.4.

The analysis of the data shows that the findings from this study of local and foreign oil companies operating in Libya are consistent with those of previous studies in some respects but not in others. However, it is also the intention of this research to explore the barriers that might stop these companies from disclosing environmental information (Research Question 4 – see Section 1.3). This will be the topic of the next section.

6.4.5 Obstacles that Might Prevent Companies from Disclosing Environmental Information

A number of key statements were formulated on the basis of the findings from the literature review. These statements were included in the questionnaire in order to help precisely identify the main actual reasons that inhibit environmental disclosure, in the view of local and foreign oil and gas companies in Libya (see Table 6-16). The responses can be divided into two groups. The first are statements that were accepted by both local and foreign companies, while the second were accepted by local companies but rejected by foreign companies (see Table 6-17).

Table 6-16 Medians and Inter-quartile Ranges for Respondents' Answers on Reasons that Could Prevent Companies from Disclosing Environmental Information

N	Propositions	Foreign			Local			P value
		Median	Inter-quartile range	Scale	Median	Inter-quartile range	Scale	
1	The difficulty of estimating the value of environmental activities.	4	4	agree	4	2	agree	0.201
2	Corporate administration may not be fully aware of its environmental responsibilities towards society as a whole.	2	2	disagree	3.5	3	agree	0.085
3	The goals of the organisation are focused towards economic performance rather than environmental and social performance.	2	1	strongly agree	5	1	strongly agree	0.025
4	There seems to be no demand by the users for this type of data; thus, no attention is paid to this information.	2	1	disagree	4	3	agree	<.001
5	The company may believe that this information is confidential and may not be disclosed.	2	3	disagree	4	1	agree	0.013
6	There is no legal requirement detailing a legal obligation to disclose environmental information.	2	3	disagree	5	1	strongly agree	<.001
7	Costs of providing this type of environmental information may far exceed the desired outcomes.	2	2	disagree	3.5	4	agree	0.005
8	There seems to be a lack of environmental standards that may help companies to disclose environmental information.	5	1	strongly agree	4.5	1	strongly agree	0.647
9	Non-disclosure of corporate environmental activities may still not impact on companies' ability to acquire new contracts for oil exploration in Libya.	4	0	agree	4	1	agree	0.686
10	Non-disclosure of corporate environmental activities may still not impact on the company's ability to market its products and compete with similar rival companies.	2	3	agree	4	2	disagree	0.003
11	Non-disclosure of corporate environmental activities may still not have any effect on the evaluation of the extent to which management in the company has been successful in the performance of its different functions.	2	1	disagree	3.5	3	agree	0.001
12	The state offers no incentives for companies to disclose their environmental performance.	5	1	strongly agree	5	1	strongly agree	0.769

Group one: propositions accepted by local and foreign companies

It can be seen from Table 6-16 that respondents from both foreign and local companies agreed or strongly agreed that certain of the elements are major obstacles that might prevent companies from disclosing environmental information. The medians of the answers for these elements range between 4 and 5, agree and strongly agree. The inter-quartile scores range between 0 and 2 for the majority of the elements, which indicates consistency in the answers of companies. When the Mann-Whitney test was applied, it yielded p-values for the agreed and strongly agreed elements ranging between 0.201 and 0.769 – greater than the 5% level of significance. This means there is no significant difference between the local and foreign companies in terms of their attitude towards these propositions.

However, there is significant variance in the answers of foreign companies for the statement regarding the difficulty of estimating the value of environmental activities (No. 1). This is evident in a high inter-quartile score of 4 (see Table 6-16). This indicates that some respondents from foreign companies strongly agreed, while others strongly disagreed that this is a barrier to ED. Those who disagreed may feel that, given the numerous environmental standards that exist to help companies assess the value of their environmental activities, this process should not be difficult.

Table 6-17 Propositions Accepted by Local and Foreign Companies

N	Propositions accepted by local and foreign companies	Propositions accepted by local companies and rejected by foreign companies
1	The difficulty of estimating the value of environmental activities.	Corporate administration may not be fully aware of its environmental responsibilities towards society as a whole.
2	There seems to be a lack of environmental standards that may help companies to disclose environmental information.	The goals of the organisation are focused towards economic performance rather than environmental and social performance.
3	Non-disclosure of corporate environmental activities may still not impact on companies' ability to acquire new contracts for oil exploration in Libya.	There seems to be no demand by the users for this type of data; thus, no attention is paid to this information.
4	The state offers no incentives for companies to disclose their environmental performance.	The company may believe that this information is confidential and may not be disclosed.
5		There is no legal requirement detailing a legal obligation to disclose environmental information.
6		Costs of providing this type of environmental information may far exceed the desired outcomes.
7		Non-disclosure of corporate environmental activities may still not impact on the company's ability to market its products and compete with similar rival companies.
8		Non-disclosure of corporate environmental activities may still not have any effect on the evaluation of the extent to which management in the company has been successful in the performance of its different functions.

According to Table 6-17, foreign and local companies alike feel that the main reasons for companies failing to disclose environmental information are the lack of incentives from the state and the absence of environmental standards to help them. This lack of guidance makes it more difficult for companies to estimate the value of their environmental activities.

The majority of interviewees also cited the absence of environmental regulations and ED standards as a major obstacle. Companies that may want to disclose environmental information are hindered by this lack of guidance. Regulations and standards would help companies to solve problems such as the overlap between industrial costs and environmental costs which makes estimating environmental costs problematic. H2 pointed out that:

> *The absence in practice of binding environmental laws and standards is the main reason that prevents companies from disclosing environmental information. Also, there are no financial or moral incentives for companies that disclose environmental information, such as tax incentives.*

A number of interviewees commented that companies have no real legal obligation to disclose environmental information, and that there are no financial or moral incentives to encourage ED such as tax incentives or priority in terms of new contracts for oil exploration in the future. The lack of both serious penalties and rewards, on top of the other obstacles, make companies indifferent to ED. These results echo the findings from the questionnaire survey.

The results from the questionnaire and the interviews are consistent with those of previous empirical studies. Solomon and Lewis (2002) explain that incentives encourage ED, while Belal and Cooper (2011), in their investigation of corporate reluctance to disclose social and environmental information in Bangladesh, conclude that the lack of a legal requirement is one of the main reasons for non-disclosure. Saleh (2004) argues that the most common reason for the low level of ED among Libyan companies is the absence of standards from professional bodies such as the Libyan Accountants and Auditors Association and the Institute of Public Control (IPC). Ahmada et al. (2003) also cite the absence of CSR reporting standards, pointing out that companies are nevertheless aware that society wants this information. Similarly, Wang et al. (2004) reveal that inadequate guidance on environmental disclosure is a major reason for the weakness of ED in China. As in these studies, the results here indicate that there are a number of perceived obstacles to corporate social and environmental disclosure.

Group two: propositions accepted by local companies and rejected by foreign companies

It can be noted from Table 6-16 that local and foreign oil and gas companies operating in Libya differ in their views on eight of the proposed elements. The medians of the answers of respondents from local companies range between 3.5 and 5 (agree and strongly agree) for these elements, although the range of inter-quartile scores (between 1 and 4) indicates that there is significant variance among these companies on some of the elements, such as the suggestion that the costs of disclosing environmental information may far exceed the desired outcomes (at 4, this is the highest inter-quartile score). In other words, while some local companies agreed strongly with this element, others strongly disagreed.

In contrast, these same elements were rejected by foreign companies. Table 6-16 shows that the medians of the answers to these rejected statements were all 2, disagree. However, inter-quartile scores of between 1 and 3 indicate a low level of consistency among foreign companies for some statements, suggesting that they did not all share exactly the same perceptions.

The Mann-Whitney test was conducted to assess whether the differences between the local companies and foreign companies are significant. The p-values for all but one of the controversial elements fall between <.001 and 0.025, which is less than the 5% level of significance. The exception is the element relating to corporate administrators' awareness of their environmental responsibilities to society, which has a high p-value of 0.085. This is mostly due to the higher inter-quartile score of this element (3). This means that while some local companies strongly agreed with this proposition, others strongly disagreed (in other words, some local companies thought the same way as the foreign companies on this one). The Mann-Whitney test confirms that there are significant differences between local and foreign companies in terms of what they perceive to be the main obstacles hindering environmental disclosure, with several of the elements that are accepted by local companies being rejected by foreign companies. However, it should be noted that within both groups, there is internal inconsistency on some elements.

When the interviewees were asked what they thought were the main obstacles preventing companies from disclosing environmental information, D1 cited several possible barriers:

> *I think the main reason for ED is to seek to enhance companies' image and reputation in the eyes of stockholders and new investors. Local oil and gas companies in Libya are public companies and they do not have shareholders or shares in their stock being traded on the market. Thus, they are not too concerned to improve their image and reputation. In addition, there seems to be no demand by the users of financial statements for environmental information and no attention is paid to such information. Thus, local companies are incurious about ED, especially as it is still voluntary rather than mandatory. Moreover, many companies may believe that the cost of disclosing environmental information outweighs its benefits; therefore some companies are unenthusiastic about disclosing environmental information.*

Many of the interviewees echoed the view that, as local companies are public entities, this type of information is not required by either the users of financial statements or society as a whole. Consequently, local companies pay no attention to it. The belief was also expressed that the costs of providing this type of information may far exceed the desired outcomes.

Many local and international empirical studies have produced findings which seem to support the views expressed here by the local respondents. When Ishwerf (2012) analysed the views of stakeholders on the lack of ED in Libya, he found that the general perception was that the main reason ED is not widespread in the country is the lack of either formal or informal regulation requiring it. A second reason is the public's lack of awareness of the importance of environmental information. This seems a reasonable explanation, particularly in the context of a developing country. He also cites lack of staff, administrative difficulties, poor economic performance and the secrecy of environmental information as other possible obstacles. Ishwerf found that Libyan managers generally regard environmental information as sensitive and confidential and that they see no competitive advantage to be gained from disclosure. He argues that companies need to see the tangible benefits that might come from disclosure, and that this is more likely to happen in a free market.

According to Saleh (2004), the real obstacles that prevent companies from disclosing environmental information are (a) the company lacks the relevant expertise, qualifications and training; and (b) the absence of regulation and guidelines. Arevalo and Aravind (2011) ascribe the non-existence of CSR to lack of resources, the complexity and difficulty of implementing CSR, and finally, lack of management support at both top and middle levels. Mashat (2005) and Elmogla (2009) claim that possible reasons for the absence of social and environmental information from Libyan annual reports are the lack of mandatory disclosure requirements, the weakness of the accounting profession in Libya, a lack of awareness of the importance and perceived benefits of social and environmental information, and the lack of demand or pressure to disclose this kind of information. Therefore, The results of the present study support the findings of many authors that a key reason for the absence of social and environmental information is the lack of regulatory requirements (Belal and Cooper, 2011; Mitchell and Hill, 2009).

To sum up, the results reveal that certain factors are perceived as obstacles to ED by local companies but not by foreign companies. The differences in perception may be ascribed to the differences in economic, social, political and cultural background – particularly between companies originating in developed and developing countries. This analysis contributes to the accounting literature by giving a clearer picture of those obstacles that prevent companies in developing countries (particularly Libya) from disclosing environmental information.

6.4.6 Control over Environmental Disclosure (ED)

As concern for the environment and the disclosure of social and environmental information has grown, a number of laws have been enacted in Libya in recent years to preserve the environment and prevent pollution in its various forms [(1)]. However, in practice, there is still no total effective obligation upon companies operating in Libya to disclose environmental information. The aim of this section is to ascertain how, in the

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1) For further explanation of Libyan law on ED, see Section 4.7.

views of local and foreign companies operating in the Libyan gas and oil sector, these laws are being applied in practice, and whether local and foreign companies differ in their perceptions of this issue. To this end, a number of propositions were included in the questionnaire regarding the Libyan Government's control over ED.

From Table 6-18 it can be inferred that the vast majority of the respondents agreed that there is no effective control over ED in oil companies in Libya. They disagreed with most of the statements; the medians for these answers (from both local and foreign companies) range between 1.5 and 2, disagree and strongly disagree, which leads us to conclude that control of ED is likely to be very weak. Inter-quartile scores range between 1 and 2, indicating that there is no significant variance or inconsistency in the answers of either local or foreign companies. In contrast, respondents from local and foreign companies tended to agree with elements No. 4 and 6 regarding the positive influence of internal auditing departments and pressure groups in obliging companies to engage in ED. It should be noted, however, that respondents from foreign companies tended to be in stronger agreement than those from local companies.

The higher medians for statements No. 4 and 6 (between 3.5 and 4) may lead us to conclude that these elements have a strong controlling effect on ED. An inter-quartile range of 1 to 2 indicates that the answers given by the foreign companies for these statements are broadly consistent; among the local companies, however, an inter-quartile range of 3 to 4 indicates significant variance and inconsistency. In other words, some of the respondents from local companies doubted that internal auditing departments and pressure groups influence companies to undertake ED.

The Mann-Whitney test was employed to identify whether the differences between respondents are significant. The p-values for all elements lie between 0.087 and 0.739, greater than the 5% level of significance, with the exception of the element relating to the control of the internal auditing department. This has a p-value of less than 0.05 (0.016). Thus, there is no significant difference between the views and opinions of local and foreign companies for all but one of the elements. The difference here may be ascribed to the high inter-quartile score (4) that was generated by the local companies, whose views on this element varied considerably – a number of the local companies were sceptical about the influence of internal auditing departments on ED. So, some local companies thought the same way as the foreign companies on this one.

From the analysis one can therefore conclude that, in the view of the respondents, the controls listed in elements No. 1, 2, 3 and 5 are ineffective in obliging companies to disclose environmental information. In contrast, the respondents from both foreign and local companies supported the suggestion that the controls listed in elements No. 4 and 6 are effective, although more emphasis was given by foreign companies to these elements. The findings confirm that in Libya, as in many other countries of the world, ED is not in practice a mandatory requirement.

Table 6-18 Medians and Inter-quartile Ranges for Respondents' Answers on Controls for Environmental Disclosure (ED)

N	Propositions	Foreign			Local			P value
		Median	Inter-quartile range	Scale	Median	Inter-quartile range	Scale	
1	There are legal requirements obliging companies to disclose their environmental activities.	2	1	disagree	2	1	disagree	0.739
2	The National Oil Corporation controls and follows up environmental disclosure among oil companies operating in Libya.	2	2	disagree	2	2	disagree	0.162
3	The Institute of Financial Auditing is an external auditor that controls and follows up environmental disclosure among oil companies operating in Libya.	2	1	disagree	2	1	disagree	0.087
4	Internal auditing departments control and follow up environmental disclosure among oil companies operating in Libya.	4	1	agree	3.5	4	agree	0.016
5	The Libyan Association of Accountants and Auditors controls and follows up environmental disclosure among oil companies operating in Libya.	2	1	disagree	1.5	1	disagree	0.617
6	Pressure groups, including organisations interested in the protection of the environment, control and follow up environmental disclosure among oil companies operating in Libya.	4	2	disagree	3.5	3	agree	0.584

The Libyan Government's failure to enforce controls and oblige companies to disclose their environmental information is the main reason for the low level of ED in the country, since companies do not disclose this information unless they are forced to. Haniffa and Cooke (2002, p.327) assert that: "Corporations in general are unlikely to provide high-quality information if the demand function does not exist or if laws and regulations governing information provision are not enforced", but Saleh (2004) reports being told by one corporate legal advisor that there are still few controls over what information is disclosed in reports in Libya. On the other hand, internal auditing departments and pressure groups are having an influence in respect of ED among oil companies. This result supports the earlier finding that one reason companies disclose environmental information is in response to pressure groups.

6.4.7 Obliging Companies to Disclose Environmental Information

It is important that companies responsible for polluting the environment acknowledge their responsibility, abide by agreed standards of environmental protection and bear the true cost of the environmental damage they cause. To ensure this happens, there must be internal and external controls on companies' social and environmental performance. A study by Wilmshurst and Frost (2000), conducted on some of the largest firms listed on the Australian stock market, found that controlling a company's social performance is one of the major factors behind companies meeting their social obligations.

The aim of this section is to consider ways in which companies might be obliged to disclose environmental information. Referring to several similar studies (Arevalo and Aravind, 2011; Zhang et al., 2008), four propositions were formulated and included in the questionnaire to identify the attitudes of respondents from local and foreign oil companies (see Table 6-19).

The participants saw nearly all of the proposed measures as effective ways of obliging companies to disclose their environmental performance. This is clear from the high median scores which range from 4 to 5 for three out of the four elements, and low inter-quartile scores of 1. This indicates that there is no significant variance or inconsistency in the answers of both local and foreign companies about these proposed methods.

However, Table 6-19 also indicates that the participants from foreign companies were less inclined to agree that their contract with the NOC should include a clause obliging them to disclose environmental information. The median score for respondents from foreign companies is 2 for element No. 4. Although this element has a low median score, the inter-quartile is 3, which indicates the existence of significant variance or inconsistency in the answers of foreign companies about this proposal. While some foreign companies strongly disagreed, a number of respondents strongly agreed; in other words, some foreign companies thought the same way as the local companies on this one.

Table 6-19 Medians and Inter-quartile Ranges for Respondents' Answers on Measures to Oblige Companies to Disclose Environmental information

N	Propositions	Foreign			Local			P value
		Median	Inter-quartile range	Scale	Median	Inter-quartile range	Scale	
1	By enforcing laws that oblige companies to disclose their environmental performance.	5	1	strongly agree	4.5	1	strongly agree	0.296
2	Through internal corporate laws and regulations.	5	1	strongly agree	5	1	strongly agree	0.658
3	By introducing tough sanctions and heavy fines on violating companies.	4	1	agree	4	1	agree	0.813
4	The contracts between the National Oil Corporation and oil companies should include a clause obliging them to disclose environmental information.	2	3	disagree	3.5	3	agree	0.019

In contrast, the respondents from local companies expressed overall agreement with the suggestion that contracts between the NOC and oil companies should include a clause requiring the disclosure of environmental information. This is clear from the high median score, which is 3.5 for this element; however, the inter-quartile score is 3, indicating significant variance or inconsistency in the answers of local companies. In other words, some respondents from local companies also disliked this idea. The Mann-Whitney test produced p-values between 0.296 and 0.813 for the first three elements (greater than the 5% level of significance). Thus, there are no significant differences between local and foreign companies in terms of their views on these three propositions. The fourth element yielded a p-value of less than 0.05, indicating a statistically significant difference between the local and foreign companies; whereas local companies saw this as a viable way to force companies to disclose environmental information, the foreign companies did not.

To sum up, the respondents agreed that three out of the four proposed measures would be effective in obliging companies to disclose environmental information (see Table 6-19). There was only one element whose potential usefulness was disputed–by the respondents from foreign companies. This was the idea that contracts between the NOC and oil companies should include a clause compelling companies to disclose their environmental performance.

6.5 Summary

The aim of the present analysis is to discover what local and foreign oil and gas companies operating in Libya perceive as being the elements that either encourage or prevent companies from disclosing environmental information. It also investigates the potential effectiveness of a number of measures for controlling ED, from the viewpoint of the participants. The propositions formulated for inclusion in the questionnaire took into account the findings of previous studies and were intended to help precisely identify some of the issues surrounding ED. The findings from the interviews were used to clarify any confusion arising from the questionnaire results and to provide additional explanation on some points. Accordingly, the interview results are referenced throughout this chapter.

The questionnaire and the interviews revealed that financial managers and accounting department employees in local and foreign oil and gas companies operating in Libya are aware of and understand CSR and ED. There was general agreement among the respondents (nearly 98%) that all their companies incorporate some degree of ED into their annual reports. This is more likely to be good and neutral information than bad information. It is interesting to note that the participants seemed to accept the need for wider disclosure in terms of social and environmental information, and thought that companies in Libya should take account of social and environmental issues. They agreed that many of the propositions they were asked to consider are indeed motives that encourage companies to disclose environmental information, although they rejected other elements (see Table 6-10).

In line with previous studies, and to capture the essential nature of these motivations, they were divided into several categories: reputation, legal requirements, meeting the expectations of society, societal pressure and economic factors. The results indicate that the foreign companies consider reputation, societal expectations, legal requirements, societal pressure and economic factors to be motives that encourage them to disclose environmental information. On the other hand, the local companies acknowledged only reputation and societal expectations as significant drivers of ED.

The evidence also suggests that there are a number of elements which are consistently seen by local companies as obstacles to environmental disclosure, but which are not seen as such by foreign companies (see Table 6-17).

It was apparent that although some environmental rules and regulations do exist, they are not applied fully and state control over ED is still weak. The respondents supported almost all of the measures that were proposed to oblige companies to disclose their environmental information (see Table 6-19).

Overall, the interview results are consistent with the findings yielded by the questionnaire survey. The interview method can be said to have increased the trustworthiness of the questionnaire results and confirmed their validity. The interviews also produced a new reason why companies disclose environmental information, when one interviewee pointed out that local oil and gas companies in Libya became more concerned with ED when foreign companies entered the country in 2005. Since then, these local companies have attempted to catch up with their foreign competitors by disclosing environmental information in their annual reports or in other reports. Although the questionnaire results indicate that local companies do not consider competition to be a significant factor in ED, it seems that competition has begun to play a key role in determining the level and type of ED practised in both local and foreign companies in Libya. The finding highlights how the presence of international companies in the domestic market can foster competition which stimulates development in local companies. The data collected via the third collection method – content analysis – is discussed in the next chapter.

Chapter Seven: Analysis and Discussion of Content Analysis

7.1 Introduction

This chapter reports on the findings of the content analysis. It is divided into two parts; the first part describes the type of ED practised by companies operating in the oil and gas sector in Libya, while the second part illustrates the association between a number of company attributes such as nationality, size, privatisation and age, and the level of ED.

As mentioned in the methodology chapter, the content analysis yielded non-parametric statistical data, so descriptive statistics were used to identify whether ED exists in the companies and whether there are differences between pairs of variables (local and foreign companies; large and small companies; large and medium companies; medium and small companies; public and private companies and old and new companies) in terms of their ED practice. The Mann-Whitney test was used to test whether these differences are statistically significant. If the p-value is less than 0.05 we can say that the differences are statistically significant. The Kruskal-Wallis test was also used to identify whether differences between three variables (small, medium and large companies) for each year are statistically significant.

Collecting annual reports was challenging for a number of reasons. A number of the companies did not keep reports for every year, especially before 2002, or if they did, the reports were often incomplete, making them unsuitable for analysis. Some companies refused to give any information to students; the researcher was told that annual reports are confidential and not available to the general public (see Section 5.7.2). A total of 126 annual reports were ultimately collected from 24 local and foreign companies operating in the oil and gas industry in Libya. The reports cover an eight year period between 2002 and 2009. Complete sets of annual reports were available for 2008 and 2009 (two years), but a number of annual reports were missing for the period 2002 to 2007, since many of the companies, especially the foreign companies, were not established until 2005, and some companies, especially (see Table 5-5).

7.2 The Type of Environmental Disclosure (ED)

As mentioned in the methodology chapter, ED comes in several forms: bad news, neutral news and good news (Gray et al., 1995a; Gray and Lavers, 1995b; Guthrie and Parker, 1990; Hackston and Milne, 1996; Saleh, 2004). This section analyses ED practice according to the type of disclosure. Descriptive statistics were used to identify the type of environmental information being disclosed in these companies' annual reports; the results are presented in Table 7-1. The table illustrates the descriptive statistics for three categories: good, neutral and bad ED, allowing comparison between local and foreign companies. The overall mean of total words being disclosed by local companies is 28.28 for bad news, 29.21 for neutral news and 49.62 for good news, while the overall mean of total words being disclosed by foreign companies is 38.62 for bad news, 68.84 for neutral news and 108.32 for good news. The table shows that in local and foreign companies alike, nearly half of the information disclosed was good news.

However, there is a clear difference between local and foreign companies when it comes to the disclosure of neutral and bad news, with neutral news accounting for nearly 32% of total disclosures among foreign companies and just over 27% for local companies. In contrast, the percentage of bad news is high in local companies compared to foreign companies: 26% compared to just under 18%. This means that bad news is more likely to be disclosed in local companies than in foreign companies.

Table 7-1 Descriptive Statistics for the Type of Environmental Disclosure (ED) by Local and Foreign Companies [1]

Company	Kind of disclosure	Years								overall mean	%
		2002	2003	2004	2005	2006	2007	2008	2009		
Local	Number of reports	3	5	7	6	9	8	10	10	58	
	Mean of bad news	2	2.2	5.57	13.83	24.56	37.25	44.6	53.6	28.28	26.4
	Mean of neutral news	0	1.8	3.43	16.17	25.78	42.38	42.1	57.2	29.21	27.27
	Mean of good news	13.67	13	18.43	30.83	48.67	64	69.9	80.9	49.62	46.33
	Total	15.7	17	27.4	60.8	99	143.7	156.6	191.7	107.10	100
Foreign	Number of reports	3	3	3	6	11	14	14	14	68	
	Mean of bad news	18.33	17.33	23.67	28.5	26.82	38.21	46.14	57.21	38.62	17.9
	Mean of neutral news	31	38.33	59.67	58.67	52.36	65.29	80	95.14	68.84	31.9
	Mean of good news	53	63.67	81.33	89.33	88	102.93	128.71	144.64	108.32	50.2
	Total	102.3	119.3	164.7	176.5	167.2	206.4	254.8	297	215.78	100

The higher average for bad news in local companies may be because they are public corporations that do not have shareholders or shares traded on the stock market;

1) Notes:
- % = percentage of overall mean = overall mean of bad news ÷ overall mean of bad news + overall mean of neutral + overall mean of bad news. e.g: Overall mean of local companies of bad news = 28.28 ÷ 28.28 + 29.21 + 49.62 = 26.4.
- Mean = total of words frequency of environmental disclosure for each year ÷ number of annual reports for each year. Mean of bad news for local companies 2002 = 6 ÷ 3 = 2 words.
- Overall mean = total of words frequency of environmental disclosure for all years ÷ number of annual reports for all years. e.g: Overall mean of local companies = 6212 ÷ 58 = 107.1 words.
- For more details, refer to Appendix 4.

disclosure, whether of good, neutral or bad news, has little effect on their market value, and they are less concerned with maintaining a reputation than are private companies. This is consistent with the finding from the accounting literature that the major reason for companies to disclose their environmental information is to maintain their reputation and appease investors and other businesses. This is especially so now that we are seeing the emergence of the “ethical investor” – investors who prefer to invest in companies whose activities do not cause damage to the environment (Barth and McNichols, 1994; Deegan and Rankin, 1997; Stevens, 1991). As the level and type of ED, and the perceived commitment to preserve the environment, can affect the decision of shareholders to continue investing in the company, it is not surprising that private companies focus more on good and neutral news. Another reason for the higher rate of bad news among the publicly owned local companies may be that they are less focused on CSR and so do more environmental damage anyway.

Table 7-2 shows that in most of the eight years under investigation, the annual reports of both local and foreign companies contained information on all of the dimensions and components of ED. The average volume of ED was highest in the health and safety and environmental policy categories, followed by products and processes, other components, energy and environmental audit. Thus, health and safety and environmental policy were the most popular areas for disclosure. The overall means of total disclosures on health and safety and environmental policy by local companies were 41.2 and 17.7 respectively, while the overall means of total disclosures by foreign companies were 50.4 and 43.2 respectively. The least popular areas of disclosure were environmental audit followed by energy; the overall means of these components were 1 and 12.9 respectively among local companies and 16.8 and 30.9 respectively among foreign companies. Strikingly, none of the local companies disclosed any information relating to environmental auditing between 2002 and 2006, and the average figure for this component remained low for the years 2007, 2008 and 2009 (0.63, 2.6 and 2.7 respectively).

Table 7-2 Mean of the Frequency of Words about the Dimensions and Components of Environmental Disclosure (ED) by Local and Foreign Companies for Eight Years [1]

No. of reports from local companies	3	5	7	6	9	8	10	10	**58**	
No. of reports from foreign companies	3	3	3	6	11	14	14	14	**68**	
Environmental policy	2002	2003	2004	2005	2006	2007	2008	2009	overall mean	%
local companies	3.3	1.8	3.3	9.3	18.4	24.3	24.6	31.1	17.7	29.1
foreign companies	12.7	19	24	32	31	40.4	52.8	65.9	43.1	70.9
Products and processes	2002	2003	2004	2005	2006	2007	2008	2009		%
local companies	4.7	3.2	5.6	10	18.7	23.3	27.3	36.8	19.3	34.7
foreign companies	19.3	24.3	27.3	28	29.4	35.7	41.7	48.7	36.3	65.3
Energy	2002	2003	2004	2005	2006	2007	2008	2009		%
local companies	0	1.2	2.6	2.6	8.4	19.8	22.2	25.3	12.9	29.5
foreign companies	15.7	17.7	27.3	23.8	30.7	27.6	35.1	44.5	30.9	70.5
Health and safety	2002	2003	2004	2005	2006	2007	2008	2009		%
local companies	9	8	12.4	30.3	41.7	56.3	58.5	64.2	41.2	45
foreign companies	28.3	33	46.7	42.2	37.8	48.8	59.1	66.2	50.4	55
Environmental audit	2002	2003	2004	2005	2006	2007	2008	2009		%
local companies	0	0	0	0	0	0.63	2.6	2.7	1	5.6
foreign companies	7.3	7	14.7	15	12.3	16.9	21.4	21.2	16.8	94.4
Others	2002	2003	2004	2005	2006	2007	2008	2009		%
local companies	3.7	2.8	4.1	8.2	14	20.6	22.8	30	15.9	29.3
foreign companies	19	19.7	24.7	29.7	30.1	37	44	51.6	38.4	70.7

1) Notes:
- Mean = total of words frequency of environmental disclosure for each year ÷ number of annual reports for each year. Mean of local companies 2002 = 10 words ÷ 3 reports = 3.3 words.
- Overall mean = total of words frequency of environmental disclosure for all years ÷ total of annual reports e.g: overall mean of local companies in 2002 = 1025 ÷ 58 = 17.7 words.
- % of overall mean = overall mean of local companies + overall mean of foreign companies e.g: % of overall mean of local companies of environmental policy = 17.7 + 43.1 ÷ 60.8 = 29.1%.
- For more details, refer to Appendix 4.

The finding that local and foreign oil and gas companies operating in Libya disclose more good than bad or neutral news is consistent with the findings of the questionnaire and interviews. The findings that local companies disclose a higher proportion of bad news than foreign companies and that health and safety and environmental policy are the most popular areas of disclosure are consistent with those of empirical studies that have previously been conducted in Libya in ED and other areas of social responsibility.

Saleh (2004), for example, found that the companies in his study focused on disclosing information related to health and safety rather than other environmental information, and that they gave more space to negative news. He put this down to the fact that the vast majority of Libyan industrial enterprises are public entities and therefore do not have to worry about preserving their corporate image. Similarly, Zubek (2008) found health and safety to be one of the most common areas of disclosure in HR, while Mashat (2005) found it to be one of the main elements disclosed in the annual reports of companies in the manufacturing sector, the financial service sector and other service sectors.

7.3 Level of Environmental Disclosure (ED) According to Company Nationality (Local and Foreign)

Many studies suggest that there is a need to direct research towards environmental issues, especially in developing countries (Anderson, 1977; Mashat, 2005). Accordingly, this research aims to identify the extent to which ED is practised by oil companies operating in Libya and whether there are any differences between foreign and local oil companies in terms of their environmental disclosure practices.

The mean volume of ED, as calculated from the minimum and maximum number of words devoted to ED in the annual reports issued by 24 local and foreign companies operating in the oil and gas industry in Libya between 2002 and 2009, is presented in Table 7-3. Almost 100% of companies provided some environmental information, with the average volume steadily increasing throughout the period. The mean row indicates that the mean volume of ED by local companies rose from 15.67 words in 2002 to 191.7 words in 2009. The minimum number of words rose from 7 to 158 and the maximum from 23 to 229. The mean volume of ED by foreign companies rose from 102.33 words in 2002 to 297 words in 2009 with minimum words increasing from 93 to 192 and maximum from 113 to 400.

Table 7-3 suggests that the mean volume of ED among foreign companies is high compared to the mean volume of ED in local companies. The percentages for ED in local and foreign companies differed significantly throughout the period, particularly between 2002 and 2004. While the figures for local companies are 13.28%, 12.47% and 14.28% in 2002, 2003 and 2004 respectively, the equivalent figures for foreign companies are 86.72%, 87.53% and 85.72%. However, there was less difference between local and foreign companies in 2005, 2006, 2007, 2008 and 2009. While the percentages of ED reported by foreign companies during these years were 74.37%, 62.81%, 58.98%, 61.94% and 60.77% respectively, the percentages of ED reported by local companies during the same years were 25.63%, 37.19%, 41.02%, 38.06% and 39.23%.

Table 7-3 Descriptive Statistics for Environmental Disclosure (ED) Practice by Local and Foreign Oil and Gas Companies in Libya (1)

Company	Statistics	Years								Overall mean
		2002	2003	2004	2005	2006	2007	2008	2009	
Local	n	3	5	7	6	9	8	10	10	
	Mean	15.67	17	27.43	60.83	99	143.6	156.60	191.7	107.1
	%	13.28	12.47	14.28	25.63	37.19	41.02	38.06	39.23	33.17
	SD	8.08	3.86	10.88	22.28	28.62	23.47	32.06	25.34	
	Minimum	7	14	17	24	54	112	90	158	
	Maximum	23	23	43	92	143	176	191	229	
Foreign	n	3	3	3	6	11	14	14	14	
	Mean	102.33	119.33	164.67	176.50	167.18	206.4	254.86	297	215.78
	%	86.72	87.53	85.72	74.37	62.81	58.98	61.94	60.77	66.83
	SD	10.06	14.29	14.36	27.99	59.45	53.39	59.09	59.66	
	Minimum	93	107	154	132	95	134	167	192	
	Maximum	113	135	181	214	272	310	346	400	

The gap between local and foreign companies narrowed as local companies increased their ED, particularly between 2005 and 2009. This increase may be ascribed to several causes; most importantly, the introduction of environmental legislation in Libya, especially environmental Law 15 (2003), which focused attention on ED (2). Although in practice there is no total or real obligation for companies to disclose environmental

1) Notes:
- N = number of annual reports % = the percentage of disclosure SD = standard deviation.
Mean = total of words frequency of environmental disclosure for each year ÷ number of annual reports for each year. Mean of local companies 2002 = 47 ÷ 3 = 15.67 words.
- % = the mean of each year ÷ the mean of each year of foreign companies + the mean of each year of local companies. e.g: % of 2002 = 15.67 + 102.33 ÷ 118 = 0.1328%.
- Overall mean = total of words frequency of environmental disclosure for all years ÷ number of annual reports for all years e.g: overall mean of local companies = 6212 ÷ 58 = 107.1 words.
- For more details, refer to Appendix 4.

2) For more information about this law, see Section 4.7.

information, local companies tend to comply with the laws, probably because they think that it will show their commitment to environmental responsibility. Ahmad and Mousa (2010) argue that the quantity and quality of ED in Libya have been driven forward by key changes which have happened in the Libyan context, such as the establishment of the Libyan Stock Market and the enactment of Law 15 (2003). Another reason why ED has increased among local companies is the entry of foreign companies into the Libyan oil sector in 2005; many local companies have decided to follow the foreign companies and start disclosing environmental information in their annual reports.

Table 7-3 demonstrates that the ratio of mean total ED is less than 34% in local companies, while it is more than 66% in foreign companies; in other words, there is a significant difference in the amount of ED being achieved by local and foreign companies, and this difference is in favour of foreign companies. Thus, there is a positive association between company nationality and ED. Nevertheless, Figure 7.1 shows that almost all companies, local and foreign, provide some environmental information. These results are consistent with the findings of the questionnaire and interviews; despite giving numerous reasons for not disclosing social and environmental activities, almost all companies disclosed some social and environmental information. The vast majority included some disclosure of environmental information in their annual reports, or at least had policies to disclose this information in the near future.

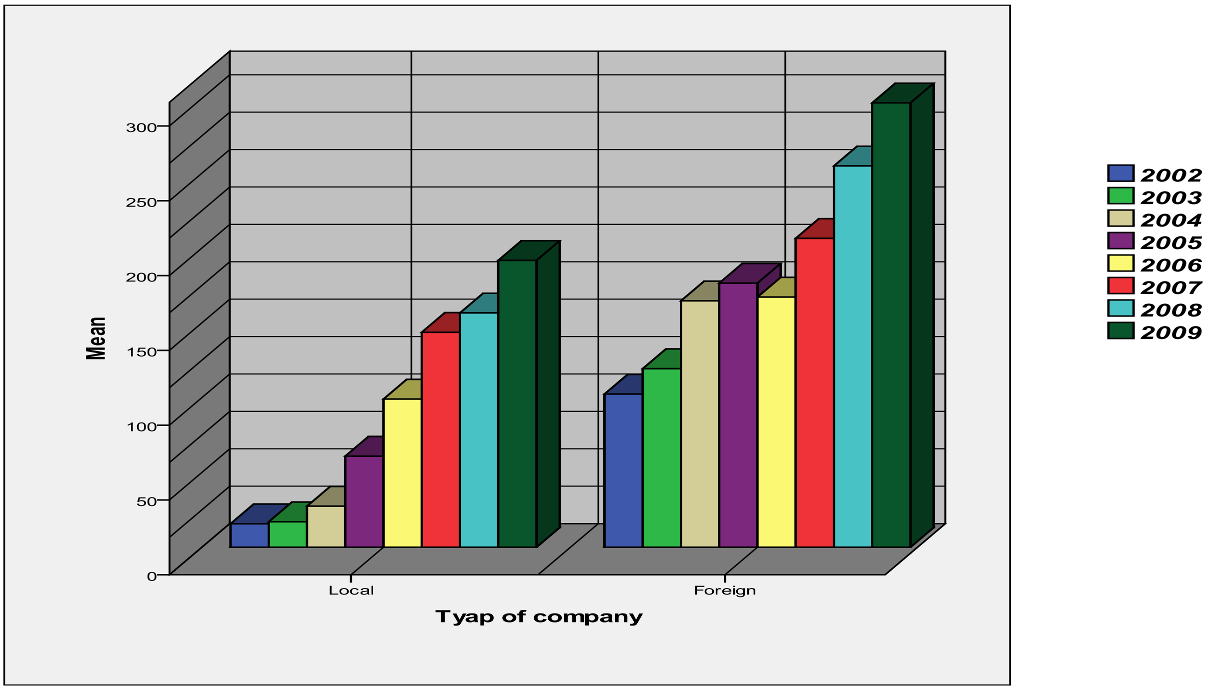
The Mann-Whitney test was conducted to identify whether the difference in the amount of ED undertaken by local and foreign oil and gas companies is significant. The result indicates that there is in fact a significant difference; the Z score is significant at (Z-statistic = -2.46, p-value = 0.014), the calculated Z value is below -1.96 and the p-value is less than 0.05. Thus, if this research question is expressed in the form of a hypothesis, we may reject the null hypothesis:

H_o: There is no significant difference in the volume of ED produced by local and foreign companies

and accept the alternative hypothesis:

H_1: There is a significant difference in the volume of ED produced by local and foreign companies.

Figure 7.1 Environmental Disclosure (ED) Practice by Local and Foreign Companies



There are several possible reasons for the significant difference in the level of ED undertaken by domestic and foreign companies. Social and environmental disclosure may help foreign companies in particular to improve their image and foster goodwill with a public that may suspect them of coming to steal Libya's natural wealth. Or they may resort to the disclosure of social and environmental information in an attempt to counter the negative publicity caused by previous environmental disasters. They may opt to disclose social and environmental information in order to strengthen their competitiveness and make themselves stand out, in the expectation that this will give them priority in terms of new contracts for oil exploration in the future.

The finding that company nationality has a material impact on the level of ED echoes the findings of a number of previous studies. Zarzeski (1996) investigated the association between ED and companies operating at global and local level, finding that global firms disclose differently. He suggests several reasons for the positive correlation between company nationality and the disclosure of important information. Firstly, he confirms that foreign firms are more likely to disclose higher levels of information than local companies because they want to showcase the quality of their operations. Secondly, he finds evidence that firms operating in the international marketplace are more likely to disclose higher levels of important information to investors in order to compete for international resources.

Similarly, Saida (2009) compared the environmental information disclosed in the annual reports of local American companies and European multinational companies. The study found that European multinationals reveal more environmental information than American local companies, and that the nationality of multinational companies seems to affect the level of environmental communication. Abdo and Aldrugi (2012) and Chapple and Moon (2005) also investigated the relationship between ED and company nationality.

They conclude that internationally active companies are more likely to engage in ED than those operating solely in their home country.

On the other hand, this result is not consistent with the findings of other prior studies. When Hossain et al. (2006) investigated the relationship between social and environmental disclosure and several corporate attributes in Bangladesh, they found no clear evidence that multinational companies in Bangladesh disclose more than their local counterparts. They were unable to explain why the subsidiaries of multinational companies in Bangladesh do not disclose social and environmental information adequately. Along similar lines, Monteiro and Guzmán (2010) tested the hypothesis that foreign companies have higher levels of ED than domestic companies, but their results revealed no statistically significant differences between the levels of environmental information disclosed by foreign parent companies and domestically owned companies. Moneva and Llena (2000), meanwhile, found no differences between the environmental information disclosed by companies with a Spanish parent company and that disclosed by organisations with a foreign parent company. Finally, Jangou (2007) actually found a higher level of disclosure among Malaysian local companies than in their foreign counterparts. The results of this study give validity and support to those studies that believe that company nationality is a key driver and has a material impact on the level of ED.

7.4 Level of Environmental Disclosure (ED) According to Company Size (Small, Medium or Large)

The effect of company size on ED is a contentious issue. This section aims to establish whether ED practice differs in large, medium and small companies.

Company size has been differentiated in several ways in the social and environmental disclosure literature, such as by the number of employees, the value of total assets, the market value of equity, capital employed and turnover. This study measures company size by the number of employees. This measure was adopted for two main reasons: first, the difficulty of obtaining confidential information makes assessing companies' total asset value, equity market value or capital employed problematic. It is easier to obtain information on the number of employees. Second, this measure has been used in many other studies see (Abreu et al., 2012; Al-drugi and Abdo, 2012; González and González, 2006; Gray et al., 2001; Halme and Huse, 1997).

As can be seen from Table 7-4, large companies disclose more environmental information than medium and small companies; they have an overall average ED of 188.89, compared to 153.09 and 121.92 words respectively. The table demonstrates that the average amount of ED increased year on year in all three groups. Small companies achieved their highest percentage (nearly 27%) in 2007, while medium companies achieved theirs (33.32%) in 2008. The highest ratio of mean total ED – almost 80% – was achieved by the large companies in 2002. The overall rate of ED was nearly 41% in the large companies, compared to 33% and 26.3% in the medium and small companies respectively.

Comparing the means and percentages of ED for each year, large, medium and small companies clearly differ in terms of their level of ED. This difference seems to be in favour of large and medium companies. As can be seen from Table 7-4, none of the small companies disclosed in 2002; although their disclosure increased in the following years, it did not reach the level of disclosure of the large and medium companies. Thus, the analysis suggests that there is an association between company size and ED.

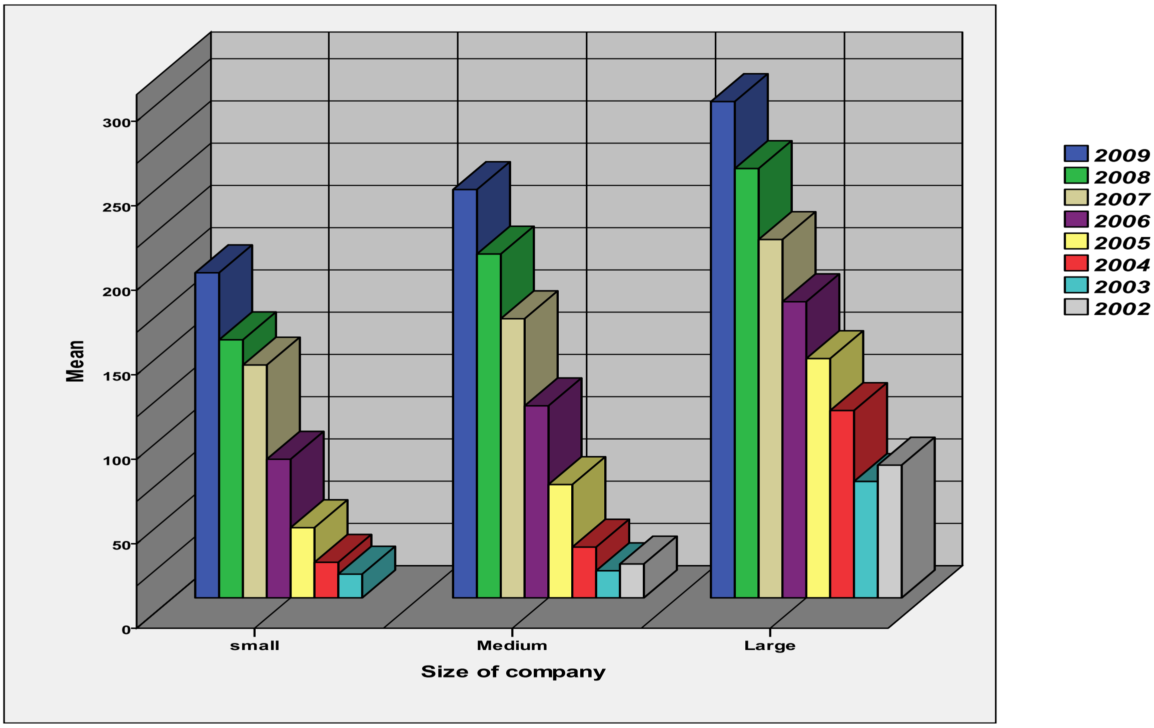
Table 7-4 Descriptive Statistics for Environmental Disclosure (ED) Practice by Small, Medium and Large Companies (1)

Company	Statistics	Years								Overall mean
		2002	2003	2004	2005	2006	2007	2008	2009	
Small	n	0	1	2	2	5	4	6	6	26
	Mean	0	14	21	41.5	82	137.75	152.67	192.33	121.92
	%	0	14.17	12.98	16.6	22.11	26.75	25.2	26.44	26.3
	SD	0		1.4	24.7	19.6	21.4	44.4	36.7	
	Minimum	0	14	20	24	54	112	90	158	
	Maximum	0	14	22	59	100	164	220	261	
Medium	n	2	1	3	1	5	7	7	7	33
	Mean	20	16	30	67	113.6	165.14	203.43	241.57	153.09
	%	20.3	16.19	18.54	26.79	30.64	32.07	33.32	33.2	33
	SD	4.2		11.3		25.8	29.6	41.7	53.3	
	Minimum	17	16	17	67	91	133	149	162	
	Maximum	23	16	37	67	149	206	268	318	
Large	n	4	6	5	9	10	11	11	11	67
	Mean	78.5	68.83	110.8	141.56	175.2	212	254	293.64	188.89
	%	79.7	69.64	68.48	56.61	47.25	41.12	41.63	40.36	40.7
	SD	48.4	56.1	75	57.7	56	59.2	70.5	74.2	
	Minimum	7	14	17	54	92	116	150	195	
	Maximum	113	135	181	214	272	310	346	400	

1) Notes:
- N = number of annual reports   % = the percentage of disclosure   SD = standard deviation.
- Mean = total of words frequency of environmental disclosure for each year ÷ number of annual reports for each year. e.g: mean of small companies 2003 = 14 ÷ 1 = 14 words.
- % = the mean of each year ÷ the mean of each year of small companies + the mean of each year of medium companies + the mean of each year of large companies e.g: % of 2003 = 14 + 16 + 68.83 ÷ 98.83 = 14.17%.
- Overall mean = total of words frequency of environmental disclosure for all years ÷ total of annual reports for all years. e.g: overall mean of small companies = 3170 ÷ 26 = 121.92 words.
- For more details, refer to Appendix 4.

Figure 7.2 shows that all the companies, large, medium and small, provided some environmental information for each year, with the exception of 2002 when none of the small companies disclosed environmental information. It confirms that there is a positive association between company size and the level of ED.

Figure 7.2 Environmental Disclosure (ED) Practice According to Company Size



When a non-parametric Kruskal-Wallis test was performed to test the effect of company size on ED, it gave a p-value = <.001 (less than 0.05), indicating a statistically significant difference in the amount of ED produced by small, medium and large companies. Thus, company size has a significant impact on the level of ED.

To further examine where the differences lie between the three categories, multiple Mann-Whitney tests were conducted (small and medium; small and large; medium and large). There is a significant difference between the small and medium companies; the Z score is significant at (Z- statistic = -2.646, p-value = 0.008). The second comparison was made between small and large companies. Again, the results indicated that there is a significant difference between these two groups; the Z score is significant at (Z- statistic = -3.317, p-value = 0.001). The final comparison was made between the medium and large companies. The Z score is significant at (Z- statistic = -2.672, p-value = 0.008), indicating that there is a significant difference between them. The calculated Z values for all company sizes are below -1.96 and the p-values are less than 0.05, confirming that the differences between large, medium and small companies are statistically significant. The differences are in favour of the large companies, with smaller companies achieving lower levels of ED. If this research question is expressed in the form of a hypothesis, we may reject the null hypothesis:

H_o: There is no significant difference in the volume of ED produced by large, medium and small companies

and accept the alternative hypothesis:

H_1: There is a significant difference in the volume of ED produced by large, medium and small companies.

There are several possible reasons for these differences. Larger companies usually have more shareholders than small companies, and more of these shareholders are likely to be interested in social issues. It has been argued that more investors are choosing to invest in companies whose activities do not harm the environment, and that these investors are increasingly pressing for environmental information to be disclosed in annual reports.

Social and environmental disclosure helps the company to satisfy these shareholders. Larger companies may have greater access to the technology and expertise necessary to improve and disclose their environmental performance. They may engage in more environmental activities to begin with, so they may be expected to have more to disclose than smaller companies. Clarkson et al. (2008) claim that firms with modern and cleaner technologies are expected to provide better environmental performance and are therefore keen to publicise their successes in their annual reports. Hossain et al. (2006) investigated the extent and nature of social and environmental reporting in corporate annual reports in Bangladesh, finding that manufacturing companies with higher profitability and those that had issued debentures tended to disclose more social and environmental information.

The finding that size has a fundamental impact upon the level of ED is consistent with the results of earlier empirical studies. Many authors argue that there is a positive correlation between firm size and the level of corporate disclosure; see (Al-drugi and Abdo, 2012; Alsaeed, 2006; Deegan and Gordon, 1996; Galani et al., 2011; Zhang et al., 2008). Liu and Anbumozhi (2009) suggest that ED increases with firm size in environment-sensitive industries such as oil and gas, chemicals and paper products, and that company size is currently the major significant factor influencing ED. In their investigation of the current application of CSR in China and Brazil and the influence of key variables on CSR, Abreu et al. (2012) found that firm size has a significant influence on CSRD. McKinnon and Dalimunthe (1993), investigating the association between disclosure and company size, also found evidence that company size has a highly significant effect on disclosure of information in annual reports. They argue that although both large and small companies collect information for internal planning and control purposes, the need for analysis and disclosure is greater in large companies.

Cooke (1991, p.176) suggests several reasons why we should expect a positive association between company size and the extent of disclosure. He argues that “larger companies are likely to be entities of economic significance. So, there may be greater demands on them to provide information for customers, suppliers and analysts, and governments as well as the general public”. Large companies may also exhibit higher levels of disclosure because they are likely to be more complex. They are more likely to be multi-product and to operate in a number of geographical areas, including overseas. These additional complexities require efficient management information systems to facilitate managerial control and to meet the needs of financiers.

According to Adams (2002), in large companies, the job of gathering information for social and environmental disclosure may be shared by several employees, while small companies usually make one person responsible for the whole process. This fact may also influence the level of ED. Gray et al. (2001) claim that in the UK at least, corporate social and environmental disclosure is directly related to company size and profit. Finally, Marston and Shrives (1991) propose that smaller corporations are more likely to feel that full disclosure of information could endanger their competitive position. For these reasons, a large company is more likely to have underlying reasons for increased disclosure than a small company.

However, a number of prior studies have rejected the idea that company size has a material impact on the level of ED. When Rao et al. (2012) examined the relationship between environmental reporting and company size in Australia, their findings showed that firm size does not have a statistically significant relationship to the level of ED. Similarly, Esa and Ghazali (2010) concluded that no positive correlation exists between social and environmental disclosure and company size. Villiers and Staden (2011) found that firms disclose more environmental information in their annual reports when they have a bad environmental reputation, but that there is no positive correlation between ED in annual reports and company size. In another area of social responsibility, Zubek (2008) examined disclosure of HR in Libya; he also found that the size of the company does not appear to be significantly related to HR disclosure practices. He argues that small companies appear to be more receptive to the influence of pressure groups and that they therefore disclose more HR information than medium and large companies. These are just a few of the many studies that have found no statistically significant difference between the level of environmental information disclosed by large, medium and small companies and that have consequently concluded that company size is an insignificant factor for ED see (Ahmed and Nicholls, 1994; Akhtaruddin, 2005; Archambault and Archambault, 2003; Halme and Huse, 1997; Lynn, 1992; Roberts, 1992).

To sum up, the results of the present study suggest that company size plays an important role in the level of ED. These results support the findings of a number of previous studies. More importantly, they are the first evidence that such a link exists in companies in Libya's oil sector.

7.5 Level of Environmental Disclosure (ED) According to Company Privatisation (Private or Public)

This section seeks to identify whether there is an association between ED and company privatisation; in other words, whether private and public companies operating in Libya differ in terms of their ED practice.

Table 7-5 presents the descriptive statistics for ED, as it appeared in the annual reports of public and private companies operating in the oil and gas industry in Libya between 2002 and 2009. Overall, the results indicate that all companies, whether public or private corporations, made some ED. The table shows that the mean of words disclosed by public companies rose from 15.67 in 2002 to 191.7 in 2009, while the mean volume of ED by private companies rose from 102.33 words in 2002 to 297 words in 2009. Thus, the average volume of ED increased steadily over the whole period. This increase may have been due to the growth in environmental legislation in Libya and especially the introduction of environmental Law 13 (2003), which focused attention on ED.

Table 7-5 demonstrates that the overall mean of ED was less than 34% in public companies but more than 66% in private companies; there was a significant difference in the amount of ED achieved by public and private companies, with the difference being in favour of private companies.

Table 7-5 Descriptive Statistics for Environmental Disclosure (ED) Practice by Private and Public Corporations [(1)]

Company	Statistics	Years								Overall mean
		2002	2003	2004	2005	2006	2007	2008	2009	
Public	n	3	5	7	6	9	8	10	10	
	Mean	15.67	17	27.43	60.83	99	143.6	156.60	191.7	107.1
	%	13.28	12.47	14.28	25.63	37.19	41.02	38.06	39.23	33.17
	SD	8.08	3.86	10.88	22.28	28.62	23.47	32.06	25.34	
	Minimum	7	14	17	24	54	112	90	158	
	Maximum	23	23	43	92	143	176	191	229	
Private	n	3	3	3	6	11	14	14	14	
	Mean	102.33	119.33	164.67	176.50	167.18	206.4	254.86	297	215.78
	%	86.72	87.53	85.72	74.37	62.81	58.98	61.94	60.77	66.83
	SD	10.06	14.29	14.36	27.99	59.45	53.39	59.09	59.66	
	Minimum	93	107	154	132	95	134	167	192	
	Maximum	113	135	181	214	272	310	346	400	

Private companies are more likely to provide more environmental information in their annual reports as they are under greater pressure to enhance their reputation and image in the market. Failure to disclose environmental performance and programmes for improvement in this field can adversely affect a company's reputation and competitive position in the capital market. Thus, companies use disclosure as a means of achieving

1) Notes:
- N = number of annual reports % = the percentage of disclosure SD= standard deviation.
- Mean = total of words frequency of environmental disclosure for each year ÷ number of annual reports for each year. e.g: Mean of public companies 2002 = 47 ÷ 3 = 15.67 words.
- % = the mean of each year ÷ the mean of each year of public companies + the mean of each year of private companies. e.g: % of 2002 = 15.67 + 102.33 ÷ 118 = 0.1328%.
- Overall mean = total of words frequency of environmental disclosure for all years ÷ total of annual reports for all years. e.g: overall mean of local companies = 6212 ÷ 58 = 107.1 words.
- For more details, refer to Appendix 4.

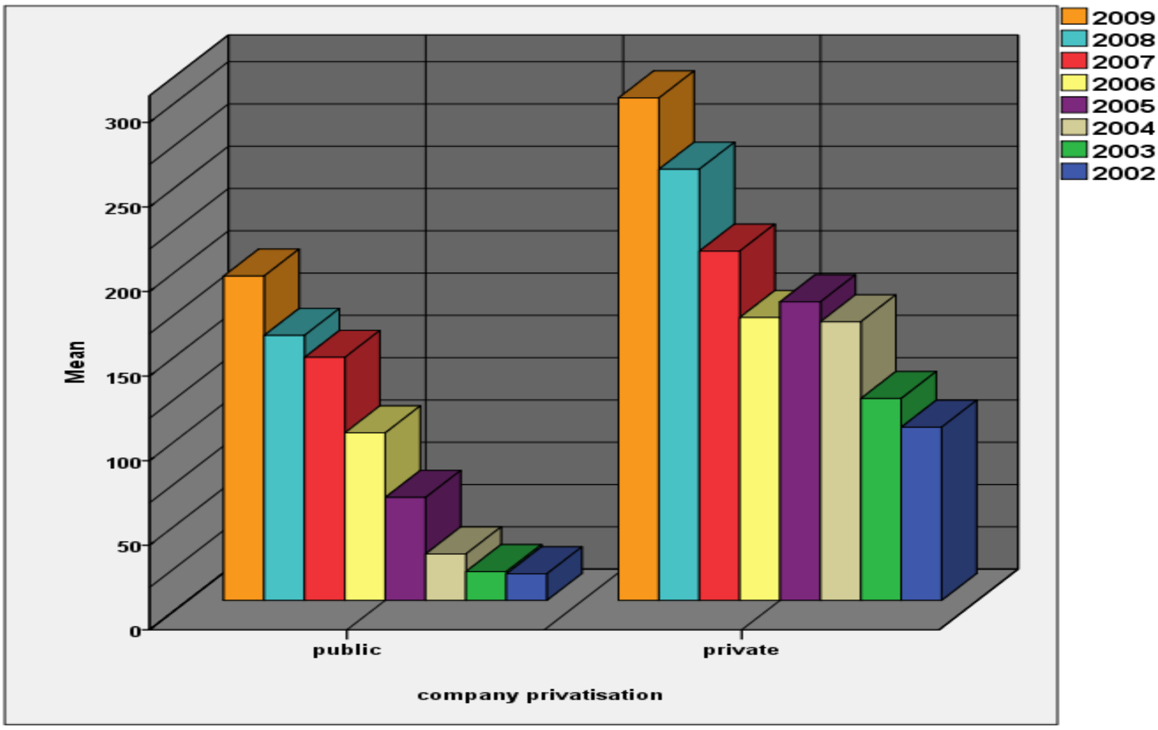
and maintaining competitive advantage (Ince, 1998; Solomon and Lewis, 2002). It may even result in increased share value, since investors prefer to invest in companies that show an interest in environmental performance.

Figure 7.3 makes clear the difference in ED practice between the two groups of companies. Although almost 100% of companies provide some environmental information, there is a positive association between company status and the level of ED, with privatisation being an important factor.

The Mann-Whitney test confirmed that the difference between public and private companies is statistically significant; the Z score is significant at (Z- statistic = -2.460, p-value = 0.014), while the calculated Z value is below -1.96 and the p-value is less than 0.05. This difference may be ascribed to the pressure imposed on private companies by environmental organisations and by investors who hold large numbers of shares and who are therefore more likely to influence management decisions (Lau et al., 2009).

It has been argued in many studies that the level of ED in a company and its commitment to the environment may affect the decision of shareholders to continue investing in the company, since investors prefer to invest in businesses that disclose their environmental practices and do not damage the environment (Consultants and Australia, 1997; Deegan and Rankin, 1997; Ingram, 1978). For this reason, private companies are more concerned to protect their reputation in the eyes of the public than public companies, which do not have shareholders or shares traded in the stock market. This argument is supported by the findings of the questionnaire survey (see Section 6.5.3), which confirm that company reputation is a key motivator of environmental disclosure.

Figure 7.3 Environmental Disclosure (ED) Practice by Public and Private Companies



Another possible explanation for private companies being more concerned with ED than public companies may be the existence of regulatory bodies such as the Securities and Exchange Commission; the Commission obliges companies trading on stock markets to provide a minimum standard of information for investors (Beets and Souther, 1999; Stanko et al., 2006).

The findings therefore provide further evidence that a company's status as a private or public corporation has a fundamental impact on its level of ED. If this research question is expressed in the form of a hypothesis, we may reject the null hypothesis:

H_o: There is no significant difference in the volume of ED produced by public and private companies

and accept the alternative hypothesis:

H_1: There is a significant difference in the volume of ED produced by public and private companies.

Although this variable has an important impact on ED, only a few recent research studies have addressed this area. The majority of prior studies have concentrated on the relationship between company privatisation and financial disclosure and CSRD in general, without reference to ED. Uwalomwa (2011), for example, examined the relationship between company privatisation and CSRD, finding that company privatisation structure has a significant positive impact on the level of CSRD. Zubek (2008) examined HR disclosure as one of the scopes and activities of social responsibility in Libya and found that company privatisation is a significant determinant of the extent of HR disclosure. In one of the very few studies to have investigated the influence of company ownership on the level of ED, Cormier and Gordon (2001) found that privatisation is likely to affect the amount of social and environmental disclosure. Rizk et al (2008) surveyed the corporate social and environmental reporting practices of Egyptian industrial corporate entities outside the oil sector. They reviewed a random sample of 60 annual reports for the 2002 financial year and identified significant differences in the reporting practices of private and government-owned companies; a greater proportion of privately owned companies included social and environmental disclosure. Their findings lend support to the idea that companies' ownership structure affects their decision to report their environmental activities.

The results of this study confirm that privatisation is a key driver of ED. Its importance lies in the fact that it is one of the very few studies to investigate this relationship in either developed or developing countries, and the first to do so in the context of the Libyan oil and gas sector.

7.6 Level of Environmental Disclosure (ED) According to Age of Company (Old or New)

Experience is one of the most important drivers of company success. However, there is disagreement on whether a relationship exists between company age and information disclosure in annual reports. While some hold the view that older companies may be more concerned to disclose information than new companies (Owusu-Ansah, 1998; Zubek, 2008), others see company age as insignificant when it comes to disclosure (Akhtaruddin, 2005; Singh and Ahuja, 1983). Accordingly, this section investigates whether old and new companies differ in terms of their ED practice.

The Libyan National Oil Corporation classifies any company that has worked in Libya for more than five years as old [(1)]. This was therefore the benchmark adopted in this study to differentiate between companies: new companies are five years old or less, while old

1) Interview with the Head of the External Audit Department in the National Oil Corporation (NOC), January 2011.

companies are more than five years old. This measure has previously been used by Abdo and Aldrugi (2012).

Table 7-6 reveals that ED compliance has been satisfactory among listed companies, especially in recent years. Around 52% of the total ED was made by old companies, with the other 48% being made by new companies; thus, there is only a slight difference in ED between old and new companies. The table shows the ED rates of old and new companies converging between 2002 and 2009; while the mean of total disclosure by old companies was 131, 136.86, 185.94, 215.44 and 256.67 words in 2005, 2006, 2007, 2008 and 2009 respectively, the annual mean of total disclosure by new companies was 81.67, 135.67, 177.33, 209.33 and 242.5 words in the same years. Among old companies, the maximum of disclosed words frequency was 374 and the minimum was 158, while the maximum and minimum of disclosed words frequency among new companies were 400 and 170 respectively.

Looking at the percentages and means in Table 7-6, there is no difference in ED between old and new companies. The reasons might be that old and new companies face the same pressures from shareholders and other pressure groups, and they are equally obliged to abide by the Securities and Exchange Commission's requirement to disclose a minimum level of information for investors. Both old and new companies may see ED as a way to strengthen their competitive position and to make themselves stand out. In any case, the results indicate that the age of the company does not have a statistically significant effect on the level of ED.

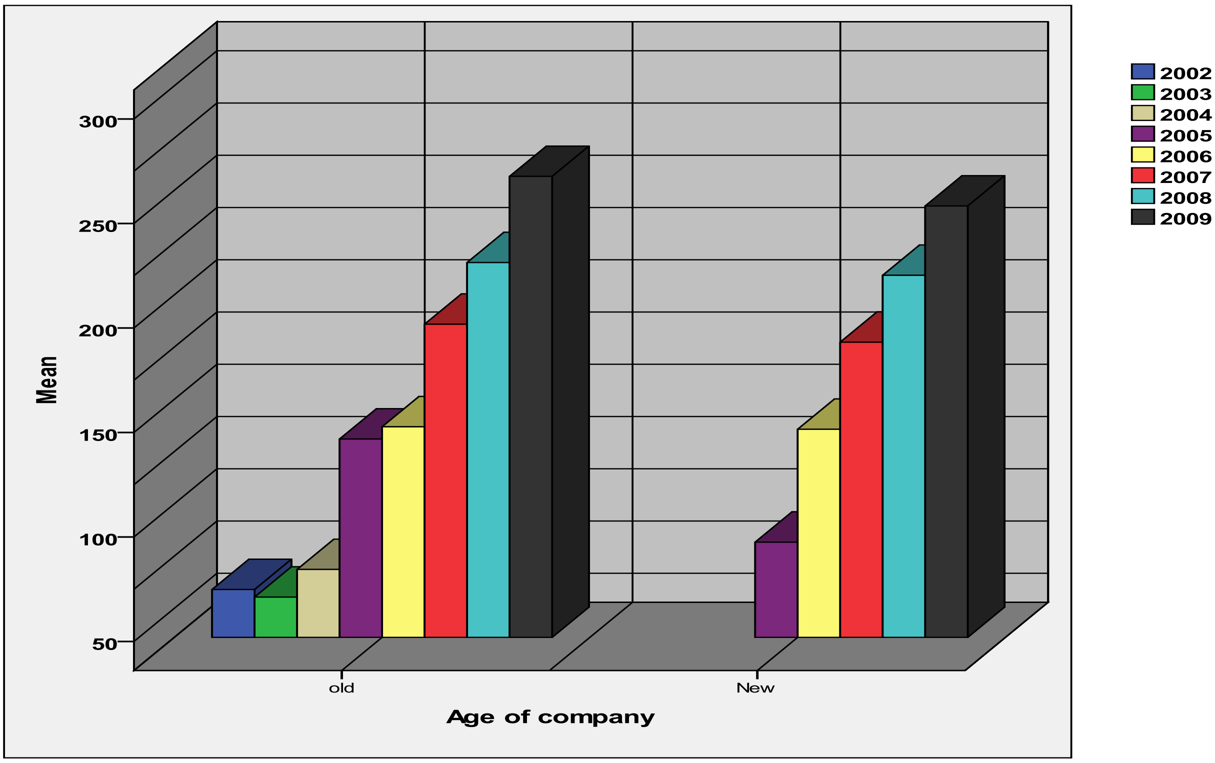
Table 7-6 Descriptive Statistics for Environmental Disclosure (ED) Practice by Old and New Companies [(1)]

Company	Statistics	Years								Overall mean
		2002	2003	2004	2005	2006	2007	2008	2009	
Old	n	6	8	10	9	14	16	18	18	
	Mean	59	55.38	68.6	131	136.86	185.94	215.44	256.67	162.13
	%	100	100	100	61.59	50.22	51.19	50.72	51.42	47.5
	SD	48.17	53.59	67.23	60.92	54.79	48.2	67.41	70	
	Minimum	7	14	17	59	54	116	90	158	
	Maximum	113	135	181	214	231	287	340	374	
New	n	0	0	0	3	6	6	6	6	
	Mean	0	0	0	81.67	135.67	177.33	209.33	242.5	179.22
	%	0	0	0	38.4	49.78	48.81	49.28	48.58	52.5
	SD	0	0	0	75.41	71.95	72.33	81.91	84.67	
	Minimum	0	0	0	24	70	112	124	170	
	Maximum	0	0	0	167	272	310	346	400	

Figure 7.4 again demonstrates that almost all companies, old and new, provide some environmental information and that there is no association between company age and ED.

1) Notes:
- N = number of annual reports % = the percentage of disclosure SD = standard deviation.
- Mean = total of words frequency of environmental disclosure for each year ÷ number of annual reports for each year. e.g: Mean of old companies 2002 = 354 ÷ 6 = 59 words.
- % = the mean of each year ÷ the mean of each year of old companies + the mean of each year of new companies. e.g: % of 2002 = 59 + 0 ÷ 59 = 100%.
- Overall mean = total of words frequency of environmental disclosure for all years ÷ total of annual reports for all years. e.g: overall mean of local companies = 16051 ÷ 99 = 162.13 words.
- For more details, refer to Appendix 4.

Figure 7.4 Environmental Disclosure (ED) Practice by Old and New Companies



The Mann-Whitney test confirmed this result, revealing no significant difference between old and new companies; the Z score is significant at (Z- statistic = -0.600, p-value = 0.548) because the calculated Z value is between -1.96 and +1.96 and the p-value is larger than 0.05. If this research question is expressed in the form of a hypothesis, we may accept the null hypothesis:

H_o: There is no significant difference in the volume of ED produced by old and new companies

and reject the alternative hypothesis:

H_1: There is a significant difference in the volume of ED produced by old and new companies.

Thus, the empirical findings do not support the hypothesis that long-established companies provide more environmental information than new companies.

As mentioned earlier, only a few recent studies have addressed the relationship between company age and disclosure of information. Furthermore, to the best of the author's knowledge, no previous studies have focused on the impact of company age on the level of ED specifically. A number of authors have investigated the relationship between company age and the level of financial disclosure and CSRD (Akhtaruddin, 2005; Alsaeed, 2006; Galani et al., 2011; Singh and Ahuja, 1983); they too have found that company age has no significant influence on the disclosure of information, and that long-established companies do not necessarily provide more information than new companies.

On the other hand, Zubek (2008), in his examination of HR disclosure in Libya, concluded that the age of companies does appear to be significant to HR disclosure practices. He argues that there is evidence that older, more experienced companies are more likely to disclose HR information, and to disclose more of it, than new companies. Owusu-Ansah (1998) also examined the relationship between company age and disclosure of information, finding that the former has a positive effect on disclosure practices. He ascribed this difference to the rising cost of collecting, processing and disclosing the required information, which may be more onerous for newer companies than their older counterparts. These results are not consistent with the findings of the current study, which rejects the hypothesis that long-established companies are likely to disclose more information in their annual reports than new companies.

7.7 Summary

This chapter presents the results of the content analysis that was conducted on the annual reports published by 43 oil and gas companies operating in Libya. This empirical investigation of these companies' ED practices has revealed that almost all of them provide some environmental information, and that this comes in the form of good, neutral or bad news. The results provide further evidence that there are significant positive associations between the level of ED and company size, privatisation and nationality. Conversely, they show that the age of a company is insignificant and negatively related to its level of ED.

Chapter Eight: Conclusion

8.1 Introduction

The main purpose of this chapter is to collate and summarise the key findings of the investigation. It is divided into seven sections. The second section presents a summary of the research questions and aims. Section three presents the main findings and discusses the extent to which the research aims have been achieved. Section four discusses the significance of the study and its contribution to knowledge and describes the key features of the results. The limitations of the study are presented in Section five. Drawing upon the findings from the literature review and the field research, Section six makes a number of recommendations. Finally, Section seven offers suggestions for further research in the field of CSR in general and ED in particular.

8.2 Conclusions Relating to the Research Aims and Questions

The first aim of this study was to evaluate the current state of and recent developments in the field of ED, as reported in the accounting literature, and the extent to which it exists in the annual reports published by oil companies operating in Libya, particularly whether foreign and local oil companies differ in their disclosure. Previous studies in the field of ED were reviewed in order to establish whether ED is being practised by oil companies operating in Libya, what type of environmental information is being disclosed in the annual reports of these companies and whether local and foreign companies differ in terms of their ED practice.

The review of the accounting literature revealed that ED is one of the most important elements of social disclosure. However, it is still recent in some countries and almost completely absent in other countries, especially in developing countries. The vast majority of studies in the field of social and environmental disclosure are conducted in developed industrial countries, neglecting the developing countries.

Using three data collection methods (questionnaire, content analysis and interviews), the study has confirmed that almost all oil companies operating in Libya, both local and foreign, prepare their annual reports with some ED, generally passing on good and neutral information rather than bad information. According to the empirical findings, the average volume of disclosure steadily increased throughout the period 2005 to 2009. It was also noted that the volume of the mean ED of foreign companies was significantly higher than that of local companies, although there was a remarkable increase in ED by local companies throughout the period under investigation.

The second aim of this study was to investigate the extent to which Libyan environmental law and regulations are being followed by oil companies operating in Libya, and to identify the level of control over the ED of these companies. It also sought to identify effective ways of obliging companies to disclose environmental information.

The questionnaire survey revealed general agreement among the respondents that although there are environmental laws and regulations that nominally require companies in Libya to protect the environment and disclose environmental information, there is no total or real obligation in practice for companies to undertake ED. The majority of interviewees agreed that there is currently a lack of adequate environmental regulations and ED standards in the country. This is not surprising; in Libya, as in many other countries, ED is not a mandatory requirement (Ishwerf, 2012). However, the study did find evidence that internal auditing departments and external pressure groups fulfil the control/follow up function to some degree.

The research identified a number of ways in which companies might be made to disclose environmental information. Respondents from local companies thought all four of the proposed measures would be effective (see Table 6-19), but the foreign companies dismissed the suggestion that contracts between the NOC and oil companies should include a clause compelling companies to disclose their environmental performance.

The third aim was to clarify whether some of the reasons for ED that have been suggested in the accounting literature are indeed seen as motives for ED by companies. To this end, the study investigated whether there is an association between ED and factors such as company reputation, legal requirements, societal expectations, societal pressure and economic factors.

The participants seemed to accept the need for greater social and environmental disclosure and thought that companies in Libya should take account of social and environmental issues, but domestic and foreign companies differed significantly in their views on why companies undertake ED. While the respondents from foreign companies were consistent in accepting all of the proposed motives (reputation, legal requirements, societal expectations, societal pressure and economic factors) as key drivers of ED, local companies accepted reputation and societal pressure but rejected the others.

Interestingly, a new insight was provided by one of the interviewees, who pointed out that ED in the Libyan oil sector has increased since foreign companies entered the sector in 2005. This has motivated local companies to undertake ED in order to catch up with their foreign competitors. Although the questionnaire results suggested that local companies do not consider competition to be a significant factor in ED, it seems that competition has indeed determined the level and type of ED being practised by these companies. The finding highlights a positive effect that has come from having international and domestic companies competing in the same market.

The fourth aim was to determine the factors that prevent companies from disclosing environmental information. Local and foreign companies had significantly different views on this. The respondents from foreign companies were broadly agreed that the main reasons for non-disclosure are the lack of incentives from the Libyan state, the lack of ED standards (which can make it difficult for companies to estimate the value of their environmental activities or to know how best to disclose them) and the fact that non-disclosure has no effect on a company's ability to acquire new contracts for oil exploration in Libya. On the other hand, the local companies accepted all of the proposed reasons as significant obstacles to ED (see Table 6-17).

The fifth aim was to test and analyse the relationship between company-specific attributes (size, privatisation, age and nationality) and ED. The findings support previous arguments that there is a relationship between company nationality and ED. In addition, the analysis confirmed that there is a statistically significant difference in the level of ED produced by large, medium and small companies (with large companies producing the greatest volume) and by private and public corporations (private companies produce more). On the other hand, the age of the company does not have a statistically significant effect on the level of ED. Thus, the investigation did not support the hypothesis that long-established companies are likely to disclose more information in their annual reports than new companies.

The sixth aim was to identify the extent to which Libyan oil and gas companies are aware of the concepts of CSR and ED. To this end, the study investigated the level of awareness and understanding of CSR and ED among financial managers and accounting department employees.

The questionnaire and interview results confirm that financial managers and accounting department employees in both local and foreign oil companies are aware of society's increasing concern for the environment, and that they are aware of and understand CSR and ED. Interviewees from both local and foreign companies were highly sensitive to the importance of CSR and ED, and were dissatisfied with the current level of training available in environmental management and environmental accounting.

8.3 Research Contribution

The contribution of this study stems from its achievement of the following:

1. The vast majority of studies in the field of environmental accounting and disclosure have focused on developed countries while neglecting developing countries. However, it may be dangerous and wrong to apply the findings from these studies to all countries since ED varies from one country to another and from one community to another (the result of economic, social, legal, political and cultural differences which may have an effect on accounting in general and environmental disclosure in particular). The progress achieved by advanced countries in the field of ED has not been coincidence but the result of the many studies that have been undertaken on ED over the last 60 years (Elnaby et al., 2003). This study contributes to the enrichment of the accounting literature on this vital topic by addressing the current lack of studies focusing on ED in developing countries – particularly Libya.

2. This study may be seen as continuing the work of previous studies in its attempt to identify the relationship between ED and key elements such as reputation, legal requirements, societal expectations, economic factors and societal pressure. It gives a clearer idea of whether it is appropriate to use these reasons as a framework to explain ED practices in the context of developing countries in general and Libya in particular.

3. Although many prior studies have investigated the relationship between ED and company size, privatisation and nationality, there is no consensus on the influence of these factors on the level and quality of ED. Only a few recent researches have addressed the impact of company privatisation on CSRD in general and ED in particular. No previous studies have investigated the relationship between company age and the level of ED, so this factor is introduced for the first time. Prior studies have concentrated on financial

disclosure or disclosure of CSR, without consideration of ED specifically. These factors have been investigated in the belief that improving the quality and quantity of ED requires not just an understanding of current environmental and financial concerns, but also insight into the factors that influence disclosure.

4. The research comes at a time when academics and international and local environmental organisations are calling upon governments to pay more attention to environmental issues and to force companies to do likewise. In identifying the extent and quality of disclosure in Libyan oil companies and foreign companies operating in Libya, the study provides important information for researchers, policy makers, oil companies, professional organisations and environmental and government agencies. It adds to international research in the field of ED by providing empirical evidence from Libya, where such evidence is still relatively unknown, and extending the scope of our current understanding of environmental reporting practices.

8.4 The Significance of the Research Results

8.4.1 Significance of Results in Relation to the Literature

The results of this research are significant and unique when compared with similar studies. There have been two other major studies in this area that have focused on Libya. Focusing on 13 local industrial companies, Saleh (2004) studied the effect of the social, political and economic situation on ED over a four-year period (1998-2001). The second study was by Ishwerf (2012), who adopted the single case study approach to investigate stakeholders' perceptions and requirements of ED in the Ahlia Cement Company.

Whereas these studies excluded the oil sector and foreign companies, the current study was carried out on local and foreign companies operating in Libya's oil and gas industry. Moreover, neither Saleh nor Ishwerf took into account the effects of company characteristics on ED; in contrast, this study investigates the relationship between certain firm-specific characteristics and ED. It attempts to identify the determinants of ED by assessing whether the reasons that have been advanced as motives for ED do in fact drive environmental disclosure and by identifying the obstacles that prevent companies from disclosing environmental information. As Saleh's data was collected between 1998 and 2001, this study may be considered a continuation of Saleh's research since it covers the period between 2002 and 2009.

Although previous studies have done important work in identifying the motives that make companies disclose environmental information, they have provided no conclusive evidence to support their findings. Many have investigated the relationship between ED and company size, privatisation and nationality, but there is still no consensus on the influence of these factors on the level and quality of ED. Only a few recent papers have addressed the impact of company age on financial disclosure in general and CSRD disclosure in particular; this study is the first to consider its impact on ED.

The current study enriches the accounting literature in general and ED literature in particular by providing a clear picture of the influence of firm-specific characteristics on ED, explaining the motivations behind ED and identifying the obstacles that stop companies disclosing environmental information. These findings open up new horizons for researchers, offer important information and indicate potential areas for future investigation.

8.4.2 Significance of Results with Respect to the Application of Environmental Disclosure (ED)

One of the main observations of this study is that certain company characteristics, such as size, influence ED. The analysis confirms that there is a statistically significant difference in the level of ED produced by large, medium and small companies and that this difference is in favour of large companies. One reason for this is that larger firms are more likely to have modern, cleaner technologies that enable them to achieve better environmental performance, and they are likely to want to celebrate this fact in their annual reports. They are generally more likely to have the resources to improve both environmental performance and its disclosure (which can be costly). The result is important in highlighting one of the issues – cost – that most concerns small companies. Drawing the attention of accounting practitioners, central authorities, oil companies, professional organisations and environmental lobby groups to these issues increases the chance that these smaller companies will be given the financial and moral support they need to increase their ED.

The results confirm that there is a significant difference in ED practice between private and public corporations, which seems to be in favour of private companies. This is important information for policy makers, planning boards and many other government agencies, particularly in developing countries like Libya which are in the process of privatising the public sector. This shift has significant knock-on effects on planning processes and the demand for information. Environmental information is of high importance to current and potential investors wanting to make sound decisions.

A positive correlation was found to exist between company nationality and disclosure of environmental information. This is further evidence that this characteristic has a material impact on the level of ED. It emerged that local companies have significantly increased their disclosure levels since 2005, but foreign companies still achieve a significantly higher level of ED than their local counterparts. The result is a clear indication of the status of ED among local companies. It is to be hoped that this will prompt central authorities to further encourage local companies to disclose environmental information, especially in light of the strong global competition. At the same time, the central authorities should encourage and reward local companies that are trying to increase their level of ED.

It is also to be hoped that drawing the attention of accounting practitioners, professional organisations and environmental lobby groups to the current state of ED in Libya may encourage them to increase pressure on reluctant companies to comply with the environmental laws and environmental pollution standards in general and international accounting standards in particular.

The most important feature of the results is that they clarify the obstacles that prevent companies from disclosing environmental information. The main reason for non-disclosure is the lack of incentives from the state. Another is the lack of environmental standards, which makes it difficult for companies to estimate the value of their environmental activities or to know how best to go about the task of disclosure. This result highlights the importance of financial and moral incentives. Should the state provide low cost loans and tax incentives to companies that disclose environmental performance? Should these companies be given priority in terms of new contracts for future oil exploration? Finally, the results include several measures that might be effective in obliging companies to disclose environmental information.

8.5 Limitations of the Research

This research, like any other, is subject to certain limitations. It was conducted among local and foreign companies operating in the oil and gas industry in Libya; it may therefore be argued that not all of its findings are generalisable to other sectors, not least because the oil sector differs significantly from other sectors in terms of economic capacity. The Libyan economy depends mainly on oil revenues; the vast majority of development projects implemented by the Libyan Government in the seventies and eighties were unsuccessful in raising the productive efficiency of the various other sectors such as agriculture and industry (Mirza, 2012). The fact that the study focuses on reports from the period 2002-2009 may also limit its generalisability.

The focus here has been on understanding the attitudes of financial managers and accounting department employees towards environmental performance and disclosure. While accounting departments assume the main responsibility for ED, it would have been instructive to expand the research to cover the managers of other departments, but time, cost and other constraints prevented this. Finally, the study adopted annual reports as a main data source; any findings from this source may only be applicable to this study.

Despite these limitations, care has been taken to ensure the validity of the results. As mentioned above, some of the findings may not be generalisable to other sectors in Libya, but others are, such as the negative impact on ED of the lack of environmental standards, state incentives and government controls.

The findings of this study can be generalised to the oil and gas sectors in other countries which have similar cultural, social, economic and political conditions, especially developing countries and particularly the Arab World. The present study chose annual reports as a data source, since these are the most widely used documents in Libyan companies, and the accounting literature (particularly CSR literature) has emphasised their value as documents for analysis.

8.6 Recommendations

Based on the research findings, a number of recommendations can be made in relation to social disclosure in general and ED in particular. These recommendations are:

1. To improve social disclosure in general and ED in particular, professional accounting bodies such as the Libyan Accountants and Auditors Association should issue environmental standards to provide guidance for companies when disclosing environmental information.
2. There should be a reward and punishment system to encourage companies to disclose environmental information. For example, companies that disclose environmental information should be rewarded by the state with financial or moral incentives such as low cost loans, tax incentives or priority in terms of new contracts for future oil

exploration. At the same time, sanctions should be imposed on companies that do not comply with minimum ED standards.

3. Professional accounting bodies such as the Libyan Accountants and Auditors Association, as well as the Libyan Stock Market, should determine the environmental information themes to be disclosed and establish these types of information in their standards or listing requirements.
4. Much more research should be conducted to address the gaps in research and the inconclusiveness of studies on social disclosure in general and ED in particular. This is especially the case in developing countries, which suffer from a shortage of research in this field.
5. More emphasis should be given to helping small companies increase their environmental disclosure, as one result of this study indicates that companies that are larger in size tend to have higher levels of ED. This is because large companies tend to have more modern and cleaner technologies which enable them to achieve better environmental performance and disclosure than small companies.
6. There should be increased emphasis on follow-up and compliance with environmental laws and regulations. The role of environmental audit departments should be enhanced and it should be given a greater role in controlling ED
7. All employees, especially those in audit departments, should have training on ED in order to raise their awareness of environmental accounting and environmental management. They should be kept up to date with amendments and modifications to the law through regular periodicals and pamphlets.

8. There should be greater focus on increasing the awareness of society as a whole and on encouraging members of the public to take advantage of their right to require the disclosure of environmental information. This knowledge could be disseminated through the media and regular meetings such as conferences and panel discussions.

8.7 Further Research

It has been pointed out that there is a shortage of research related to ED in developing countries, particularly Libya. No previous study has been conducted in the Libyan oil and gas sector to investigate ED or assess how it is influenced by company-specific attributes. The results of this study raise many further research possibilities; it echoes other authors in calling for more research to be conducted on social and environmental disclosure in corporate reports, especially in developing countries. Research might be conducted to develop environmental standards to help companies in Libya measure and assess the value of their environmental activities and disclose their environmental information effectively. It should also focus on CSRD in other areas such as human resources, product development and energy saving.

It is the intention of this author to continue to focus on environmental disclosure, for example by examining disclosure related to climate change in annual reports. In light of the results of this study, he will also continue to investigate the obstacles that prevent companies from disclosing environmental information.

References

Abd Elgaani, M., 2000. The Impact of Environmental Considerations in Financial Statements Auditing, *Journal of the Faculty of Commerce Alexandria University* 37 (1), 12-35.

Abdo, H., 2006. *Exploring the Rationales for Relaxations in the UK Petroleum Fiscal Regime* 1980-2000, phD, University of Sheffield.

Abdo, H., Al-drugi, A., 2012. Do Companies Characteristics Play Key Roles in the Level of Their Environmental Disclosure, *Energy Research Journal* 3 (1), 1-11.

Abozrida, M.A., 1981. *An Investigation of the Emerging System of Host Government Participation in the International Oil Industry with Particular Reference to Libya Participation Arrangements*, phD, University of Birmingham.

Abreu, M., Castro, F., Soares, F., Filho, J., 2012. A Comparative Understanding of Corporate Social Responsibility of Textile Firms in Brazil and China, Journal of Cleaner Production 20, 119-126.

Abuarrosh, M., 1996. A *Cross-Cultural Study of Locus of Control and Self- Esteem as Related to Socio Cultural factors Among Libyan and British*, phD, Manchester University.

Adams, C., 2008. A Commentary on: Corporate Social Responsibility Reporting and Reputation Risk Management, *Accounting, Auditing and Accountability Journal* 21 (3), 365-370.

Adams, C., 2002. Internal Organizational Factors Influencing Corporate Social and Ethical Reporting: Beyond Current Theorizing, *Accounting, Auditing and Accountability Journal* 15 (2), 223-250.

Adams, C., Hill, W., Roberts, C., 1998. Corporate Social Reporting Practices in Western Europe: Legitimating Corporate Behaviour, *British Accounting Review* 30, 1-21.

Adams, C.A., Harte, G., 1998. The Changing Portrayal of the Employment of Women in British Banks' and Retail Companies' Corporate Annual Reports, *Accounting, Organizations and Society* 23 (8), 781-812.

Adams, C.A., Kuasirikun, N., 2000. A Comparative Analysis of Corporate Reporting on Ethical Issues by UK and German Chemical and Pharmaceutical Companies, *European Accounting Review* 9 (1), 53-79.

Adhikari, A., Tondkar, R.H., 1992. Environmental Factors Influencing Accounting Disclosure Requirements of Global Stock Exchanges, *Journal of International Financial Management and Accounting* 4 (2), 75-105.

Aerts, W., Cormier, D., 2009. Media Legitimacy and Corporate Environmental Communication, *Accounting, Organizations and Society* 34 (1), 1-27.

Ahmad, N., Mousa, F., 2010. Corporate Environmental Disclosure in Libya a Little Improvement, *World Journal of Entrepreneurship, Management and Sustainable Development* 6 (1/2), 260-272.

Ahmad, N., Sulaiman, M., 2004. Environmental Disclosures in Malaysian Annual Reports: a Legitimacy Theory Perspective, *International Journal of Commerce and Management* 14 (1), 44-58.

Ahmad, Z., Hassan, S., Mohammad, J., 2003. Determinants of Environmental Reporting in Malaysia, *International journal of business studies* 11 (1), 69-90.

Ahmada, N., Sulaimanb, M., Siswantoroc, D., 2003. Corporate Social Responsibility Disclosure in Malaysia, an Analysis of Annual Reports, *Journal of Economics and Management* 11 (1), 1-37.

Ahmed, K., Nicholls, D., 1994. The Impact of Non-financial Company Characteristics on Mandatory Disclosure Compliance in Developing Countries: The Case of Bangladesh, T*he International Journal of Accounting* 29, 62-77.

Akhtaruddin, M., 2005. Corporate Mandatory Disclosure Practices in Bangladesh, *The International Journal of Accounting* 40 (4), 399-422.

Al-Arabi, A., Darwish, B., 2003. T*he Appropriateness of the Accounting Methods of Evaluation of the Projects Offered for Ownership of the Reality of Libya*. In: Academy of Graduate Studies, Tripoli - Libya.

Alciatore, M., Dee, C., 2006. Environmental Disclosures in the Oil and Gas Industry, *Advances in environmental Accounting and Management* 3, 49-75.

Al-drugi, A., Abdo, H., 2012. Investigating the Development of Environmental Disclosures by Oil and Gas Companies Operating in Libya: a comparative study, T*he International Journal of Economics and Finance Studies* 4 (2), 1-10.

Algeru, O., 2012. *Perceptions and Evaluations of the Internal Audit Function in Libyan Oil and Gas Companies*, phD, Gloucestershire University.

Alnajjar, F., 2000. Determinants of Social Responsibility Disclosures of U.S. Fortune 500 Firms: An Application of Content Analysis, A*dvances in Environmental Accounting and Management* 1, 163-200.

Alsaeed, K., 2006. The Association Between Firm-Specific Characteristics and Disclosure: The Case of Saudi Arabia, *Managerial Auditing Journal* 21 (5), 476-496.

Al-Sarraf, A., 2010. Defeat and Hope: The Draft Liberation and the Bottom of the Revolution in Libya. Arab Institution for Studies and Publishing, Beirut.

Al-Sharif, I., 2006. *The Requirements of the Development of Accounting Profession* In: The First Conference of Accounting, Tripoli - Libya.

Amaeshi, K., Osuji, O., Nnodim, P., 2008. Corporate Social Responsibility in Supply Chaine of Global Brands: A Boundary less Responsibility? Clarifications, Exceptions and Implications, *Journal of Business Ethics* 81 (August), 223-234.

Amaratunga, D., Baldry, D., Sarcher, M., Newton, R., 2002. Quantitative and Qualitative Research in the Built Environment: Application of "Mixed" *Research Approach, Work Study* 51 (1), 17-31.

American Accounting Association (AAA), 1975. Committee on Social Costs, *The Accounting Review* 50 (4), 50-89.

American Accounting Association (AAA), 1973. Committee on Environmental Effects of Organization Behavior, *The Accounting Review* 48 (4), 72-119.

American Institute of Certified Public Accounting, 1977. *The Measurement of Corporate Social Performance*, American Institute of Certified Public Accounting.

Anderson, R., 1977. Social Responsibility Accounting. Time to Get Started, *Ca Magazine* February, 29-31.

Anderson, K., 2006. Disclosure Rules Unmask Pollution Costs, National Underwriter / *Property and Casualty Risk and Benefits Management* 110 (28), 26-27.

Andrew, B., Gul, F., Guthrie, J., Teoh, H., 1989. A Note on Corporate Social Disclosure Practices in Developing Countries: the Case of Malaysia and Singapore, *British Accounting Review* 21 (4), 371-376.

Archambault, J., Archambault, M., 2003. A Multinational Test of Determinants of Corporate Disclosure, *The International Journal of Accounting* 38 (2), 173-194.

Arevalo, J., Aravind, D., 2011. Corporate Social Responsibility Practices in India: Approach, Drivers, and Barriers, *Corporate Governance* 11 (4), 399-414.

Attir, M., 1992. T*he Road Towards Modernization of Libya: The Mixture of Old and New*. Arab development institute, Beirut.

Audit Bureau, 1981. The Classification of People With Qualifications and Experience in the Field of Accounting and Auditing Other than the Bureau's Members of Staff and Determining their Remuneration, *Official Gazette* 56 (1), 29-36.

Azzone, G., Mamini, R., Noci, G., 1996. Evolutionary Trends in Environmental Reporting, *Business Strategy and the Environment* 5 (4), 219-230.

Babiak, K., Trendafilova, S., 2011. CSR and Environmental Responsibility: Motives and Pressures to Adopt Green Management Practices, *Corporate Social Responsibility and Environmental Management* 18 (1), 11-24.

Bae, B., Sami, H., 2005. The Effect of Potential Environmental Liabilities on Earnings Response Coefficients, *Journal of Accounting, Auditing and Finance* 20 (1), 43-70.

Baily, P., Soyka, P., 1996. Making Sense of Environmental Accounting, *Total Quality Environmental Management* 5 (3), 1-15.

Bait El-Mal, M., 1990. Survey and Evaluation of the Accounting Principles in Libya, T*he Economic Research Centre* 2 (1).

Bait El-Mal, M., 1973. The Development of Accounting in Libya, *International Journal of Accounting: education and Research* 8, 83-103.

Bakar, M., 1997. A*ccounting and the Economic Development of the Oil and Gas Sector in Libya: Historical Review, Theoretical Analysis and Empirical Investigation*, phD, University of Dundee.

Barth, M., McNichols, M., 1994. Estimation and Market Valuation of Environmental Liabilities Relating to Superfund Sites, Journal of Accounting Research 32 (3), 177-209.

Bayoud, N., Kavanagh, M., Slaughter, G., 2012. Corporate Social Responsibility Disclosure and Corporate Reputation in Developing Countries: The Case of Libya, Journal of Business and Policy Research 7 (1), 131-160.

BBC News, 2., 2012. Bp Oil Disaster : Eco-Impact of the BP Oil Spill, http://www *bbc co uk/news/special_reports/oil_disaster/* , Accessed 2012.

Bebbington, J., Gonzalez, C., Abadıa, J., 2008. Legitimating Reputation/the Reputation of Legitimacy Theory, *Accounting, Auditing and Accountability Journal* 21 (3), 371-374.

Beets, D., Souther, C., 1999. Corporate Environmental Reports: The Need for Standards and an Environmental Assurance Service, *Accounting Horizons* 13 (2), 129-145.

Beierle, T., 2003. The Benefits and Costs of Environmental Information Disclosure: What Do we Know about Right-to-Know? *Resources for the Future March*, 1-28.

Belal, A., 2001. A Study of Corporate Social Disclosures in Bangladesh, *Managerial Auditing Journal* 16 (5), 274-289.

Belal, A., Kabir, R., 2010. Corporate Environmental and Climate Changes Disclosure: Empirical Evidence from Bangladesh, *Research in Accounting in Emerging Economies* 10, 145-167.

Belal, A., Owen, D., 2007. The Views of Corporate Managers on the Current State of, and Future Prospects for, Social Reporting in Bangladesh, *Accounting, Auditing and Accountability Journal* 20 (3), 472-494.

Belal, A., Cooper, S., 2011. The Absence of Corporate Social Responsibility Reporting in Bangladesh, *Critical Perspectives on Accounting* 22 (7), 654-667.

Belkaoui, A., 1983. Economic Political and Civil Indicators and Reporting and Disclosure Adequacy, Journal of Accounting and Public Policy 2 (3), 207-219.

Belkaoui, A., 1980. The Impact of Scio-Economic Accounting Statements of Investment Decisions: An Empirical Study, *Accounting Organization and Society* 5 (3), 263-283.

Bell, J., 2005. *Doing Your Research Project, a Guide for First-Time Researchers in Education,* Health and Social Science. Two Penn Plaza, New York.

BenGharbia, S., Al-Kilani, A., Faraj, A., 1987. Studying the Standards of Auditing in Libya, *Journal of Sciences Research The Economic Sciences Research Centre* Bangazi- Libya, 1(2).

Berenson, M., Levine, D., 1992. *Business Statistics Concepts and Applications*, Fifth ed. Prentice Hall, Inc, New Jersey.

Berthelt, S., Cormier, D., Moncton, M., 2003. Environmental Disclosure Research: Review and Synthesis, *Journal of Accountancy Literature* 22, 1-44.

Blomgren, A., 2011. Does Corporate Social Responsibility Influence Profit Margins? A Case Study of Executive Perceptions, *Corporate Social Responsibility and Environmental Management* 18 (5), 263-274.

Boesso, G., Kumar, K., 2007. Drivers of Corporate Voluntary Disclosure: A Framework and Empirical Evidence From Italy and the United States, *Accounting Auditing and Accountability Journal* 20 (2), 269-296.

Bryman, A., 2001. *Social Research Methods*. Oxford University, New York.

Bryman, A., 1988. *Quantity and Quality in Social Research.* Routledge, London.

Bryman, A., Bell, E., 2011. *Business Research Methods*. Oxford University, New York.

Buhr, N., 1998. Environmental Performance, Legislation and Annual Report Disclosure: the Case of Acid Rain and Falconbridge, *Accounting, Auditing and Accountability Journal* 11 (2), 163-190.

Cameron, S., Price, D., 2009. *Business Research Methods*. The Chartered Institute of Personnel and Development, London.

Campbell, D., 2000. Legitimacy Theory or Managerial Reality Construction? Corporate Social Disclosure in Marks and Spencer Pic Corporate Reports, 1969-1997, *Accounting Forum* 24 (1), 80-100.

Carifio, J., Perla, R., 2008. Resolving the 50-year Debate Around Using and Misusing Likert Scales, *Medical Education* 42, 1150-1152.

Carroll, A., 1991. The Pyramid of Corporate Social Responsibility: Toward the Moral Management of Organizational Stakeholders, Business horizons 34 (4), 39-48.

Carroll, A., 1979. A Three-Dimensional Conceptual Model of Corporate Performance, *Academy of Management Review* 4 (4), 497-505.

Cassell, C., Symon, G., 1994. *Qualitative Methods in Organizational Research.* SAGE, London.

Central Bank of Libya, 2009a. *Annual Report,* Tripoli Libya Report Number 53.

Central Bank of Libya, 2009b. *Economic Bulletin: Key Economic and Monetary Indicators,* Tripoli Libya .

Central Bank of Libya, 2008a. *Annual Report,* Tripoli Libya Report Number 52.

Central Bank of Libya, 2008b. *Economic Bulletin: Key Economic and Monetary Indicators*, Tripoli - Libya .

Central Bank of Libya, 2007a. *Annual Report*, Tripoli Libya , Report Number 51.

Central Bank of Libya, 2007b. *Economic Bulletin: Monetary and Banking Statistics*, Tripoli Libya .

Central Bank of Libya, 2006a. *Annual Report*, Tripoli Libya Report Number 50.

Central Bank of Libya, 2006b. Economic Bulletin: Monetary and Banking Statistics, Tripoli - Libya .

Central Bank of Libya, 2005a. *Annual Report*, Tripoli Libya Report Number 49.

Central Bank of Libya, 2005b. *Economic Bulletin, Research and Statistics Department,* Tripoli 41 (2).

Central Bank of Libya, 2011, www.cbl.gov.ly, , Accessed, 2011.

Chapple, W., Moon, J., 2005. Corporate Social Responsibility (CSR) in Asia, *Business and Society* 44 (4), 415-441.

Cho, C., Chen, J., Roberts, R., 2008. The Politics of Environmental Disclosure Regulation in the Chemical and Petroleum Industries: Evidence from the Emergency Planning and Community Right-to-Know Act of 1986, *Critical Perspectives on Accounting* 19, 450-465.

Cho, C., Patten, D., 2007. The Role of Environmental Disclosures as Tools of Legitimacy: A Research Note, *Accounting, Organizations and Society* 32 (7-8), 639-647.

Clarkson, P., Li, Y., Richardson, G., Vasvari, F., 2008. Revisiting the Relation Between Environmental Performance and Environmental Disclosure: An Empirical Analysis, *Accounting, Organizations and Society* 33 (4-5), 303-327.

Clarkson, P., Li, Y., Richardson, G., 2004. The Market Valuation of Environmental Capital Expenditures by Pulp and Paper Companies, *Accounting Review* 79 (2), 329-353.

Cohen, L., Manion, L., Morrison, K., 2001. *Research Methods in Education,* First published ed. Routledge Falmer, Canada.

Colorado State University Online, 2012, Types of Questions, *http://writing colostate edu/guides/research/survey/com4a2a cfm* , Accessed, 2012.

Consultants, C., Australia, S., 1997. Environmental Accounting - what Does it Mean to Professional Accounting? *Accounting, Auditing and Accountability Journal* 10 (4), 594-600.

Cooke, E., 1991. An Assessment of Voluntary Disclosure in the Annual Reports of Japanese Corporations, I*nternational Journal of Accounting Education and Research* 26 (3), 174-189.

Corbin, J., Strauss, A., 2008. *Basics of Qualitative Research*: Techniques and Procedures for Developing Grounded Theory. Sage, London.

Cormier, D., Gordon, I., 2001. An Examination of Social and Environmental Reporting Strategies, *Accounting Auditing and Accountability Journal* 14 (5), 587-616.

Cormier, D., Magnan, M., 2003. Environmental Reporting Management: a Continental European Perspective, Journal of Accounting and Public Policy 22, 43-63.

Cormier, D., Magnan, M., Van, B., 2005. Environmental Disclosure Quality in Large German Companies: Economic Incentives, Public Pressures or Institutional Conditions, *European Accounting Review* 14 (1), 3-39.

Cornell, D., Apostolou, B., 1991. Auditing for Violations of Environmental Laws, T*he National Public Accountant* 37 (7), 16-20.

Cortina, J., 1993. What Is Coefficient Alpha? An Examination of Theory and Applications, *Journal of Applied Psychology* 78 (1), 98-104.

Council of Ministers, 1975. Regarding the Audit Bureau, *The Official Gazette* (53), 1693-1712.

Council of Ministers, 1974. The Organization of Accounting and Auditing Profession, *The Official Gazette* (7), 251-268.

Council of Ministers, 1954. Commercial Law and Maritime Law, *The Official Gazette* (2), 17-25.

Cowen, S.S., Ferreri, L.B., Parker, L.D., 1987. The Impact of Corporate Characteristics on Social Responsibility Disclosure: A Typology and Frequency-Based Analysis, Accounting, Organizations and Society 12 (2), 111-122.

Crane, A., Matten, D., 2007. *Business Ethics*, 2nd ed. Oxford University press.

Creswell, J., 2009. *Research Design Qualitative, Quantitative and Mixed Methods Approaches.* SAGE Publications, Inc, London.

Creswell, J., 2007. *Qualitative Inquiry Research Design*. Sage Publications, Inc, London.

Creswell, J., Clark, V., 2011. *Designing and Conducting Mixed Methods Research*. SAGE Publications, Inc, London.

Cronbach, L.J., 1951. *Coefficient Alpha and the Internal Structure of Tests*, Psychometrika 16, 297-334.

Curwin, J., Slater, R., 2008. *Quantitative Methods for Business Decisions*, 6th ed. THOMSON, Geraldine Lyons.

Dahlsrud, A., 2008. How Corporate Social Responsibility is Defined: An Analysis of 37 Definitions, *Corporate Social Responsibility and Environmental Management* 15, 1-13.

Darwish, B., Ghali, A.E.M., 2006. *The Factors Affecting the Evolution of the Accounting Profession in Libya*, Paper presented at the First National Conference for Accounting. In: Tripoli- Libya, pp. 1-14.

Davis, K., 1973. The Case for and Against Business Assumption of Social Responsibilities, *Academy of Management Journal* 16 (2), 312-322.

Dedman, E., Lin, S., Prakash, A., Chang, C., 2008. Voluntary Disclosure and its Impact on Share Prices: Evidence From the UK Biotechnology Sector, *Journal of Accounting and Public Policy* 27 (3), 195-216.

Deegan, C., 2002. Introduction the Legitimising Effect of Social and Environment Discloures - A Theoretical Foundation, *Accounting, Auditing and Accountability Journal* 15 (3), 282-311.

Deegan, C., Gordon, B., 1996. A Study of the Environmental Disclosure Practices of Australian Corporations, *Accounting and Business Research* 26 (3), 187-199.

Deegan, C., Rankin, M., 1996. Do Australian Companies Report Environmental News Objectively? An Analysis of Environmental Disclosures by Firms Prosecuted Successfully by the Environmental Protection Authority, *Accounting, Auditing and Accountability Journal* 9 (2), 50-67.

Deegan, C., Rankin, M., 1997. The Materiality of Environmental Information to Users of Annual Reports, Accounting, *Auditing and Accountability Journal* 10 (4), 562-583.

Deegan, C., Rankin, M., Tobin, J., 2002. An Examination of the Corporate Social and Environmental Disclosure of BHP From 1983-1997 A Test of Legitimacy Theory, *Accounting Auditing and Accountability Journal* 15 (3), 312-343.

Deegan, C., Rankin, M., Voght, P., 2000. Firms Disclosure Reactions to Major Social Incidents: Australian Evidence, *Accounting Forum* 24 (1), 101-130.

Denzin, N., 1970. *The Research Act: A Theoretical Introduction to Sociological Method.* Sage, Chicago.

DeWinter, J., Dodou, D., 2010. Five-Point Likert Items: t Test Versus Mann-Whitney-Wilcoxon, *Practical Assessment Research and Evaluation* 15 (11), 1-16.

Dillman, D., 1978. M*ail and Telephone Surveys.* Simultaneously, New York.

Ditlev-Simonsen, C., Midttun, A., 2011. What Motivates Managers to Pursue Corporate Responsibility? a Survey Among Key Stakeholders, *Corporate Social Responsibility and Environmental Management* 18 (1), 25-38.

Dominguez, A., 2012. Company Characteristics and Human Resource Disclosure in Spain, *Social Responsibility Journal* 8 (1), 4-20.

Dumontier, P., Raffoumier, B., 1998. Why Firms Comply Voluntarily with lAS: An Empirical Analysis with Swiss Data, *Journal of International Financial Management and Accounting* 9 (3), 216-245.

Ellabbar, K., 2007. *Capital Market and Accounting Disclosure in Emerging Economies: The Case of Libya,* phD, University of Salford.

Elmogla, M., 2009. *Corporate Social Reporting in a Transition Economy: the Case of Libya*, phD, University of Huddersfield.

Elnaby, H., Epps, R., Said, A., 2003. The Impact of Environmental Factors on Accounting Development, *Critical Perspectives on Accounting* 14 (3), 273-292.

Elsayed, M., Hoque, Z., 2010. Perceived International Environmental Factors and Corporate Voluntary Disclosure Practices: An Empirical Study, *The British Accounting Review* 42, 17-35.

Encyclopedia of Arab Africa Economic Integration, 2012, Investment Opportunities in Arab and African, *http://enaraf com/enaraf com/ena/* , Accessed, 2012.

Epstein, M., 1996. Improving Environmental Management with Full Environmental Cost Accounting, *Environmental Quality Management* 6 (11), 22.

Epstein, M., Dilley, S., Estes, R., Fertig, P., Oliver, B., Ramanathan, K., 1976. Report of the Committee on Accounting for Social Performance, The Accounting Review 51 (4), 38-69.

Epstein, M., Freedman, M., 1994. Social Disclosure and the Individual Investor, *Accounting, Auditing and Accountability Journal* 7 (4), 94-109.

Esa, E., Ghazali, N., 2010. Corporate Social Responsibility and Corporate Governance in Malaysian Government-Linked Companies, *Corporate Governance* 12 (3), 292-305.

European Commission, 2001. *Green Paper: Promoting a European Framework for Corporate Social Responsibility*, COM, Brussels 366, 1-32.

Everett, J., Neu, D., 2000. Ecological Modernization and the Limits of Environmental Accounting? *Accounting Forum* 24 (1), 5-29.

Farley, R., 1971. *Planning for Development in Libya: The Exceptional Economy in the Developing World*. Praeger Publishers, New York.

Field, A., 2012. *Discovering Statistics using IBM SPSS for Windows*, 4th ed. Sage Publications Ltd, London.

Fielding, N., Fielding, J., 1986. *Linking Date*. SAGE, London.

Fisher, B., 1971. T*he Middle East.* Methuen and Co LT., London.

Fisher, C., 2004. *Researching and Writing a Dissertation.* Prentice Hall, London.

Freedman, M., Jaggi, B., 1994. Analysis of the Association between Pollution Performance and Input Cost Factors: The Case of Electric Utility Plants, *Journal of Accounting and Public Policy* 13 (1), 31-48.

Freedman, M., Stagliano, A., 2008. Environmental Disclosures: Electric Utilities and Phase 2 of the Clean Air Act, *Critical Perspectives on Accounting* 19 (4), 466-486.

Friedman, M., 1970. The Social Responsibility of Business is to Increase its Profits, *The New York Times Magazine* 33 (1), 122-126.

Galani, D., Alexandridis, A., Stavropoulos, A., 2011. The Association between the Firm Characteristics and Corporate Mandatory Disclosure the Case of Greece, World Academy of Science, *Engineering and Technology* 77, 101-107.

Gall, M., Borg, W., Gall, J., 1996. *Educational Research an Introduction*, Sixth ed. Longman, London.

Gamble, G., Hsu, K., Jackson, C., Tollerson, C., 1996. Environmental Disclosures in Annual Reports: An International Perspective, *The International Journal of Accounting* 31 (3), 293-331.

Gao, S., Heravi, S., Xiao, J., 2005. Determinants of Corporate Social and Environmental Reporting in Hong Kong: A Research Note, *Accounting Forum* 29 (2), 233-242.

Gary, D., 2002. Environmental Disclosures in the Annual Report: Extending the Applicability and Predictive Power of Legitimacy Theory , *Accounting Auditing and Accountability Journal* 15 (3), 344-371.

General people’s Committee, 2007. *Results of Industrial Survey*, Tripoli - Libya Report, 1-75.

General People's Committee for Industry, Economy and Trade, 2011, *www.ect.gov.ly/real/index.php?option=com_frontpage&Itemid=*, , Accessed, 2011.

General People's Committee of Libya (Council of Ministers), 1999. *Resolution No. 263 of 1999 to Establish the Environment Public Authority*, Tripoli - Libya.

General People's Committee of Libya (Council of Ministers), 2011, *http://www.gpc.gov.ly/html/home.php*, , Accessed, 2011.

General People's Congress (Parliament), 2005. T*he Regulation of Banks, No 1,* Tripoli - Libya.

General People's Congress (Parliament), 2004. *Determining the Types of Economic Activity,* No 1, Tripoli - Libya.

General People's Congress (parliament), 2003. *Law No 15 of 2003, protection and improvement of the environment*, Tripoli - Libya.

General People's Congress (Parliament), 2001. *Certain Provisions Relating to Engagement in Economic Activities and Modifications on Accounting and External Audit*, *No 21*.

General People's Congress (parliament), 1984. *Law No 13 of 1984 Provisions for Public Hygiene*, Tripoli - Libya.

General People's Congress (parliament), 1973. *Law No 8 of 1973 Prevention of Oil Spillages at sea*, Tripoli - Libya.

Gibbins, M., Richardson, A., Waterhouse, J., 1990. The Management of Corporate Financial Disclosure: Opportunism, Ritualism, Policies, and Processes, *Journal of Accounting Research* 28 (1), 121-143.

Gibby, D.J., Patella, R., 1993. Deductibility of Environmental Remediation Costs, Journal of Accountancy 176 (6), 44-49.

Glac, K., 2009. Understanding Socially Responsible Investing: the Effect of Decision Frames and Trade- off Options, *Journal of Business Ethics* 87 (April), 41-55.

González, J., González, Ó., 2006. A Review of Determinant Factors of Environmental Proactivity, *Business Strategy and the Environment* 15 (2), 87-102.

Goodrich, S., 1986. Cross-national Financial Accounting Linkages: An Empirical Political Analysis, *The British Accounting Review* 18 (1), 42-60.

Gray, R., Bebbington, J., 2001. Accounting for the Environment, 2nd ed. SAGE, London.

Gray, R., Javad, M., Power, D., Sinclair, D., 2001. Social and Environmental Disclosure and Corporate Characteristics: A Research Note and Extension, *Journal of Business Finance and Accounting* 28 (3), 327-356.

Gray, R., Kouhy, R., Lavers, S., 1995a. Corporate Social and Environmental Reporting A Review of the Literature and a Longitudinal Study of UK Disclosure, *Accounting, Auditing and Accountability Journal* 8 (2), 47-77.

Gray, R., Lavers, S., 1995b. Methodological Themes Constructing a Research Database of Social and Environmental Reporting by UK Companies, *Accounting, Auditing and Accountability Journal* 8 (2), 78-101.

Gray, R., Owen, D., Adams, C., 1996. *Accounting and Accountability: Changes and Challenges in Corporate Social and Environmental Reporting*. Prentice Hall Europe, London.

Gray, R., Owen, D., Maunders, K., 1987. *Corporate Social Reporting: Accounting and Accountability*. Prentice Hall International, London.

Gugler, P., Shi, J., 2009. Corporate Social Responsibility for Developing Country Multinational Corporations: Lost War in Pertaining Global Competitiveness? *Journal of Business Ethics* 87, 3-24.

Guthrie, J., Mathews, M., 1985. Corporate Social Accounting in Australasia, Research in Corporate Social Performance and Policy 7, 251-277.

Guthrie, J., Parker, L., 1990. Corporate Social Disclosure Practice: A Comparative International Analysis, *Advances in Interest Accounting* 3, 159-175.

Guthrie, J., Parker, L., 1989. Corporate Social Reporting: A Rebuttal of Legitimacy Theory, *Accounting and Business Research* 19 (76), 343-352.

Hackston, D., Milne, M., 1996. Some Determinants of Social and Environmental Disclosures in New Zealand Companies, *Accounting, Auditing and Accountability Journal* 9 (1), 77-108.

Halme, M., Huse, M., 1997. The Influence of Corporate Governance, Industry and Country Factors on Environmental Reporting, *Scandinavian Journal of Management* 13 (2), 137-157.

Hamouda, N., 2007. *Towards a Theory of Social and Environmental Accounting*. Academy of Graduate Studies, Tripoli.

Hanafi, R., 2006. *An Exploration of Corporate Social and Environmental Disclosure*, phD, University of Glasgow.

Haniffa, R., Cooke, T., 2002. Culture, Corporate Governance and Disclosure in Malaysian Corporations, Abacus, *A journal of Accounting, Finance and Business Studies* 38 (3), 317-349. doi: http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1467-6281.

Harnett, D., 1982. Statistical Methods. Addison-Wesley Publishing Company, Inc, London.

Hayali, W., 1998. Procedures of Measurement for the Accounting of Environmental Pollution, *Journal of industrial cooperation in the Arabian Gulf* 71 (January).

Hayslett, T., 1974. *Statistics made Simple,* 3rd ed. Heinemann, London.

Healey, J., 1990. Statistics: *A Tool for Social Research, Second* ed. Wadsworyh, Inc, California.

Healy, M., Perry, C., 2000. Comprehensive Criteria to Judge Validity and Reliability of Qualitative Research within the Realism Paradigm, Qualitative Market Research: *An International Journal* 3 (3), 118-126.

Heard, J., Bolce, W., 1981. The Significance of Corporate Social Reporting in the United States of America, *Accounting, Organizations and Society* 6 (3), 247-254.

Heikkurinen, P., 2010. Image Differentiation with Corporate Environmental Responsibility, *Corporate Social Responsibility and Environmental Management* 17 (3), 142-152.

Higgins, B., 1968. Economic Development Principles, Problems and Policies. W.W. Norton and Comp, Inc, New York.

Higgins, B., Jacqres, R., 1967. Economic Development with Unlimited Supplies of Capital, *The Libyan Economic and Business Review* 3 (2), 10-50.

Hitchcock, G., Hughes, D., 1995. *Research and the Teacher: A Qualitative Introduction to School- Based Research*, 2nd ed., London.

Hochman, J.A., 1998. Cleaning up Environmental Accounting, *National Public Accountant* 43 (4), 20.

Hogner, R., 1982. Corporate Social Reporting: Eight Decades of Development at US Steel, *Research in Corporate Social Performance and Policy* 4, 243-250.

Holmes, S., 1976. Executive Perceptions of Corporate Social Responsibility, *Business horizons* 19 (3), 34-40.

Holsti, O., 1969. *Content Analysis for the Social Sciences and Humanities.* Addison-Wesley, London.

Hopwood, A., 2009. Accounting and the Environment, *Accounting Organizations and Society* 34 (3-4), 433-439.

Hossain, M., Islam, K., Andrew, J., 2006. *Corporate Social and Environmental Disclosure in Developing Countries: Evidence from Bangladesh.* In: Conference, Australia, pp. 1-22.

Huizing, A., Dekker, C., 1992. Helping to Pull our Planet out of the Red: an Environmental Report of BSO/ ORIGIN, *Accounting Organizations and Society* 17 (5), 449-458.

Huizingh, E., 2007. *Applied Statistics with SPSS*. SAGE Publications, London.

Human Rights Watch, 2012. *Death of a Dictator : Bloody Vengeance in Sirte*, Human Rights Watch Middle East and North Africa Division 1-56432-952-6, 1-52.

Human Rights Watch, 2009. *Human Rights Developments in Libya Amid Institutional Obstacles*, Human Rights Watch Middle East and North Africa Division 1-56432-564-4, 1-77.

Hussey, J., Hussey, R., 1997. *Business Research: A Practical Guide for Undergraduate and Postgraduate Students*, First published ed. MACMILLAN PWESS LTD, London.

Ince, D., 1998. *Corporate Social and Environmental Reporting (CSER): An Application of Stakeholder Theory*, phD, University of Exeter.

Ingram, R., 1978. An Investigation of the Information Content of (Certain) Social Responsibility Disclosures, *Journal of Accounting Research* 16 (2), 270-285.

International Federation Accountants, 2004. The Consideration of Environmental Matters in the Audit of Financial statement, *International Federation Accountants* 1010, 1-17.

International Federation of Accountants, 2007. International Federation of Accountants Reaches the World's Accountants Through Multilingual Website, *International Federation of Accountants News* October, 1-10.

International Federation of Accountants, 2011, Summaries of International Financial Reporting Standards, Deloitte International Financial Reporting Standard Publications www.iasplus.com/dttpubs/pubs.htm , (Accessed 2011).

Ishwerf, A., 2012. *Stakeholders' Requirements and Perceptions of Corporate Environmental Disclosure in Libya*, phD, University of Salford.

Islam, M., Deegan, C., 2008. Motivations for an Organisation within a Developing Country to Report Social Responsibility Information, *Accounting, Auditing and Accountability Journal* 21 (6), 850-874.

Islam, S., Hosen, A., I slam, M., 2005. An Examination of Corporate Environmental Disclosure by the Bangladeshi Public Limited Companies, *Journal of Social Sciences* 3 (9), 1095-1102.

Jakobsson, U., 2004. Statistical Presentation and Analysis of Ordinal Data in Nursing Research, *Scandinavian Journal of Caring Sciences* 18 (4), 437-440.

Jamali, D., 2007. The Case for Strategic Corporate Social Responsibility in Developing Countries, *Business and Society Review* 112 (1), 1-27.

Jamieson, S., 2004. Likert Scales: How to (ab) Use them, *Medical Education* 38 (12), 1217-1218.

Jangou, T., 2007. The Current State of Corporate Social Responsibility Among Industrial Companies in Malaysia, *Social Responsibility Journal* 3, 9-18.

Jick, T., 1979. Mixing Qualitative and Quantitative Methods: Triangulation in Action, *Administrative Science Quarterly* 24 (4), 602-611.

Johnson, B., Johnson, E., Carter, T., 2011. Corporate Social Responsibility: The Role of Fortune 100 Companies in Domestic and International Natural Disasters, *Corporate Social Responsibility and Environmental Management* 18, 352-369.

Joshi, S., Krishnan, R., Lave, L., 2001. Estimating the Hidden Costs of Environmental Regulation, The Accounting Review 76 (2), 171-198.

King, B., Whetten, D., 2008. Rethinking the Relationship between Reputation and Legitimacy: A Social Actor Conceptualization, *Corporate Reputation Review* 11 (3), 192-207.

Klonoski, R., 1991. Foundational Considerations in the Corporate Social Responsibility Debate, *Business horizons* 34 (4), 9-18.

Korner, U., Bondolfi, A., Buhler, E., MacFie, J., Meguid, M., Messing, B.O., F, Valentini, L., Allison, S., 2006. Ethical and Legal Aspects of Enteral Nutrition, *European Society for Clinical Nutrition and Metabolism* 25 (January), 196-202.

KPMG, 2002. *International Survey of Corporate Sustainability Reporting*, University of Amsterdam Report, 1-32.

Krippendorff, K., 2004. *Content Analysis.* SAGE Publications, London.

Kumar, R., 2005. *Research Methodology A Step-by-Step Guide for Beginners*, Second ed. SAGE Publications Ltd, London.

Kuzon, w., Urbanchek, M., McCabe, S., 1996. The Seven Deadly Sins of Statistical Analysis, *Annals of Plastic Surgery* 37 (3), 265-272.

Labib, K., 2002. A Suggested Framework of Managerial Environmental Accounting, *Scientific Journal for Economics and Commerce* 3 (3).

Laine, M., 2009. Ensuring Legitimacy through Rhetorical Changes? A Longitudinal Interpretation of the Environmental Disclosures of a Leading Finnish Chemical Company, *Accounting, Auditing and Accountability Journal* 22 (7), 1029-1054.

Lau, J., Sinnadurai, P., Wright, S., 2009. Corporate Governance and Chief Executive Officer Dismissal following Poor Performance: Australian Evidence, *Accounting and Finance* 49 (1), 161-182.

Lee, B., jung, S., Chun, Y., 2002. *Environmental Accounting in Korea: Cases and Policy Recommendations*. Kluwer Academic Publishers, Netherlands.

Levitt, T., 1958. The Dangers of Social Responsibility, *Harvard business review* 36 (5), 41-50.

Li, Y., McConomy, B.J., 1999. An Empirical Examination of Factors Affecting the Timing of Environmental Accounting Standard Adoption and the Impact on Corporate Valuation, *Journal of Accounting, Auditing and Finance* 14 (3), 279-313.

Libyan Centre of Archives and Historical Studies, 2011, http://www.libsc.org.ly/mrkaz/, *http://www.libsc.org.ly/mrkaz/index.php* , Accessed, 2011.

Libyan Secretary of Justice, 1982. *Law No, 7 of 1982 of Environmental Protection in Libya, Official Gazette* (8).

Libyan Stock Market, 2., 2011. *www.lsm.ly/English/Pages/default.aspx*, Accessed, 2011.

Linowes, D., 1968. Socio-Economic Accounting, *Journal of Accountancy* 126 (5), 37-42.

Linsky, A., 1975. Stimulating Responses to Mailed Questionnaires: a Review, *Public Opinion Quarterly* 39 (1), 82.

Liu, X., Anbumozhi, V., 2009. Determinant Factors of Corporate Environmental Information Disclosure: an Empirical Study of Chinese Listed Companies, *Journal of Cleaner Production* 17 (6), 593-600.

Lynn, M., 1992. A Note on Corporate Social Disclosure in Hong Kong, *British Accounting Review* 24 (2), 105-110.

Macintosh, N.B., 1990. *Annual Reports in an Ideological Role: A Critical Theory Analysis.* The Macmillan Press, London.

Mahaishi, I., 2006. *The Impact of the World Trade Organisation (WTO) on the Accounting Services in Libya,* Pepper Presented at the First National Conference for Accounting. In: , Tripoli- Libya.

Mahapatra, S., 1984. Investor Reaction to a Corporate Social Accounting, *Journal of Business Finance and Accounting* 11 (1), 29-40.

Maon, F., Lindgreen, A., Swaen, V., 2009. Designing and Implementing Corporate Social Responsibility: An Integrative Framework Grounded in Theory and Practice, *Journal of Business Ethics* 87 (April), 71-89.

Marshall, C., Rossman, G., 1999. *Desiging Qualitative Research,* 3rd ed. SAGE Publications, Inc., London.

Marston, C., Shrives, P., 1991. The Use of Disclosure Indices in Accounting Research: A Review Article, *British Accounting Review* 23 (3), 195-210.

Mashat, A., 2005. *Corporate Social Responsibility Disclosure and Accountability*, phD, Manchester Metropolitan University.

Mathews, M., 1997. Twenty- Five years of Social and Environmental Accounting Research, *Accounting, Auditing and Accountability Journal* 10 (4), 481-531.

Mathews, M., 1993. *Socially Responsible Accounting,* 1st ed. London: Chapman and Hall.

McClave, J., Sincich, T., 2011. *Statistics.* Pearson Education International, New York.

McKinnon, J., Dalimunthe, L., 1993. Voluntary Disclosure of Segment Information by Australian Diversified Companies, *Accounting and Finance* 33 (1), 33-50.

Mcwilliams, A., Siegel, D., 2001. Corporate Social Responsibility: A Theory of the Firm Perspective, *Academy of Management Review* 26 (1), 117-127.

Medawar, C., 1976. The social audit: A political view, *Accounting, Organizations and Society* 1 (4), 389-394.

Melo, T., Garrido-Morgado, A., 2012. Corporate Reputation: A Combination of Social Responsibility and Industry, *Corporate Social Responsibility and Environmental Management* 19 (1), 11-31.

Miles, M., Huberman, M., 1994. Qualitative Data Analysis: An Expanded Sourcebook, 2nd ed. Sage, London.

Miller, D., Salkind, N., 2002. *Handbook of Research Design and Social Measurement*, 6th ed. Sage Publications, Inc., London.

Milne , M., Adler, R., 1999. Exploring the Reliability of Social and Environmental Disclosures Content Analysis, *Accounting, Auditing and Accountability Journal* 12 (2), 237-256.

Mirza, A., 2012. *Libya*: *Lost Opportunities and Renewed Hopes*. Arab Institute for Research and publishing, Beirut.

Mitchell, C., Hill, T., 2009. Corporate Social and Environmental Reporting and the Impact of Internal Environmental Policy in South Africa, *Corporate Social Responsibility and Environmental Management* 16 (1), 48-60.

Mobley, S., 1970. The Challenges of Socio-Economic Accounting, *The Accounting Review* 45 (4), 762-768.

Mohamed, A., Al-Habaibeh, A., Abdo, H., 2013. An Investigation into the Current Utilisation and Prospective of Renewable Energy Resources and Technologies in Libya, *Renewable Energy* 50, 732-740.

Momin, M., 2006. *Corporate Social Responsibility and Reporting by Multinational Corporations in Bangladesh* - An Exploration, phD, University of Glasgow.

Moneva, J.M., Llena, F., 2000. Environmental Disclosures in the Annual Reports of Large Companies in Spain, European Accounting Review 9 (1), 7-29.

Monteiro, S., Guzmán, B., 2010. Determinants of Environmental Disclosure in the Annual Reports of Large Companies Operating in Portugal, *Corporate Social Responsibility and Environmental Management* 17 (4), 185-204.

Morgan, G., Smircich, L., 1980. The Case for Qualitative Research, *Academy of Management Review* 5 (4), 491-500.

Mousa, F., 2005. Developing *A Model for Evaluating the Effectiveness of the Internal Audit Function in Libyan Organisations: Case Study with Special Reference to Oil Companies,* phD, The Manchester Metropolitan University.

Nachmias, C., Nachmias, D., 2008. *Research Methods in the Social Sciences*, Third ed. Worth, New York.

Nahapiet, J., 1980. The Role of Accounting in Organisations and Society, *Accounting, Organizations and Society* 5 (1), 5-27.

National Association of Accountants, 1974. Report of the Committee on Accounting for Social Performance, *Management Accounting* 55 (1), 39-41.

National Oil Corporation (NOC) Online, 2010, www.en.noclibya.com.ly/, , Accessed, 2010.

Ness, K., Mirza, A., 1991. Corporate Social Disclosure: A Note on a Test of Agency Theory, *British Accounting Review* 23 (3), 21-217.

Neu, D., Warsame, H., Pedwell, K., 1998. Managing Public Impressions: Environmental Disclosures in Annual Reports, *Accounting, Organizations and Society* 23 (3), 265-282.

Neuendorf, K., 2002. The Content Analysis Guidebook. Sage Publications, Inc.

Neuman, L., 2006. *Social Research Methods: Qualitative and Quantitative Approaches,* 6th ed. Pearson Education Inc, London.

Newson, M., Deegan, C., 2002. Global Expectations and their Association with Corporate Social Disclosure Practices in Australia, Singapore, and South Korea. *The International Journal of Accounting* 37 (2), 183-213.

Norwegian Social Science Data Services, 2012, Standard Error and Significance Level, *http://essedunet nsd uib no/cms/topics/regression/4/1 html* , Accessed, 2012.

Novak, J., Cañas, A., 2007. Theoretical Origins of Concept Maps, How to Construct Them and Use in Education, Reflection Education , *http://www.reflectingeducation.net/index.php/reflecting/index,* 3 , Accessed, 2011 (1), 29-42.

Nunan, D., 1998. *Research Methods in Language Learning*, Seventh ed. Cambridge University Press.

O'Dwyer, B., 2006. *Theoretical and Practical Contributions of Social Accounting to Corporate Social Responsibility*. Palgrave Macmillan, New York.

O'Dwyer, B., Unerman, J., Bradley, J., 2005. Perceptions on the Emergence and Future Development of Corporate Social Disclosure in Ireland, *Accounting, Auditing and Accountability Journal* 18 (1), 14-43.

Okamoto, D., 2009. Social Relationship of a Firm and the CSP–CFP Relationship in Japan: Using Artificial Neural Networks. *Journal of Business Ethics* 87 (June), 117-132.

Oppenheim, A., 1996. *Questionnaire Design Interviewing and Attitude Measurement.* Basic Book, New York.

Ostlund, L., 1977. Attitudes of Managers Toward Corporate Social Responsibility, *California Management Review* 19 (4), 35-49.

Ouellette, J., 1996. *Environmental Accounting*, Chemical Marketing Reporter 250 (3), 16.

Owusu-Ansah, S., 1998. The Impact of Corporate Attributes on the Extent of Mandatory Disclosure and Reporting by Listed Companies in Zimbabwe, *The International Journal of Accounting* 33 (5), 605-631.

Pallant, J., 2010. *SPSS Survival Manual: A Step by Step Guide to Data Analysis using SPSS,* 4th ed. Open University Press, Maidenhead - England.

Parker, L., 2005. Social and Environmental Accountability Research, Accounting, *Auditing and Accountability Journal* 18 (6), 842-860.

Patelli, L., Prencipe, A., 2007. The Relationship between Voluntary Disclosure and Independent Directors in the Presence of a Dominant Shareholder, *European Accounting Review* 16 (1), 5-33.

Patten, D., 1992. Intra-Industry Environmental Disclosure in Response to the Alaskan Oil Spill: a Note on Legitimacy Theory, *Accounting Organizations and Society* 17 (5), 471-475.

Patton, M., 2002. *Qualitative Evaluation and Research Methods.* Sage, London.

Pava, M., Krausz, J., 1996. The Association between Corporate Social-Responsibility and Financial Performance, the Paradox of Social Cost, *Journal of Business Ethics* 15 (March), 321-357.

Perera, M., Mathews, M., 1990. The Cultural Relativity of Accounting and International Patterns of Social Accounting, *Advances in International Accounting* 3, 215-251.

Petty, G., Yongvanich, K., Ricceri, F., 2004. Using Content Analysis as a Research Method to Inquire into Intellectual Capital Reporting, *Journal of Intellectual Capital* 5 (2), 282-293.

Pfau, M., Haigh, M., Sims, J., Wigley, S., 2008. The Influence of Corporate Social Responsibility Campaigns on Public Opinion, *Corporate Reputation Review* 11 (2), 145-154.

Pickman, H., 1998. The Effect of Environmental Regulation on Environmental Innovation, *Business Strategy and the Environment* 7 (4), 223-233.

Rajiv, K., Raza, W., Ali, M., 2004. Corporate Social Responsibility: A Call For Multidisciplinary Inquiry, *Journal of Business and Economics Research* 2 (51), 59.

Raman, S.R., 2006. Corporate Social Reporting in India: a View from the Top, *Global Business Review* 7 (2), 313-324.

Ranganathan, J., Ditz, D., 1996. Environmental Accounting: A Tool for Better Management, Management Accounting: *Magazine for Chartered Management Accountants* 74 (2), 38.

Rao, K., Tilt, C., Lester, L., 2012. Corporate Governance and Environmental Reporting: an Australian Study, *Corporate Governance* 12 (2), 143-163.

Rezaee, Z., Szendi, J., Aggarwal, R., 1995. Corporate Governance and Accountability for Environmental Concerns, *Managerial Auditing Journal* 10 (8), 27-33.

Rizk, R., Dixon, R., Anne, W., 2008. Corporate Social and Environmental Reporting: A Survey of Disclosure Practices in Egypt, *Social Responsibility Journal* 4 (3), 306-323.

Roberts, R., 1992. Determinants of Corporate Social Responsibility Disclosure: An Application of Stakeholder Theory, Accounting Organisations and Society 17 (6), 595-612.

Roberts, S., 2006. Failure to Fully Report Environmental Liabilities a Growing Business Risk, *Business insurance* 40 (42), 4-28.

Rosenberg, S., Schnurr, P., Oxman, T., 1990. Content Analysis: A Comparison of Manual and Computerized Systems, Journal of Personality Assessment 54 (1), 298.

Saida, D., 2009. Contribution on the Analysis of the Environmental Disclosure: A Comparative Study of American and European Multinationals, *Social Responsibility Journal* 5 (1), 83-93.

Saleh, N., 2004. *Corporate Environmental Disclosure in Libya*, phD, Napier University.

Sarantakos, S., 2005. *Social Research,* third ed. Palgrave Macmillan, New York.

Saunders, M., Lewis, P., Thornhill, A., 2012. *Research Methods for Business Students*, sixth ed. Pearson Education Limited, London.

Saunders, M., Lewis, P., Thornhill, A., 2003. *Research Methods for Business Students.* Prentice Hall, London.

Schwartz, M., Carroll, A., 2003. Corporate Social Responsibility: A Three-Domain Approach, *Business Ethics Quarterly* 13 (4), 503-530.

Sekaran, U., 2003. *Research Methods for Business*, Fourth ed. John Wiley and Sons, Inc., New York.

Sense, M., 1996. Environmental Accounting, *Total Quality Environmental Management* 5 (spring), 1-15.

Siegel, S., 1988. *Nonparametric Statistics for the Behavioral Sciences*, Second ed. McGraw-Hill, Inc, New York.

Silver, M., 1992. *Business Statistics.* McGraw-Hill, Manchester.

Silverman, D., 2006. *Interpreting Qualitative Data: Methods for Analysing Talk, Text and Interaction.* SAGE, London.

Silverman, D., 2005. *Doing Qualitative Research*. SAGE Publications Ltd, London.

Singh, D., Ahuja, J., 1983. Corporate Social Reporting in India, *The International Journal of Accounting Education and Research* 18, 151-169.

Smith, M., Thorpe, R., Jackson, P., 2012. Management Research, Fourth ed. SAGE Publications Ltd, London.

Smith, M., Thorpe, R., Jackson, P., 2008. *Management Research,* Third ed. SAGE Publications Ltd, London.

Smith, M., Thorpe, R., Lowe, A., 2004. *Management Research*. SAGE, London.

Sobhani, F., Amran, A., Zainuddin, Y., 2009. Revisiting the Practices of Corporate Social and Environmental Disclosure in Bangladesh, *Corporate Social Responsibility and Environmental Management* 16 (3), 167-183.

Solomon, A., Lewis, L., 2002. Incentives and Disincentives for Corporate Environmental Disclosure, *Business Strategy and the Environment* 11 (3), 154-169.

Spence, C., 2007. Social and Environmental Reporting and Hegemonic Discourse, Accounting, *Auditing and Accountability Journal* 20 (6), 855-882.

Spicer, B., 1978. Accounting for Corporate Social Performance: Some Problems and Issues, *Journal of Contemporary Business* (Winter), 151-167.

Spomar, J., 2003. Environmental Accounting 101, *American Drycleaner* 70 (7), 62-64.

Sratee, H., 2002. *Factors that are Delaying Issuing Financial Reports: Applied Study within the Libyan industrial companies*, Masters, Academy of High Studies, Tripoli- Libya.

Staden, C., 2009. Corporate Social Responsibility Reporting in Developing Countries–The Case of Bangladesh, *British Accounting Review* 41, 138-139.

Stake, R., 1995. *The Art of Case Study Research.* Sage, London.

Stanko, B., Brogan, E., Alexander, E., Chay, J., 2006. Environmental Accounting, *Business and Economic Review* 52 (3), 21-27.

Stanwick, P., Stanwick, S., 1998. The Relationship between Corporate Social Performance, and Organizational Size, Financial Performance, and Environmental Performance: An Empirical Examination, *Journal of Business Ethics* 17, 195-204.

Steel, R., 1967. *North Africa*. The H. W. Wilson Company, New York.

Stevens, W., 1991. The Auditing Profession and the Valdez Principles, *Managerial Auditing Journal* 6 (5), 4-6.

The International Bank for Reconstruction and Development, 1960. *The Economic Development of Libya,* Johns Hopkins University Report.

The New York Times, 2012, Bhopal (Chemical leak) in India, http://topics nytimes com/top/news/international/countriesandterritories/india/bhopal/index html , Accessed, 2012.

Tilling, M., Tilt, C., 2010. The Edge of Legitimacy Voluntary Social and Environmental Reporting in Rothmans' 1956-1999 Annual Reports, *Accounting Auditing and Accountability Journal* 23 (1), 55-81.

Tilt, C., 2001. The Content and Disclosure of Australian Corporate Environmental Policies, *Accounting, Auditing and Accountability Journal* 14 (2), 190-212.

Tilt, C., 1994. The Influence of External Pressure Groups on Corporate Social Disclosure Some Empirical Evidence, *Accounting, Auditing and Accountability Journal* 7 (4), 47-72.

Trevor, W., Geoffrey, F., 2000. Corporate Environmental Reporting: A Test of Legitimacy Theory, Accounting, *Auditing and Accountability Journal* 13 (1), 10-26.

Trotman, K., Bradley, G., 1982. Association between Social Responsibility Disclosure and Characteristics of Companies, *Accounting Organisations and Society* 6 (4), 355-362.

Tsang, E., 1998. A Longitudinal Study of Corporate Social Reporting in Singapore. *Accounting Auditing and Accountability Journal* 11 (5), 624-635.

Tuodolo, O., 2007. *Corporate Social Responsibility (CSR), Local Communities and TNCs in the Oil and Gas Sector of Nigeria,* phD, Liverpool University.

Turker, D., 2009. Measuring Corporate Social Responsibility: A scale Development Study. *Journal of Business Ethics* 85 (April), 411-427.

Turner, J., 1983. International Harmonization: A Professional Goal, Journal of Accountancy 158 (1), 58-66.

Unerman, J., 2000. Methodological Issues Reflections on Quantification in Corporate Social Reporting Content Analysis. *Accounting Auditing and Accountability Journal* 13 (5), 667-690.

United Nations, Economic Commission for Africa, 1991. S*urvey of Economic and Social Conditions in Africa*, 1990/91, .

US Department of Commerce, Bureau of International Commerce, 1970. *Overseas Business Report, Basic Data on the Basic Economy of Libya*, Government Printing Office Washington, 70-75.

Uwalomwa, U., 2011. An Examination of the Relationship between Management Ownership and Corporate Social Responsibility Disclosure: A Study of Selected Firms in Nigeria, *Research Journal of Finance and Accounting* 2 (6), 23-29.

Vaus, D., 2002. *Surveys in Social Research*, 5th ed. Routledge, London.

Vigderhous, G., 1977. The Level of Measurement and ‘Permissible’ Statistical Analysis in Social Research, *Pacific Sociological Review* 20 (1), 61-72.

Vilanova, M., Lozano, J., Arenas, D., 2009. Exploring the Nature of the Relationship between CSR and Competitiveness, *Journal of Business Ethics* 87 (April), 57-69.

Villiers, C., Staden, C., 2011. Where Firms Choose to Disclose Voluntary Environmental Information, *Account Public Policy* 30, 504-525.

Violet, W., 1983. A Philosophical Perspective on the Development of International Accounting Standards, *The International Journal of Accounting* 19 (1), 13.

Vitell, S., Paolillo, J., Thomas, j., 2003. The Perceived Role of Ethics and Social Responsibility: A Study of Marketing Professionals, *Business Ethics Quarterly* 13 (1), 63-86.

Waldman, D., De Luque, M., Washburn, N., House, R., Adetoun, B., Barrasa, A., Bobina, M., Bodur, M., Yi-Jung, C., Debbarma, S., Dorfman, P., Dzuvichu, R., Evcimen, I., Fu, P., Grachev, M., Duarte, R., Gupta, V., Hartog, D., De Hoogh, A., Howell, J., 2006. Cultural and Leadership Predictors of Corporate Social Responsibility Values of Top Management: a GLOBE Study of 15 Countries, *Journal of International Business Studies* 37 (6), 823-837.

Wallace, O., 1990. Accounting in Developing Countries, *Research in Third World Accounting* 1, 3-54.

Wang, H., Bi, J., Wheeler, D., Wang, J., Cao, D., Lu, G., Wang, Y., 2004. Environmental Performance Rating and Disclosure, *Journal of Environmental Management* 71 (2), 123-133.

Warsame, H., Neu, D., Simmons, C., 2002. Responding to "Discrediting" Events: Annual Report Disclosure Responses to Environmental Fines, *Accounting and the Public Interest* 2 (1), 22-40.

Wartick, S., Cochran, P., 1985. The Evolution of the Corporate Social Performance Model, *Academy of Management Review* 10 (4), 758-769.

Watsonn, M., Mackay, J., 2003. Auditing for the Environment, Managerial Auditing Journal 18 (8), 625-630.

Weber, P., 1994. *Basic Content Analysis*. Sage, London.

Weber, R., 1990. *Basic Content Analysis,* 2nd ed. Sage Publications., London.

Williams, M., 1999. Voluntary Environmental and Social Accounting Disclosure Practices in the Asia-Pacific Region: An International Empirical Test of Political Economy Theory, *The International Journal of Accounting* 34 (2), 209-238.

Wilmshurst, T., Frost, G., 2000. Corporate Environmental Reporting A Test of Legitimacy Theory. *Accounting Auditing and Accountability Journal* 13 (1), 10-26.

Wolfe, R., 1991. The Use of Content Analysis to Assess Corporate Social Responsibility, *Research in Corporate Social Performance and Policy* 12, 281-307.

World Business Council for Sustainable Development, 2011, Corporate Social Responsibility the WBCSD's Journey, _http://www wbcsd ch/DocRoot/I0NYLirijYoHBDflunP5/csr2002_ pdf Accessed, 2011, 1-6.

Yin, R., 1994. *Case Study Research Design and Methods*, Second ed. SAGE Publications, Inc., California.

Yin, R., 1993. *Applications of Case Study Research*. Newbury Park, London.

Zaman, M., Rahaman, A., 2005. The Adoption of International Accounting Standards in Bangladesh an Exploration of Rationale and Process, *Accounting, Auditing and Accountability Journal* 18 (6), 816-841.

Zarzeski, M., 1996. Spontaneous Harmonization Effects of Culture and Market Forces on Accounting Disclosure Practices, *Accounting Horizons* 10 (1), 18-37.

Zeghal, D., Ahmed, S., 1990. Comparison of Social Responsibility Information Disclosure Media Used by Canadian Firms, Accounting, *Auditing and Accountability Journal* 3 (1), 38-53.

Zhang, B., Bi, J., Yuan, Z., Ge, J., Liu, B., Bu, M., 2008. Why Do Firms Engage in Environmental Management? An Empirical Study in China, *Journal of Cleaner Production* 16, 1036-1045.

Zikmund, W., 2002. *Business Research Methods*, 7th ed. Thomson South Western, London.

Zubek, F., 2008. *An Investigation into Human Resource Disclosure,* phD, Liverpool John Moores University.

Appendixes

Appendix 1: Questionnaire and interview questions in English and Arabic

Appendix 1.1: English questionnaire

Dear Respondents

I am carrying out a study exploring environmental disclosure with Nottingham Trent University, UK. This study is in partial fulfillment of the degree of Doctor in Accounting. My aim is to study and analyse environmental disclosure practices among oil and gas companies in Libya, and to identify any differences that might exist between local and foreign companies in this area.

The attached questionnaire is one of the data collection methods I am employing for this research. I would be very grateful if you could help by completing this short questionnaire; I have left space at the end for your comments.

The time and effort you spend in responding to this questionnaire will help me to arrive at real findings which will contribute towards the development of the accounting profession and social and environmental disclosure in Libya.

I would like to assure you that all responses to the questionnaire will be kept confidential.

Thank you very much for your cooperation.

Yours faithfully

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Part one: general information

Please tick the box that represents the best response for you:

1- Your present occupation

Financial manager ☐

Employee in accounting department ☐

2- What is your highest academic qualification?

PhD. Degree ☐

Master degree ☐

Bachelor degree ☐

Intermediate Diploma ☐

Other, ☐

3- Type of the educational qualification

Accounting qualification ☐

Non-accounting qualification ☐

Other ☐

4- Place of the last education qualification

Libya ☐

Other Arab Countries ☐

The UK ☐

Other ☐

5- length of experience in present occupation

Less than 5 years ☐

From 5 years to 10 years ☐

From 10 years to 15 years ☐

More than 15 years ☐

6- Have you ever attended a training course concerning environmental management or environmental accounting?

If yes, in which year did the training course take place? ………………………………………………….................

Part two: information regarding to environmental disclosure:

1-Below is a set of elements which represent attitudes of management toward social and environmental disclosure. Please tick the box to indicate the level of your approval for each element.

N	Contents	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	The sole responsibility borne by the organisation is to maximise shareholders profits.					
2	Companies should consider social and environmental responsibility in equal proportion to their economic interests.					
3	Business organisations should bear greater environmental and social responsibilities to justify their presence in the community.					
4	Concern for the environment should occupy high status within the company even if it could lead to reduced profits.					
5	The relevant accounting parties need to determine what companies should disclose regarding their environmental performance.					
6	Accounting bodies such as the Libyan Association of Accountants and Auditors should prepare environmental disclosure standards.					
7	The company should disclose environmental performance parallel to its economic achievement through the preparation of environmental reports alongside financial ones.					

2-Below are some questions regarding corporate social responsibility and environmental disclosure. In your view:

A. What does corporate social responsibility mean?

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B. What does environment disclosure mean?

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3- Does your company disclose its environmental activities in the annual reports?

Yes ☐ No ☐

If yes, what type of disclosure does your company do?

Bad news ☐

Neutral news ☐

Good news ☐

4- Below is a set of reasons and motives that could encourage companies to disclose environment of information. Please tick the box to indicate the level of your approval for each motive and incentive.

N	Contents	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Environmental disclosure helps the company to improve its image and reputation before the public opinion.					
2	Environmental disclosure helps the company to avoid lawsuits being filed against it.					
3	Environmental disclosure helps the company to meet the expectations of society as a whole and to give its activities greater legitimacy.					
4	Environmental disclosure helps the company respond to pressure from organisations interested in the environmental performance.					
5	The company discloses environmental information to increase transparency.					
6	Environmental disclosure helps the company to give an impression of the extent of its commitment to environmental laws.					
7	Environmental disclosure helps the company respond to pressure from users and customers.					
8	Environmental disclosure can be used as a tool for planning, monitoring and evaluation of performance.					
9	The right of the firm's employees to receive environmental information and to identify the level of pollution resulting from the production processes.					
10	Investors and other external parties have the right to receive environmental information to assist them in taking appropriate investment decisions.					
11	The company discloses environmental information in response to legal obligations.					

N	Contents	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
12	The company discloses environmental information in accordance with its social and moral responsibility.					
13	The company discloses environmental information to satisfy consumers and moral investors.					
14	Environmental disclosure helps the company increase its competitiveness.					
15	The company discloses environmental information as required by the National Oil Corporation.					
16	The company discloses its environmental information as required by Libyan environmental laws.					
17	The company discloses environmental information to get priority in terms of new contracts for oil exploration, in the future					
18	The company discloses environmental information because there is a relationship between this type of disclosure and its continuation in the future in Libya.					
19	The company discloses environmental information as a result of moral incentives.					
20	The company discloses environmental information as a result of financial incentives.					

5-Below is a set of reasons that might prevent companies for disclosing environmental information. Please tick the box to indicate the level of your approval for each reason.

N	Contents	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	The difficulty of estimating the value of environmental activities.					
2	Corporate administration may not be fully aware of its environmental responsibilities towards society as a whole.					
3	The goals of the organisation are focused toward economic performance rather than environmental and social performance.					
4	There seems to be no demand by the users for this type of data; thus no attention is paid to this information.					
5	The company may believe that this information is confidential and may not be disclosed.					
6	There is no legal requirement detailing a legal obligation to disclose environmental information.					
7	Costs of providing this type of environmental information may far exceed the desired outcomes.					

N	Contents	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
8	There seems to be a lack of environmental standards that may help companies to disclose environmental information.					
9	Non-disclosure of corporate environmental activities may still not impact on companies' ability to acquire new contracts for oil exploration in Libya.					
10	Non-disclosure of corporate environmental activities may still not impact on the company's ability to market their products and compete with similar rival companies.					
11	Non-disclosure of corporate environmental activities may still not have any effects on the evaluation of the extent to which management in the company has been successful in the performance of its different functions.					
12	The state offers no incentives for companies to disclose their environmental performance.					

6- Below is a set of means and methods through which environmental disclosure might be controlled. Please tick the box to indicate the level of your approval for each mean and method.

N	Contents	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	There are legal requirements obliging companies to disclose their environment activates.					
2	The National Oil Corporation controls and follows up environmental disclosure among oil companies operating in Libya.					
3	The Institute of financial auditing is an external auditor that controls and follows up environmental disclosure among oil companies operating in Libya.					
4	Internal auditing department controls and follows up environmental disclosure among oil companies operating in Libya					
5	The Libyan Association of Accountants and Auditors controls and follows up environmental disclosure among oil companies operating in Libya.					
6	Pressure groups, including organisations interested in the protection of the environment, control and follow up environmental disclosure among oil companies operating in Libya					

7-Below is a set of means and methods which could be helped to oblige companies to disclose their environment activities. Please tick the box to indicate the level of your approval for each mean and method.

N	Contents	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	By enforcing laws that oblige companies to disclose their environmental performance					
2	Through internal corporate laws regulations.					
3	Introducing tough sanctions and heavy fines on violating companies					
4	The contracts between the National Oil Corporation and oil companies should include clause to oblige them to disclose environmental information.					

Thank you for taking the time to complete the questionnaire. If you have any comments and/or propositions would you like to add about environmental disclosure, please use this page to write them down:

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Appendix 1.2: Arabic questionnaire

الأخ الكريم .... الأخت الكريمة ....

السلام عليكم ورحمة الله وبركاته

افيدكم باني اقوم ببحث بعنوان استكشاف الافصاح البيي في شركات النفط والغاز العاملة في ليبيا كجزء من متطلبات الحصول علي درجة الاجازة الدقيقة الدكتوراه في مجال المحاسبة من جامعة نوثنقهام ترنت بالمملكة المتحدة البريطانية ، وتعتبر صحيفة الاستبيان احد الطرق الرئسية لجمع البيانات في هذا البحث.

حيث يهدف هذا البحث الي التعرف علي الافصاح البيئ في الشركات النفطية العاملة في ليبيا والاختلافات في هذا الافصاح بين الشركات المحلية والاجنبية .

ان اسهامكم في الاجابة على الاسئلة الورادة بهذا الاستبيان سيكون خير عون علي اتمام هذا البحث وسيساهم بطريقة مباشرة او غير مباشرة في تطوير مهنة المحاسبة في ليبيا ورفع مستوى الوعي باهمية المسؤولية الاجتماعية والبيئية للشركات.

وقد تم تخصيص صفحة في نهاية هذا الاستبيان لاضافة اي تعليقات او مقترحات ترونها مناسبة وتخدم هذا البحث. واوكد لكم ان اجاباتكم على هذه الاسئلة ستعامل بمنتهى السرية وسوف تستخدم فقط لاغراض البحث العلمي.

وفي الختام يتقدم الباحث بخالص شكرة وتقديره على حسن تعاونكم وانفاق جزء من وقتكم لخدمة البخث العلمي

والسلام عليكم ورجمة الله وبركاته

الباحث علي مسعود الدروقي

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الجزء الاول : معلومات عامة .

رجاء القيام بوضع علامة (√) في المربع الواقع أمام العبارة المناسبة أو ملء الفراغ المناسب:

1 ـ المركز الوظيفي الذي تشغلونه :

رئيس القسم المالي

موظف بقسم المحاسبة

2 ـ اخر مؤهل علمي تحصلت عليه

دكتوراه

ماجستير

بكالوريوس

دبلوم متوسط

مؤهلآخر

3 ـ نوع المؤهل العلمي

مؤهل محاسبي

مؤهل غير محاسبي

4- البلد الدي حصلت فيه على اخر مؤهل دراسي

ليبيا

بلد عربي اخر

المملكة المتحدة البريطانية

بلد اخر

5 ـ عدد سنوات الخبرة في مجال هذا العمل

أقل من 5 سنوات

من 5 سنوات إلى أقل من 10 سنوات

من 10سنوات إلى 15 سنة

ما يزيد عن 15 سنة

6- هل سبق ان حضرت دورات تدريبية في مجال الاداة البيئة او المحاسبة البيئة

نعم لا

اذا كانت الاجابة بنعم في اي سنة حدثت هذه الدورة ....

الجزء الثاني: معلومات تتعلق بالافصاح البيئ

1- موقف الادراة اتجاه المسؤولية الاجتماعية والافصاح البيئ.

الجدول التالي يتضمن مجموعة من العناصر التي تبين موقف الادراة اتجاه المسؤولية الاجتماعية والافصاح البيئ من فضلك اختار درجة الموافقة التي تراها مناسبة علي كل فقرة من الفقرات التالية:

م	العناصر	غير موافق تماماً	غير موافق	محايد	موافق	موافق تماماً
1	المسؤولية الوحيدة التي على المنظمة تحملها هي ان تعمل على تحقيق اكبر قدر من الارباح لملاكها.					
2	يجب ان تهتم الشركات بمسؤوليتها البيئة والاجتماعية الى جانب مسوليتها الاقتصادية.					
3	يجب على منظمات الاعمال ان تتحمل قدر اكبر من المسؤوليات البيئة والاجتماعية (غالبا الحد الادني اللازم لنجاح وتطوير المنظمة) لتبرر تواجدها في اطار المجتمع.					
4	يجب ان يحتل الاهتمام بالبيئة مكانة عالية لدى الشركة حتى لو ادي ذلك الي تخفيض الارباح.					
5	يجب ان تحدد الجهات المسؤولة مايجب ان تفصح علية الشركات فيما يتعلق بادئها البيئ .					
6	ينبغي على الجهات المحاسبية مثل نقابة المحاسبين والمراجعين الليبين ان تقوم باعداد معايير الافصاح البيئ.					
7	يجب علي الشركة الافصاح عن ادائها البيئ الى جانب ادائها الاقتصادي من خلال اعداد تقارير بيئة الي جانب التقارير المالية.					

2- في الاسفل بعض الاسئلة المتعلقة بالمسئولية الاجتماعية والافصاح البيئ من وجهت نظرك

أ- ما المقصود بالمسئولية الاجتماعية للشركات؟

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ب - ما المقصود بالافصاح البيئ للشركات؟

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3- هل تقوم شركتكم بالافصاح عن انشطتها البيئة في التقارير السنوية ؟

نعم ☐ **لا** ☐

ادا كانت الاجابة بنعم :

ما نوعيه المعلومات التي تقوم الشركة بلافصاح عنها

معلومات تتعلق بالاداء البيئ السيئ ☐

معلومات تتعلق بالاداء البيئ المحايد ☐

معلومات تتعلق الاداء البيئ الجيد ☐

4- الاسباب والحوافز التي تشجع الشركات على الافصاح عن ادائها البيئ

الجدول التالي يتضمن مجموعة من الاسباب والحوافز التي تجعل الشركة تفصح عن انشطتها البيئة من فضلك اختار درجة الموافقة التي تراها مناسبة علي كل فقرة من الفقرات التالية:

م	العناصر	غير موافق تماماً	غير موافق	محايد	موافق	موافق تماماً
1	الإفصاح البيئ يساعد الشركة على تحسين صورتها و سمعتها امام الراي العام					
2	الإفصاح البيئ يساعد الشركة على تجنب رفع الدعاوي القضائية ضدها.					
3	الإفصاح البيئ يساعد الشركة على مقابلة توقعات المجتمع ككل واعطاء انشطة الشركة اكثر مشروعية .					
4	الإفصاح البيئ يساعد الشركة على مقابلة الضغوط من قبل جماعات الضغظ والموسسات المهتمة بالاداء البيئ.					
5	الإفصاح البيئ يساعد الشركة على اعطاء صورة عن مدي التزام الشركة بالقوانين البيئة.					
6	الإفصاح البيئ يساعد الشركة على مقابلة ضعوط المستخدمين والعملاء وافراد المجتمع ككل.					
7	الافصاح البيئي يمكن ان يستخدم كاداة للتخطيط والرقابة وتقييم الاداء .					
8	حق العاملين بالشركة في الحصول علي المعلومات البيئة والتعرف على مستوي الثلوث الناتج عن العمليات الانتاجية.					
9	حق المستثمرين وباقي الاطراف الخارجية الاخرى في الحصول علي المعلومات البيئة لمساعدتهم في اتخاذهم قراراتهم الاستثمارية.					
10	تفصح الشركة عن الاداء البيئي استجابة للالتزامات القانونية.					

م	العناصر	غير موافق تماماً	غير موافق	محايد	موافق	موافق تماماً
11	تفصح الشركة عن الاداء البيئي وفاة للمسؤولية الاجتماعية والادبية					
12	تفصح الشركة عن الاداء البيئي لتحقيق رضاه المستهلك والمستثمر الاخلاقي.					
13	تفصح الشركة عن الاداء البيئي تدعيما للقدرة التنافسية والتميز للشركة					
14	تفصح الشركة عن الاداء البيئ كمطلب من قبل الموسسة الوطنية للنفط					
15	تفصح الشركة عن الاداء البيئ كمطلب من قبل جهاز المراجعة المالية					
16	اولوية حصول الشركات التي تفصح عن ادائها البيئ علي عقود جديدة للتنقيب عن النفط في المستقبل.					
17	ارتباط افصاح الشركات عن ادائها البيئ باستمراريتها في مزاولة نشاطها في المستقبل في ليبيا.					
18	وجود حوافز ضريبية تقدمها الدولة للشركات التي تفصح عن ادائها البيئ.					
19	وجود حوافز معنوية للشركات التي تفصح عن ادائها البيئ.					
20	وجود حوافز مادية مثل منح القروض بتكلفة منخفضة وشروط ميسرة للشركات التي تفصح عن ادائها البيئ.					

5- اهم الاسباب التي تجعل الشركات لاتفصح عن انشطتها البيئة.

الجدول التالي يتضمن مجموعة من الاسباب التي تجعل الشركة لا تفصح عن انشطتها البيئة من فضلك اختار درجة الموافقة التي تراها مناسبة علي كل فقرة من الفقرات التالية:

م	العناصر	غير موافق تماماً	غير موافق	محايد	موافق	موافق تماماً
1	نظرا لصعوبة تقدير قيمة الانشطة البيئة.					
2	الادارة لاتدرك مسوليتها البيئية تجاه المجتمع ككل.					
3	اهداف المنظمة تركز على الاداء الاقتصادي على حساب الاداء البيئ والاجتماعي.					
4	لعدم وجود طلب من قبل مستخدمي القوائم المالية على مثل هذا النوع من المعلومات وبالتالي لايهتمون بمثل هذه المعلومات.					
5	لان الشركة ترى ان هذه المعلومات سرية لايجوز الافصاح عنها .					
6	عدم وجود الزام قانوني بضرورة وجوب الافصاح عن المعلومات البيئية.					
7	لان تكاليف توفير هذه المعلومات البيئة تفوق المنفعة المرجوه منها .					
8	لعدم وجود معايير بيئة تساعد الشركات على الافصاح عن المعلومات البيئة .					
9	لان عدم افصاح الشركات عن نشاطها البيئ لايوثر علي حصول الشركات علي عقود جديدة للتنقيب عن النفط .					

م	العناصر	غير موافق تماماً	غير موافق	محايد	موافق	موافق تماماً
10	لان عدم افصاح الشركات عن نشاطها البيئ لايوثر علي قدرة الشركة على تسويق منتجاتها الصناعية ومنافسة الشركات الممثلة لها.					
11	لان عدم افصاح الشركات عن نشاطها البيئ لايوثر علي تقييم مدى نجاح ادارة الشركة فى اداء وظائفها المختلفة.					
12	لعدم وجود حوافز تقدم من قبل الدولة للشركات التي تفصح عن ادائها البيئ .					

6ـ الرقابة علي الافصاح البيئ من قبل الجهات المسؤولة في الدولة.

الجدول التالي يتضمن مجموعة من العناصر التي تبين مدي خضوع الاداء البيئ للشركات للرقابة من قبل الجهات المسؤولة من فضلك اختار درجة الموافقة التي تراها مناسبة علي كل فقرة من الفقرات التالية:

م	العناصر	غير موافق تماماً	غير موافق	محايد	موافق	موافق تماماً
1	توجد قوانيين تلزم الشركات بالافصاح عن انشطتها البيئة .					
2	توجد رقابة ومتابعة من قبل المؤسسة الوطنية للنفط على الافصاح البيئ للشركات التفطية العاملة في ليبيا.					
3	توجد رقابة ومتابعة من قبل جهاز المراجعة المالية كمراجع خارجي (ديوان المحاسبة)علي الافصاح البيئ للشركات التفطية العاملة في ليبيا.					
4	توجد رقابة ومتابعة من قبل قسم المراجعة الداخلية علي الافصاح البيئ للشركات التفطية العاملة في ليبيا.					
5	توجد رقابة و متابعة من قبل نقابة المحاسبيين والمراجعييين الليبيين علي الافصاح البيئ للشركات التفطية العاملة في ليبيا.					
6	توجد رقابة ومتابعة من قبل جماعات الضغط مثل الموسسات المهتمة بالمحافظة علي البيئة.					

7ـ الوسائل التي تساعد على الزام الشركات للقيام بالافصاح عن ادائها البيئ.

الجدول التالي يتضمن مجموعة من العناصر تساعد علي الزام الشركات بالافصاح عن الاداء البيئ من فضلك اختار درجة الموافقة التي تراها مناسبة علي كل فقرة من الفقرات التالية:

م	العناصر	غير موافق تماماً	غير موافق	محايد	موافق	موافق تماماً
1	من خلال فرض قوانين تلزم الشركات بضرورة الافصاح عن ادائها البيئ.					
2	من خلال اللوائح والقوانين الداخلية للشركات.					
3	من خلا فرض عقوبات صارمة وغرامات مالية كبيرة على الشركات المخالفة.					
4	من خلال الاشارة الى ضرورة افصاح الشركات عن ادائها البيئ في العقد المبرم بين المؤسسة الوطنية للنفط والشركات النفطية .					

شكرا لاعطائك الوقت لاتمام هذا الاستبيان .إذا كانت لديك أي تعليقات أو ملاحظات تحب أن تضيفها عن افصاح الشركات النفطية في ليبيا عن ادائها البيئ أو لديك أي اقتراحات رجاءً استخدام هذه الصفحة للتعبير عن ذلك .

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Appendix 1.3: English interview questions

No	Questions
1	From your point of view, what do CSR and CER mean?
2	From your point of view, why /why not should companies pay attention to the social responsibility and environmental disclosure?
3	Does your company disclose any environmental information in the annual reports? If yes, what type of disclosure? If no does your company have an environmental Policy? If yes, why does your company not disclose these policies? If no, does the company intend to establish an Environmental Policy in the near future?
4	From your point of view, do you see any real reasons behind corporate environmental disclosure?
5	What are the most important reasons that might prevent companies from disclosing environmental information?

Appendix 1.4: Arabic interview questions

الاسئلة	رقم
من وجهة نظرك ، ماهي المسئولية الاجتماعية والبيئية للشركات ؟	1
من وجهة نظرك, لماد يجب علي الشركات ان تفصح عن مسؤوليتها الاجتماعية وعن المعلومات البيئية ؟	2
هل تفصح شركتكم عن الملعلومات البيئية في تقاريرها السنوية ؟ اذا كانت الاجابة نعم، ماهو نوع هذا الافصاح ؟ اذا كانت الاجابة لا، هل شركتكم عندها اي سياسات بيئة؟ اذا كانت الاجابة نعم ، لماذا لاتفصح شركتكم عن هذه السياسات؟ اذا كانت الاجابة لا، هل تنوي شركتكم تقرر بعض السياسات البيئية في المستقبل؟	3
هل تري اي اسباب حقيقة وراء الافصاح البيئ للشركات؟	4
ماهي اهم الاسباب التي تمنع الشركات من الافصاح عن المعلومات البيئية؟	5

Appendix 2: Libyan and foreign oil and gas companies represented in the study population

n	Name of company		no	Name of company	
1	Taknia Libyan Engineering Company	L	23	Nippon oil Exploration	**F**
2	North African Geophysical Exploration Company's	L	24	Sonatrach company	**F**
3	Jowfe company for oil technology company	L	25	Exxon Mobil Corporation	**F**
4	RasLanuf oil & Gas Processing Company	L	26	Oil India Limited	**F**
5	Azzawiya oil refining company	L	27	ONGC Videsh Limited	**F**
6	Sirte oil company	L	28	Shell company	**F**
7	National oil well drilling and workover company	L	29	RWE Dea	**F**
8	Gulf arab oil company	L	30	Verenex Energy	**F**
9	Mellitah oil and gas BV	L	31	TATNEFT	**F**
10	Akakus Oil Operations	L	32	inpexlibya	**F**
11	Harouge Oil Operations	L	33	Statoil	**F**
12	Zueitina oil company	L	34	Woodside company	**F**
13	Waha oil company	L	35	BP company	**F**
14	Wintershall oil company	F	36	Turkish petroleum company	**F**
15	Pertamina oil & gas company	F	37	Petrobras	**F**
16	Repsol company	F	38	Gazprom	**F**
17	Hess corporation	F	39	Petro-Canada	**F**
18	CNODC company	F	40	PGNiG	**F**
19	Teikoku oil company	F	41	OMV	**F**
20	Japex company	F	42	Eni	**F**
21	Occidental Petroleum corporation	F	43	Total	**F**
22	Chevron Corporation	F			

L= local company; **F**= foreign company Source: (National Oil Corporation (NOC) Online, 2010)

A total of 126 annual reports were ultimately collected from 24 local and foreign companies covering an 8 year period from 2002 to 2009.

Appendix 3: Previous studies in the field of social and environmental disclosure (ED)

Authors	Objectives	Findings
Friedman 1970	This article explores the nature of corporate social responsibility (CSR).	Defines corporate social responsibility as commitment to social-related laws and regulations that the government puts in place. Companies stand to make large profits while adhering to these laws and regulations. Companies pay their taxes; securing social welfare to all members of society should be the responsibility of government.
American Accounting Association (AAA) **1975**	The central focus of this report is on social accounting in the context of measuring and reporting on the impacts of a business firm upon society and the physical environment.	Social accounting is deemed to include the cost/benefit measurement and reporting of a firm's social programmes and general activities. There are five areas of social activities, which are Environmental Controls, Minority Employment, and Responsibility to Personnel, Community Activities and Product Improvement.
Andrew et al. 1989	Examines corporate social disclosure CSD practices in Malaysian and Singapore companies: foreign and local companies.	Social disclosure in the developing countries is not as extensive as in the industrialised countries; not only is company size a significant variable in social disclosure analysis, but there is also difference in terms of themes and extent of disclosure. In addition, foreign companies are more willing to disclose than local companies
Carroll 1991	This article explores the nature of corporate social responsibility (CSR) with an eye toward understanding its component parts.	The results indicate that the concept of social responsibility assumes that companies do not only have economic and legal obligations, but they also have other responsibilities extending far beyond such as ethical responsibility and voluntary responsibility, which aims at enhancing social welfare. The paper categorises components of social responsibility into four types: economic, legal, moral and philanthropic responsibility.
Ness and Mirza 1991	Uses agency theory to test for an association between environment-related disclosure and the oil industry.	The results of the study indicate that a positive relationship exists between environment-related disclosure in the annual reports of 131 large UK companies and the oil industry. This result supports agency theory which dictates that social information is disclosed to increase the welfare of management.
Adhikari et al. 1992	Examines the relationship between environmental factors and the accounting disclosure requirements of 35 stock exchanges in different countries. Five environmental factors were used to explain the variation observed in disclosure requirements.	The five factors examined are: degree of economic development, type of economy, size of the equity market, activity on the equity market and dispersion of stock ownership in the equity market. Only size of the equity market is found to be a significant explanatory variable.
Christophe and Bebbington 1992	The aim of this paper is to demonstrate that environmental information can be presented in a systematic, standardised manner that will provide information to readers; it attempts to develop a conceptual framework for environmental accounting.	Finding shows traditional accounting does not often provide sufficient information on social and environmental costs. Traditional disclosure does not meet the needs of those using the information.

Hackston and Milne 1996	Investigates the social and environmental disclosure practices of a sample of listed New Zealand companies, also examines some potential relationships between corporate characteristics and environmental disclosure.	While both size and industry are significantly associated with amount of social and environmental disclosure, profitability is not. In addition, the results show that the size-disclosure relationship is much stronger for high-profile industry companies than for low-profile industry companies.
Deegan and Gordon 1996	Analyses the environmental disclosure practices of Australian corporates, also Investigates the correlation between environmental group membership, firms in environmentally sensitive industries and firm size and the level of corporate environmental disclosure.	Finds a general increase in environmental disclosure occurred during the period 1988 to 1991. This increase is positively associated with increases in environmental group membership; also there is a positive correlation between firms in environmentally sensitive industries and firm size and the level of corporate environmental disclosure.
Ouellette 1996	This study attempts to identify the importance of environmental accounting and Investigates the adequacy of traditional accounting methods in chemical companies.	Tries to define environmental accounting as a set of practices within firms at either the national or company level that leads to a better understanding and management of environmental issues and their associated costs. Firms can learn more about their own costs and identify opportunities to improve environmental and economic performance by implementing these practices. On the other hand, the results indicate that traditional accounting does not often provide sufficient information on social and environmental costs.
Adams et al. 1998	Identifies the factors that influence all types of social disclosure by examining 150 annual reports for six European countries.	The results indicate that company size, industrial grouping and country of domicile all influence corporate social reporting patterns. The large companies are more likely to disclose all types of corporate social information. Industry type was found to be related to the decision to report environmental and some employee information. The amount and nature of information disclosed varies significantly across Europe.
Williams 1999	The principal objective of this study is to provide empirical evidence on the significance of variables that may assist in explaining variations in the quantity of environmental and social disclosure information provided by organisations in 356 annual reports of listed companies operating in seven Asia-Pacific nations (Australia, Singapore, Hong Kong, the Philippines, Thailand, Indonesia and Malaysia)	Finds that cultural dimensions, political and civil systems are significant determinants of the quantity of Voluntary Environmental and Social Accounting Disclosure information. In contrast, the legal system and equity market do not appear to be important factors in explaining variations in Voluntary Environmental and Social Accounting Disclosure levels. In addition, the results show that there are five areas of social activities, which are Environmental, Energy, Human Resources, (Products and Customers) and Community Involvement.
Alnajjar 2000	This study investigates the relation between environmental disclosures by the U.S. Fortune 500 firms and a number of corporate characteristics.	This research finds evidence of a highly significant effect of profitability on environmental disclosure. Size is also found to correlate with types of environmental disclosure.

Wilmshurst and Forost 2000	Examines for a relationship between factors perceived as important by chief finance officers in the decision to disclose and the observed disclosure of environmental information within the annual report.	The results indicate some significant correlations between a number of factors and environmental disclosure. Factors considered of most importance were shareholders' or investors' right to information (also ostensibly to provide a ``true and fair'' view of operations), legal obligations and ``due diligence'' requirements, and community concerns.
Mcwilliams and Siegel 2001	This study attempts to answer the question: How much should a firm spend on CSR? by using supply and demand theory.	Its analysis reveals that there is some level of CSR that will maximise profits while satisfying the demand for CSR from multiple stakeholders; the firm should offer precisely that level of CSR. Therefore, corporate social responsibility is defined as being actions that appear to further some social good, beyond the interests of the firm and that which is required by law.
Cormier and Gordon 2001	Examines how social and environmental disclosure differed between public companies and private companies in Canada between 1985 and 1996.	The publicly owned firms disclosed more social and environmental information than did the privately owned companies; disclosure was also related to the size of the companies.
Commission of the European Communities 2001	This study attempts to identify the economic impact of corporate social responsibility and to launch a wide debate on how the European Union could promote corporate social responsibility at both the European and international level, how to make the most of existing experience, to encourage the development of innovative practice.	The economic impact of corporate social responsibility can be broken down into direct and indirect effects. Positive direct results may for example derive from a better working environment, which leads to a more committed and productive workforce or from efficient use of natural resources. On the other hand, indirect effects result from the growing attention of consumers and investors, which will increase their opportunities on the markets.
Gray et al. 2001	Examines the correlation between social and environmental disclosure and corporate characteristics (size, profit and industry)	Social and environmental disclosure by corporations is directly related to size, profit and industry.
World Business Council for Sustainable Development (WBCSD 2002	This article explores the nature of corporate social responsibility (CSR).	Corporate social responsibility is defined as the obligation and commitment of corporate owners and shareholders to achieve sustainable economic and social development through the improvement of the conditions of staff members and their respective families and the surrounding community in social, health, and scientific areas in order to achieve social wellbeing for all members of society.
Newson and Deegan 2002	This paper explores the social disclosure policies of large Australian, Singaporean and South Korean multinational corporations. The study tries to answer why large multinational corporations respond to ''global expectations'' rather than simply to the expectations of those people residing in the corporation's ''home'' country.	The results of the testing indicate a minimal association between global expectations and social disclosure policies of large multinational corporations. Country of origin and industry of operation appear to significantly influence disclosure practices.

Solomon and Lewis 2002	This paper attempts to answer the question: Why do companies disclose environmental information? Further, it investigates disincentives for corporate environmental disclosure.	Findings suggest that there is a strong consensus on a number of incentives and disincentives for corporate environmental disclosure. Motives are that companies resort to the disclosure of some environmental information in an attempt to improve their image. In addition, companies use disclosure as a means of achieving and maintaining competitive advantage in their area of activity. They also disclose as a result of their ethical consciences and to discharge social responsibility.
Warsame et al. 2002	Investigates how a discrediting event such as an environmental fine influences the quality of environmental disclosure in the annual reports of Canadian firms between 1985 and 1997.	Finds that firms increased quality of environmental disclosure in the period after their prosecution and the environmental fines.
Spomar 2003	This article explores the importance of environmental accounting	Environmental accounting is an important management tool that can be used for a number of purposes. It can improve environmental performance, control costs, and inform management decisions about product mix and pricing. In addition, it encourages investment, because investors look to invest in companies interested in environmental matters. This eventually reflects positively on corporate income.
Ahmad and Sulaiman 2004	This study examines the extent and type of environmental disclosures in Malaysian annual reports and the motivations of management to make environmental disclosures.	The study suggests that the level of current environmental reporting and disclosure in Malaysia appears to be low. The findings also suggest that factors influencing companies to reveal environmental information are related to legal compliance and enhancing image and reputation.
Clarkson et al. 2004	Examines the market valuation of environmental capital expenditure investment related to pollution abatement in the pulp and paper industry.	The use of methods and techniques of social and environmental accounting can assist in making optimal use of resources and a better understanding of environmental and social costs, leading to an increase in profits and the protection of environment.
Wang et al. 2004	Examines a new incentive-based pollution control programme in China, in which the environmental performance of firms is rated and reported to the public.	The impact of the new incentive was substantial, suggesting that public disclosure provides a significant incentive for firms to improve their environmental performance. It showed that performance disclosure can significantly reduce pollution, even in settings where environmental non-governmental organisations play little role and there is no formal channel for public participation in environmental regulation.
Saleh 2004	Identifies how administrative decisions regarding environmental disclosure can be influenced by (but do not influence) the social, political and economic situation in Libya	The economic side is an influential factor on accounting in general, and on social and responsibility accounting in particular. Moreover, cultural, social and political differences can also have a large impact.
Cormier et al. 2005	The purpose of this study is to identify determinants of environmental disclosure, for example economic incentives, public pressures and institutional theory, by investigating 337 large German firms.	Results show that German firms' disclosure is converging over time. Public pressure, reliance on capital markets, trading volume, firm size, and routine determine the level of environmental disclosure by German firms in a given year.

Islam et al. 2005	Examines 48 corporate annual reports of 2003 to find out significant differences in the quality of environmental disclosure between industry types and between company sizes along with present environmental disclosure practice s.	Findings show significant statistical differences in sales revenue and employee size between companies having environmental disclosure and companies not having environmental disclosure. However, there is no significant difference in the quality of the disclosure between most industry types.
Gao et al. 2005	Investigates the patterns and determinants of corporate social environmental disclosure in Hong Kong by analysing 154 annual reports of 33 HK listed companies from 1993 to 1997.	Findings show that there is a positive correlation between company size, industry difference and the level of corporate social environmental disclosure. In addition, it is suggested that there are six areas of social activities: Environment, Energy, Health and Safety, Human Resources, Community Involvement, and Fair Business Practices.
Mashat 2005	Investigates CSR disclosure practices in Libya, analyses current practices, trends and future potential, including perceptions amongst members of the accounting community regarding current corporate reporting and disclosure practices.	The results indicate that most companies provide some measure of social disclosure, although the volume of information disseminated is low compared to developed countries. Most of this disclosure reflects the employee and community involvement themes.
Akhtaruddin 2005	This study examines the level of mandatory disclosure made by listed companies in Bangladesh. It also investigates the factors that influence mandatory disclosure practice.	This study examines the relationship between mandatory disclosure and four corporate attributes (company age, status, size, and profitability). Analysis reveals that the age of the company is not a factor for disclosure. The investigation does not support the hypothesis that old companies will provide more information than new companies. Similarity, company status has no effect on disclosure. Profitability was also found to have no effect on disclosure.
Alciatore and Dee 2006	Examines mandatory environmental disclosure for sample oil and gas firms during the period from 1989 to 1998, a period in which environmental disclosure regulations were increased and firms with environmental exposures faced new threats to their legitimacy.	Shows that many companies significantly increased their disclosure levels during the period from 1989 to 1998. However, descriptive analysis suggests that some sample firms may not have been providing complete disclosure of their environmental liabilities, and that some companies were not adequately disclosing information relating to environmental contingencies.
Stanko 2006	This article discusses requirements regarding the financial reporting of environmental liabilities and current initiatives that should improve the measurement and disclosure of these liabilities.	It defines environmental accounting as the identification, measurement and allocation of environmental costs, the integration of these environmental costs into business decisions, and the subsequent communication of the information to a company's stakeholders.
crane and Matten 2007	One of the important aims for this study was distinguish the various concepts of corporate social responsibility.	Finding shows corporate social responsibility encompasses the economic, legal, ethical and philanthropic.

Patelli and Prencipe 2007	Examines the correlation between voluntary disclosure and corporate attributes (size, leverage, profitability and labour pressure).	Based on 175 sample of Italian non-financial listed companies characterised by the presence of a dominant shareholder, this study shows that there is a positive correlation between size, leverage, profitability and labour pressure.
Bing Zhang et al. 2008	The paper analyses the impact of pressures from organisations interested in environmental performance and pressure groups as a whole on environmental performance and the relationship between company size and environmental performance.	The results show that pressures from organisations interested in environmental performance and pressure groups as a whole play significantly positive roles in engaging firms in improving environmental management performance. In addition, large firms will be more active in improving environmental management performance.
Liu and Anbumozhi 2009	This study identifies the determinant factors affecting the disclosure level of corporate environmental information on the basis of stakeholder theory. The samples and data for this study were collected from Chinese listed companies.	Results prove firms' environmental sensitivity and size are currently the major significant factors influencing their environmental information disclosure efforts. However, economic performance is not significantly related to environmental disclosure activities. The results also show Chinese companies are providing environmental information mainly to alleviate the concerns of government.
DammakSaid 2009	Compares environmental disclosure in the annual reports of American and European multinational companies and tries to show the factors which explain the differences.	The level of environmental disclosure in European companies is higher than that of American; company nationality seems to have an effect on the level of environmental information.
Elsayed and Hoque 2010	Examines how international environmental factors influence voluntary disclosure levels. Some of the factors identified are intensity of global competition and international accounting standards.	Findings provide no significant association between voluntary disclosure level and perceived intensity of global competition. On the other hand, the level of a company's voluntary disclosure is positively and significantly associated with compliance with international accounting standards.
Belal, Ataur and Cooper-Stuart 2011	The purpose of this paper is to study and analyse CSR. It focuses on the absence of CSR reporting within developing countries	The findings suggest that the main reasons for non-disclosure include lack of resources, the profit imperative, lack of legal requirements, lack of knowledge/ awareness, poor performance and the fear of bad publicity. The authors recommend that further research is still required in the area of CSR.
de Villiers and van Staden 2011	Compares environmental disclosure in annual reports with a long-term (bad) and a short-term (crisis) environmental performance measure. Also examines the correlation between environmental disclosure and size of company.	The results indicate that firms disclose more environmental information in their annual reports when they have a bad environmental reputation. In addition, there is no positive correlation between environmental disclosure in annual reports and company size, so the company size is insignificant in terms of level and amount of environmental disclosure.
Despina, Galani et al. 2011	The main thrust of this paper is to assess the level of disclosure in the annual reports of non-financial Greek firms and to investigate the hypothesized impact of several firm characteristics on the extent of mandatory disclosure.	The findings indicate that firm size is significantly positively associated with the level of disclosure. In contrast, company age was found to be insignificant in explaining the variation in disclosure.

Jorge, Arevalo and Deepa Aravind 2011	The paper seeks to investigate the reported drivers and barriers to implementing CSR practices. It tries to answer the questions: What motivates companies in India to pursue CSR? What obstacles do Indian companies face when implementing CSR?	They find that the most popular motivators for CSR among Indian firms are ethics and values factors. Also important, but not to the extent of ethics and values, are enhancing business reputation, satisfying stakeholder demands, and improving profits. Further, the results indicate that the most significant obstacles are those related to lack of resources, followed by barriers related to the complexity and difficulty of implementing CSR and finally, lack of management support at both top and middle levels.
Elinda, Esa and Nazli Ghazali 2012	The purpose of this study is to investigate the correlation between social and environmental disclosure and the size and profitability of the company.	Results indicate no positive correlation between social and environmental disclosure and size and profitability; these are not significant elements with regard to the extent of social and environmental disclosure.
Kathyayini, Rao et al. 2012	One of the aims of this paper is to clarify the relationship between environmental reporting and company size in Australia.	The findings show firm size is not statistically significant with the level of environmental disclosure, so this result is in contrast to the prediction that large firms disclose more environmental information, found in some previous studies.
Monica Abreu et al. 2012	This study tries to identify the current application of CSR in China and Brazil and the influence of three variables (country location, firm size and position) on the adoption of CSR practices.	The study shows that neither Brazilian nor Chinese textile firms embed CSR practices in their strategy plan. Also firm size and position in the value chain exert significant influence but to a lesser extent than the country variable.
Melo, Tiago and Morgado Alvaro 2012	One of the main aims of this study is to investigate the relationship between CSR and corporate reputation.	The results reveal that CSR has a significant impact on corporate reputation.
Ishwer 2012	The aim of this research is to investigate the perceptions and requirements of stakeholders towards corporate environmental disclosure in Libya. The study was carried out on Ahlia Cement Company; a single case study approach was adopted for the purposes of Ishwerf's study.	Participants believed companies should be accountable to all stakeholder groups for their environmental impacts and the only way to enforce CED practice is using mandatory compliance. Increasing awareness of environmental issues, market competition, religious obligation, compliance with industrial codes and training programmes appear to be the key driving motivations in the study country, while lack of legal requirements, lack of knowledge/awareness, absence of demand, issues management, fear of bad publicity, companies' emphasis on economic performance, sensitive and confidential information, absence of pressure by government, and absence of NGOs appear to be impeding CED practice.
Elmogla 2012	The aim of this study is to investigate corporate social responsibility disclosure in Libyan companies' annual reporting in light of the country's economic, social and political environment.	The findings show that Libyan companies generally disclose some information related to social responsibility. However, the amount of information is low compared with their counterparts in developed countries. Employee and community involvement are the themes that the companies disclose most information about. Participants widely accepted the need for disclosure of more social and

Appendix 4: Number of environmental words disclosed and their summary

Appendix 4.1: Number of words disclosed in annual reports of oil and gas companies operating in Libya

years	2002	2003	2004	2005	2006	2007	2008	2009	**Total**
Company 1	**local company - medium company- old company**								
Environmental Policy	0	*	2	13	*	23	29	42	
Products and Processes	8	*	7	10	*	27	36	51	
Energy	0	*	0	0	*	25	22	26	
Health and Safety	9	*	11	32	*	62	77	79	
Environmental Audit	0	*	0	0	*	0	0	0	
Others	0	*	5	12	*	19	22	31	
Total	17	0	17	67	0	156	186	229	672
Company 2	**local company small company old company**								
Environmental Policy	*	*	5	9	8	*	15	33	
Products and Processes	*	*	0	7	9	*	13	25	
Energy	*	*	0	9	10	*	18	16	
Health and Safety	*	*	15	24	20	*	33	56	
Environmental Audit	*	*	0	0	0	*	0	0	
Others	*	*	2	10	7	*	11	28	
Total	0	0	22	59	54	0	90	158	383
Company 3	**local company - large company- new company**								
Environmental Policy	*	*	*	0	24	27	22	37	
Products and Processes	*	*	*	12	28	33	41	47	
Energy	*	*	*	0	0	15	21	29	
Health and Safety	*	*	*	42	56	62	76	72	
Environmental Audit	*	*	*	0	0	0	0	0	
Others	*	*	*	0	17	24	21	38	
Total	0	0	0	54	125	161	181	223	744
Company 4	**local company - large company- old company**								
Environmental Policy	*	6	4	19	23	31	26	38	
Products and Processes	*	0	0	8	15	23	30	42	
Energy	*	0	0	0	0	16	18	15	
Health and Safety	*	8	12	33	44	59	49	64	
Environmental Audit	*	0	0	0	0	0	0	0	
Others	*	0	0	9	10	22	27	35	
Total	0	14	17	69	92	151	150	195	688

(*) = The report could not be obtained

years	2002	2003	2004	2005	2006	2007	2008	2009	Total
Company 5	**Local and Public company- small company- new company**								
Environmental policy	*	*	*	0	15	12	17	23	67
Products and Processes	*	*	*	6	16	19	24	43	
Energy	*	*	*	0	8	21	18	23	
Health and Safety	*	*	*	18	32	44	51	63	
Environmental audit	*	*	*	0	0	0	0	0	
Others	*	*	*	0	9	16	14	18	
Total	0	0	0	24	70	112	124	170	500
Company 6	**Local and Public company - medium company- Old company**								
Environmental policy	10	*	8	*	21	33	41	32	
Products and Processes	6	*	7	*	10	25	18	28	
Energy	0	*	0	*	5	16	19	23	
Health and Safety	12	*	14	*	52	47	58	65	
Environmental audit	0	*	0	*	0	0	0	8	
Others	11	*	7	*	13	23	29	31	
Total	23	0	36	0	91	144	165	187	646
Company 7	**Local company - Public company - large company- Old company**								
Environmental policy	0	0	*	15	24	18	31	28	
Products and Processes	0	5	*	17	38	23	34	42	
Energy	0	0	*	9	0	13	23	29	
Health and Safety	6	9	*	33	45	51	55	61	
Environmental audit	0	0	*	0	0	0	14	12	
Others	0	4	*	18	21	21	28	39	
Total	7	18	0	92	128	116	185	211	757
Company 8	**Local and Public company - small company- Old company**								
Environmental policy	*	3	4	*	16	*	24	17	
Products and Processes	*	0	2	*	11	*	19	31	
Energy	*	0	0	*	22	*	31	32	
Health and Safety	*	9	10	*	31	*	44	59	
Environmental audit	*	0	0	*	0	*	0	0	
Others	*	2	4	*	8	*	27	36	
Total	0	14	20	0	88	0	145	175	442

years	2002	2003	2004	2005	2006	2007	2008	2009	Total
Company 9	**Local and Public company - large company- Old company**								
Environmental policy	*	0	7	*	28	33	26	38	
Products and Processes	*	4	6	*	19	22	38	31	
Energy	*	0	9	*	15	29	31	34	
Health and Safety	*	14	15	*	59	68	66	69	
Environmental audit	*	0	0	*	0	5	12	7	
Others	*	5	6	*	22	19	18	28	
Total	0	23	43	0	143	176	191	207	783
Company 10	**Local company - Public company - medium company- Old company**								
Environmental policy	*	0	3	*	7	17	15	23	
Products and Processes	*	7	10	*	22	14	20	28	
Energy	*	6	9	*	16	23	21	26	
Health and Safety	*	0	10	*	36	57	62	59	
Environmental audit	*	0	0	*	0	0	0	0	
Others	*	3	5	*	19	22	31	26	
Total	0	16	37	0	100	133	149	162	597
Company 1	**Foreign and private company - large company- Old company**								
Environmental policy	*	16	31	39	42	36	65	84	
Products and Processes	*	25	24	21	32	35	44	57	
Energy	*	19	20	31	29	24	35	42	
Health and Safety	*	33	49	61	68	51	73	67	
Environmental audit	*	6	14	16	19	18	29	26	
Others	*	12	21	24	27	33	43	59	
Total	0	107	159	192	217	197	289	335	1496
Company 2	**Foreign and private company - large company- Old company**								
Environmental policy	12	22	18	25	*	29	37	59	
Products and Processes	23	19	29	41	*	46	58	72	
Energy	10	13	23	39	*	28	29	45	
Health and Safety	31	38	45	56	*	67	74	68	
Environmental audit	5	9	18	20	*	18	23	27	
Others	12	15	21	33	*	36	39	57	
Total	93	116	154	214	0	224	260	328	1389

years	2002	2003	2004	2005	2006	2007	2008	2009	Total
Company 3	**foreign and private company - large company- old company**								
Environmental Policy	15	*	23	*	26	33	44	51	
Products and Processes	17	*	29	*	37	42	53	57	
Energy	23	*	39	*	48	41	43	49	
Health and Safety	31	*	46	*	61	74	79	81	
Environmental Audit	8	*	12	*	18	22	28	20	
Others	19	*	32	*	41	39	33	46	
Total	113	0	181	0	231	251	280	304	1360
Company 4	**foreign and private company - large company- old company**								
Environmental Policy	11	19	*	31	21	46	63	75	
Products and Processes	18	29	*	42	33	39	29	41	
Energy	14	21	*	18	17	26	19	37	
Health and Safety	23	28	*	43	36	51	62	60	
Environmental Audit	9	6	*	15	12	11	14	16	
Others	26	32	*	38	35	41	49	58	
Total	101	135	0	187	154	214	236	287	1314
Company 5	**foreign and private company - medium company- new company**								
Environmental Policy	*	*	*	*	25	39	57	62	
Products and Processes	*	*	*	*	31	42	48	41	
Energy	*	*	*	*	28	33	39	42	
Health and Safety	*	*	*	*	23	43	54	58	
Environmental Audit	*	*	*	*	7	10	23	18	
Others	*	*	*	*	35	39	47	51	
Total	0	0	0	0	149	206	268	272	895
Company 6	**foreign and private company - medium company- old company**								
Environmental Policy	*	*	*	*	*	32	54	67	
Products and Processes	*	*	*	*	*	45	39	46	
Energy	*	*	*	*	*	28	29	35	
Health and Safety	*	*	*	*	*	41	35	51	
Environmental Audit	*	*	*	*	*	14	18	23	
Others	*	*	*	*	*	23	29	36	
Total	0	0	0	0	0	183	204	258	645

(*) = The report could not be obtained

years	2002	2003	2004	2005	2006	2007	2008	2009	**Total**
Company 7	**foreign and private company - medium company- old company**								
Environmental Policy	*	*	*	*	27	42	44	73	
Products and Processes	*	*	*	*	34	38	51	62	
Energy	*	*	*	*	18	32	46	55	
Health and Safety	*	*	*	*	19	37	43	59	
Environmental Audit	*	*	*	*	12	18	21	28	
Others	*	*	*	*	23	29	37	41	
Total	0	0	0	0	133	196	242	318	889
Company 8	**foreign and private company - small company- new company**								
Environmental Policy	*	*	*	*	13	28	33	41	
Products and Processes	*	*	*	*	22	20	26	32	
Energy	*	*	*	*	16	19	19	29	
Health and Safety	*	*	*	*	24	34	38	45	
Environmental Audit	*	*	*	*	7	13	17	14	
Others	*	*	*	*	18	27	34	37	
Total	0	0	0	0	100	141	167	198	606
Company 9	**foreign and private company - large company- new company**								
Environmental Policy	*	*	*	35	52	59	57	98	
Products and Processes	*	*	*	29	49	42	53	63	
Energy	*	*	*	19	34	38	49	38	
Health and Safety	*	*	*	42	68	78	88	100	
Environmental Audit	*	*	*	16	26	37	31	29	
Others	*	*	*	26	43	56	68	72	
Total	0	0	0	167	272	310	346	400	1495
Company 10	**foreign and private company - small company- old company**								
Environmental Policy	*	*	*	*	*	27	38	44	
Products and Processes	*	*	*	*	*	31	45	37	
Energy	*	*	*	*	*	22	27	48	
Health and Safety	*	*	*	*	*	38	47	56	
Environmental Audit	*	*	*	*	*	19	24	17	
Others	*	*	*	*	*	27	39	59	
Total	0	0	0	0	0	164	220	261	645

(*) = The report could not be obtained

years	2002	2003	2004	2005	2006	2007	2008	2009	Total
Company 11	**foreign and private company - medium company- old company**								
Environmental Policy	*	*	*	*	22	34	58	51	
Products and Processes	*	*	*	*	15	18	22	36	
Energy	*	*	*	*	8	15	34	45	
Health and Safety	*	*	*	*	19	32	43	62	
Environmental Audit	*	*	*	*	4	2	12	23	
Others	*	*	*	*	27	37	41	48	
Total	0	0	0	0	95	138	210	265	708
Company 12	**foreign and private company - large company- old company**								
Environmental Policy	*	*	*	33	49	68	79	98	
Products and Processes	*	*	*	19	26	39	43	52	
Energy	*	*	*	13	22	27	47	43	
Health and Safety	*	*	*	25	42	56	71	87	
Environmental Audit	*	*	*	8	13	28	19	23	
Others	*	*	*	34	52	69	77	63	
Total	0	0	0	167	201	287	336	366	1357
Company 13	**foreign and private company - small company- new company**								
Environmental Policy	*	*	*	*	23	31	38	37	
Products and Processes	*	*	*	*	15	27	24	31	
Energy	*	*	*	*	18	20	34	39	
Health and Safety	*	*	*	*	17	24	37	42	
Environmental Audit	*	*	*	*	4	7	16	12	
Others	*	*	*	*	21	25	21	31	
Total	0	0	0	0	98	134	170	192	594
Company 14	**foreign and private company - large company- old company**								
Environmental Policy	*	*	*	29	41	62	72	82	
Products and Processes	*	*	*	16	29	36	49	55	
Energy	*	*	*	23	38	34	53	61	
Health and Safety	*	*	*	26	39	57	83	91	
Environmental Audit	*	*	*	15	13	19	24	21	
Others	*	*	*	23	29	37	59	64	
Total	0	0	0	132	189	245	340	374	1280

(*) = The report could not be obtained

Local	Foreign	Large	Medium	Small	Old	new
10	14	11	7	6	18	6

Appendix 4.2: Summary of Number of words disclosed in annual reports of oil and gas companies operating in Libya

years	2002	2003	2004	2005	2006	2007	2008	2009	Total
Companies	small companies								
Number of reports	0	1	2	2	5	4	6	6	26
Company 1	0	0	22	59	54	0	90	158	
Company 2	0	0	0	24	70	112	124	170	
Company 3	0	14	20	0	88	0	145	175	
Company 4	0	0	0	0	100	141	167	198	
Company 5	0	0	0	0	0	164	220	261	
Company 6	0	0	0	0	98	134	170	192	
Total	0	14	42	83	410	551	916	1154	3170
Companies	Medium companies								
Number of reports	2	1	3	1	5	7	7	7	33
Company 1	17	0	17	67	0	156	186	229	
Company 2	23	0	36	0	91	144	165	187	
Company 3	0	16	37	0	100	133	149	162	
Company 4	0	0	0	0	149	206	268	272	
Company 5	0	0	0	0	0	183	204	258	
Company 6	0	0	0	0	133	196	242	318	
Company 7	0	0	0	0	95	138	210	265	
Total	40	16	90	67	568	1156	1424	1691	5052
Companies	Large companies								
Number of reports	4	6	5	9	10	11	11	11	67
Company 1	0	0	0	54	125	161	181	223	
Company 2	0	14	17	69	92	151	150	195	
Company 3	7	18	0	92	128	116	185	211	
Company 4	0	23	43	0	143	176	191	207	
Company 5	0	107	159	192	217	197	289	335	
Company 6	93	116	154	214	0	224	260	328	
Company 7	113	0	181	0	231	251	280	304	
Company 8	101	135	0	187	154	214	236	287	
Company 9	0	0	0	167	272	310	346	400	
Company 10	0	0	0	167	201	287	336	366	
Company 11	0	0	0	132	189	245	340	374	
Total	314	413	554	1274	1752	2332	2794	3230	12663

years	2002	2003	2004	2005	2006	2007	2008	2009	Total
Companies	**Local and public companies**								
Number of reports	3	5	7	6	9	8	10	10	58
Company 1	17	0	17	67	0	156	186	229	
Company 2	0	0	22	59	54	0	90	158	
Company 3	0	0	0	54	125	161	181	223	
Company 4	0	14	17	69	92	151	150	195	
Company 5	0	0	0	24	70	112	124	170	
Company 6	23	0	36	0	91	144	165	187	
Company 7	7	18	0	92	128	116	185	211	
Company 8	0	14	20	0	88	0	145	175	
Company 9	0	23	43	0	143	176	191	207	
Company 10	0	16	37	0	100	133	149	162	
Total	47	85	192	365	891	1149	1566	1917	6212
Companies	**Foreign and private companies**								
Number of reports	3	3	3	6	11	14	14	14	68
Company 1	0	107	159	192	217	197	289	335	
Company 2	93	116	154	214	0	224	260	328	
Company 3	113	0	181	0	231	251	280	304	
Company 4	101	135	0	187	154	214	236	287	
Company 5	0	0	0	0	149	206	268	272	
Company 6	0	0	0	0	0	183	204	258	
Company 7	0	0	0	0	133	196	242	318	
Company 8	0	0	0	0	100	141	167	198	
Company 9	0	0	0	167	272	310	346	400	
Company 10	0	0	0	0	0	164	220	261	
Company 11	0	0	0	0	95	138	210	265	
Company 12	0	0	0	167	201	287	336	366	
Company 13	0	0	0	0	98	134	170	192	
Company 14	0	0	0	132	189	245	340	374	
Total	307	358	494	1059	1839	2890	3568	4158	14673

years	2002	2003	2004	2005	2006	2007	2008	2009	Total
Companies	**Old companies**								
Number of reports	6	8	10	9	14	16	18	18	99
Company 1	17	0	17	67	0	156	186	229	672
Company 2	0	0	22	59	54	0	90	158	383
Company 3	0	14	17	69	92	151	150	195	688
Company 4	23	0	36	0	91	144	165	187	646
Company 5	7	18	0	92	128	116	185	211	757
Company 6	0	14	20	0	88	0	145	175	442
Company 7	0	23	43	0	143	176	191	207	783
Company 8	0	16	37	0	100	133	149	162	597
Company 9	0	107	159	192	217	197	289	335	1496
Company 10	93	116	154	214	0	224	260	328	1389
Company 11	113	0	181	0	231	251	280	304	1360
Company 12	101	135	0	187	154	214	236	287	1314
Company 13	0	0	0	0	0	183	204	258	645
Company 14	0	0	0	0	133	196	242	318	889
Company 15	0	0	0	0	0	164	220	261	645
Company 16	0	0	0	0	95	138	210	265	708
Company 17	0	0	0	167	201	287	336	366	1357
Company 18	0	0	0	132	189	245	340	374	1280
Total	354	443	686	1179	1916	2975	3878	4620	16051
Companies	**New companies**								
Number of reports	0	0	0	3	6	6	6	6	27
Company 1	0	0	0	54	125	161	181	223	744
Company 2	0	0	0	24	70	112	124	170	500
Company 3	0	0	0	0	149	206	268	272	895
Company 4	0	0	0	0	100	141	167	198	606
Company 5	0	0	0	167	272	310	346	400	1495
Company 6	0	0	0	0	98	134	170	192	606
Total				245	814	1064	1256	1455	4834

Appendix 4.3: Number of words disclosed in annual reports by type of ED (bad, neutral and good) by oil and gas companies operating in Libya

years	2002	2003	2004	2005	2006	2007	2008	2009	Total
Company 1	**Local company**								
Bad News	0	*	0	15	*	41	56	68	
Neutral News	0	*	0	22	*	55	46	71	
Good News	17	*	17	30	*	60	84	90	
Total	17	*	17	67	0	156	186	229	672
Company 2	**Local company**								
Bad News	*	*	3	16	14	*	31	45	
Neutral News	*	*	3	13	16	*	22	51	
Good News	*	*	16	30	24	*	37	62	
Total	*	*	22	59	54	*	90	158	383
Company 3	**Local company**								
Bad News	*	*	*	19	34	42	54	69	
Neutral News	*	*	*	15	29	48	41	72	
Good News	*	*	*	20	62	71	86	82	
Total	*	*	*	54	125	161	181	223	744
Company 4	**Local company**								
Bad News	*	2	6	15	32	49	41	61	
Neutral News	*	2	4	19	23	43	39	52	
Good News	*	10	7	35	37	59	70	82	
Total	*	14	17	69	92	151	150	195	688
Company 5	**Local company**								
Bad News	*	*	*	0	19	31	34	48	
Neutral News	*	*	*	0	11	26	40	39	
Good News	*	*	*	24	40	55	50	83	
Total	*	*	*	24	70	112	124	170	500
Company 6	**Local company**								
Bad News	6	*	13	*	19	39	53	51	
Neutral News	0	*	0	*	24	43	44	59	
Good News	17	*	23	*	48	62	68	77	
Total	23	*	36	*	91	144	165	187	646

years	2002	2003	2004	2005	2006	2007	2008	2009	Total
Company 7	**Local company**								
Bad News	0	0	*	18	33	24	52	58	
Neutral News	0	0	*	28	39	31	46	67	
Good News	7	18	*	46	56	61	87	86	
Total	7	18	*	92	128	116	185	211	757
Company 8	**Local company**								
Bad News	*	3	6	*	23	*	37	44	
Neutral News	*	2	4	*	19	*	48	57	
Good News	*	9	10	*	46	*	60	74	
Total	*	14	20	*	88	*	145	175	442
Company 9	**Local company**								
Bad News	*	6	11	*	31	43	53	61	
Neutral News	*	5	13	*	48	57	53	52	
Good News	*	12	19	*	64	76	85	94	
Total	*	23	43	*	143	176	191	207	783
Company 10	**Local company**								
Bad News	*	0	0	*	16	29	35	31	
Neutral News	*	0	0	*	23	36	42	52	
Good News	*	16	37	*	61	68	72	79	
Total	*	16	37	*	100	133	149	162	597
Company 1	**foreign company**								
Bad News	*	12	14	11	19	16	21	34	
Neutral News	*	35	62	73	82	64	79	92	
Good News	*	60	83	108	116	117	189	209	
Total	*	107	159	192	217	197	289	335	1496
Company 2	**foreign company**								
Bad News	18	23	26	34	*	31	39	42	
Neutral News	30	42	59	79	*	95	109	135	
Good News	45	51	69	101	*	98	112	151	
Total	93	116	154	214	*	224	260	328	1389

years	2002	2003	2004	2005	2006	2007	2008	2009	**Total**
Company 3	**foreign company**								
Bad News	22	*	31	*	49	56	67	62	
Neutral News	36	*	58	*	77	84	91	95	
Good News	55	*	92	*	105	111	122	147	
Total	113	*	181	*	231	251	280	304	1360
Company 4	**foreign company**								
Bad News	15	17	*	25	13	31	29	39	
Neutral News	27	38	*	58	41	69	81	76	
Good News	59	80	*	104	100	114	126	172	
Total	101	135	*	187	154	214	236	287	1314
Company 5	**Local company**								
Bad News	*	*	*	*	15	23	38	42	
Neutral News	*	*	*	*	36	57	73	93	
Good News	*	*	*	*	98	126	157	137	
Total	*	*	*	*	149	206	268	272	895
Company 6	**foreign company**								
Bad News	*	*	*	*	*	32	26	41	
Neutral News	*	*	*	*	*	59	68	82	
Good News	*	*	*	*	*	92	110	135	
Total	*	*	*	*	*	183	204	258	645
Company 7	**foreign company**								
Bad News	*	*	*	*	12	24	36	62	
Neutral News	*	*	*	*	31	46	63	89	
Good News	*	*	*	*	90	126	143	167	
Total	*	*	*	*	133	196	242	318	889
Company 8	**foreign company**								
Bad News	*	*	*	*	19	32	35	44	
Neutral News	*	*	*	*	33	48	57	62	
Good News	*	*	*	*	48	61	75	92	
Total	*	*	*	*	100	141	167	198	606

years	2002	2003	2004	2005	2006	2007	2008	2009	**Total**
Company 9	**foreign company**								
Bad News	*	*	*	32	53	73	69	81	
Neutral News	*	*	*	51	78	98	112	136	
Good News	*	*	*	84	141	139	165	183	
Total	*	*	*	167	272	310	346	400	1495
Company 10	**foreign company**								
Bad News	*	*	*	*	*	33	49	65	
Neutral News	*	*	*	*	*	52	68	72	
Good News	*	*	*	*	*	79	103	124	
Total	*	*	*	*	*	164	220	261	645
Company 11	**foreign company**								
Bad News	*	*	*	*	11	28	48	62	
Neutral News	*	*	*	*	32	46	67	78	
Good News	*	*	*	*	52	64	95	125	
Total	*	*	*	*	95	138	210	265	708
Company 12	**foreign company**								
Bad News	*	*	*	33	47	66	79	86	
Neutral News	*	*	*	56	69	80	91	115	
Good News	*	*	*	78	85	141	166	165	
Total	*	*	*	167	201	287	336	366	1357
Company 13	**foreign company**								
Bad News	*	*	*	*	14	33	35	43	
Neutral News	*	*	*	*	38	43	56	68	
Good News	*	*	*	*	46	58	79	81	
Total	*	*	*	*	98	134	170	192	594
Company 14	**foreign company**								
Bad News	*	*	*	36	43	57	75	98	
Neutral News	*	*	*	35	59	73	105	139	
Good News	*	*	*	61	87	115	160	137	
Total	*	*	*	132	189	245	340	374	1280

Appendix 4.4: Summary of Number of words disclosed in annual reports by type of ED (bad, neutral and good) by oil and gas companies operating in Libya

Company	Kind of disclosure	Years								Total
		2002	2003	2004	2005	2006	2007	2008	2009	
Local	n	3	5	7	6	9	8	10	10	58
	Bad News	6	11	39	83	221	298	446	536	1640
	Neutral News	0	9	24	97	232	339	421	572	1694
	Good News	41	65	129	185	438	512	699	809	2878
	Total	47	85	192	365	891	1149	1566	1917	6212
Foreign	n	3	3	3	6	11	14	14	14	68
	Bad News	55	52	71	171	295	535	646	801	2626
	Neutral News	93	115	179	352	576	914	1120	1332	4681
	Good News	159	191	244	536	968	1441	1802	2025	7366
	Total	307	358	494	1059	1839	2890	3568	4158	14673

Appendix 4.5: Number of words disclosed in annual reports of oil and gas companies operating in Libya

N of reports of local companies	3	5	7	6	9	8	10	10	**58**
N of reports of foreign companies	3	3	3	6	11	14	14	14	**68**
Environmental policy	2002	2003	2004	2005	2006	2007	2008	2009	**Total**
Local and public companies	10	9	33	56	166	194	246	311	1025
Foreign and private companies	38	57	72	192	341	566	739	922	2927
Products and Processes	2002	2003	2004	2005	2006	2007	2008	2009	**Total**
Local and public companies	14	16	32	60	168	186	273	368	1117
Foreign and private companies	58	73	82	168	323	500	584	682	2470
Energy	2002	2003	2004	2005	2006	2007	2008	2009	**Total**
Local and public companies	0	6	18	18	76	158	222	253	751
Foreign and private companies	47	53	82	143	276	387	503	608	2099
Health and Safety	2002	2003	2004	2005	2006	2007	2008	2009	**Total**
Local and public companies	27	40	87	182	375	450	585	642	2388
Foreign and private companies	85	99	140	253	416	683	827	927	3430
Environmental audit	2002	2003	2004	2005	2006	2007	2008	2009	**Total**
Local and public companies	0	0	0	0	0	5	26	27	58
Foreign and private companies	22	21	44	90	135	236	299	297	1144
Others	2002	2003	2004	2005	2006	2007	2008	2009	**Total**
Local and public companies	11	14	29	49	126	166	228	300	923
Foreign and private companies	57	59	74	178	386	518	616	722	2610

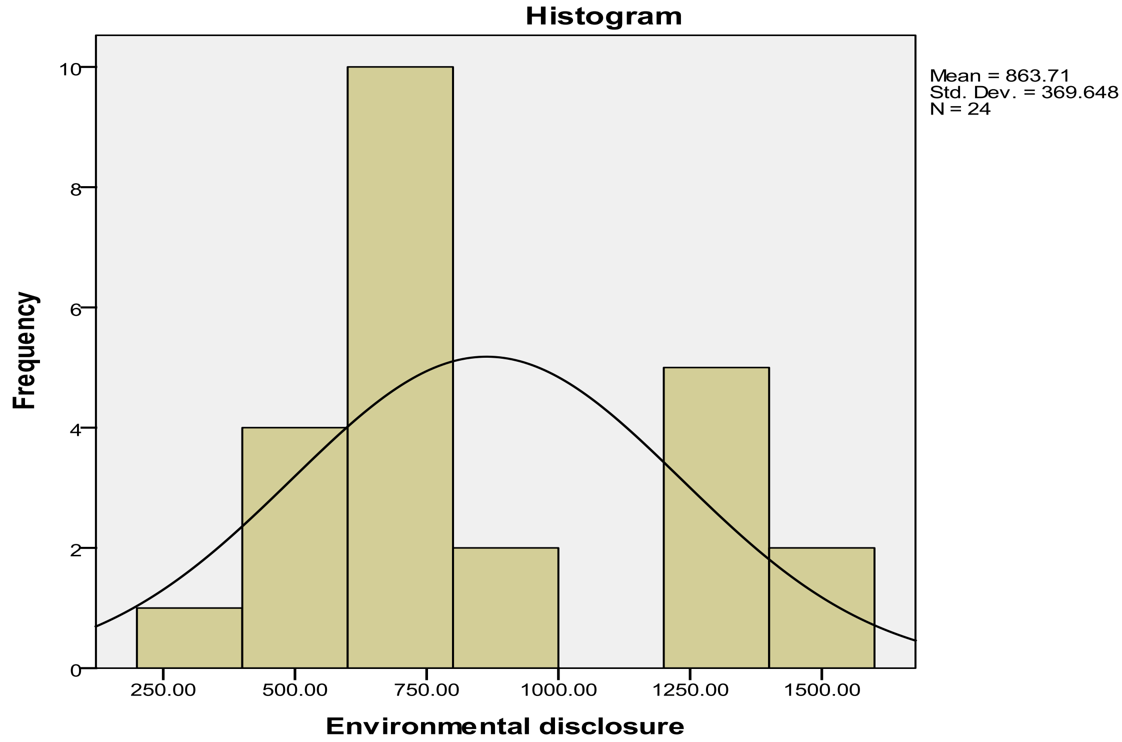
Appendix 5: Statistical tests
Appendix 5.1: Normal distribution test

Statistics

Environmental disclosure

N	Valid	24
	Missing	0
Mean		863.7083
Median		726.0000[a]
Mode		645.00
Skewness		.535
Std. Error of Skewness		.472
Kurtosis		-.924
Std. Error of Kurtosis		.918
Sum		20729.00

a. Calculated from grouped data.



Appendix 5.2: Kolmogorov-Smirnow test

Tests of Normality

	Kolmogorov-Smirnov[a]		
	Statistic	df	Sig.
Environmental disclosure	.211	24	.007