

**Corporate Environmental Disclosure:
A Case from the Libyan Construction Industry**

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

In the name of Allah,
the Beneficent, the
Merciful.

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To my father, my mother

My wife

To my daughter and my sons

To my brothers and my sisters

Declaration

I declare that all the work in this thesis is totally my personal effort, also no part of this work has been submitted for a scientific degree either in this university or any other universities or other educational institution.

Abbreviations

CED	Corporate Environmental Disclosure
CSD	Corporate Social Disclosure
CSR	Corporate Social Responsibility
GDP	Gross Domestic Product
USA	United States of America
UK	United Kingdom
CSED	Corporate Social and Environmental Disclosure
UN	United Nation
LAAA	Libyan Accountants and Auditors Association
AB	Audit Bureau
SPSS	Statistical Package for the Social Sciences

Abstract

In recent years, the international community has become ever more concerned with the effect of human activity on the environment which can be observed and regulated through international policy. An underlying premise suggests that the natural environment should serve the interests of the current generations without jeopardising those of future generations. As a result, the disclosure of environmental issues has become the topic of many studies, and there has been much debate over the disclosure of environmental information by companies. However, little research has been conducted in developing countries regarding the amount and kind of corporate environmental disclosure (CED) within annual reports and its development over time, as well as the effect of external and internal factors on the environmental disclosure.

The main aim of this study is to explore current disclosure of environmental issues carried out by Libyan construction companies in order to explain the presence or the absence of CED practices in light of stakeholder and political economy theory. In doing so, a content analysis of the annual reports is made in order to describe CED practices undertaken by the largest Libyan construction companies. In addition, the perspectives and perceptions of a sample of financial managers and the users of the annual reports of Libyan construction companies regarding the various aspects of CED have been explored by conducting semi-structured interviews and administration of questionnaires.

Although financial managers are positively inclined toward environmental performance and disclosure by the companies, the results of the study revealed that the level of environmental disclosure in Libyan construction companies was very low. Based on the views of the financial managers, this is due to a number of reasons that have prevented them adopting CED. The most prominent of these are an absence of environmental awareness, lack of demand for environmental information and a dearth of academic research. Similarly, managerial perspectives reveal that the absence of environmental disclosure is mainly due to lack of civil society organizations and the avoidance of any accountability to the public or government. In addition, a deeper viewpoint was provided by the users of annual reports, when they indicated that the social, political and economic features of the Libyan society does not encourage or facilitate environmental disclosure initiatives. However, the teachings of the Islamic religion may encourage companies to disclose the damage to the environment, according to the viewpoint of the majority of the participants. Furthermore, the results of study are consistent with managerial branch of stakeholders theory and the bourgeois political economy theory providing a robust explanation for the absence and the presence of environmental disclosure of Libyan

construction companies. Thus, it can be concluded that the CED practices of the Libyan construction industry are influenced by internal factors (management attitude and cognition) and external factors including, local culture, accounting education, the economic and political system, and the legal system.

List of publications

1. Ibrahim, M. H. I., Matipa, W. Melaine, Y. and Bryde, D. J (2012) “The effect of external and internal factors on corporate environmental disclosure: a case of the Libyan construction industry” **Full Paper**, *7th annual Liverpool BEAN Conference Proceedings*, Liverpool John Moores University, 30th May, 2012.
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CHAPTER ONE

Introduction

1.1 Research background

Corporate environmental disclosure (CED) is one of the many terms used to describe the social and environmental contributions and consequences of business activity (Jenkins and Yakovleva, 2006). The natural environment and the effect of human activity on the environment have been an ever-present concern of humanity for centuries. With the drive for worldwide industrialisation, the international community has become even more concerned and has therefore been trying to find answers through international policy and regulations on how to use the natural environment to serve the interests of the current generations without jeopardising those of future generations (Buss, 2007).

In this regard, both positive and negative impacts of business organizations on the natural environment (the wealth that is added to the economy, and the cost created by pollution or resource degradation and depletion) should be measured or disclosed using accounting systems (Lovins *et al.*, 2000). As a result, CED has become one of the most important topics in the field of accounting and is likely to achieve a dramatic evolution in the coming years (Hopwood, 2009).

However, it would be wrong to consider that CED is a recently established practice, because CED has previously been addressed under the term corporate social disclosure (CSD) or corporate social responsibility (CSR) since 1970s (Lewis *et al.*, 1984; Guthrie and Parker, 1989; Mathews, 1997; Gray, 2001). The impact on the natural environment has been disclosed by companies, via the themes of social disclosure including energy, human resources, products, and community involvement (Epstein *et al.*, 1976; Ingram and Frazier, 1980; Guthrie and Parker, 1989; Mathews, 1997).

Indeed, CED was recognized in the mid-1970s, when formal environmental policy statements were published by most large and medium companies throughout the industrialized world. In this regard, Dierkes and Preston (1977, p. 3) confirmed that, “protection of the physical environment and abatement of specific pollution problems are now generally recognized as major aspects of the corporation-society relationship”. However, the period 1971-1980 was not one in which the environment was on top of the list for accounting academics and policy makers (Mathews, 1997).

Thus, the researchers and writers interested in the social dimension were generally more concerned with what would now be called “social accounting”, especially disclosures relating to employees and product, where the empirical studies included environmental issues as part of a large portfolio of interests, and many of the studies were descriptive and relatively unsophisticated by later standards (Mathews, 1997).

In the 1980s, many programs and public policies were adopted by governments in European countries to reform and protect the environment from the development of the economic activities (Hibbett, 2004). As a result, more attention has been given to voluntary reporting which contains the information about employee related disclosure, health and safety and environmental and energy disclosure (Gray *et al.*, 1996). At the end of the 1980s, there was evidence that concern of social accounting had declined, compared with the attention that was given to it in the previous decade (Gray, 2001). Harte and Owen (1991, p. 51) stated that “Companies tended to report little or no social and environmental information in annual reports other than required by statute”.

In the late 1980s and the early 1990s, environmental reporting became a main feature of social policy and business culture, where the annual reports of companies began to contain more environmental information (Ingram and Frazier, 1980; Harte and Owen, 1991; Gray and Bebbington, 2001). However, most environmental reporting is still at a very general level, where information regarding the environmental performance tends to be quite superficial rather than being detailed (Gray and Bebbington, 2001). In this regard, Mathews (1997, p. 495) has summarized the events in this era as “the period 1981-1990 produced different patterns of publication than in the previous period. The empirical research was more analytical and less descriptive; the normative models, which were a particular feature of the 1970s, were largely absent, but in their place was a significant development in the philosophical debate about the role of accounting in disclosing information relating to social and environmental accounting activities and, later, about the nature of environmental problems and the type of reporting which would assist a wider range of users”.

At the beginning of the 1990s, attention was moved from social issues disclosure to environmental issues disclosure (Roberts, 1991; Gray *et al.*, 1996; Gray, 2001). For example, Gray *et al.* (1996, p. 168) stated that “the 1990s saw a quantum increase in surveys and books on environmental reporting and accounting and professional accounting bodies and firms paid the subject increasing attention”. In addition, Deegan and Unerman (2011) stated that since the early 1990s, a number of large companies around the world have provided increasing amounts of information regarding their environmental performance by using a variety of reports.

In this regard, it can be said that there are some reasons for increasing the concern of the environmental disclosure issues, where the steady increase in the amount of environmental information may be attributed to the changing expectations of the community regarding the performance and responsibilities of business. In addition, management considers itself to be responsible for social and environmental performance of the companies along with its responsibilities relating to economic performance. Moreover, their accountability to a broad group of stakeholders is key in relation to not only their financial performance, but also their social and environmental performance (Deegan and Unerman, 2011).

1.2 Problem statement

The environmental disclosure practices have increased in the last two decades, where many companies have used environmental information to achieve certain benefits such as, building, maintenance or enhancing corporate reputation and gaining competitive advantage (Ali and Rizwan, 2013). Pramanik *et al.* (2008) confirmed that the disclosure of environmental information within the annual reports enables stakeholders to recognize the impact of the company's activities on the natural environment, thereby helping them in the process of decision-making. In addition, adoption of environmental policies by companies gives them a better chance to attract more attention from investors, where there are ethical and social considerations which should be taken into account when making investment decisions (Adams and Zutshi, 2004). Hence, there will be a growing demand from the investment community for the environmental information to be disclosed by companies (Solomon and Solomon, 2006). However, the failure of organizations to adopt social and environmental disclosure may lead to the possibility of exposure to a number of risks including the threat of increased regulatory control by national governments and international organizations, financial risks caused by pollution and large resource use and the damage that can affect the reputation of the organization (Gerbens-Leenes *et al.*, 2003).

In response, the CED has become the topic of many studies and much debate over the last years in order to study and analyse the information disclosed by companies (Tilt, 2001; Eugenio *et al.*, 2010). As can be seen by reviewing the previous studies, much of the research has been conducted in different regions of the world, where it can be said that the early and leading studies were carried out in developed countries such as the United States of America (USA), the United Kingdom (UK), Australia, and Western Europe (Ahmad and Sulaiman, 2004; Ismail and Ibrahim, 2009). In developing countries, most studies were undertaken in the context of newly industrialised countries such as Malaysia, Bangladesh, Portugal, India and China, and in some

African countries such as South Africa and Nigeria (Sen *et al.*, 2011; Uwalomwa and Jafaru, 2012). However, very few studies on environmental disclosure have been undertaken in the context of the Libyan industrial sector of any sort; leading to the assumption that non-disclosure of environmental aspects of the business operations would eventually have a remarkable impact on Libyan society at some point.

Indeed, and with particular relevance to the developing countries, there is an explicit need for CED as an incentive to attract investment (Solomon and Lewis, 2002), due to the presence of multinationals operating in these countries whose standards differ from developed countries (Gray *et al.*, 1996). Agosin and Machado (2005) argued that investment has been identified as a key determinant of economic growth in developing countries, especially if the domestic investments have failed to contribute to capital formation or, given the scarcity of domestic entrepreneurship, a need arises to nurture existing entrepreneurial talent. In this regard, Deegan (2002) indicated that to attract investment funds internationally 'ethical investment funds' are becoming an increasing part of the capital market; for example, the Dow Jones Sustainability Group Index. People responsible for rating particular organisations for the purpose of inclusion or non-inclusion within the fund's investment portfolio utilise information from a number of sources including information being released by the organisations themselves. Jenkins and Yakovleva (2006) confirmed that the social, environmental and ethical aspects of a company are more likely to be examined by investors before making an investment decision.

Therefore CED could be used as a tool to discharge accountability to investors through the enhancement of corporate transparency, improvement of corporate image and the provision of helpful information for investment decision making. CED can be provided with a drive to economic development, minimizing a firm's cost of capital and helping in warding off potential regulatory pressure (Gray *et al.*, 1995a; Gray *et al.*, 1996; Gray and Bebbington, 2001; Cormier *et al.*, 2005).

In Libya, for example, as a result of government decisions regarding the liberalisation of the economy and the lifting of sanctions, there has been a huge investment across a wide range of industries involving international partnership contracts (see section 4.4). Hence, Libyan construction companies need to develop a strategy to adopt attractive business plans and policies, which will attract more investment for their better well-being. High dependency on wide and foreign economic networks also requires corporations to follow global trends, and voluntary environmental reporting is one of them.

A five year plan was established prior to the recent crisis in Libya (2007-2011) to initiate this growth plan. This plan aimed to liberalize the economy from state control, and to support and stimulate the establishment of private projects, and build and develop the country's infrastructure (Ngab, 2009). As a result, the recent years have seen a huge investment in different areas including oil and gas sector, water projects, airports, ports, railways, new homes, hotels and resorts, in addition to an expansion in the granting of loans for housing construction, where more than 5 billion dollars were given for private home loans in 2006-2007 alone (Ngab, 2009). Consequently, the Libyan construction industry has made a major contribution to the economy, where it contributes 5.2% of the Libyan Gross Domestic Product (GDP), and it employs around 3.2 % of the total workforce (Ngab, 2009).

However, the construction industry is considered one of the least sustainable industries in the world where a large amount of non-renewable resources are used in construction (Willmott Dixon, 2010). As a result, the control of environmental impacts from construction has become a major issue to the public (Shen and Tam, 2002) especially given that this sector is a globally emerging sector, and a highly active industry in both developed and developing countries (Ortiz *et al.*, 2009).

Therefore, to achieve sustainable development, the environmental impacts of the construction industry should be reduced by implementing the principles of environmental management which includes using fewer natural materials, using materials with low environmental impact, green materials and applying renewable energies to reduce environmental loads, energy and water consumption (Ortiz *et al.*, 2009). In this regard, CED has become an essential aspect of business in society, particularly in terms of their contribution to achieving economic, social and environmental sustainability, where it seeks to balance the diverse demands of communities, and the imperative to protect the environment, with the ever present need to make a profit (Jenkins, 2004). Libyan construction companies should follow these procedures to stimulate sustainable development, in addition to penetrating foreign markets as good environmental performance, which is a critical factor to attract international investments thereby promoting well-being, social and economic development. In doing so, effective environmental disclosure should be provided through social and environmental accounting systems. If the industry had adequate environmental impact information about the business processes, this would help decision makers in dealing with resources for the business, and society would be aware of the performance of the businesses from the social and environmental perspectives (Deegan and Rankin, 1999), rather than the financial perspective alone.

However, Deegan and Unerman (2011) indicated that there are some limitations of conventional financial reporting to reflect the social and environmental impact of organizations, including a general lack of regulation in the area of social and environmental reporting, in addition to an absence of an accepted conceptual framework for social and environmental reporting. Consequently, there is much variation in how this reporting is being done in practice. Based on the notion of financial materiality, if anything is not judged to be material, it cannot be disclosed in the financial report. The most important limitation in financial accounting that is based on the definition of expenses, is that any impacts on resources that are not controlled by the entity (such as the environment) are excluded, except fines or other cash flow results. Moreover, in financial accounting, the focus is on the needs of those parties with a financial interest in the entity, thus the information that is provided consequently tends to be primarily of a financial or economic nature (Deegan and Unerman, 2011).

Conversely, the availability of environmental information is a very important matter in order to engage Libyan construction companies with considering the needs and wants of society. This is why environmental accounting may be seen as an important tool to supersede conventional accounting (while still having regard for the financial), in order to contribute in achieving sustainable development and to attract more investment for promoting well-being, social and economic development (Gray and Bebbington, 2001; Margolis and Walsh, 2003) where this context provides a rationale for this study. Therefore the research problem lies in the following statement:

CED is likely to have a role in addressing the challenges posed by sustainable development in Libyan society in general and in the Libyan construction industry in particular (Jenkins, 2004; Jenkins and Yakovleva, 2006). Furthermore, disclosing environmental information is crucial for Libyan construction companies to shake off a hitherto negative image among such investors (Cormier *et al.*, 2005; Jenkins and Yakovleva, 2006). However, in Libya the environmental disclosure is still voluntary (see section 4.5) and traditional financial accounting does not provide the appropriate framework to adopt environmental issues where accounting plays a role in measuring the financial performance of companies. This role remains absent or limited with regard to disclosure of the environmental impacts of companies (see sections 4.7 and 4.8).

1.3 Research questions

The above discussion raises two research questions:

- I. Do Libyan construction companies disclose any environmental information in their annual reports?
- II. What are the factors that may affect the adoption of environmental disclosure by Libyan construction companies?

In approaching these questions, there are a host of potential factors which have been suggested to use as a guide to understand and explain the evidence of the presence or absence of environmental disclosure practices in Libyan construction companies based on the theoretical framework of Hibbett (2004) (see section 3.4). A number of theoretical perspectives have been adopted by researchers to explain and justify the corporate social and environmental disclosure (CSED), these are agency, legitimacy, stakeholder, and political economy theories (Deegan, 2002). In this regard, there is no single conceptual framework to explain and interpret CSED practice (Bebbington *et al.*, 2008). In addition to the special nature of the economic and political system in Libya, (see chapter four) two theories have been adopted in this study, namely stakeholder theory and political economy theory, that may have an explanatory power to interpret the presence or absence of environmental disclosure practices in Libyan construction companies.

1.4 Research aim and objectives

Following the research questions identified above, the main aim of this study is to explore the current disclosure of environmental issues as carried out by Libyan construction companies in an attempt to explain the presence or the absence of CED practices. This study could contribute to the development of environmental disclosure which could underpin achieving sustainable development and attracting foreign investment; and promoting well-being, social and economic development. To achieve the main aim of the study, the following objectives have been formulated:

1. To determine the amount, type and methods of environmental disclosure of Libyan construction companies in their annual reports.
2. To critically review the reasons underlying the current environmental disclosure practices of Libyan construction companies.
3. To identify the financial managers' attitudes and beliefs of the Libyan construction companies towards environmental disclosure.
4. To examine the extent of the impact of the social, environmental and political and economic influences on CED.
5. To develop a framework for environmental disclosure in the Libyan construction industry.

1.5 Research scope and methodology

Choosing the methodology was adopted directly on the ontological, epistemological and human nature assumptions of the researcher. Based on research objectives, all philosophical assumptions indicated that the study generally adopts a middle-range position. Hence, this study takes a middle-range methodology between the nomothetic related with the deductive approach and the ideographic approaches associated with the inductive approaches where quantitative and qualitative research strategies will be used (for more details see chapter five). These strategies are based on the nature of the current study, which is descriptive and exploratory; as for the research objectives, there are different types of objectives which need different methods to achieve them. Therefore, three different strategies of enquiry were used in this study as follows.

The content analysis was used to achieve the first objective relating to determining the level of environmental disclosure of Libyan construction companies where a sample of annual reports over a period of five years for five largest companies was examined (for more details see chapter five).

The semi-structured interviews were undertaken in order to realize the second and third objectives to understand the phenomenon of CED. Hence, ten interviews were conducted during the period of August and September 2012. Interviewees included five financial managers, four Chiefs of departments of accounting and one Chief of accounting information department employed by the biggest five Libyan construction companies (for more details see chapter five).

The questionnaire survey was carried out in order to meet the remainder of the objectives including: to understand the factors that may affect adoption of the environmental disclosure and to develop a framework for the environmental disclosure in the construction industry in Libya. A representative sample of the users of the annual reports of Libyan construction companies has been collected, which includes four groups – academic accountants, government officials, bank credit officers and external auditors (for more details see chapter five).

1.6 The main research findings

The level of environmental disclosure of Libyan construction companies was very low, which indicates that the disclosure is still in its initial stages. The environmental information included all the categories, specially the environmental policies, representing about 53% of the total disclosure. In addition, two types of information were disclosed (positive and negative), where one first most widely used represented 83.4% of the total disclosure. Financial, quantitative, and

qualitative methods were used by companies, the most widely used were the qualitative, which represented 58.4% of the total percentages of the used methods (for more details see chapter six).

The vast majority of financial managers stressed that environmental protection is the responsibility of the company's management, because that is part of its social responsibilities, hence they believe that the task of preparation and dissemination of environmental information should be undertaken by the management of the company. However, their perceptions revealed a number of reasons that prevented them adopting CED. The most prominent of these identified by financial managers are absence of environmental awareness, lack of demand for environmental information and a dearth of academic research. Similarly, managerial perspectives reveal that the absence of environmental disclosure is mainly due to lack of civil society organizations and avoiding any accountability by the public or government (for more details see chapter seven).

The majority of the users of the annual reports believed that the lack of academic qualifications and practical experience affect negatively on environmental disclosure. Also, they strongly support that academic research is an important part of developing environmental disclosure. Moreover, the majority of them believed that there is a lack of public knowledge of environmental issues which is the most frequent explanation given for non-disclosure. However, the teachings of the Islamic religion may encourage companies to disclose the damage to the environment according to the viewpoint of the majority of the participants. In addition, the majority of participants firmly asserted that there is insufficient legislation in Libya regarding the environmental disclosure. Hence, the majority of respondents were supportive of mandatory environmental disclosure, which should be introduced by the government. Furthermore, a substantial number of respondents perceived that environmental disclosure appears as a criticism of government policy and hence companies may eschew the dissemination of environmental information (for more details see chapter eight).

1.7 Importance of study

The significance of this study therefore lies in providing a comprehensive analysis of the internal and external factors that may affect CED in the Libyan context. This is achieved by investigating the opinions of managers and the users of the annual reports of Libyan construction companies, to interpret the absence or presence of environmental disclosure in accordance with stakeholder theory and political economy theory.

Hence, this research is concerned primarily with attempts to explain how to develop environmental disclosure, which could underpin achieve sustainable development and attracting foreign investments, promoting well-being, social and economic development. In addition, the findings of the study may be used by the government and independent accounting bodies as a guide to set policies and standards that would develop environmental disclosure in the future. Moreover, the Libyan construction companies could benefit from the findings of this study for future implementation of necessary procedures that could enhance environmental disclosure. Finally, this study provides ideas to conduct further studies in the field of environmental detection.

1.8 Limitations

This thesis has several limitations: the first limitation is that the study was limited to the construction sector in Libya which impacts on the potential to create a generic template for other industries.

Secondly, this study has used the annual reports of Libyan construction companies to identify the present state of CED, while there are other means which can be used to disclose environmental information.

Thirdly, the limitations relate to restricted access to data considered to be confidential or poses a potential threat by competitors. Furthermore, there were misconceptions as to what constituted an annual report. The researcher experienced difficulties in retrieving responses because of negative preconceptions about the research and also experienced difficulties in the logistics of collecting feedback.

1.9 Structure of thesis

This thesis is divided into nine chapters as shown in Figure 1.1. The current chapter introduces this study in aspects of research background, problem statements and research questions, research aim and objectives, research scope and methodology, the main research findings, limitations and structure of the thesis. The second chapter reviews the CED, where it focuses on the meaning and emergence of environmental disclosure and reporting. In addition, it provides an overview of the prior research relating to environmental disclosure. The third chapter discusses the theoretical framework. In chapter four, the environmental factors have been reviewed in order to understand how these factors affect the application of CED. Research methodology is outlined in chapter five. Chapter six presents analysis of the annual reports of

Libyan construction companies in order to investigate environmental disclosure practices. Chapter seven provides analysis and discussion of the data collected by semi-structured interviews to elicit the perceptions of financial managers regarding CED. Chapter eight: presents the descriptive statistical analyses and discussion of findings obtained by the questionnaire to examine the extent of the impact of social, political and economic environment on CED. Finally, chapter nine displays the conclusions based on the empirical findings of the study as well as interpretation of the absence or presence of environmental disclosure in the Libyan context. In addition, it presents the contributions of study and the most important recommendations to promote environmental disclosure of Libyan construction companies. Limitations of study and the suggestions for future research are shown at the end of the chapter.

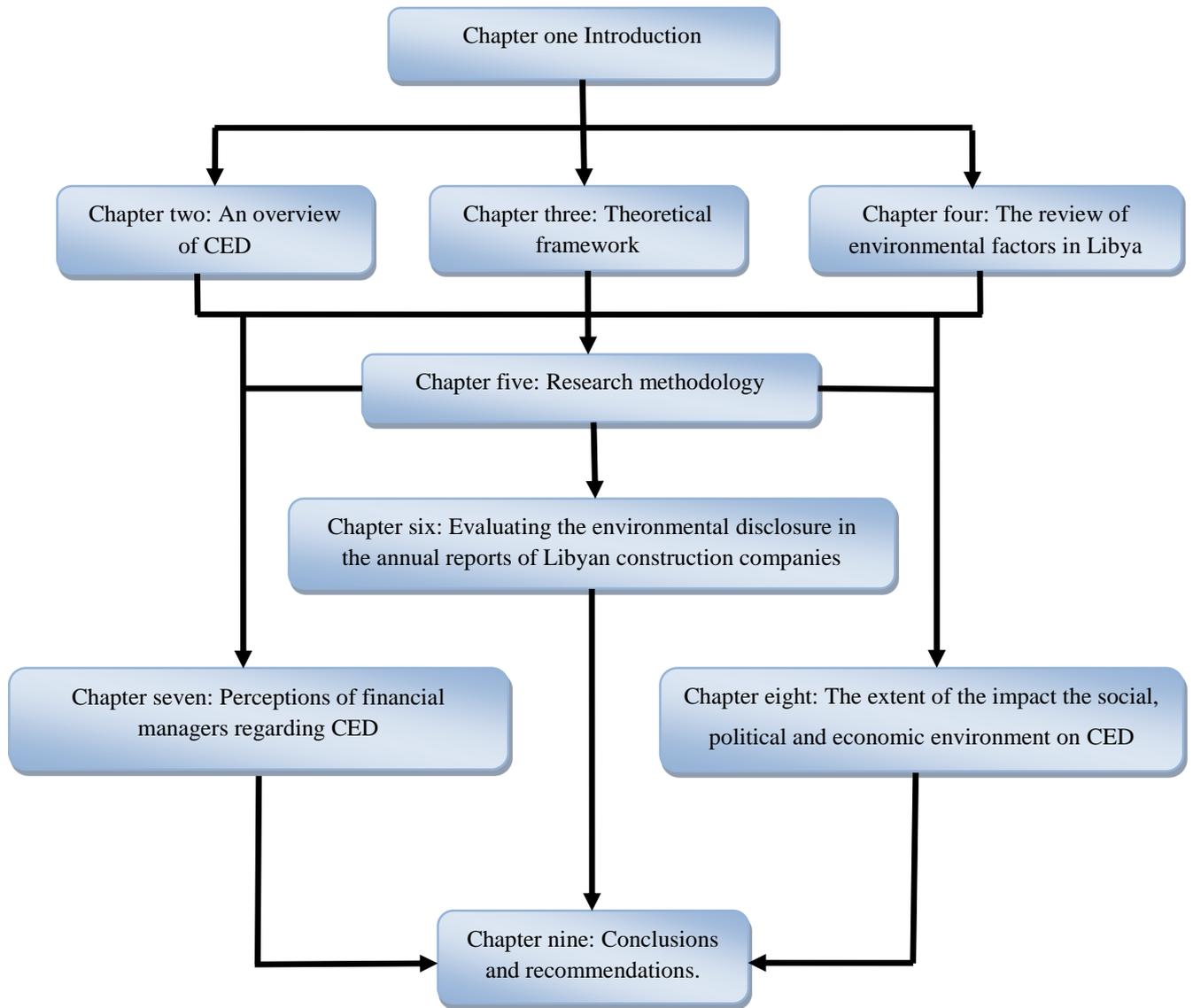


Figure 1.1 Structure of thesis

CHAPTER TWO

An overview of corporate environmental disclosure

2.1 Introduction

Corporate environmental disclosure (CED) has become the topic of many studies and much debate since the 1980s regarding the divulgence of information by companies. Many studies have examined the nature and patterns of CED including a variety of explanatory factors that influence CED practices (Tilt, 2001; Gao *et al.*, 2005; Eugenio *et al.*, 2010). There is a wide range of literature asserting that environmental disclosure is an important phenomenon used by companies to achieve a variety of purposes (Gray *et al.*, 2001). Lodhia (2001) argued that environmental disclosures is not a traditional or habitual phenomenon where it varies from country to country and sector to sector, in addition, it is interpreted by different theoretical frameworks. This chapter aims to review and discuss the previous studies to identify any significant gaps in CED literature as a justification for undertaking this study. In addition, it provides background material regarding different theoretical frameworks and methodological choices followed in these studies to provide the basis for the researcher to deal with the issues which will be raised in chapters 3 and 5. This in turn leads to achieving the research objectives outlined in chapter 1, section 1.4 via conducting the empirical investigation for CED aspects in chapters 6, 7 and 8.

The chapter is structured as follows, the first as an introduction, the next section explores the concept of CED and its elements. Section 2.3 discusses the categories of CED. The potential benefits of disclosing environmental information are illustrated in section 2.4 whilst previous studies are reviewed in section 2.5. In section 2.6, the discussion of the previous studies is presented and the chapter is summarised in section 2.7.

2.2 Definition of corporate environmental disclosure and its elements

It can be said that accounting is the language of business, where it provides information regarding the economic performance of a company to all interested parties (Belkoui, 2004), and that the accounting disclosure in corporate annual reports has become the means of decision making (Abdullah and Ismail, 2008). In this context, accounting disclosure can be defined as “the provision of financial and non-financial information, on a regular basis, to those interested in the economic activities of an organization; the information is normally given in an annual report and accounts, which includes financial statements and other financial and non-financial information,

the annual report and accounts of a limited company are regulated by company legislation, accounting standards, and, in the case of quoted company, by stock exchange regulations” (Hussey, 1999 cited in Ellabbar and Havard, 2005, p. 675). However, traditional accounting does not provide a proper basis for addressing environmental issues (Gray and Bebbington, 2001). In this regard, Schaltegger and Burritt (2000, p. 77) stated that “in general, accounting systems do not reflect environmental impacts caused directly or indirectly by a company”. In other words, to address environmental issues, an accounting system should be developed to provide information regarding the environmental performance (Gray and Bebbington, 2001). Nevertheless, accounting has been developed to include environmental matters such as environmental pollution and environmental litigations, as a result of the company's commitment to its responsibility towards society, including rehabilitating and training the human resources, in addition to protecting and repairing the natural environment (Margolis and Walsh, 2003). As part of corporate social responsibility (CSR), environmental information has been provided by a large number of companies in developed countries. Deegan and Rankin (1996, p. 51) argued that “environmental disclosures constitute part of what frequently are labelled social responsibility disclosures. Social responsibility disclosures can include, among other things, disclosures relating to the interaction between an organization and its physical and social environment, inclusive of disclosures relating to human resources, community involvement, the natural environment, energy, and product safety”.

Generally, the social and environmental disclosure “can typically be thought of as comprising information relating to a corporation's activities, aspirations and public image with regard to environmental, community, employee and consumer issues” (Gray *et al.*, 2001, p. 329).

Briefly, environmental disclosure has been defined as “those disclosures that relate to the impact company activities have on the physical or natural environment in which they operate” (Wilmshurst and Frost, 2000, p. 16).

Also, Toms (2002, p. 269) added that “environmental disclosures are direct or indirect statements about the impact of the company's activities on the environment”.

In an in-depth manner, Hibbitt (2004, p. 18) offers a definition of CED as “the external communication of environmental, health and safety and energy issues relating to the policies, undertaking and beliefs of an organization through company-wide reports which are placed in the public domain on a regular and continuing basis”.

In keeping with Fun (2002, p. 9), CED has been defined as “the process of communicating externally the environmental effects of an organisation’s economic actions through the corporate annual report or a separate stand-alone publicly available environmental report”.

Recently, environmental disclosure has been considered as part of (CSR), where the information regarding the interaction of the organization with its physical and social environment should be provided to a range of stakeholders such as the information relating to the health and safety of workers and the use of natural resources (Deegan and Unerman, 2011).

Premised on previous definitions of CED, the following definition is formulated for the purposes of this study:

Corporate environmental disclosure is, providing the information regarding the environmental issues to interested groups in society through the annual reports of companies.

Based on the above definition, the following points are discussed.

Regarding the sources of data, there are many types of media that can be used to disclose environmental information, such as annual reports, environmental reports, advertisements, booklets, brochures, labelling of products, newsletters, press releases, supplements to the annual report, video tapes, and websites (Gray *et al.*, 1995b; Jenkins and Yakovleva, 2006; Zeghal and Ahmed, 1990).

In this regard, annual reports are the most important source adopted by companies to provide environmental disclosures (Wiseman, 1982; Tilt, 1994; Cormier *et al.*, 2004). The information, supplementary to the organization’s financial reports in the annual reports, is an important source and the most widely used by companies (Tri Setyorini and Ishak, 2012). Moreover, Deegan and Rankin (1997) added that the annual report has been considered by annual report users such as employees, lenders, creditors, suppliers, investors and government to be an important source of environmental information. Therefore, in the present study, the annual reports of Libyan construction companies have been adopted to determine the level of environmental disclosure practices.

Regarding the users of the annual reports, Sarapaivanich (2003) indicated that the company’s annual reports are usually used by accountants to present the financial and non-financial information to all interested in the economic activity of companies. The users of annual reports, as defined by Alexander and Britton (1996), include the present and potential investor groups, such as shareholders; loan creditor groups which have used the accounting information to decide whether to lend to the company and on what terms; employee groups; business contacts including

customers and suppliers; the government such as tax authorities and local authorities; the public, including political parties; environmental protection; and the analyst adviser groups such as researchers and stockbrokers. In this study, four different groups of the users for the annual reports in Libya have been chosen to consider their opinion regarding the CED.

Alternatively, environmental information could be classified into two types, mandatory and voluntary (Gray *et al.*, 1995a). Voluntary disclosures can be defined as “information disclosed in the company’s annual report in excess of requirement which represent free choices of the company’s management in order to provide the users with the information related to their decision making” (Zhou, 2008, p. 14). In contrast, mandatory disclosure is the divulgence of environmental information in the annual reports in order to comply with environmental regulations over the reporting period (Cowan and Gadenne, 2005).

It can be said the voluntary disclosure has been adopted by companies to legitimize their operations in the society more than to meet the users ‘right to know any information regarding the organisation (Guthrie and Parker, 1989; Deegan and Rankin, 1996; Wilmshurst and Frost, 2000; O’Donovan, 2002). Eng and Mak (2003) indicated that to satisfy outside shareholders, the company will provide voluntary disclosure. Dye (2001, p. 184) added that “any entity contemplating making a disclosure will disclose information that is favourable to the entity, and will not disclose information unfavourable to the entity”. Therefore, mandatory disclosure compared to the voluntary disclosure enables users to get more information on the actual performance of the company where the rules and regulations concerning disclosure should be followed by the company (Cowan and Gadenne, 2005). Indeed, there are principle factors which may have an effect on adopting the voluntary or mandatory disclosure by companies, such as the nature of the externality associated with disclosure, the company's attitude towards existing shareholders and the potential investors (Dye, 1990). Buhr and Freedman (2001) conducted a study to explore the role of cultural and institutional factors in the company's decision to adopt mandatory and voluntary disclosure by comparing environmental disclosure produced by Canadian and US companies. The results indicated that Canadian culture and institutional infrastructure is more conducive in producing a greater level of voluntary environmental disclosure. However, the US companies have provided more of the mandatory environmental disclosure because the US is a more litigious society.

According to Jorgensen and Soderstrom (2006) in most of the world, environmental disclosure is still voluntary where it is developed through voluntary standards such as the Global Reporting

Initiative. Voluntary environmental disclosure may include one of the following elements: monetary information such as the amounts that have been spent on research to explore alternative sources of energy, non-monetary quantitative information such as the levels of emissions, and the descriptive information such as the results of environmental auditing (Buhr and Freedman, 2001).

However, some countries (Denmark and the United States of America (USA) and Canada) have started to issue legislation in order to compel companies to disclose environmental information. For instance, in USA, the present and future capital expenditures for environmental protection must be disclosed. Also in Canada the disclosure of site restoration costs are required by Canadian GAAP (Buhr and Freedman, 2001).

2.3 Categories of corporate environmental disclosure

The various types of environmental information are used to explain and illustrate the environmental policies of company in addition to disclosing the organization's effect on the nature environment (Jenkins and Yakovleva, 2006).

Indeed, the first definition of the categories of environmental disclosure came from the survey of Ernst and Ernst (1978), which have been adopted by many recent studies for example Uwalomwa and Jafaru (2012), where the environmental issues have been considered as one of the main categories of corporate social disclosure (CSD), including pollution control; prevention or repair of environmental damage; conservation of natural resources; and other environmental disclosures.

Another proposal has been presented by Gray *et al.* (1995b) regarding the categories of environmental disclosure which have been used by a number of studies such as Jenkins and Yakovleva (2006). These included environmental policy; environmental audit; waste, packaging, pollution, sustainability; health and safety; and other environmental issues.

Consequently, most of the previous studies have adopted general and grouped categories of information to evaluate the environmental disclosure such as the products and processes, health and safety, environmental policies, energy conservation, energy efficiency and sustainability for example Gray *et al.*(1995a), Gray (2000), Gray and Bebbington (2001), Hibbitt (2004).

However, some studies have adopted small groups and detailed information. For example Deegan and Rankin (1996) investigated the environmental reporting practices based on information relating to the organizations' interaction with the environment, such as the

installation of environmentally friendly machinery; undertaking site rehabilitation; recycling activities; admission of pollution emissions; and incurring of fines relating to environmental misdemeanours.

This difference refers to the absence of definite rules concerning form and content of the environmental information; this is due to the fact that environmental disclosure is still voluntary in most countries (Azzone *et al.*, 1996). Niskanen and Nieminen (2001) stated that because of the absence of regulation, the objectivity of environmental information released by firms has frequently been questioned.

In this regard, several attempts have been made in recent years to provide a systematic framework to be served as a guide in order to help organizations to disclose their social and environmental performance (Azzone *et al.*, 1996; Deegan and Unerman, 2011). For example, in 1999, Accountability framework (AA1000) for the standards, guidelines and professional qualifications was provided by the Institute for Social and Ethical Accounting (ISEA). It aimed to improve the quality of social and ethical accounting, auditing and reporting through determining the information needs, these may include: the organisation's values and governance, its regulations and controls, its operations, the impact of its products / services and investments, its impact on other species and the environment, human rights issues, labour and working conditions issues, and supply chain issues (ISEA, 1999).

Another framework is the Global Reporting Initiative (GRI) which provides guidelines for the reporting of an organisation's economic, environmental, and social performance (GRI, 2002). These relate to the assessment of the social and environmental performance of the organisation GRI (2011) using the following indicators: energy, water, emissions, effluents, waste, biodiversity, environmental compliance, labour practices, human rights, and product responsibility.

For the purposes of this study, an intensive review of previous studies, international standards and guidelines and the Libyan environmental legislations has been conducted in order to determine the suitable categories of environmental information to evaluate the environmental disclosure in annual reports of Libyan construction companies, Roberts (1991), Gray *et al.* (1995b), Deegan and Rankin (1996), Williams (1999), Belal (2000), Raar (2002), Ahmad and Sulaiman (2004), Rizk *et al.* (2008), Ahmad and Mousa (2010), Sen *et al.* (2011), Uwalomwa and Uadiale (2011), Uwalomwa and Jafaru (2012), Ahmad and Mohamad (2013), ISEA (1999), GRI (2002), General People's Congress (2003). These categories are disclosures relating to

environmental policies, products and processes, health and safety, energy, and others (see Appendix one, A).

2.4 Benefits of corporate environmental disclosure

The accounting information is becoming more important to the business community in making decisions (Abdullah and Ismail, 2008). In this context, the accounting disclosure of the environmental matters of the business organizations has become the essential element of corporate disclosure practice, due to the growing interest in the natural environment in recent years (Deegan and Rankin, 1999, 1997). Based on a former study conducted by Deegan and Rankin (1997), in order to investigate the perceptions of annual report users regarding the extent of the usefulness of environmental information to make decisions, the findings indicated that the environmental information was considered to be important for making decisions. Pramanik *et al.* (2008) confirmed that the disclosure of environmental information within the annual reports enables stakeholders to recognise the impact of the company's activities on the natural environment, thus, it may help them in the process of decision-making.

In addition, according to Deegan and Rankin (1999), the identification and assessment of environmental information is the key element in the decision-making process. In this regard, environmental information could be used to make decisions for investment, borrowing, and distribution of companies' products. It can also be used in the production process and to allocate labour and other resources to the company as well as determining whether society will support the companies. Consequently, if the environmental information is deficient or misleading, the decisions made may be different to decisions made based on more convenient information (Deegan and Rankin, 1999). However, De-Freitas (2003, p. 47) argued that "Environmental information in a variety of forms is now widely available, especially electronically via the internet, but the generation of information alone is not sufficient for business planning and decision-making. Information has to be delivered to end-users, processed and then put in a user-friendly form relevant to them. Moreover, end-users must have the incentive, technical skill and intellectual capacity to use the information effectively".

Furthermore, environmental disclosure can be used by companies as a tool in order to legitimize activities which may adversely affect the natural environment (Patten, 2002; Cho and Patten, 2007). For example Patten (2002, p. 772) stated that "worse environmental performance is associated with greater environmental disclosure supporting arguments that the level of social disclosure is a function of the exposure a company faces to the social/political environment". In

contrast, other authors, for example, Ingram and Frazier (1980), Wiseman (1982), Fekrat *et al.* (1996) have another point of view: that the relationship between environmental disclosure and environmental performance does not exist and therefore the environmental information is not used as a legitimizing tool to justify the organization's operations. In addition, the disclosure of environmental performance in annual reports by companies has enhanced their environmental reputation, which has been influenced by the implementation and monitoring of environmental strategies (Toms, 2002). Ferreira *et al.* (2008) emphasized that companies who provide environmentally-friendly products may improve their reputation through enhanced image and gained popularity with the public. However, the disclosure of information about environmental performance by companies with weak financial performance may not lead to the enhancement of their environmental reputation to creditors and suppliers (Cormier and Magnan, 1999). In other words, there are some intangible benefits resulting from the dissemination of environmental information, such as improving the image of the company, which are difficult to be measured quantitatively (Bernhut, 2002; Adams and Zutshi, 2004). According to Adams (2002, p. 234) “the reason for the increase in the number of companies producing environmental reports since the early 1990s is not regulation or public pressure. The main objective is to improve corporate image with customers, state authorities, journalists and the press”. Adoption of environmental policies by companies makes it more likely that investors will realise that there are ethical considerations and social implications which should be taken into account when making investment decisions; therefore, this means that if the company is responsible to the community for social and environmental impacts, its financial returns will be increased from obtaining more funds (Adams and Zutshi, 2004). Evidence has been provided by Solomon and Solomon (2006) that there is a growing demand from the investment community for the environmental information that is disclosed by companies.

According to the view that environmental disclosure is the most important element of CSR (Gray and Bebbington, 2001; Hibbett, 2004), the debate regarding the benefits of environmental disclosure could be revealed in the studies which have addressed the benefits of CSR disclosures, for example, Idown and Towler (2004, p. 423), who mentioned some benefits including “increased customer loyalty, more supportive communities, the recruitment and retention of more talented employees, improved quality and productivity and the avoidance of potential reputational risks which may arise from environmental incidents”. In other words, when the company is responsible to the community for social and environmental impacts, this helps it to achieve several benefits (Adams, 2002; Bernhut, 2002).

Based on the previous discussion (see section 2.4) about the benefits that can be achieved as a result of disclosing information relating to environmental issues, the most important benefits can be summarized in the following points:

- 1- Environmental information has been considered to be important in making decisions.
- 2- Environmental disclosure can be used by companies as a legitimizing tool in order to legitimize its activities, which may adversely affect the natural environment.
- 3- The disclosure of environmental performance in annual reports by companies has enhanced their environmental reputation, which has been influenced by the implementation and monitoring of environmental strategies.
- 4- The dissemination of environmental information serves to improve the image of the company, which is difficult to measure quantitatively.
- 5- Organizations that disclose information relating to environmental issues, are more likely to benefit from 'green' funders who seek to invest only in environmentally sensitive organisations.

2.5 A review of corporate environmental disclosure studies

As stated in section 2.1, there is an increase in the academic writings and publications regarding social and environmental issues. According to Mathews (1997), Deegan (2002), Parker (2005), Parker (2011) who have examined the social and environmental disclosure in the leading journals in the field of social and environmental accounting, they found that environmental issues receive the most attention. Based on the study of Parker (2011) who investigated the leading journals in the field of social and environmental accounting that were published between 1988 and 2008, the results indicated that, the environmental issues have been addressed by the largest proportion of papers (54%) as shown in Figure 2.1, while 26% of them focussed on the social responsibility issues, and 20% studied both areas.

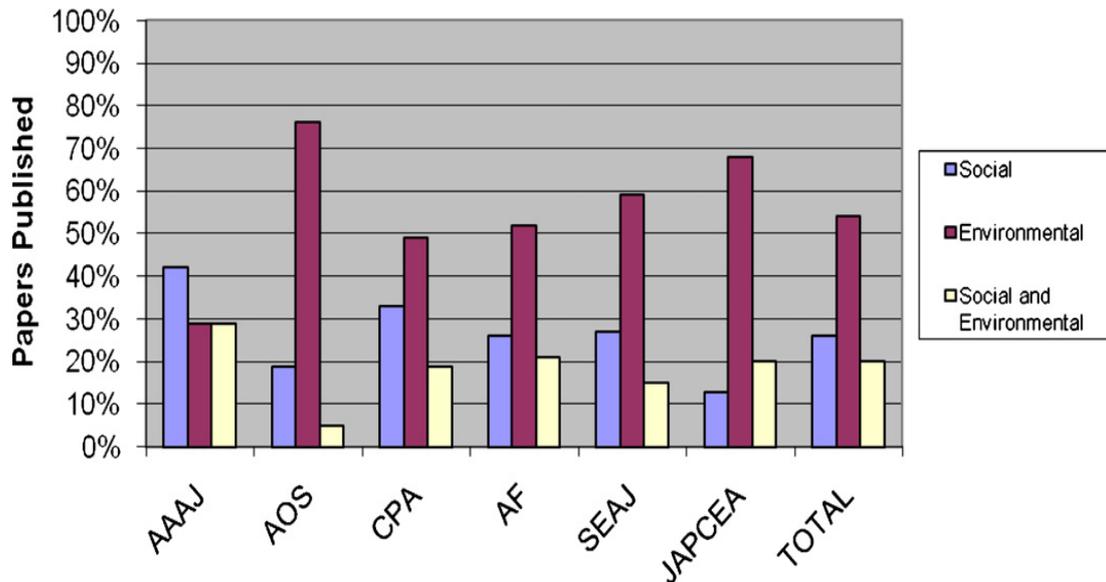


Figure 2.1 The social and environmental accounting research 1988-2008 (Parker, 2011)

Indeed, there are many different aspects of social and environmental disclosure which were taken up by the researchers in previous studies for instance, external disclosure, corporate attitudes, market reactions, national practices and regulations, ethical issues, and environmental audit (Parker, 2005; Parker, 2011).

However, Deegan (2002) argues that the factors that affect social and environmental disclosure or the management motivations for social and environmental disclosure is the first area that was given the most attention by researchers.

For the purposes of the current study, the former studies that related to the research objectives can be classified into four groups including studies examining the level of CED; studies identifying the attitudes and beliefs of management towards environmental disclosure, studies determining reasons underlying the environmental disclosure practices; and studies concerned with the external influence on CED.

2.5.1 Determining the level of corporate environmental disclosure

This section deals with the previous studies related to determining the level of CED in developed and developing countries. The first objective of the study outlined in chapter one forms the main theme of this section where these studies are presented from oldest to newest as follow:

A large sample of European companies have been examined to determine level and to the type of disclosed information. The annual reports and accounts for 1988 or 1989, of 110 companies have been investigated based on a checklist of 54 specific items which was designed, based upon

both the items contained in an earlier study of Roberts (1990) and an initial analysis of the information contained in a number of reports from each country. The results indicated that most companies have discussed some environmental information in their reports where the highest level of disclosure is found in the German reports, followed by Swedish (Roberts, 1991).

More specific items including product, and the use and conservation of energy have been evaluated to determine environmental disclosure in annual reports of a sample of thirty British companies. The annual reports of 1990 were analysed using content analysis (the number of pages). In addition, the financial, non-financial and narrative methods have been used to determine the form of disclosure. The results indicated that, despite the lack of detailed environmental information in the annual reports, there is a general increase in the level of disclosure compared to previous years. The majority of companies provided descriptive information regarding some environmental aspects of their business. In addition, the positive news was the dominant feature on the types of environmental information, disclosed in annual reports of companies (Harte and Owen, 1991).

Using legitimacy theory to explain any systematic changes in CED, the annual reports of twenty Australian companies during the period from 1990 to 1993 have been investigated. Content analysis was used to determine the amount of environmental disclosure, where the number of words was adopted as a unit of measurement, small groups and detailed information were included as categories for disclosure. The results revealed that the majority of companies provided environmental information in a descriptive manner, and that predominantly was positive. In addition, the environmental information was found in a number of places within the annual report, including the directors' report, the section relating to the groups' activities, the section relating to community relations, and the separate section devoted to the environment. Furthermore, the results indicated that companies avoid mentioning proven fines that could cast a negative image, so tend to focus on positive environmental policies in order to legitimize their operations (Deegan and Rankin, 1996).

In the same country, a cross section of annual reports for fiscal year 1991 of 197 companies was analysed using content analysis (the number of words). The results indicated that the level of environmental disclosure is low, where the average of disclosure was 186 words, which were mostly positive (Deegan and Gordon, 1996). In the same study, to determine the trend of environmental disclosure over time, a sample from the annual reports for the year 1980, 1985, 1988 and 1991 of 25 companies that came from different industries was investigated. The researchers observed that the amount of disclosure has increased over time accompanied by a

similar increase in the number of members belonging to the environment protection associations (Deegan and Gordon, 1996).

Similar results are found, but in the framework of developing countries. A total of 30 annual reports for 1996 of various Bangladeshi companies were examined using content analysis, where the average number of lines were used to measure the amount of disclosure. Five themes including expenditure on energy, tree plantation and afforestation, future strategy, safety related issues, and environmental protection were used to determine the quantity of the disclosure (Belal, 2000).

Using the same methodology, different results were achieved. Monetary, non-monetary, and qualitative methods were used to measure quality of voluntary environmental disclosure. In addition, eight categories including key indicators are broken down into: profile, policies, external relations, management performance, occupational health and safety, product performance and sustainability used to determine the quantity of the information disclosed in the annual reports. The quantity of environmental information has increased, particularly in certain categories including the firm's profile, external relations and product performance. The results also indicated that information disclosed is mostly descriptive. However, there are indications that the companies have the intention to adopt the monetary and quantitative methods, in order to support the qualitative information (Raar, 2002).

Contradictory to the above studies, the mandatory environmental disclosure was investigated alongside with voluntary disclosure. The annual reports of Australian companies over three consecutive years during the period 1998 to 2000 were examined by using content analysis. The results revealed that Australian companies have a tendency to disclose higher levels of positive environmental information in the voluntary sections of the annual report, than in the mandatory sections (Cowan and Gadenne, 2005).

In an attempt to explain the extent and nature of the environmental disclosure Ahmad and Sulaiman (2004) examined the environmental disclosure of Malaysian industrial and construction companies in light of legitimacy theory. Content analysis was used to determine the amount of environmental disclosure, where the number of sentences was adopted as a unit of measurement. The environmental information was measured based on monetary and non-monetary methods, good, bad and neutral news, and environmental audit and environmental policy. The findings indicated that the level of environmental disclosure in Malaysia seems low, where most of the companies (72.46%) do not disclose any environmental information, while some of them (27.54%) have disclosed some information. The disclosing companies provided

general, neutral and declarative information which was located in different parts of the annual report. Moreover, findings show some limited support for legitimacy theory in explaining the nature of disclosure, as well as the reasons for the disclosure.

Contrasting results have been proven in the study conducted by Rizk *et al.* (2008) in Egyptian companies of nine high pollution industries, for fiscal year 2002. The findings indicated that the companies owned by the private sector provide more disclosure of social and environmental information in their annual reports, while the public sector companies present less information. This result can be explained by legitimacy theory where an increase of environmental disclosure by private companies is a strategy employed by Egyptian organizations to ensure/maintain their organizational legitimacy.

By using a different theoretical perspective, Ahmad and Mousa (2010) examined the CED practices, for the 18 largest industrial companies quoted on Industrial and Mineralisation Secretary in Libya. Using the content analysis technique, the reports of companies during the period 2001- 2007 were investigated. The findings indicated that the level of CED within Libyan companies increased slightly, the authors suggest that the change in disclosure may be due to the establishment of the Libyan Stock Market and issuance of the Libyan environmental law. This result can be explained by political economy theory that compels companies to provide relevant data to the central authorities. Consequently, bad news was the dominant feature on the types of environmental information as required by the central authorities.

By using legitimacy theory, a further contribution was offered by Uwalomwa and Uadiale (2011) who determined the level of corporate social and environmental disclosure (CSED) among companies in the brewery and building material industry in Nigeria. The annual reports of ten companies for the period 2004-2008 which came from two major industries were investigated by using content analysis. Legitimacy theory has been used to interpret potential difference in the level of CSED between the selected industries. The level of social and environmental disclosure has been found very low and is still at its initial phase.

Using the same procedures to analyse the annual reports of companies, Sen *et al.* (2011) evaluated the existing status of environmental disclosure practices in Indian companies. The findings indicate that all the environmental disclosure themes were reported in a descriptive manner, in the directors' report, while some of them were disclosed in the chairman's speech section. However, the environmental disclosure is incomplete in terms of lack of coverage of most of the environmental themes included in the study. In addition, Indian companies disclosed positive or neutral information.

In line with the above study Zamir *et al.* (2012) found that the amount of disclosure by Pakistani companies has increased, ascending over a period of five years. Descriptive information was the dominant character to environmental disclosure, where the environmental policy was the category most mentioned in the annual reports.

By using stakeholder theory Uwalomwa and Jafaru (2012) examined the CED practices of Nigerian companies listed in the Stock Exchange. Using the content analysis method, the annual reports of companies manufacturing industries for the year 2011 were investigated, where the number of sentences was adopted as a unit of measurement. The study concluded that most of companies provide general information related to products and consumers, employees and community involvement, which was mostly positive and monetary. The Chairman's Statement and Operations Review sections of the annual report have been used by a large proportion of companies as a location to disclose the environmental information. In addition, the findings emphasized that CED has been provided by Nigerian companies to improve their image rather than to meet stakeholders' information needs.

Recently Ahmad and Mohamad (2013) examined the extent and quality of environmental disclosures in Malaysian construction companies. The annual reports of 2009 of the 49 companies were analysed using content analysis, where the number of sentences was used as a unit of analysis. Eight themes including governance structure and management systems, credibility, environmental performance indicators, environmental spending, green building initiatives, vision and strategy claims, environmental profile, and environmental initiatives were used to determine the quantity of the information disclosed in the annual reports, which were measured by using monetary and quantitative methods. The results of their study revealed that Malaysian construction companies do not provide complete and comprehensive environmental information. However, some good news and declarative sentences indicate the existence of an environmental disclosure.

2.5.2 Attitudes and beliefs of management towards environmental disclosure

This section deals with the previous studies related to identifying the attitudes and beliefs of management, towards environmental disclosure in developed and developing countries in order to provide the basis for the researcher to deal with the issues that are investigated in the third objective. These studies are presented in chronological order from oldest to newest as follows.

Bebbington *et al.* (1994) explored the attitudes of accountants regarding the environmental accounting practices, identifying the reasons for its presence or absence. A postal questionnaire

was sent to the largest companies in the United Kingdom (UK) (as listed at the time by the most recent The Times 1,000), where the finance directors were targeted; only 181 usable questionnaires were received. The findings indicated that accountants have low levels of involvement in their company's environmental activities, where despite their positive attitudes towards environmental issues, they are unable to translate this into practice within company.

Similar results are found in a study conducted by Jaggi and Zhao (1996) examining the attitudes of managers of Hong Kong companies regarding the importance of environmental performance and disclosure. A questionnaire was sent to a total of 100 companies, where Chief accountants were targeted, only 28 questionnaires were returned. The results of study revealed that the managers' attitudes were positive toward environmental performance as well as disclosure, where they believe that the company will have a better image if it discloses environmental information. However, based on the investigation of the annual reports of all sample companies, they have low level of environmental disclosure which does not reflect these positive attitudes.

Using legitimacy theory Wilmshurst and Frost (2000) examined the management attitudes regarding specific factors in the decision to disclose environmental information, and whether they were consistent with the actual environmental disclosure. The survey targeted the chief finance officers of environmentally sensitive Australian companies. In addition, the content analysis (number of words) was used in this study to determine the actual environmental disclosure in the annual reports of selected companies. The results indicated that different levels of importance have been given for the factors that may impact on the decision to disclose environmental information, where the right of shareholders or investors to obtain the information, legal obligations, community concerns and due diligence requirements were considered the most importance factors. Regarding the relationship between the level of importance given to these factors and the actual environmental disclosure practices, the authors concluded that this study provides limited support for the applicability of legitimacy theory as an explanation for the decision to disclose environmental information.

Another study investigated the attitudes of different categories of accountants towards social and environmental accounting issues in Thailand. The interviewees and the questionnaire respondents agreed that the social and environmental information may help to make decisions, in addition they think that social and environmental accounting would become important in the future (Kuasirikun, 2005).

Similarly, Ahmad *et al.* (2005) observed that accountants in Malaysia considered environmental disclosure in annual reports to be an important issue. In addition, generally the accountants have

accepted the view that they have a role in helping companies to disclose the environmental information, however, they think that they are not the main player in this issue.

Furthermore, Bhattacharyya (2011) examined the attitudes of managers regarding social and environmental accountability in an Indian context. The questionnaire was sent to a sample of 65 organisations that was selected randomly from the pharmaceutical and biotech industry where the top and middle level managers were targeted. The results showed a positive attitude towards environmental accounting amongst the sample of managers. With respect to environmental attitudes, the results indicated that respondents exhibited strong environmental support favouring specific issues concerning environmental accountability such as, adopting international standards for an environmental management system and reporting of compliance with environmental regulations.

Recently, Salehi *et al.* (2011) examined the attitudes of managers regarding the environmental disclosure of Iranian companies. A total of 72 questionnaires were distributed among the active firms of the Tehran Stock Exchange. This study revealed that, although the attitudes of managers were positive, they expressed their desire to disclose the environmental information of their expenses. However, they believed that there are a number of obstacles preventing the achievement of that including: an absence of legislation, lack of scientific qualification and practical experience in this area, and deficiency of awareness among managers about the matter fully, including the standards, regulations and the ways to reduce pollution.

2.5.3 Reasons for absence of environmental disclosure

This section deals with the previous studies related to identifying the reasons underlying the environmental disclosure practices in developed and developing countries in order to provide the basis for the researcher to deal with the issues that are investigated in the second objective. These studies are presented from oldest to newest as follows.

To understand the reasons for the absence of environmental disclosure, Perry and Sheng (1999) have evaluated the environmental disclosure of Singaporean companies as a first phase of this paper. In the second stage the researchers sought to explain the level of disclosure where the questionnaire was designed for companies that did not disclose any environmental information in their annual reports. Two hundred and twenty two postal questionnaires were sent to non-disclosing companies, which targeted the company secretary, finance manager, communications manager or other individual suggested by the organisation. Sixty six completed questionnaires

were obtained which represented 30% of the total questionnaires. The results suggested that there are three main reasons for non-disclosing of environmental information including: firstly the lack of environmental awareness, and the sense that the environmental impact of the organisation's activities are unknown by Singaporeans citizens, secondly, the non-disclosing organisations believed environmental disclosure does not offer any benefit, thus is not important and thirdly, lack of government pressure to encourage companies to adopt environmental disclosure.

Other reasons for absence of environmental disclosure were found by Solomon and Lewis (2002). A total of 625 postal questionnaires were sent to three various groups including academics, banks and the companies that represented all the major UK industries. Only 267 completed questionnaires were received, where the response rate was 43%. Based on former studies, the questionnaire was designed to include lists of proposed incentives and disincentives. The findings indicated that the lack of legal obligation for companies was the most important reason of the suggested disincentives. Also, the reluctance to report sensitive information was considered significantly more important. However, companies believing that they do not have an impact on the environment was seen as significantly less important than the other disincentives.

More reasons were found by De Villiers (2003) who investigated the reasons for the dearth of environmental reporting for South African companies. The questionnaire was distributed to 615 companies listed on the Johannesburg Stock Exchange where the financial directors were targeted to complete it. The response rate was very low (12%), with only 72 completed questionnaires being received. The findings indicated that the lack of legal requirement was the most important reason, with further reasons including: there is no need or motivation to disclose; there is no demand for the information; and it is not applicable to our industry, coming in second place in terms of importance. The next reasons in terms of importance are lack of knowledge regarding environmental disclosure issues and costs exceed benefits.

Using the same methodology, Ahmad and Sulaiman (2004) investigated the reasons for non-disclosure of environmental information of 53 Malaysian companies listed on the Kuala Lumpur Stock Exchange. This study revealed that there are two reasons including the absence of mandatory environmental reporting standards in Malaysia, and lack of scientific and practical experience of accountants.

Based on the perceptions of the members of the Malaysian Institute of Accountants Ahmad *et al.* (2005) listed the following reasons for the absence or inadequate CED. Avoidance of any accountability by public or government, the absence of legislation requiring companies to

disclose environmental information, and lack of reporting standards in Malaysia. Moreover, there are other reasons considered to be important, including a lack of concern by Malaysians of environmental issues, lack of financial resources to conduct environmental disclosure, companies think that they do not have impact on the environment and the lack of management expertise.

Furthermore, the reasons for absence of environmental disclosure of Libyan companies were justified by Ishwerf and Eaton (2010) through an investigation of the views of stakeholders. 30 semi-structured interviews were conducted with the participants who came from six groups including: Decision Makers, Local Government, Financial Institutions, Shareholders, Managers, and Employees. The authors found that there are several reasons for lack of environmental information, including the lack of requirements by governmental and non-governmental organizations, lack of environmental awareness and knowledge, absence of competition in the market, and the lack of civil society organisations, and sensitivity and confidentiality of environmental information.

Recently, in light of stakeholder theory Suttipun and Stanton (2012) explored the underlying reasons behind the disclosure or non-disclosure of environmental information in the annual reports of Thai companies. The results suggested that, the following statements have been considered the most important reasons for not disclosing the environmental information by the participants in the study: the absence of environmental regulations and standards in Thailand, belief that companies have no impact on the environment. The reasons for disclosing environmental information may be attributed to meeting legal obligation, increasing customer loyalty, and customer concerns. This means the findings support stakeholder theory that business organizations have to respond, not only to investor demands, but also to the concerns of stakeholders, especially customer demands.

2.5.4 Investigating the external influence on corporate environmental disclosure

This section deals with the former studies concerned with the external influence on CED in developed and developing countries. The fourth objective of the study outlined in chapter one forms the main theme of this section, where these studies are presented from oldest to newest as follows.

Gamble *et al.* (1996) examined the environmental disclosure in 27 countries, in order to determine the significant difference in the type and level of disclosure on a global basis. Content analysis was used to analyse the annual reports of 276 companies that came from nine industries,

for three years 1989-1991. A sample of companies was selected, based on their production processes, transportation, storage, and waste disposal process. Based on the annual reports of 1989, codes were identified to determine the quantity of environmental disclosure such as environmental policy, legal compliance and restrictions, changes in environmental regulations and operating and capital environmental expenditures. The results of their study revealed that there is a difference between the environmental disclosure practices by the companies in different countries, where the companies working in the countries which have a high social conscience and developed capital markets tend to disclose more environmental information. The highest levels of environmental disclosure were recorded in the USA, UK and Canada.

In light of legitimacy theory Deegan and Rankin (1997) explored the opinions of annual report users, regarding the usefulness, or materiality, of environmental information to make decisions. A mail questionnaire was used to collect the opinions of a sample of the 474 participants from five groups including shareholders, stockbrokers, academic accountants, representatives of financial institutions and a group of overseeing organizations. A total of 118 correct and complete questionnaires were received, where the response rate was 24.9%. The results of study revealed that environmental information was considered by the shareholder, the financial organizations, and the accounting academics to be very important in decision making. This means that changes in environmental disclosure practices are driven by attempts by organizations to legitimate their operations. However, the stockbrokers and analysts downplayed the materiality of environmental information. In addition, the annual report was considered by the total group of respondents to be most important source of environmental information. Participants' views tend to consider environmental disclosure to be a mandatory component of the annual report. In addition, there is slight agreement among the participants, that the government should provide guidelines on the disclosure of environmental information in annual reports.

Using political economic theory Williams (1999) investigated the effects of socio-political and economic factors on the voluntary environmental and social disclosure practices in seven nations across the Asia- Pacific region: Australia, Singapore, Hong Kong, the Philippines, Thailand, Indonesia and Malaysia. From each country, 100 listed companies were randomly selected, and a letter regarding the request for the annual report for 1995 was sent to each one. The overall response rate was 53.5% where the annual reports of 356 companies were collected. The content analysis, specifically the number of sentences, was used to measure the quantity of voluntary environmental and social disclosure, which is considered the dependent variable in this study.

The independent variables such as the culture, political and civil system, legal system, level of economic development were measured using the original cultural scores suggested by Hofstede (2001). Multiple regression analysis was used to analyse data in order to determine the relationship between independent variables and dependent variables. The findings indicated that the culture, political system and civil system have considerable influence on social and environmental disclosure, while the legal system and the equity market are not important factors to determine social and environmental disclosure. Moreover, overall findings of this study support the application of the political economic theory for explaining the social and environmental disclosure practices.

Furthermore, Jorgensen and Soderstrom (2006) determined the effect of institutional factors on environmental disclosure in countries around the world. A total of 10993 executives and business leaders in up to 117 countries were targeted to fill the international survey which was sponsored by Harvard University and the World Economic Forum. All variables, including the level of environmental disclosure, legal origin, accounting and auditing regulation, Gross Domestic Product and the extent of government mandated to disclose environmental information were measured based on the Global Competitiveness Report for 2004-2006. This report summarized responses (mean and standard deviation for each question) for international survey administrated in this study. In general, the results of their study revealed that environmental disclosure is related to the legal system, and economic development. The countries that adopt the Scandinavian legal system present the highest level of regulation of environmental reporting, the highest level of auditing and accounting standards, and the highest levels of environmental disclosure. Countries that adopt German legal origin come in second place followed by the English legal origin countries. For example, Denmark has the highest level of environmental disclosures at the global level, which is attributed to the recent laws issued which oblige companies to provide environmental information. In addition, the countries with weak economic performance have a low level of environmental disclosure and regulation of environmental reporting. For example the lowest level of environmental disclosure was recorded in developing market economies.

2.6 Discussion of the previous studies of corporate environmental disclosure to determine the gap

The review of former studies, based on dividing them into four groups including studies determining the level of CED; studies identifying the attitudes and beliefs of management, towards environmental disclosure, the reasons for its absence, and studies concerned with the external influences on CED.

Adams (2002) indicated that to improve social and environmental disclosure and specifically, the extensiveness of reporting, the quality and quantity of reporting by individual companies, the completeness or comprehensiveness of reporting (by understanding the reasons for non-disclosure), and the disclosure of critical analysis of the (potential) role of legislation in achieving improvements in the abovementioned areas, it is necessary to understand the factors influencing disclosure. These factors include corporate characteristics, general contextual factors (including country of origin, time, social, political, cultural and economic context), and the internal context (including identity of company chair and existence of a social report).

As can be seen by reviewing the previous studies, a lot of research has been conducted in different regions of the world, where it can be said that the early and leading studies have been carried out in developed countries such as USA, the UK, Australia, and Western Europe. In developing countries, most studies were undertaken in the context of newly industrialised countries such as Malaysia, Bangladesh, Portugal, India and China, and in some African countries such as South Africa and Nigeria.

In this context, most of the studies that were carried out in developing countries have focused on one side identifying the level of CED such as Ahmad and Mousa (2010), Uwalomwa and Uadiale (2011), Sen *et al.* (2011), Uwalomwa and Jafaru (2012), Ahmad and Mohamad (2013). They concluded that the level of social and environmental disclosure has been found very low and still at initial phases.

Regarding the internal factors, very few studies have been carried out in developed countries, such as Bebbington *et al.* (1994), Solomon and Lewis (2002), while several of them have been conducted in developing countries De Villiers (2003), Ahmad and Sulaiman (2004), Ahmad *et al.* (2005), Kuasirikun (2005), Bhattacharyya (2011). It can be seen that there are many differences between these countries in several aspects, namely political, economic, culture, legal system and the accounting systems (Gray *et al.*, 1996). Thus, the results of these studies cannot be applied on Libyan society.

Regarding the external factors, very few studies have been conducted in developed and developing countries such as Gamble *et al.* (1996), Deegan and Rankin (1997), Williams (1999), Jorgensen and Soderstrom (2006) these studies cannot be applied in Libyan context due to the many differences as mentioned above.

In Libyan context, very few studies on environmental disclosure have been undertaken in the context of the industrial sector of any sort. This leads to the assumption that undisclosed

environmental aspects of the business operations would eventually have a huge impact on Libyan society at some point. Only three Libyan studies Ahmad (2004), Ahmad and Mousa (2010), Ishwerf and Eaton (2010) were identified that have addressed environmental disclosure.

Ahmad and Mousa (2010) examined the CED practices, for the 18 largest industrial companies quoted on Industrial and Mineralisation Secretary in Libya (for more details see section 2.5.1). Ishwerf and Eaton (2010) determined the views of stakeholders regarding the reasons of absence of environmental information by Libyan companies (for more details see sections 2.5.3).

In addition, one detailed longitudinal study by Ahmad (2004), has investigated environmental disclosure of a sample of the largest public industrial companies while examining the internal factors (management attitude) and external factors with a view to testing the applicability of Environmental Determinism Theory. Content analysis was used to investigate environmental disclosure in internal reports and annual reports, while questionnaires were used to explore the perceptions of the financial managers regarding environmental disclosure. The result indicated that CED has yet to develop in Libya. Furthermore Ahmad (2004, p. 245) suggested that “the study looked at only the management's perception. To enhance further understanding, a study identifying the users (central authorities) of CED and examining their perceptions about CED in Libya may be considered worthwhile and needs the urgent attention of future researchers”. Based on the above discussion, existing gaps can be identified as follows.

Most studies of CED failed to provide an explanation for the results related to the level of environmental disclosure which is considered important in order to develop CED. In this regard, Belal (2001, p. 23) indicated that “it is important to note that any analysis of social disclosures would be incomplete if it fails to capture the socio-political and economic contexts in which the disclosures are made”. In addition, Roberts (1990) argued that the reasons behind the adoption or not of social and environmental disclosure should be an area of research. Thus, the investigation of CED should be conducted taking into account all the factors that may affect the management's decision to disclose social and environmental information.

Subsequently, there is a need to conduct further studies and research in developing countries including Libya, regarding challenges and problems that impede the development of environmental disclosure.

The evidence has been provided by Kisenyi and Gray (1998, p.16) “Whilst we are steadily learning more about social and environmental accounting and disclosure practices in English-speaking and European countries, (as past issues of SEA testify), we still know too little about

practices in ex-colonial, smaller and/or emerging countries. Learning about these countries is not only valuable for the stimulation it offers to the jaded palates of western scholars but, more importantly, it can provide vivid challenges to the presupposition baggage with which western researchers typically approach issues". In particular Libyan studies suffers from the following flaws.

Studies have focused on one aspect of environmental disclosure, for example, examining the CED practices Ahmad and Mousa (2010) and determining the reasons of absence of environmental information Ishwerf and Eaton (2010).

While Ahmad (2004) conducted feedback on the perception of finance managers, it is worthwhile considering the attitudes of other users or parties that may have experience regarding different aspects of corporate reporting. Neuman (2010) indicated that during observing something from different angles or more views, one can get a more objective insight. Adopting a single theory Ahmad (2004), where there is no one theory that provides a complete basis to explain the CSED practices. Gray *et al.* (1995a) indicated that social and environmental disclosure practices are complex activities that cannot fully be explained by a single theoretical perspective or from a single level of resolution. Most studies are cross-sectional focused on different sectors; however, concentrating on a single sector is more useful to gain detailed in-depth insights regarding the environmental disclosure practices (Ahmad and Mohamad, 2013).

On the other hand there are several factors which have an effect on the research process, which leads to different results such as, the use of different sizes of samples conducting the studies in different time periods by different researchers, and using different methods (Hackston and Milne, 1996; Gray *et al.*, 1996).

Therefore, the present study provides a comprehensive analysis of the internal and external factors in the Libyan context. In doing so, the opinions of managers and the users of the annual reports of Libyan construction companies are investigated to explain the presence or absence of environmental disclosure practices.

The main contribution of the current research is its being the first study of its kind, to the best of my knowledge, to empirically examine the internal and external factors that affect CED in the Libyan construction industry. This has been based on a theoretical framework that proposes a number of factors using stakeholder and political economy theories as explanatory power, to interpret the presence or absence of environmental disclosure. Thus, this research could contribute to the development of environmental disclosure to support the achievement of

sustainable development and attracting foreign investments that would ultimately promote well-being, social and economic development.

2.7 Summary

The chapter thoroughly outlines the definition of CED for the purposes of this study as providing the information that is represented in a number of categories regarding the environmental issues to interested groups in society, through the annual reports of companies in order to achieve a number of benefits.

From the review of the literature in section 2.2, there are many types of media can be used to disclose environmental information. However, annual reports are the most important source material for use by companies to provide environmental disclosures. In addition, the annual reports are usually used to present the financial and non-financial information to all interested in the economic activity of company. Moreover environmental information could be classified into two types, mandatory and voluntary throughout most of the world environmental disclosure is still voluntary where it is being developed through voluntary standards such as the Global Reporting Initiative.

From the review of the literature in section 2.3, there are no definite rules concerning form and content of the environmental information; this is due to the fact that environmental disclosure is still voluntary in most countries (Azzone *et al.*, 1996). Hence, several attempts have been made in recent years to provide a systematic framework to be served as a guide in order to help organizations to disclose their social and environmental performance, for example Accountability framework (AA1000) and Global Reporting Initiative (GRI) (Azzone *et al.*, 1996; Deegan and Unerman, 2011).

Through an extensive review of the literature, regarding the benefits of disclosing environmental information, the following points have been found, to legitimize company activities, making decisions, enhancing company reputation, improve the image of the company, and greater chance of getting green funding.

Finally, the chapter provides a review of the previous studies relating to the research objectives, including studies determining the level of CED; studies identifying the attitudes and beliefs of management towards environmental disclosure, reasons underlying the environmental disclosure practices; and studies concerned with the external influence on CED. Thus the internal and

external factors that may contribute significantly to shape environmental disclosure in organisations has been the focus of attention of these studies.

The discussion of these studies highlight potential causes for the failure of previous research to conduct a comprehensive analysis of the internal and external factors that may impact CED practices, hence identifying any gaps in the existing literature. Of particular interest is the development of CED in Libya, which still remains a controversial issue of how it could underpin achieving sustainable development and attracting foreign investments, promoting well-being. Consequently, the present study intends to systematically extend prior research within a Libyan context and to overcome the limitations inherent in prior research. In doing so, the current study contributes to literature through providing a comprehensive analysis of the internal and external factors by investigating the opinions of managers and the users of the annual reports. This is also based on a theoretical framework that proposes a number of factors in light of stakeholder theory and political economy theory as explanatory power, to interpret the presence or absence of environmental disclosure in the Libyan construction industry.

However, in order to proceed with the current study, following pertinent literature review and the consequent identification of gaps in the existing literature, the adoption of a theoretical framework is required which depicts the conceptual structure for supporting the study's argument and providing the necessary guidance in explaining the relationship between CED and the internal and external factors in the Libyan context. The next chapter presents the different theories that help explain the environmental disclosure practices along with a discussion of the theoretical framework adopted by the present study.

CHAPTER THREE

Theoretical framework

3.1 Introduction

Following a review of the empirical studies referred to in the previous chapter (see section 2.5), several different theoretical frameworks have been proffered by the researchers to explain and examine environmental disclosure practices. Likewise, in this study, a theoretical framework to explain the relationship between corporate environmental disclosure (CED) and the internal and external factors in the Libyan context has been adopted before commencing an empirical investigation for CED aspects in chapters 6, 7 and 8. The aim of this chapter is to establish a theoretical basis under which the current study will be undertaken and relied upon in interpreting the emerging results. This chapter has been structured into an overview of the theoretical framework, the next section reviews the different theories that are generally used to explain the environmental disclosure practices. The third section is devoted to the discussion of these theories. The theoretical framework adopted by the present study is addressed in section four. The summary of chapter is presented in section five.

3.2 Theories of corporate environmental disclosure

A number of theoretical perspectives have been adopted by researchers to explain and justify the corporate social and environmental disclosure (CSED) (Deegan, 2002). In this regard, there is no single conceptual framework to explain and interpret CSED practice (Bebbington *et al.*, 2008). Therefore, this section deals mainly with a discussion of the four most common theories employed by researchers to explain and interpret CSED and understand the motivations behind the practice. These are agency, legitimacy, stakeholder, and political economy theories.

3.2.1 Agency (Economic) theory

The agency theory is the contractual relationship between the stockholder and managers. This relationship is defined by Jensen and Meckling (1976, p. 5) as “a contract under which one or more parties (the principals) engage another party (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent”. In other words, the stockholder is treated as a client, and the managers treated as agents (Shalhoub, 2002). In this regard, this theory focuses on the contractual relationship between the actor or group and another

group where the economic relationship is established between them (Hibbitt, 2004). There are two problems that may accompany agency relationships including inconsistencies in the goals and desires between principal and agent resulting in different actions because they have different attitudes toward risks (Eisenhardt, 1989).

In this regard, the agents (managers) have a desire to improve social and environmental performance of a company more than principals (stockholders) because the expenses that may be incurred by the company in order to commit to their social and environmental responsibilities, are not spent from their own money and in addition, a long time is needed to realize the benefits from a commitment to corporate social performance (Graves and Waddock, 1994).

Moreover, agency theory describes the contracts and relationships between individuals under asymmetric information, who do not have the same type of information, for example, the relationship between company owners and managers (Noreen, 1988). Thus, based on the agency theory, the companies may provide more information in order to mitigate conflicts between shareholders and managers (Rouf and Alharun, 2011).

According to Jensen (1983), the agency theory can be viewed from two aspects: firstly is to build the agent model using mathematics; and second is the positive theory of agency, which means that the agency theory is significantly affected by the branch of philosophy known as positive economics where it is referred as economic agency theory which is more common (Hibbitt, 2004).

In the 1970s, the agency theory was developed in the framework of the finance part of new classical economics to address the relationship between the owners and managers of large companies (Jensen and Meckling, 1976; Jensen, 1983), where the positive agency theory was used to explain corporate accounting practice (Watts, 1977). In other words, the theory focuses on describing, predicting, and explaining the behaviour of accountants and managers while it has not given much attention to the accounting entities (Christenson, 1983). Therefore, the second part of the agency theory has been referred to as behaviour theory (Hibbitt, 2004) or, as Christenson (1983) preferred to name it, 'sociology of accounting'.

In this regard, agency theory has been used by researchers as the theoretical framework behind voluntary disclosure (Rouf and Alharun, 2011). In addition, it was used by researchers as a theoretical framework to explain voluntary social and environmental disclosure practices (Ness and Mirza, 1991). In this context, the agency theory assumes that the managers will disclose social and environmental information if it supports their interests, and when the cost of disclosure is less than the benefits from disclosure (Ness and Mirza, 1991).

In empirical studies, the agency theory was used by Ness and Mirza (1991), who have analysed 1984 annual reports of 131 leading British companies to examine the relationship between social environmental disclosure and the oil industry. The results indicated that a positive correlation between environmental disclosure and the oil industry was found, consistent with agency theory, which assumes that the social and environmental information is disclosed to increase the welfare of management. It can be interpreted that the managers have understood that the oil companies tend to generate more damage to the natural environment, and thus, more environmental information in the annual reports will be provided in order to maintain their interests. However, the economic agency theory has not been widely used to explain the reasons behind the absence or presence of CSED where it does not have a lot to offer for the development of social and environmental disclosure (Gray *et al.*, 1995a). According to Noreen (1988, p. 360) “the ethical behaviour is either altruistic or ultimately utilitarian in motivation. Altruistic behaviour is motivated either by a fundamental concern for the welfare of others or by the desire to feel good by helping others. Utilitarian ethical behaviour, on the other hand, has to do with voluntary compliance with rules that are, in some sense, in the individual's own self-interest”.

It is worth mentioning the agency theory, which assumes that in the short-term, all actions are motivated by self-interest, which seems not only empirically implausible but also highly offensive (Gray *et al.*, 1995a). The agency theory disagrees with the ethical behaviour because it is based on utilitarian behaviour. Moreover, the absence of the concept of social value in accounting theories, such as agency theory which makes no distinction between price and value, may make it theoretically unable to interpret the social role of the organization in the community (Tinker and Okcabol, 1991).

On the other hand, the economic issues cannot be studied independently from social and political dimensions (Gray *et al.*, 1995a). Therefore, based on the previous criticisms levelled at this theory, it can be said that it fails to explain and interpret CED. This debate leads to discussion of another theory which may be used to explain CSED, namely legitimacy theory.

3.2.2 Legitimacy theory

The legitimacy theory can be applied in two areas including parliamentary democracy and business organisation (Hibbitt, 2004). In business, according to legitimacy theory, the organizations should respond to society's needs and give society what it wants, in order to improve their image, and to retain their present social role in society (Davis, 1973).

According to Lindblom (1993, p. 52) legitimacy can be defined as “a condition or a status which exists when an entity's value system is congruent with the value system of the larger social system of which the entity is a part. When a disparity, actual or potential, exists between the two value systems, there is a threat to the entity's legitimacy”. In this context, it can be said that the legitimacy theory is based on upon the following notion: the survival of an organization's existence and achievement of its economic goals depends on the obligation to follow required procedures socially (Guthrie and Parker, 1989). In other words, legitimacy theory helps to maintain the legitimacy of the contents of the organisation's system in order to create wealth and jobs. In essence, this theory seeks to identify the society's expectations regarding the performance of the organization in terms of its compatibility with the social and moral values of society (Gray *et al.*, 1996).

To maintain their legitimacy, companies may disclose social and environmental information voluntarily to legitimise their activities in terms of creating a good impression of a company (Ghazali, 2007). Accordingly, social and environmental disclosures can be considered important methods, to be adopted by a company to influence the public policy process, either directly via addressing public and/or legislative concerns or indirectly, by improving an image of the company (Patten, 1992).

In this regard, Ghazali (2007) argued that Legitimacy theory emphasises the importance of societal acceptance in ensuring a company's survival. Underlying this theory is the belief that a company's actions can have an impact on the environment in which it operates. If a company's activities are deemed to be unethical or to have detrimental effects on the community, the public may react by boycotting the company's product or pressuring for government intervention, e.g. the formation of small pressure groups within local communities to prevent supermarkets from expanding further, particularly in urban areas where it is felt there is already an adequate provision of supermarkets and general convenience stores.

Therefore, it can be said that the legitimacy theory in many respects, depends on the concept of social contract (Patten, 1992) as explained by Mathews (1993, p. 26), as follows: “the social contract would exist between corporations and individual members of the society. Society (as a collection of individuals) provides corporations with their legal standing, attributes, and the authority to own and use natural resources and to hire employees. Organisations draw on community resources and output both goods and services and waste products to the general environment. The corporation has no inherent rights to these benefits, and in order to allow their existence, society would expect the benefits to exceed the costs to society”.

According to the concept of social contract, if an organisation does not adhere to the terms of the contract resulting in a lack of efficiency in the use of powers and resources granted to it, the contract will be cancelled. A failure to maintain a condition of legitimacy will lead to the threat of its survival in terms of the difficulty in obtaining financial and human resources as well as implementation of marketing strategies (Lindblom, 1993). Therefore, if society does not consider the organisation legitimate, it forces a change of *modus operandi* (Makela and Nasi, 2010).

In this regard, Lindblom (1993) argued that the organisation may use four legitimation strategies when faced with different legitimation pressures; for example when the organisation fails in the face of problems related to its performance (serious accident, a major pollution, leak or a financial scandal), it is likely to resort to one of the following options:

- Seek to provide information related to the organisation's intentions to educate stakeholders;
- Try to change the stakeholders' perceptions of the event, but without changing the actual performance of the organisation;
- Divert attention away from the issue of concern to some positive issue that is not necessarily related to the negative activity;
- Seek to change external expectations about its performance (for instance, explaining why a competitive, profit seeking, wealth-creation company is not actually responsible for human rights abuses to its employees in a repressive regime in which it operates).

Indeed, the additional social and environmental disclosure can be used by a company to achieve the above strategies in order to maintain the legitimacy of the organization in the community and thus its survival (Deegan *et al.*, 2002; Ghazali, 2007).

In this context, social and environmental disclosure can be used by companies as a legitimizing tool via two alternatives where the first is interested with the legitimacy of individual organisations, for example, a pollution incident, and a major oil spill. In other words, the organisation is trying to legitimise its actions by using disclosure, in order to fill the legitimacy gap. The second aspect is concerned with legitimacy of the system in general, when the company regularly provides positive information, rather than negative, about the organization, for example, providing an explanation about changing the relationship between the organisation and the employees to educate stakeholders (Patten, 1992; Deegan and Rankin, 1996; Gray *et.al.*, 1996). However, the latter approach has been considered as more useful than the first alternative, because it has the ability to continue to maintain the legitimacy of the organization (Gray *et al.*, 1996).

According to Deegan (2002) the most broadly used theory, to explain motivations behind social and environmental disclosure is legitimacy theory; several studies in relation to CSED disclosures have embraced this theory.

In this regard, many of these studies have provided support to legitimacy theory as an appropriate basis to interpret the voluntary social and environmental disclosure practices, see for example Gray *et al.* (1995a), Deegan and Gordon (1996), Cho and Patten (2007), Islam and Deegan (2010).

Deegan and Gordon (1996) found that there is a positive correlation between CED and environmental lobby groups concerned with the environmental performance of companies. This justifies the administration adopted for environmental disclosure in order to maintain or establish its legitimacy. In addition, Cho and Patten (2007) have found that environmental disclosure has been used by companies as a legitimizing tool, thereby providing additional support for legitimacy theory. Recently, Islam and Deegan (2010) found that a positive social and environmental disclosure will be used by a company to allay public opinion when the company is exposed to criticism by the media; this result is consistent with legitimacy theory.

However, some of these studies have failed to provide support to this theory for example Wilmshurst and Frost (2000), Deegan and Rankin (1997), Ahmad and Sulaiman (2004).

Deegan and Rankin (1997) have tested the assumption that the environmental information contained within the annual report is used by various groups in society, so organizations seek to change their environmental disclosure practices in order to legitimate their operations. The study concluded that this assumption is not correct, where some groups have considered environmental information is not important to make decisions. Also, according to Ahmad and Sulaiman (2004) the results showed that the level of environmental disclosure was very low, this reflects the unwillingness of companies to use environmental information to legitimize their operations, so this study does not support the legitimacy theory where it failed to interpret the nature of environmental disclosures and the motivations of management to make environmental disclosures.

Although the legitimacy theory compared with agency theory has provided a better explanation for CSED, it is not able to provide a comprehensive basis for an explanation of CED in a given country. In this regard, Guthrie and Parker (1989, p. 351) indicated that “a relationship between legitimacy theory and disclosure was only marginally supported for environmental issues,

unconfirmed for energy and community issues and subject to contradictory evidence for human resources issues”.

In addition, Dobbs *et al.* (2012) confirmed that it is difficult to rely on a single theory to explain the different results obtained from the use of different research methods. For example, the content analysis results have been successfully interpreted based on legitimacy theory, but when viewed in conjunction with the results of the questionnaire, the same theory was not sufficient to explain this combination of results. Consequently, it is not possible to rely on a single theory to explain the results, especially as they were obtained from the use of different research methods. In other words, to understand the rationales for social and environmental disclosure, different approaches should be tested instead of relying only on the interpretation of disclosure as a response to breaches of the social contract (Bebbington *et al.*, 2008). Therefore, the discussion is converted to another theory which might also be used to interpret CSED, namely stakeholder theory.

3.2.3 Stakeholder theory

Stakeholder theory is concerned with the relationship between particular groups and the organization, where it describes how the organization can respond to the stakeholder demands and expectations (Islam and Deegan, 2008). In this regard, the stakeholder theory has been defined by Freeman and Reed (1983, p. 89) as follows: “those groups who have a stake in the actions of the corporation”. In other words, stakeholders can be identified through the legitimacy of their demands based on the mutual relationship between them and the organisation, and hence stakeholders include stockholders, creditors, managers, employees, customers, suppliers, local communities and the general public.

In addition, Clarkson (1995) stated that the stakeholders are the persons or groups who have or claim ownership rights, or interests in a corporation and its activities, past, present, or future. These claimed rights or interests are the result of transactions with, or actions taken by, the corporation, and may be legal or moral, individual or collective. They can be divided into external groups such as shareholders, environmental pressure groups, creditors, government regulatory, and financial accounting and conversely, internal groups such as managers and employees (Schaltegger and Burritt, 2000).

Stakeholders are any group concerned with a company, who can be affected by the company, or can affect the company (Gray *et al.*, 1996). Thus, the legitimate demands of all stakeholders must be met by organization management through the establishment of organizational structures and

general policies (Donaldson and Preston, 1995). Therefore, “the corporation's continued existence requires the support of the stakeholders and their approval must be sought and the activities of the corporation adjusted to gain that approval. The more powerful the stakeholders the more the company must adapt” (Gray, *et al.*, 1995a, p. 53).

According to Clarkson (1995) stakeholders groups can be classified into two types, primary stakeholder and secondary stakeholders. A primary stakeholder group, is one on whom the survival of the company depends. In other words, a primary stakeholder has the ability to influence directly on the company's activities. These groups typically are comprised of shareholders and investors, employees, customers, suppliers creditors, managers, government and civil society organizations (Clarkson, 1995; Donaldson and Preston, 1995). All previous parties have a relationship with the organization, under which there will be the needs or demands of each party. For example, government provides infrastructure and publicity, in return, it requests an obligation to adhere to company laws and regulations regarding protection environment (Clarkson, 1995). In addition, the civil society organizations such as environmental organizations may provide some support to companies via awareness campaigns; in exchange, the companies must commit to their responsibilities towards the environment (Clarkson, 1995).

Secondary stakeholders are the groups that can affect the company or are affected by it, and do not have any economic transactions with company, thus they are not important for its survival, where the media and public can be classified under this item (Mitchell *et al.*, 1997). For example, the media has the ability to shape public opinion whether against or with the company (Clarkson, 1995).

There is a high level of interdependence between the corporation and its primary stakeholder groups, where they have a fundamental role in determining the policies or programs that are adopted by the company. Despite the dissatisfaction of secondary stakeholders, the company may resort to a change in policy and programs in order to satisfy the needs and expectations of its primary stakeholder groups (Clarkson, 1995).

It can be concluded that the attention from the organisation that is received by a particular stakeholder group is dependent on the control exercised by the stakeholder groups over fundamental resources, such as capital, labour and materials needed by the organisation (Belal, 2008). However, all stakeholders, whether primary or secondary, have the ability to encourage companies to adopt a voluntary environmental program that leads to improved environmental and economic performance (Henriques and Sadorsky, 2008).

According to Deegan and Unerman (2011) there are two branches of stakeholder theory including the ethical (or normative) and the managerial branch. According to the ethical branch, the company must take into account all the stakeholders without exception, where depending on the moral principles, the company should inform all stakeholders on its activities (Mellahi and Wood, 2003).

In other words, the normative stance of the stakeholder theory is based on the concept of the social contract. The social contract gives the right to all stakeholders to access benefits as well as being informed about the impact on them by the organisation. Therefore, the company should know how to behave towards stakeholders, for example, changes in disclosure in accordance with societal changes (Gray *et al.*, 1996). However, the normative branch of stakeholder theory does not have a direct role in predicting managerial behaviour apart from the managerial branch of stakeholders. This emphasises the need to manage particular stakeholder groups, particularly those that are deemed to be powerful because of their ability to control resources that are necessary to the organisation's operations (Deegan, 2002). This approach cannot be used to interpret the social and environmental disclosure practices (Gray *et al.*, 1996).

The other branch of this theory is managerial, where it based on the premise that some stakeholders have more influence over organizations than others, and hence the stakeholders are identified by the organisation and managed accordingly, where priority access to information is given them (Friedman and Miles, 2002).

In other words, financial and social information are used to determine and manage the stakeholders in order to gain their support and approval or change their opinions on certain issues (Gray *et al.*, 1996).

Under this perspectives of stakeholders, the CSED can be explained, in that the management of company might seek to satisfy particular groups of stakeholders (typically powerful) by providing financial and social information required (Deegan and Unerman, 2011).

However, the managerial branch of stakeholders theory fails to describe the type and nature of the social and environmental information that should be disclosed, and thus the problem of how to determine the most important (powerful) stakeholders still exists (Deegan and Unerman, 2011). Unlike the ethical branch of stakeholder's theory, the managerial branch is tested by using the empirical observation (Deegan and Unerman, 2011). In this regard, the managerial branch has been adopted by several researchers in order to explain the motivations behind the presence

or absence of CSED, for example, Roberts (1992), Islam and Deegan (2008), Uwalomwa and Jafaru (2012), Suttipun and Stanton (2012).

Islam and Deegan (2008) reviewed the annual reports during the period from 1987 to 2005 of Bangladeshi clothing industry companies in order to determine the amount of social and environmental disclosure and interpret this level of disclosure by conducting interviews with managers of companies to find out any pressures or response that can be reflected by the reports. The results indicated that, generally there has been a steady increase in the amount of disclosure between 1987 and 2005, in particular, the human resource disclosure represented the highest percentage of total disclosure from which it can be interpreted that certain groups of stakeholders have begun since the early 1990s to impose pressure on the Bangladeshi clothing industry to improve its social performance. According to the perceptions of managers, the multinational companies (certain groups of stakeholders) are considered important clients for the clothing industry sector in Bangladesh. These companies impose certain restrictions on the employment of children, which was a response to pressures from western consumers.

Indeed, one point of view cannot be relied on (particular theory) to explain the social and environmental disclosure so it is useful to adopt different points of view (Deegan and Unerman, 2011). Therefore, the discussion will turn to another theory, namely political economic theory, which may be used to investigate the factors behind CSED.

3.2.4 Political economy theory

The political economy theory can be used to interpret the social and environmental disclosure in the light of social, political and economic context (Belal, 2008). The concept of political economy can be defined as “the social, political and economic framework within which human life takes place” (Gray *et al.*, 1996, p. 47).

In other words, the political, economic and social systems cannot operate in isolation from each other, for example, the economic issues cannot be investigated without considering the political, social and institutional framework in an integrated manner. Thus, by this framework, many societal issues can be considered which may impact on organizational activity, and the kind of information that is chosen to be disclosed (Deegan and Unerman, 2011).

In this regard, the corporate disclosure, in accordance with political economy theory is “a proactive process of information provided from management's perspective, designed to set and shape the agenda of debate and to mediate, suppress, mystify and transform social conflict. This

theory recognizes the potential for management to tell its own story or refrain from doing so, according to its own self-interest” (Guthrie and Parker, 1989, p. 351).

According to Gray *et al.* (1996), the political economic theory has been divided into two parts, namely classical, which is associated with Marx Weber, and bourgeois, relating to John Stuart Mill. The classical political economy is based on a set of ideas including structural conflict, inequality, and the main role of the government within society. In contrast, the political economy bourgeois is based on ignoring the previous elements, where the world is seen as essentially pluralistic (Gray *et al.*, 1995a). In other words, a certain class cannot impose its control over the rest of the classes within society (Deegan and Unerman, 2011).

In this regard, in the framework of classical political economy, it can be said that the possible interpretations of the social and environmental disclosure are based on the idea of maintaining the legitimation of the system as a whole, through imposing some restrictions on organisations by the state, where the state is acting as if in the interests of disadvantaged groups, for example, the disabled, minority races, in order to maintain the legitimacy of the capitalist system as a whole. In other words, the social and environmental disclosure can be interpreted according to the political perspective (Gray *et al.*, 1995a; Gray *et al.*, 1996).

The classical political economy provides interpretations regarding the mandatory, social and environmental disclosure, but fails to provide details regarding the explanation of the motives of the voluntary CSED (Gray *et al.*, 1996). Regarding the bourgeois political economy, it can be used to explain the reasons and motivations behind social and environmental disclosure, where it is concerned with the relationship between groups in an essentially pluralistic world, for instance, the negotiation between a company and an environmental pressure group or between local authority and the state. In contrast, the relationships as mentioned above do not exist in the classical political economy (Gray *et al.*, 1996).

In other words, based on bourgeois political economy, social and environmental information is disclosed by organizations to respond to the pressures of the social, political and economic systems that surround them (Williams, 1999). Indeed, the bourgeois perspective can be successfully used to explain social and environmental disclosure practices (Belal, 2008).

Adams and Harte (1998) have examined the corporate social disclosure (CSD) regarding the employment of women in two sectors (banking and retail companies) in the British economy. Based on the content analysis, the annual reports of the period 1935 to 1993 have been reviewed in the context of social, political and economic developments. The results indicated that the

annual reports do not give any importance to women where the management of companies has sought to withhold information which could have assisted an assessment of performance regarding the equality of opportunity. However, in recent years, the annual reports have shown a growing recognition of the importance of equality, as a result of the economic incentives and legislation to encourage equality of opportunity, which indicates that the political economy theory may offer a basis to understand the social disclosure practices. In addition, the reporting of women's employment indicates that the voluntary CSD may provide a basis for corporate accountability in order to develop regulation and prepare the information which reflects the interactions between corporations and the society and the environment in which they operate. The accountability cannot be made without involving certain parties such as employees, trade unions, and human resource management departments.

Williams (1999) investigated the effects of socio-political and economic factors on the voluntary environmental and social disclosure practices in seven nations across the Asia-Pacific region. The overall findings of this study support the application of the bourgeois political economic theory for explaining the social and environmental disclosure practices where social and environmental disclosure is used by organizations as a means to protect their self-interest from external influences that result from the social and political pressures.

In contrast, Buhr (1998) analysed the legitimacy theory and political economic theory to determine which theory offered a stronger explanation to the disclosure regarding the environmental issues provided by the Falconbridge Company. Falconbridge's annual reports from 1964 to 1991 were analysed, interviews were undertaken with 12 Falconbridge personnel. The findings indicated that legitimacy theory offers a better explanation for environmental disclosure, where the company chose to change their activities rather than to use disclosure to influence the social norms or influence the distribution of income wealth and power.

According to Deegan and Unerman (2011), the legitimacy theory and the stakeholder theory are derived from the perspective of bourgeois political economy. Based on the pluralistic world the legitimacy theory reflects a bourgeois perspective where it is interested to negotiate with all parties in the community (Belal, 2008). In other words, the social and environmental information is used by organisations to legitimize their operations and to deflect criticism (Gray *et al.*, 1996).

Stakeholder theory is "(typically) explicitly bourgeois in that the world is seen from the perspective of the management of the organization who are concerned strategically with the continued success of the company" (Gray *et al.*, 1995a, p. 53). That means that the groups in the

community are trying to press the organization through legislation or the threat of legislation in order to urge them to disclose social and environmental information (Gray *et al.*, 1996).

However, these theories do not deny that an organisation might disclose for ethical reasons (Gray *et al.*, 1996). Even though this perspective of bourgeois political economy combines both legitimacy theory and stakeholder theory, it can be said this perspective cannot be used to provide a full explanation of social and environmental disclosure practices.

3.3 Discussion of the previous theories

In the previous section (3.2), a number of theories relating to accounting disclosure have been reviewed, in order to find a suitable basis to explain and analyse the findings of the present study regarding issues of environmental disclosure in Libyan context. It is worth mentioning that the most commonly used theories in the accounting literature to interpret social and environmental disclosure practices are legitimacy theory, stakeholder theory and political economy theory (Gray *et al.*, 1996). In this regard, the economic agency theory has not been widely used to explain the reasons behind the absence or presence of CSED where it does not have a lot to offer for the development of social and environmental disclosure (Gray *et al.*, 1995a). The agency theory assumes that, in the short-term, all actions are motivated by self-interest which seems not only empirically implausible but also highly offensive (Gray *et al.*, 1995a). Thus, the agency theory disagrees with the ethical behaviour because it is based on utilitarian behaviour. In addition, the absence of the concept of social value in accounting theories such as agency theory which makes no distinction between price and value, may make it theoretically unable to interpret the social role of the organization in the community (Tinker and Okcabol, 1991). Moreover, the economic issues cannot be studied independently from the social and political dimensions (Gray *et al.*, 1995a). Therefore, based on the previous criticisms levelled at this theory, it can be said it cannot be used to explain and interpret CED in Libyan context, especially if taking into account the special nature of the economic and political system in Libya.

The legitimacy theory is based on upon the following notion: the survival of the organization and achievement of its economic goals depends on the obligation to required procedures socially (Guthrie and Parker, 1989). Consequently, this theory seeks to identify the society's expectations regarding the performance of the organization in terms of its compatibility with the social and moral values of society (Gray *et al.*, 1996).

Campbell *et al.* (2003) stated that the legitimacy theory can be considered as belonging to the stakeholder theory in that it deals with the whole society, which is considered as a part of the

overall concept to stakeholders. In this regard, some groups of society have more power to influence the organisation than other groups (Deegan, 2002). However, the legitimacy theory does not take into account changes in the value system within the society which is reflected in the culture of the organization, thus changing in the manner in which the organisations relate to society (Campbell *et al.*, 2003). Therefore, the legitimacy theory fails to explain the CSD, especially with regard to energy, human resources and community issues, while providing some support for environmental issues (Guthrie and Parker, 1989). Moreover, Dobbs *et al.* (2012) confirmed that it is difficult to rely on a single theory to explain the different results obtained from the use of different research methods. In this regard, Bebbington *et al.* (2008) indicated that adopting different approaches may provide useful insights to understanding the rationales for disclosure, instead of relying solely on the interpretation of disclosure as a response to breaches of the social contract. Given the fact that Libya has a unique political and economic system (see chapter four), the adoption of environmental disclosure by companies is not likely to be of the kind to enhance the continuation of the organization and improve its image in the community. Therefore, the legitimacy theory is not likely to be used to interpret the CED within Libyan context.

Stakeholder theory is concerned with the relationship between particular groups and the organization, where it describes, how the organization can respond to the stakeholder demands and expectations (Islam and Deegan, 2008). These demands must be achieved by organization management through the establishment of organizational structures and general policies (Donaldson and Preston, 1995).

In this context, the attention from the organisation received from a particular stakeholder group is dependent on the control exercised by the stakeholder groups over fundamental resources (such as capital, labour and materials) needed by the organisation (Belal, 2008). However, all stakeholders, whether primary or secondary, have the ability to encourage companies to adopt voluntary environmental programs that lead to improved environmental and economic performance (Henriques and Sadorsky, 2008).

Generally, the stakeholder theory indicates that the social and environmental disclosure may be used by organisations as a tool to manage their relationships with the powerful stakeholders whose support is critical for organisational survival (Belal, 2008). However, the normative branch of stakeholder theory does not influence managerial behaviour other than the managerial branch of stakeholders. This emphasises the need to manage particular stakeholder groups, particularly those that are deemed to be powerful, because of their ability to control vital

resources necessary to the success of an organisation (Deegan, 2002). This approach cannot be used to interpret the social and environmental disclosure practices (Gray *et al.*, 1996). Moreover, the managerial branch of stakeholder theory fails to describe the type and nature of the social and environmental information that should be disclosed, so there remains a problem of how to determine the most important (powerful) stakeholders (Deegan and Unerman, 2011).

The corporate disclosure, in accordance with political economy theory is “a proactive process of information provided from management's perspective, designed to set and shape the agenda of debate and to mediate, suppress, mystify and transform social conflict. This theory recognizes the potential for management to tell its own story or refrain from doing so, according to its own self-interest” (Guthrie and Parker, 1989, p. 351). Hence, by this framework, many societal issues can be considered which may impact on organization activity and the kind of information that is chosen to be disclosed (Deegan and Unerman, 2011). The classical political economy seems to be more likely to provide the interpretations regarding the mandatory social and environmental disclosure, where it assumes that the possible interpretation is based on the idea of maintaining legitimacy of the system as a whole, through imposing relevant restrictions on organisations by the state. As a result, the classical political economy is incompatible with the explanation of the motives of the voluntary social and environmental disclosure practices (Gray *et al.*, 1996).

The bourgeois political economy theory is better equipped to explain the reasons and motivations behind social and environmental disclosure, because it responds better to the demands of the social, political and economic systems that surround them (Williams, 1999). According to Deegan and Unerman (2011), the legitimacy theory and the stakeholder theory are derived from the perspective of bourgeois political economy. The legitimacy theory is based on the pluralistic world reflecting a bourgeois perspective where it is interested to negotiate with all parties in the community (Belal, 2008). The stakeholder theory is “(typically) explicitly bourgeois in that the world is seen from the perspective of the management of the organization who are concerned strategically with the continued success of the company” (Gray *et al.*, 1995a, p. 53). However, these theories do not deny that an organisation might disclose for ethical reasons (Gray *et al.*, 1996). Even though this perspective of bourgeois political economy combines both legitimacy theory and stakeholder theory, it can be said, this perspective is still only a minor factor to providing a full explanation of social and environmental disclosure practices.

Based on the above, at best a partial interpretation of the social and environmental disclosure can be provided by these theories (Gray, 2008). In other words, these theories are not considered complete theoretical frameworks so far; however, they may provide frameworks that can be

relied upon combined to study social and environmental disclosure practices (Gray *et al.*, 1996). It can be said the relationship between these theories is complementary and not competitive (Gray *et al.*, 1995a). To understand the rationales for social and environmental disclosure, different approaches should be adopted, instead of relying on a single theory (Bebbington *et al.*, 2008). To sum up, this thesis has not adopted one particular theory but will rely on two theories, namely stakeholder theory and political economy theory, to interpret the presence or absence of environmental disclosure practices in Libyan construction companies.

3.4 Proposed theoretical framework for the environmental disclosure of Libyan construction companies.

The research in environmental disclosure varies across aspects, such as the motivations for disclosure, accountability, market reactions, and the cost (Islam, 2009). To illustrate, some research has focused on the environmental factors' motivation (Deegan, 2002) while other studies have examined the ethical and accountability issues (Owen, 2008). Furthermore, some research has been conducted to analyse the costs of externalities (Shalteggre and Burritt, 2000). Deegan (2002) argues that the factors that affect social and environmental disclosure or the management motivations for social and environmental disclosure is the first area that was given the most attention by researchers. In this regard, there are several factors that can affect the adoption or non-adoption of environmental disclosure by companies. However, scientific research requires the use of a theoretical framework or model to formulate specific proposals testable in order to identify the nature of a particular phenomenon and its causes (Hibbett, 2004).

The same cannot be said to apply to a developing country such as Libya, where more factors are needed to determine the level of environmental disclosure. It is therefore important, in a developing country, to identify and investigate important factors that have an impact on environmental disclosure. Therefore, a proposed framework has been adopted based on the previous work of Hibbett (2004) to offer a number of factors that may affect CED and with two theories, namely stakeholder theory and political economy theory (see section 3.3), to interpret the presence or absence of environmental disclosure practices in Libyan construction companies. A suggested theoretical framework diagram for the current study is set out in Figure 3.1.

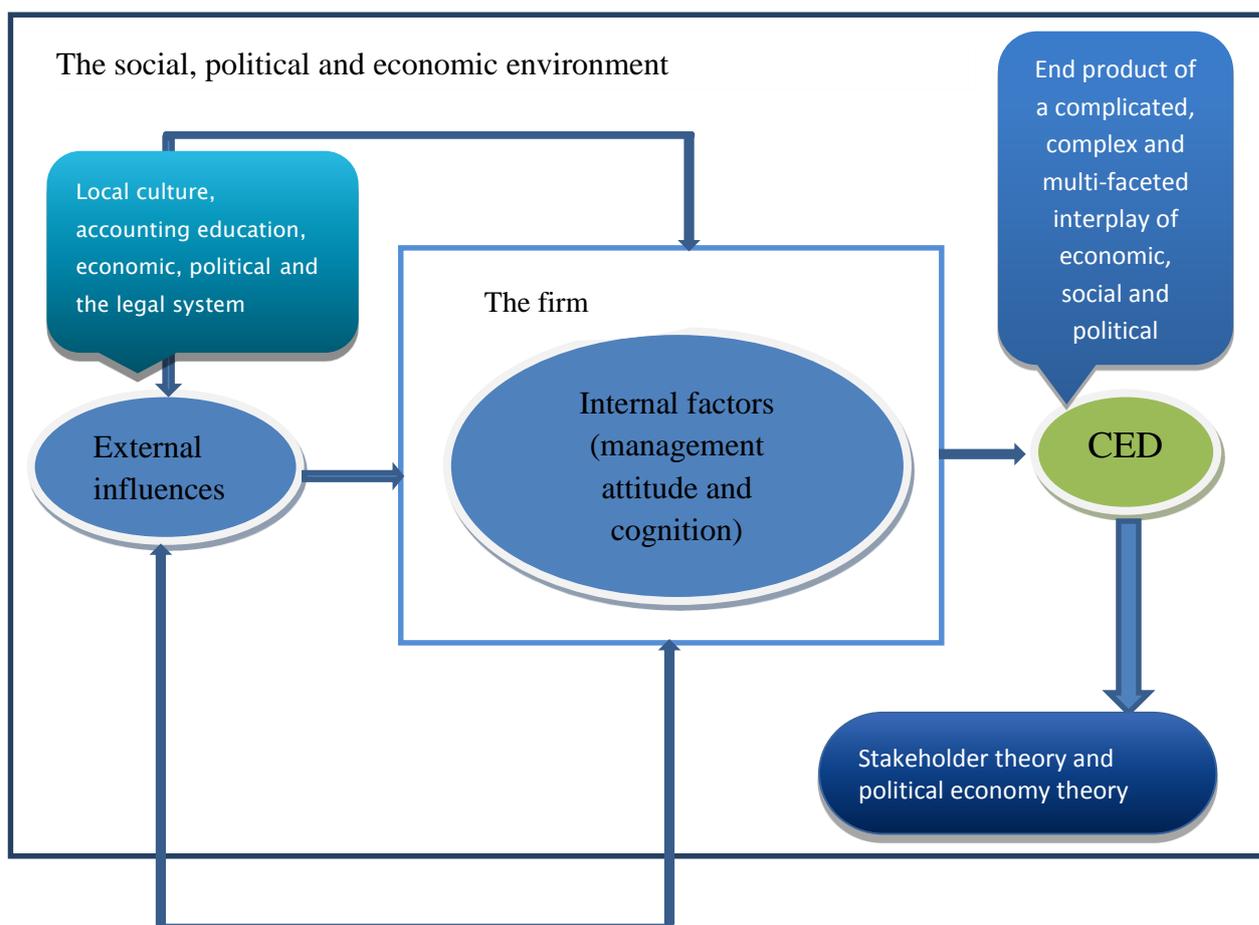


Figure 3.1 Overview of the theoretical framework of the relationship between the internal and external factors and CED (based on Hibbett (2004, p.74))

To determine the potential effect of the various factors on CED they have been classified into two categories; the first is the internal factors which include company characteristics (such as firm size, profitability, stock-market value, sector, foreign ownership, environmental certification, financial leverage, internationalisation and corporate sustainability), management attitude and cognition see, for example, Bebbington *et al.* (1994), Jaggy and Zhao (1996), Moneva and Llana (2000), O'Dwyer (2002), Gray *et al.* (2001), Hossain (2002), Ayuso and Larrinaga (2003), Gao *et al.* (2005), Kuasirikun (2005), Smith *et al.* (2007), Brammer and Pavelin (2008), Pahuja (2009), Liu and Anbumozhi (2009). For this research framework, perceptions of financial managers of Libyan construction companies are used to investigate the management attitude and cognition regarding the CED. The main reason for the selection of management attitude and cognition is that other factors used in studies of developed countries may not easily apply to a developing country such as Libya due to the special nature of the economic and political system (see chapter four). Furthermore, the five biggest companies in the Libyan construction industry were selected in this context, the company characteristics such as, size of company cannot be applied in this sample. The second items are external impacts which

represent the general economic, social and political milieu in which the firm operates and include factors such as local culture, accounting education, economic and political system, and the legal system (Williams, 1999; Jorgensen and Soderstrom, 2006).

Specifically, the proposed theoretical framework involves the following relationships: 1) the role of the internal factors to motivate management to disclose environmental information in annual reports, 2) and the role of external factors to influence management decisions to disclose environmental information in annual reports. Consequently, the factors that are suggested for inclusion in the proposed theoretical framework are: management attitude and cognition, local culture, accounting education, economic and political system, and the legal system.

3.4.1 Internal factors (management attitude and cognition)

The internal factors refer to the internal environment within the company, which include the values, attitudes and beliefs of upper management, in addition to the reporting strategy and the organization culture such as values, principles and ethics (Hibbett, 2004). In this regard, the most important factor that has a direct impact on the environmental disclosure practices is management attitude, because the final decision for disclosing environmental information is usually made by the managers (O'Donovan, 2002). In addition, Wilmshurst and Frost (2000) indicated that the environmental information within the annual report is subject to senior management intervention.

Depending on this factor to explain the environmental disclosure practice, some elements need to be taken into consideration such as values and motives which influence the perceptions, attitudes and decisions of those who are responsible for the organisation performance (Elsakit and Worthington, 2012). In this regard, the management attitude has been analysed from different aspects, including the perceptions of managers toward environmental disclosure in the annual reports of companies such as their motivation for doing so (Bebbington *et al.*, 1994; Jaggi and Zhao, 1996; O'Dwyer, 2002). There are further studies into the reasons for disclosing environmental information in the annual reports (Haniffa and Cooke, 2005; Elsakit and Worthington, 2012), and determining the reasons behind the absence of environmental information within annual reports (Perry and Sheng, 1999; Belal and Cooper, 2011). In this study, the management attitudes regarding CED and the reasons behind the absence of environmental information within annual reports of Libyan construction companies, are explored.

3.4.2 External factors

External influences refer to the general economic, social and political milieu in which the firm operates, such as, the pressures of civil society organizations, attitudes, values and beliefs of the general public, the attitudes of the stakeholders towards the CED, adoption of environmental disclosure by competitors, and technical and industrial developments. The above points will be discussed in light of the following factors:

3.4.2.1 Local culture

Accounting as a social structure is expected to be affected by cultural factors. According to Hofstede (2001, p. 9), culture is defined as “the collective programming of the mind that distinguishes the members of one group or category of people from another”. In this context, the cultural system can be defined from several elements including Individualism, Power Distance, Uncertainty, Avoidance and Masculinity, which constitute Hofstede’s dimensional model (Gray, 1988). According to Gray (1988) the Individualism and the Uncertainty Avoidance are the most important factors that affect the accounting system, while Power, Distance and Masculinity are less important factors. Regarding the CSED, two elements of culture (the Uncertainty Avoidance and Masculinity) are most related to it (Gray, 1988; Williams, 1999).

Accordingly, the company may avoid disclosing social and environmental information if this information could negatively affect the companies (Williams, 1999). Furthermore, the communities with higher levels of masculinity are less able to be conscious of the company’s activities on society than the communities with lower levels of masculinity (Gray, 1988). As a consequence, the companies working in a masculine society could disclose lower levels of social and environmental information than the companies working in a non-masculine community. With reference to previous studies, Hofstede’s dimensional model has been used by most researchers to recognize cultural characteristics which could be connected with accounting practice.

3.4.2.2 Legal system

The legal system has been mentioned in the literature as a factor to influence financial accounting practice (Archambault and Archambault, 1999; Jaggi and Low, 2000; Hope, 2003; Williams, 1999; Archambault and Archambault, 2003). According to Douppnik and Salter (1995, p. 195) the legal system has been defined as “a part of the institutional framework with which the

accounting system is likely to interact. The legal system influences the way in which accounting rules are promulgated, which in turn could influence the nature of the rules themselves". In this context, the legal system has been broken down into three main families: Romano-Germanic (Code) law, common law and socialist law (David and Brierley, 1985). Romano-Germanic law is the group of rules formulated by legal scholars, based on ideas of justice and morality (Salter and Doupnik, 1992). In this context, countries with codified laws, such as the Romano-Germanic (Code), and with less reliance on traditional cases, may be more likely to develop accounting rules that modify the basic accounting model (Archambault and Archambault, 1999). In contrast, common law is based mostly on the decisions that have been made by judges regarding similar cases from the past to settle specific problems (David and Brierley, 1985). In addition, common law may be more likely to create an environment to help the accountants to be more adaptive and innovative (Archambault and Archambault, 1999). Socialist law is a collection of certain principles of socialist ideology based on civil law systems and on the civil law tradition (Quigley, 1989). As a result, the relationship between the legal system and level of accounting disclosure practice is based on the type of law that a country has adopted. Williams (1999) found that there is no association between the Romano-Germanic law and the level of social and environmental disclosure in annual reports of companies in the Asia-Pacific region. However, Jorgensen and Soderstrom (2006) found that CED has been affected by the legal system.

3.4.2.3 Economic system

In general, the economic system is an important factor that impacts on the disclosure practices (Gray, 1988; Cooke and Wallace, 1990). An economic system can affect accounting disclosure practice via two factors: the nature of the economic system and the level of economic development (Gray *et al.*, 1996). In this context, there are three kinds of economy: planned economy, market economy and mixed economy, which could have different effects on accounting practice (Boolaky, 2004). Regarding the planned economy, the financial information is not important because the organizations are not targeted to make a profit. However, the information for the financial performance is requested by the users of accounting statements in the mixed and market economies (Boolaky, 2004). In addition, in the market economy, financial disclosure has received more attention than has environmental disclosure. Conversely, the second factor that affects accounting disclosure practice is the level of economic development (Archambault and Archambault, 2003). Furthermore, the level of economic development as the affecting factor on social and environmental disclosure has received much attention in recent years (Williams, 1999). Jorgensen and Soderstrom (2006) determined the effect of institutional

factors including legal origin, accounting and auditing regulation, Gross Domestic Product (GDP), and the extent of government mandates to disclose environmental information on environmental disclosure in 117 countries. The survey questions targeted 10,993 executives and business leaders in given countries. All variables including the level of environmental disclosure, were measured by the survey questions. The results of their study revealed that environmental disclosure is related to economic development.

3.4.2.4 Political system

The degree of political freedom is reflected by the political system in a given country. This political freedom depends on three elements: the degree of political rights, civil liberties, and the type of political system (Belkaoui, 1983). Regarding the effect of the political system on accounting disclosure practice, according to Belkaoui (1983), Cooke and Wallace (1990), Hassabelnaby *et al.* (2003), Archambault and Archambault (2003), there is a positive relationship between political freedom and accounting disclosure practice. In addition, the political system indirectly affects accounting disclosure via its effect on the local culture and economic system (Hassabelnaby *et al.*, 2003). Regarding the effect of the political system on voluntary social and environmental disclosure, a positive association has been found by Williams (1999), who investigated the factors affecting social and environmental disclosure, using content analysis to analyse 356 companies in seven Asia-Pacific nations.

3.4.2.5 Accounting education and practice

In general, the accounting can be divided into three main parts including practice, research and education (Cuganesan *et al.*, 1997). As is well known, education and experience are very important to develop any profession. The accounting profession is no exception; accounting practice is affected by the level of accounting education (Ahmed and Nicholls, 1994; Douppnik and Salter, 1995; Hassabelnaby *et al.*, 2003; Archambault and Archambault, 2003).

In this regard, the accounting profession faces two challenges including the change of the accounting role in response to the economic and social developments in the community, which has led to growing demand for graduates who have a high level of training, both scientific and practical, in the various areas of accounting. In addition, there is the existence of a gap between the actual qualifications and skills for graduates and those required in practice (Aldin *et al.*, 2011). This highlights the fundamental role of education in the development of accounting in general and the accounting profession in particular. In this regard, there are three kinds of factors that

may affect educational performance including individual factors such as intelligence and the manner of study, the social and family factors such as the appropriate environment for study, and the institutional factors such as school physical space and presence of equipment and training equipment (Aldin *et al.*, 2011). In this context, Cuganesan *et al.* (1997, p. 54) recommended that, “the materials used to teach accounting must encourage the students to react, question, propose, analyse and evaluate, giving legitimate space to their own lives and experiences. Nor can such thinking be developed and enhanced without delving into the problems of our societies”.

On the other hand, Parker *et al.* (2011) found that academic research in the field of accounting is considered an influential factor in professional practice, where it provides the technologies and technical practices that can be used by accounting practitioners in social and organisational settings. It can be said that there is evidence which emphasizes the relationship between the accounting profession and the academic research in the field of accounting, for instance, the accounting research in certain fields, such as environmental accounting, and intellectual capital have been funded by professional organizations (Parker *et al.*, 2011). Although the research in the field of environmental accounting has represented a significant proportion of accounting research, environmental accounting remains on the periphery of accounting education where results indicate that accounting education did not provide theoretical and practical frameworks that would develop the intellectual and moral abilities of students (Gibson, 1997). Therefore, the traditional approaches do not seem enough to meet skills needs so new materials and technologies should be adopted in accounting education in order to develop students’ skills in abstraction, systems thinking, experimentation, and the capacity for communication and collaboration (Howieson, 2003).

3.5 Summary

Based on reviewing the different theoretical frameworks in this chapter, there is no single conceptual framework to interpret the presence or absence of the environmental disclosure. Hence, to understand the rationales for social and environmental disclosure, different approaches should be adopted, instead of relying on a single theory (Bebbington *et al.*, 2008). For this study and given the special nature of the economic and political system in Libya (see chapter four), two theories have been adopted, namely stakeholder theory and political economy theory, that could have an explanatory power to interpret the presence or absence of environmental disclosure practices in Libyan construction companies.

To obtain a deep understanding of the relationship between CED and the internal and external factors in the Libyan context, a host of potential factors have been suggested as a guide for the empirical investigations of this thesis, based on the theoretical framework of Hibbett (2004). As a result, the thesis framework provides a number of factors to evaluate the motivations to disclose environmental information, including management attitude and cognition, local culture, accounting education, economic and political system, and legal system in light of stakeholder theory and political economy theory.

Discussion of CED contextually could help in providing a better understanding of CED in Libya. In the next chapter, the Libyan context has been considered along with many factors that might impact accounting disclosure and practice, including the Libyan socio-cultural, political and economic context, Libyan laws, regulations and, Libyan history including colonial experience.

CHAPTER FOUR

The review of environmental factors that impact on the corporate environmental disclosure in Libya

4.1 Introduction

Social, political, cultural, legal and economic factors can largely affect accounting disclosure practices in general and, in particular, corporate environmental disclosure (CED) (Gray, 1988; Cooke and Wallace, 1990; Hassabelnaby *et al.*, 2003; Archambault and Archambault, 2003; Jorgensen and Soderstrom, 2006). Therefore, it makes sense before starting conducting the empirical investigation for CED aspects in chapters 6, 7 and 8 at the same time, to learn lessons regarding environmental factors to understand CED in the Libyan context. This chapter aims to critically examine the Libyan socio-cultural, political and economic context, in addition to Libyan laws, that are likely to have an impact on the accounting profession and accounting education. The chapter is divided into the following sections, the next section gives an overview of the Libyan context, and political environment is outlined in the third section. The fourth section, then explains the economic context. Libyan laws and regulations and cultural context are considered in the fifth and sixth sections respectively. The seventh, eighth, and ninth sections address the accounting education and accounting profession in Libya, including a brief review of the Libyan construction industry. Finally, a summary of chapter will be provided to highlight how these factors affect the way in which CED practices are developed.

4.2 An overview of Libya (geographical, population, area, and historical stages of Libya).

According to Otman and Karlberg (2007) Libya is a developing Arab state located in the north-central part of Africa. It is bound by the Mediterranean Sea to the north, Egypt to the East, Sudan to the southeast, Tunisia and Algeria to the west, and Niger and Chad to the south. The population of Libya is 6.4 million spread over a large land mass of 1,775,5000 square kilometres (700,000 square miles). The capital, Tripoli, is home to 1.7 million people. Ninety percent of the people live in less than 10% of the area, primarily along the coast. More than half the population is urban, mostly concentrated in the two largest cities, Tripoli and Benghazi. Thirty-three percent of the population is estimated to be under age 15. The main language spoken in Libya is Arabic, which is also the official language. Libya has seen a long history of occupation which started thousands of years ago following occupation by the Greeks, Romans, Phoenicians, Ottomans

and Italians (Otman and Karlberg, 2007; Wright, 2012; Vandewalle, 2012). Colonial periods continued up to the declaration of Libyan independence by the United Nations (UN) on the 24th of December 1951 (Wright, 2012). According to the constitution promulgated in October 1951, Libya was a federal monarchy ruled by King Al-Sanusi, and the country was divided into the three provinces of Tripolitania, Cyrenaica and Fezzan (Grifa, 2012). The federal government consisted of a bicameral legislature. In April 1963, the federal government introduced legislation designed to transform Libya from a federal into a unitary state. In 1969 monarchy was overthrown by a military coup which abolished the existing constitution and created a republican regime in Libya (Grifa, 2012). For the first seven years following the military coup, Libya was ruled by a military council consisting of 12 members led by Muammar Ghaddafi. They began a complete overhaul of Libya's political system, society, and economy (Grifa, 2012).

4.3 Political environment

The political system can be considered an important factor influencing accounting disclosure practices, either directly through the extent of political freedom guaranteed by political regime, or indirectly by its effect on local cultural and economic systems (Belkaoui, 1983; Cooke and Wallace, 1990; Hassabelnaby *et al.*, 2003; Archambault and Archambault, 2003). Hence, to know the extent of the impact of the political system on CED practices in Libya, it may be worthwhile looking at the most important characteristics of the political system and its mechanism of action. In this context, some of the key points that have had an impact on political life in Libya, are discussed as follows:

4.3.1 Announcement of the cultural or popular revolution

In 1975 a cultural or popular revolution was started, which was aimed to combat bureaucracy in schools, businesses, factories, and public institutions, where all the managers in these organizations were replaced under the pretext of the public interest (Vandewalle, 2012). This revolution focused on the following points which had been considered a roadmap for the coming period: (1) disable all laws impeding the revolutionary transformation; (2) purge this country of people who have reactionary ideas; (3) all freedom should be for the people, however no freedom is granted to potential enemies; (4) declaration of the cultural revolution meant censorship of publications and publication of books, newspapers and magazines to ensure they did not contain non-revolutionary ideas; and (5) declaration of the administration revolution meant changing all

the managers in the production units and services in Libya and replacing them with others via a popular selection.

4.3.2 Declaration on the Authority of the People

In 1977 there was an announcement of the establishment of what is called the power of the people, where the third universal theory was adopted as a framework for the political system in Libya (Grifa, 2012). Perhaps, the most important implications of this change in the political system, is the application of the so-called the people's congresses system where the mechanism of action of this system can be summarized as follows:

- Based on the people's power system, the people are divided into small groups called the Basic People's Conference, where the Conference Secretariat is selected by the Conference members which consist of five members including the secretary of the conference.
- In addition, members of the committee are selected by the conference members consisting of the Secretary of the People Committee and Secretary to all sectors in the area within the administrative boundaries of the conference.
- The basic People's Congresses meet twice a year, once at the beginning of the year to set the agenda of the issues to be discussed and at the end of the year to take decisions on the issues and the accountability of the People's Committee of the Conference.
- The Secretaries of the People's Congresses at the municipal level meet to formulate final decisions, finally all the Secretaries of the People's Congresses of the Provinces meet in the General People's Congress which is the legislative authority in Libya.
- The General People's Congress is composed of the Secretaries of the People's Congresses and Secretaries of the People's Congresses of the provinces, who choose the Secretariat of General People's Congress which consists of five members including Secretary of the Conference. Moreover, the General People's Committee, which is the executive branch, are selected by the General People's Congress, which consists of the general Secretary of the People Committee (Prime Minister) and secretaries to all sectors in Libya.

As mentioned above, theoretically, the final decisions are issued by the General People's Congress, and the General People's Committee implement these decisions, moreover all the secretaries of the sectors are accountable to the General People's Congress.

4.3.3 Attempts to reform

According to Bleck (2011) in 2000, most central government executive functions were abolished. The responsibilities were transferred to the 26 municipal councils that make up the General People's Congress. Centralised control is maintained over the economy, finance, defence and security, energy, infrastructure, foreign affairs, social security and trade portfolios, the heads of which all report directly to the prime minister's office.

In 2006 the People's Committees of Districts and the position of secretary of the People's Committee were abolished. The powers were transferred to the Central Authority which took control of issuing decisions and overseeing public projects (Otman and Karlberg, 2007).

4.3.4 Libyan Revolution

Following the outbreak of the revolution in 15 February, 2011, the national transitional council was formed, to be the sole legitimate representative of the Libyan people on 27th of February 2011 (International Crisis Group, 2011). On 23 October, it was announced that the Transitional National Council had liberated the country after the defeat of the military forces of the Gaddafi regime, and it announced on 23 November the formation of a transitional government and the future plans to conduct parliamentary elections (IMF, 2012). In July 2012, Libyan voters chose 200 members of a General National Congress, which is considered to be the first election after nearly 50 years (Blanchard, 2012). The General National Congress appointed a prime minister in October, 2012, who formed an interim government tasked with preparing the ground for a new constitution and fresh parliamentary elections in 2013. Based on previous events, especially with regard to the peaceful transition of power, Libyan people, have a good chance to build a democratic state ruled by law, and institutions, in order to achieve growth in various sectors, which will include all categories of citizens. However, Libya faces serious challenges in addressing the root causes of the revolution, and building a democratic system amid rising regional risks, and uncertainties prevailing around the world. Therefore, in the medium term, the efforts should be focused on building capacity and renewal of infrastructure, developing the private sector, improving the level of education, providing job opportunities, and developing an effective network of social safety within the framework of transparent and accountable government (IMF, 2012).

According to the mechanism of action of the political system in Libya of the period between 1969 and 2011, there is a big gap between the theory and practical aspect, where all decisions

were made by revolutionary leader in an informal way. Thus, the system of governance was distinctly dictatorial. Therefore, the number of flaws resulted from such a system of governance as follows: lack of equal opportunities among citizens which led to the marginalization of large segments of the population; and, the spread of poverty, low level of health services and level of education, the spread of corruption in the administrative units.

Regarding the accounting development, the absence of a general policy led to the ignoring of the important mechanisms in the field of accounting thought and action, which have important implications for the future development in line with the experience of other countries, such as the balanced institutional environment in the development of financial accounting standards (Alhsadi, 2007). Finally, the fundamental change that has taken place in Libya in the recent period may not have an immediate significant impact on social and environmental disclosure but in reality it could have a positive effect in the long run (Christopher and Chivvis, 2014).

4.4 Economic context

Accounting disclosure practices can be affected by the characteristics of the economic environment, including the nature of the economic system and the level of economic activity (Gray *et al.*, 1996). Hence it is important to understand the nature of Libyan economic system and its mechanism of action through review its development stages since 1952 until now as follows.

4.4.1 The first stage (1951-1959) before oil discovery

In 1951 Libya became an independent country, in this era it was one of the poorest countries in the world, where most people were relying on the agriculture and animal husbandry to get an income sufficient to meet their basic needs. In addition, Libya depended on external aid from the UN, and America, to support the national economy (Vandewalle, 1996). In this regard, an accurate description of this period, was mentioned in the report of the World Bank as follows “Libyans live a very simple life, their food is simple, their necessities are limited, and their knowledge of twentieth-century technology very limited. The majority are farmers who consume most of their production and their living standards are very poor, and the majority live in hamlets and caves” (The International Bank for Reconstruction and Development, 1960, p. 1). Thus, the most important characteristic of this phase is the lack of resources which reflected negatively on the people where per capita income was less than \$ 50 per year; in addition the agriculture was the key sector in economic activity.

4.4.2 Second stage (1959-1969) after oil discovery

Perhaps the most important event in this stage was the discovery of oil in the late 1950s which had a major impact on the course of economic life in Libya (St-John, 2008). According to the Libyan Secretary of Planning (1997) the oil revenues contributed a significant contribution to Gross Domestic Product (GDP) and had reached 24.4% in 1962 and then rose dramatically to reach to 61.7 % in 1969. As a result, the per capita income reached \$ 1250 in 1967 compared to \$ 50 in 1951. Regarding the nature of the economic system in Libya (1951-1969) the free economic system was the hallmark of the Libyan economy, where the private sector was leading the economic activity with a minimum of government intervention.

4.4.3 Third stage (1969-1980) the transformation to the socialist system

During this phase, a radical change occurred in the system of government, where Libya turned to a republican system after a military coup led by the army. Economically, despite the survival of the manifestations of the capitalist system in economic life, the transition toward the socialist system was very clear (Grifa, 2012). According to the Libyan Secretary of Planning (1975) the State started to expand and develop the public sector vis-a-vis narrowing down the role of the private sector. This phase witnessed a three- year plan for economic development (1973-1975) which sought to achieve the following goals: producing food supplies to meet the people's needs and focusing on the agriculture and industry sectors, in an attempt to increase the contribution of these sectors to GDP and reduce dependence on oil. Moreover, the fifth plan (1976-1980) was implemented by the government to change the structure of the Libyan economy, and to increase the role of the production and service sectors in the economic activity.

4.4.4 Fourth stage (1980-1990) the dramatic drop in the oil prices

The main feature of this stage is complete conversion to the socialist economy, where all the businesses activities such as factories and retail trade came under the public sector administration (St-John, 2008). During this stage, two plans of development were implemented, and each one was for a period of 5 years. The first plan covered the period (1981-1985) and the second plan covered the period (1986-1990). These plans focused on the production sectors, particularly, the agricultural and industry sectors in order to achieve food self-sufficiency. In addition, the education sector received more attention to provide the necessary human resources for the implementation of development plans (The Libyan Ministry of Planning, 1998). However, there

was a deviation in the implementation of these plans as a result of the lack of resources caused by the dramatic drop in oil prices (Vandewalle, 2011).

4.4.5 Fifth stage (1990-2000) the trend towards liberalization of the economy

In this stage, there was a general trend towards liberalization of the economy to improve its unsatisfactory performance where the Libyan government began by selling the state-owned enterprises, closing non-viable underperforming companies, reducing subsidies for some of the services provided by the State such as water and electricity, and reducing the number of employees in state institutions (Alafi and Bruijn, 2009; Vandewalle, 2011). Moreover, new rules and laws were adopted which stipulated establishment of joint stock companies, the permission to open foreign currency accounts and to obtain import permits for private companies in order to encourage foreign capital investment in Libya (Vandewalle, 2011). This stage witnessed two plans including a 5-year plan (1991-1995) which adopted the previous goals; such as diversification, self-sufficiency, and the creation of jobs. Also the second five-year plan (1996-2000) focused on the preparation for new development. However, the objectives of the plans mentioned above were not accomplished due to unexpected difficulties caused by sanctions that were imposed by the UN on Libya. In other words, the focus at this stage was to complete the existing projects and repay previous commitments. Zoubir (2009, p. 407) indicated that “Libya went through a very difficult period from 1992 until September 2003, at which time the UN sanctions were finally lifted”.

4.4.6 Sixth stage (2000- to present) the remarkable growth in economic activity

According to the IMF (2003), at this stage more decisions were taken by the government to liberalize the economy, for instance, selling the assets of the public sector. In 2002, the dual exchange rate system was unified at a fixed rate of one Libyan Dinar (LD) equal to 0.608 American dollar (\$), which impacted positively on the economic development. In 2003, the sanctions were lifted by UN, which led to the growth of economic activity steadily for 7 years, with average GDP growth of about 5% during the period 2004-2010. In addition, foreign assets increased and reached 170 billion dollars at the end of 2010, compared to 2003 when the figure was 20 billion dollars (IMF, 2012).

To sum up, the Libyan economy depends largely upon revenues from the oil sector, which represents the majority of the GDP. Regarding the nature of the economic system, it is centrally planned, where the state controls all sectors. Due to fluctuations in oil prices, and the sanctions

imposed on the Libyan economy, it was suffering from recession, which led to the suspension of the development process. Despite the remarkable economic development, there has not been a respective focus on accounting procedures. Today, after the passage of nearly three years on the triumph of the revolution, Libya faces a long way to begin changing its socialist economy and benefitting from the experiences of others with respect to the diversification of sources of income and not to over-dependence on oil.

4.5 The influence of Libyan laws and regulations on environmental disclosure

The legal system influences the way in which accounting rules are promulgated, which in turn could influence the corporate disclosure practices (Doupnik and Salter, 1995). Thus, it is useful to examine the current regulatory framework that regulate the practices of accounting disclosure within the practical application of accounting in Libya, in order evaluate its role in developing the environmental disclosure practices. Historically, Libyan law has been influenced by Ottoman, French, Italian, and Egyptian sources (Kilani, 1988). In 1969 the monarchical system was ended by a military coup which established a republic. Later, the Revolutionary Command Council issued a decree proclaiming Sharia governance, the principal source of all legislation and established a High Commission to examine all existing legislation in order to make it consistent with Sharia principles. In this context, according to the Libyan political system, the laws are issued by the General People's Congress. In addition, the executive regulations and executive decisions are issued by the General People's Committee; and ministerial decisions are issued by the individual ministries. In Libya, the formal sources of the laws include the Civil Code as the main source as well as Islamic principles, custom, and principles of natural law and rules of equity (United Nations, 2004). In this regard, Civil law was issued in 1953 and is based on the Egyptian Civil Code, which in turn was based on the French Civil Code.

4.5.1 Legislation and standards of the accounting disclosure practices

Indeed, most of the legislation and standards of the accounting disclosure practices in Libya have been influenced by regulations and some institutions inherited from the colonial periods of United States of America (USA), United Kingdom (UK) and Italian (Bait El-Mal *et al.*, 1973; Kilani, 1988). These legislation and standards can be found as follows.

4.5.1.1 Libyan Commercial Law

Commercial law is concerned with business transactions for business organizations. In other words, it regulates the commercial bookkeeping, in addition to some other aspects relating to financial reporting and auditing. The following is a summary of the most important rules which were contained in the Libyan Commercial Law regarding the commercial transactions and accounting in Libyan companies (Libyan Secretary of Justice, 1953; Alhsadi, 2007).

- ❖ Regarding the accounting books, accounting files and records, the duration of keeping them and using as evidence in courts to satisfy the legal requirements (see articles 58 to 64 and 570).
- ❖ Determine the functions and responsibilities of the supervisory body which was named the Oversight Committee, which is appointed by the General Assembly; this Committee should be independent of the Board of Directors, in order to carry out legal and administrative and financial oversight (see articles 547 to 559).
- ❖ Determine the rules that govern the accounting measurement process, which must be taken into account, in the event of non-compliance with these rules, must obtain the approval of the Oversight Committee and state the justifications. Indeed, these rules represent accounting standards in the legal drafting (see articles from 574 to 594).
- ❖ The Libyan Commercial law emphasizes the need to adhere to imposed deadlines when preparing financial reports, where it requires companies to disclose accounting information within four months from the end of the company's financial year. However, it may stipulate in the Company Memorandum that period to be longer, provided that it does not exceed 6 months from the end of the company's financial year.
- ❖ According to law, the Board of Directors must inform monitoring committee on the budget at least thirty days before the day for the general assembly meeting (see article 580).
- ❖ The law also requires depositing a copy of the budget and reports of the directors and the report of the Oversight Committee in Trade Registry Office within thirty days of the ratification (see article 583).

According to the above, although it can be observed that the financial accounting practices have received due process by the Libyan Commercial law, they do not incorporate any requirements related to social and environmental disclosure.

4.5.1.2 Income tax law

Several laws related to income tax in Libya, have been issued, and the latest one is Law No. (7) 2010, consisting of 105 articles divided into five parts (General People's Congress, 2010). According to this law, Libyan companies are required to provide to the tax authority the following requirements: their balance sheet, profit and loss account, trading account, depreciation statement, and a detailed statement of the expenses included in the profit and loss account. According to article 71 of this Act, these requirements should be provided during the month of the date of approval of the budget, and no later than four months from the end of the financial year. Moreover, according to article 66 the annual tax is determined based on the amount of net income calculated after deducting all costs. General expenses and commission income are not tax deductible.

The accounting practices of Libyan companies are subject to tax law, where many companies have adopted the requirements of the tax authority to prepare external financial reporting (Bait El-Mal *et al.*, 1973).

Therefore, a distinction must be made between the reporting for tax purposes and accounts prepared for other purposes, because adoption of the same approach leads to not achieving the targets of accounting disclosure. In this context, the same requirements of the tax authority have been adopted by Libyan companies to prepare the annual reports, thus it is unlikely that these reports contain any information that conflicts with these requirements such as, the social and environmental information (Saleh, 2001).

4.5.1.3 Financial System Law of State

The Financial System Law of State was issued in 1967, and has been partially modified from time to time in order to meet the changing needs of society. In 2008 a new law was issued, where it repealed the previous law and its amendments (General People's Congress, 2008).

According to the first article, the Ministry of Finance carries out the following tasks in order to implement the provisions of this law:

- Manage the funds, assets, coffers, and stocks of state, and supervise the revenues, expenditures, and investments. Moreover, it collects the revenue and manages their accounts in accordance with the legislation governing them.

- Prepare the draft general budget, and any subsequent extra or exceptional budgets. Identify funding resources, methods of collection, and allocation of budget items. Keep financial records, and prepare final accounts in order to monitor the implementation of the budget according to the state's financial law.
- Appoint financial observers in sectors and State actors in order to censor financial policies and practices of these institutions.
- Draw up plans, programs, and suggesting the laws and regulations in order to implement the financial policies of the State.

According to the above, the accounting practices of companies that are subject to State control can be influenced by financial law of State, via its commitment to the rules and regulations for the preparation of financial reports. In this regard, although the Financial System Law has been issued recently, it does not seem to reflect developments in the accounting field, including disclosure of the environmental impact of companies.

4.5.2 Laws related to protecting of the environment in Libya

Libya is one of the countries that focuses on environmental issues and its problems, where the number of laws and regulations relating to the protection of the environment, have been issued which includes the following:

4.5.2.1 Law No. (13) of 1984 on provisions relating to general hygiene

The third article of this law, stipulates the following “Prohibits individuals, corporations, and institutions, whether public or private, national or foreign, from throwing waste and rubbish or disposal in places other than those designated for this purpose” (General People's Congress, 1984). According to the sixth article of this Act, the industrial companies that produce residues harmful to health, such as industrial waste and chemicals were required to collect and transport the waste and dispose of it by technical means that have been approved by the competent authorities (General People's Congress, 1984). In addition, the regulations of this law have identified the methods and control regarding collecting garbage, waste, and responsible parties for the performance of these tasks, including technical and safe conditions for the disposal of this waste.

4.5.2.2 Decision No. (263) of 1999 of General People's Committee regarding the establishment of the Environment Public Authority

The commission aims to protect the natural environment, in other words, it seeks to preserve all living organisms, including humans, water, soil, air and food. Moreover, it induces companies to improve their environmental performance and produce the goods in an environmentally friendly way (General People's Committee, 1999).

4.5.2.3 Law No. (15) of 2003 of protecting and improving the environment

According to General People's Congress (2003), the second article of this law stipulates the following: this law aims to achieve monitoring the environment, in order to protect it and improve it, finding the appropriate ways to measure pollution, preserving the ecological balance, prevention of pollution, and resultant damage, improve life circumstances, and adoption of the plans and programs to implement these objectives.

Additionally, the third and fifth articles of this law stipulates the following: all companies and organizations, whether public or private, must make all efforts to reduce the phenomenon of pollution, in other words, the ways and means of maintaining the balance of the environment, must be taken into account by all these bodies. Regarding the aspects of the environment that are addressed by this law, the following notes have been summarized:

- 1- Protection of atmospheric air
- 2- Protection of the seas and marine resources
- 3- Protection of water resources
- 4- Protection of food
- 5- Protection of soil and plants
- 6- Protection of wildlife.

Although there are some provisions to regulate the practices of accounting disclosure within the practical application of accounting in Libya, the accounting information obtained from financial reports in most Libyan companies, particularly from the perspective of contemporary financial accounting, is incomplete, unreliable, not comparable, and not disclosed in a timely manner. Thus, it is not valid for the purposes of analysis and decision-making (Alhsadi, 2007). This means that there is a gap between the provisions of the law and practices of accounting. This is due to a combination of factors, political, economic and social, cultural and which together constitute public policy in the field of accounting, which guides thoughts and practice in the process of accounting development, and the development of its tools in a manner that achieves

the goals of society. Therefore, it can be said the laws are not robust enough to impose this information, because Libyan companies do not apply the laws relating to accounting disclosure. There are other factors which should be taken into account, in order to develop the accounting disclosure practices in general, and the environmental disclosure practices in particular (Alhsadi, 2007).

4.6 Cultural context

Culture can be defined as follows: “The system of shared beliefs, values, customs, behaviours, and artefacts that the members of society use to cope with their world and with one another, and that are transmitted from generation to generation through learning (Cultural Anthropology, 1997). To determine the parameters of culture in any society, there are two major indicators including language and religion (Twati, 2008). Religion has an active role in the formation of cultural values (Vandewalle, 2012).

Regarding the Libyan culture, Libya is an Arabic country characterized by the same cultural characteristics in the Arab world including cultural values, language, religion and other social values, where the official language is Arabic, and the religion is Islam (about 97% of Libyans are Sunni Muslim). In this regard, the legislative codes were reviewed and revised after 1969 in order to harmonize them with the Sharia; in 1977 the Holy Koran was adopted formally as the main source of legislation in Libya. Given the fact that Islam is all-encompassing religion covering the relationship between God and the human, this determines the moral principles of people’s behaviour in addition to the social and political aspects (Abubaker, 2008). Thus it should be an influential element in people's behaviour, in terms of commitment to justice, and tolerance and not to commit acts that harm others. According to Agnaia (1997) a clan or tribe plays an essential role in the community’s life and people’s relationships with each other. In this context, the family in Libya is the first nucleus in the community, whether that may be a large family or small. The power in the family is owned by the eldest, in other words, father, grandfather, or eldest son. In addition, Libyan society, like other Arab societies is composed of small nuclear families while each of these families compose large extended families that constitute the tribe or clan. Thus, according to tribal combination of Libyan society, there are customs and traditions, which in fact include some negative habits that the individual finds himself forced to follow as a result of the nature of society. For example, personal relations and family play a larger part in getting jobs, rather than practical experience or academic qualifications. In other words, loyalty to family, clan, and tribe and the emphasis on regionalism and sectarianism occasionally is more important than loyalty to profession and law (Agnaia,

1997). According to Hofstede (2001) the culture system can be driven by four elements as discussed in section 3.4.2.1. In this context, these components have been examined by an IBM study which has covered three regions and fifty countries to which Libya was one (Abubaker, 2008). The study found that Libyan culture is characterised by high power distance, high masculinity, high uncertainty avoidance and low individualism. Thus, under these properties, there may not be adequate opportunities for the development of environmental disclosure practices.

4.7 The influence of accounting education on environmental disclosure

The education system, including accounting education, was significantly influenced by colonial periods that Libya passed through during the past 400 years (Ahmad and Gao, 2004). During the 1950s when Libya obtained its independence, more than 90% of Libya's population was illiterate and the formal accounting education and training for the local population did not exist (Kilani, 1988). In general, the education system from primary level to university level, was established, depending on guidance from Britain, America and the UN to take advantage of their expertise in this area (Ahmad and Gao, 2004). In this regard, the accounting system was based on educational and accounting systems of countries that colonized Libya before its independence. Yapa (2000, p. 297) has confirmed that “Almost all developing countries which have been colonies under powerful western rulers for a considerable length of time inherited their accounting education from a colonial system”.

Initially, the focus was on middle education (pre-university level) where the first school of Public Administration was established in 1953 that aimed to provide a training program for government employees in the field of accounting. At the level of higher education, accounting education at university level started in 1957 with the establishment of the Accounting Department in the Faculty of Economics and Commerce at the University of Libya (now called Garyounis University) (Kilani, 1988).

In the period between 1957 and 1976, the accounting education in Libyan universities was based on the English accounting curriculum, where the textbooks used were either British or written in English. In addition, some textbooks were translated to Arabic or were written by Arabic writers who had graduated from British Universities (Kilani, 1988). In 1976, the accounting education system provided by Libyan universities was transformed into to the American model, due to the fact that most members of academic staff were graduates from USA (Kilani, 1988). Several intermediate institutes and universities were established in Libya to meet the significant increase

in the number of students, where many departments of accounting developed their curriculum to facilitate progression of graduates to work in both public and private sectors.

Regarding the Masters programme, the Garyunis University was the first leading university in this area, where it started to offer this programme in 1986. Currently, most Libyan universities have sections for Post Graduate Studies in this field. Most of the faculty members who teach in these departments, are Libyans, who graduated from the US or the UK. On the other hand, the Master's program includes three elements, core subjects, electives and a dissertation. Textbooks used are either British or written in English. Moreover, some textbooks have been translated into Arabic or have been written by Arabic writers who have graduated from British Universities (Kilani, 1988).

However, there is no PhD programme in accounting by the Libyan universities so far. Thus, all faculty members who hold a doctoral degree, have studied abroad, where most of them have graduated from the UK and USA, while the remainder have studied in other countries such as Australia, Egypt, and Jordan. There is no doubt that the adoption of a program to grant doctoral degree is very important in order to conduct accounting research that develops the accounting practices. In this context, Ahmad and Gao (2004, p. 379) confirmed that, “The lack of a PhD programme is one of the main factors that have contributed to the slow development of accounting education and research in Libya”.

Regarding the issues of social and environmental disclosure in the accounting education system, indeed there are no courses related to social and environmental disclosure in the Bachelor's degree, however, the Master's Programs of some universities contain an optional course that address social accounting. As a result, students who have graduated from universities, whether undergraduate or postgraduate, may not have a background in social and environmental disclosure issues, thus, they are not able to deal with these issues, either in the practical or academic field.

4.8 The evolution of the accounting profession in Libya

During the extended period of the independence of Libya until 1973, the accounting profession did not exist, and this is due to the colonial periods endured by the country and the lack of local qualified accountants (Bait-El-Mal *et al.*, 1973). The discovery of oil in the early 1960s played an essential role in developing economic activities, hence, there were increasing demands on accounting information, and services of accounting and auditing by several parties such as managers, investors, creditors, and state agencies (Ahmad and Gao, 2004). Consequently, most

companies have relied on foreign accounting firms in preparing and auditing their accounts. In this regard, many branches of foreign companies from Egypt, the US and the UK specializing in accounting, have been established in Libya to provide accounting and audit services (Bait-El-Mal *et al.*, 1973). However, in the 1970s several local accounting offices have been established as a result of increasing the number of graduates from Libyan universities and the return of many students who were studying abroad after completing their studies (Bait-El-Mal *et al.*, 1973). In order to develop a general framework of accounting in Libya and to organize the accounting and auditing profession, Law No. 116 was issued in 20 December 1973 (Libyan Secretary of Justice, 1973). It addresses the following issues: the establishment of the Libyan Accountants and Auditors Association (LAAA); registration of members, fees, pension and contribution fund, obligations of accountants and auditors, penalties; and general and transitional provisions (Libyan Secretary of Justice, 1973). Based on the provisions of this law, the LAAA was established by the Libyan government in June 1975 in order to achieve the purpose of its establishment which was as follows:

- To organize and develop the accounting and auditing profession through the development of the accounting standards, to evaluate performance of accountants and auditors, and to habilitate them scientifically and practically;
- To contribute to the development of accounting education according to the needs of the work environment and the community;
- To benefit from the expertise of international bodies in the field of accounting and auditing through contact with them and exchange of information;
- Keep abreast of new developments in the field of accounting and auditing through organizing and participating in scientific conferences and seminars internally and abroad, in addition, to encourage research through publications in specialized magazines; and
- To protect the rights of members such as determining fees, determining rules to organize relations between members, and to establish a retirement pension fund. In contrast, to take all necessary measures against members who do not respect the laws and ethics of the profession.

Within the LAAA, there are two types of membership, accounting and auditors who practise the profession, which is divided into two groups, including accountants and auditors and assistants of accountants and auditors.

The second kind of membership is called accountants and auditors who do not practise the profession made up of two groups, accountants and auditors, and assistants of accountants and auditors (Libyan Secretary of Justice, 1973).

According to article No.24, there are a number of conditions, which must be met by the applicant to join the LAAA, including, scientific and practical qualifications in addition to being Libyan and enjoying a good biography. Despite the passage of nearly 40 years since the establishment of the LAAA, it has not achieved the goals for which it was created, especially with regard to building the theoretical framework for the practice of the profession and determining the ethics of its practice (Bengharbia, 1989). In this context, Shareia (2010, p. 13) added that, “Rather, it has simply followed government regulatory requirements relating to accounting practice. This suggests that the LAAA has failed to regulate itself and to recognize its obligation towards the public interest”. Therefore, with this weak performance, and the absence of the criteria which organizes the practice of the profession, the LAAA is not expected to make any progress, especially with regard to the issues of social and environmental disclosure.

4.9 Libyan construction industry

As mentioned earlier, the economic development plans were designed to reduce dependence on oil, so the government started to build heavy industrial capacity in the 1980s, especially the construction industry, to reduce reliability on imports and to increase the contribution to GDP (Eltaief, 2010). In this context, the Libyan construction industry makes a contribution to the economy, where it contributes 5.2 % of the Libyan GDP, and it employs around 3.2 % of the total workforce (Ngab, 2009).

4.9.1 Key stages of Libyan construction industry

In the following, the stages that passed by the Libyan construction industry are discussed in order to highlight the importance of this sector in the Libyan economy.

Since the discovery of oil in the late 1950s, Libyan governments have used the oil revenues to increase their investment in the construction industry (Eltaief, 2010). Although it can be observed that in the early 1970s through to mid1980s, the construction industry won a significant share of investment to meet the urgent needs of the population for houses, roads, schools, and infrastructure (Sheibani and Havard, 2005). In this respect, between 1970 and 1986, the government invested more than 10 billion dollars in housing and infrastructure which made possible the construction of 277,500 housing units. In addition, more than 30,000 km of a road network across the country was constructed during this period (Ngab, 2009). The increase in construction was accompanied by an increase in the consumption of cement, reaching 6 million tonnes annually in the 1970s. In this regard more than 97 % of the construction in Libya used

cement-based materials regardless of location, cost, or environmental conditions (General Council for Planning, 2002). However, since 1984 as a result of the fall in oil prices and international sanctions during the early 1990s, the construction industry slowed to a halt, where many housing contracts were suspended or cancelled in keeping with a general decline in government spending (Ngab, 2009). Since 2000, Libya has witnessed significant investment in different areas including the oil and gas sector, water projects, airports, ports, railways, new homes, hotels and resorts. This was in addition to a surge in the granting of loans for housing construction, where more than 5 billion dollars were given for private home loans in 2006-2007 alone. During this period, the five-year plan (2007-2011) was initiated for development, which included all sectors. This plan aimed to liberalize the economy from state control, support and stimulate the establishment of private projects, and build and develop the country's infrastructure (Ngab, 2009).

4.9.2 Libyan construction companies

Libya has many kinds of companies which work in the construction industry. Most of these companies are directly or indirectly owned by the State (Eltaief, 2010). In this study, the largest construction companies were selected as a sample in order to evaluate the environmental disclosure within the Libyan construction industry, hence a description will be provided for selected companies, in order to justify its adoption as a sample for this study as follows.

4.9.2.1 AL-Ahlia Cement Company

Ahlia Cement Company is the leading company in the cement industry in Libya, where it built the Marqab factory, which began production in 1969. In 1965, the company was established under the name National Company of Cement and Construction Materials. In 1988, some existing plants were merged with the company to become the Arabian Cement Company. In 2005, decision Number (45) of the General People's Committee was issued to raise the company's capital to 600 million dinars and changed its name to Ahlia Cement Company. Currently it is one of the largest companies in Libya and it has six plants with sites across Libya as shown in Table 4.1.

Table 4.1 Factories affiliated to AL-Ahlia Cement Company

Statement	Actual production tonnes/year				
	2006	2007	2008	2008	2010
Years					
Name of factory					
Marqab factory	255122	259971	252157	243701	300570
Suk Elkhamis Complex factory	780727	617973	877810	697666	608459
Labda cement plant	612198	671447	607818	614062	427128
Zliten cement plant	771349	612477	607818	754074	365079
Paper bags plant	37232731	29780481	42000000	33380000	31231350
Gypsum plant			2615	16130	14134

4.9.2.2 Libyan Cement Company

It is one of the biggest companies in the cement industry field in Libya. It possesses three factories, Hawari, Benghazi, and Elfataiah, where they cover more than one third of the Libyan cement demand. In the year 2008, the company entered into a partnership with a foreign partner, under this contract the design capacity of the company's factories was upgraded to reach 3 million tonnes per annum while the production capacity of company increased from 1.6 million tonnes in 2007 to 2.5 million tonnes in 2010. The Figure 4.1 describes the development of design capacity and production of the Libyan Cement Company.

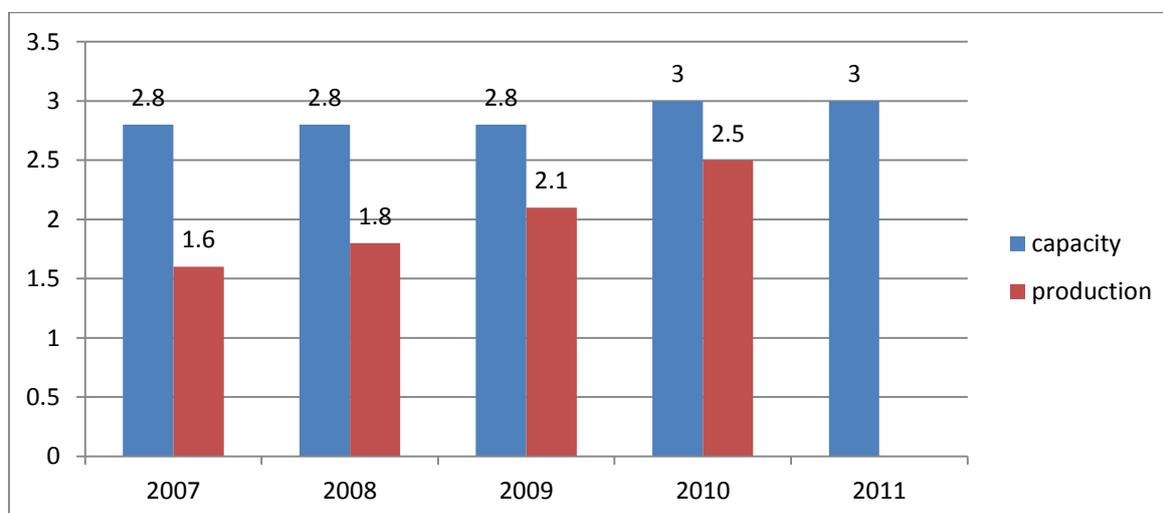


Figure 4.1 Production capacity, and actual production of Libyan Cement Company

4.9.2.3 Libyan Iron and Steel Company

This is one of the largest companies in the Libya with an annual capacity of 1,324,000 tons of liquid steel. The company is situated near the coastal city of Misurata, about 210 km east of Tripoli on an area of 1,200 hectares. The Table 4.2 shows the production facilities of the company, the kind of production, and target production for year 2010.

Table 4.2 Facilities and types of production of the Libyan Iron and Steel Company

Name of factory	Type of production	Target production tonnes/year
Direct Reduction Plant (the first and second units)	Sponge Iron	1,100,000
Direct Reduction Plant (the third unit)	Steel hot-moulded	650,000
Steel Melt Shop No. 1	Billets and Blooms.	500,000
Steel Melt Shop No. 2	Slabs.	611,000
Bar and Rod Mills	Bars and Rods	710,000
Light and Medium Section Mill	Light and Medium Sections	38,000
Hot Strip Mill.	Hot Rolled Coils and Sheets	580,000
Cold Rolling Mill .	Cold Rolled Coils and Sheets	110,000
Galvanizing Line .	Galvanized Coils and Sheets	40,000

4.9.2.4 Arab Union Contracting Company

It was established in 1974 under Law No (6) of the Presidential Council of the Federation of Arab Republics as a federal contribution company. Since its founding, it has implemented several vital projects, including the construction materials industry and building the condominiums, hospitals, banks, and networks of sewerage. In the field of the building materials industry, the company has established the cement factory with a production capacity (1,400,000 tonnes) annually. It is ranked first in terms of production capacity for all cement plants in Libya.

4.9.2.5 Libyan investment and development holding

The company was established by a resolution of the General People's Committee No. 309 in 2007 with a capital of one hundred million dinars; it carries out all public contracting in the areas of civil, mechanical and electrical, it is wholly owned by the Fund of Economic and Social Development, based in the city of Tripoli. The company's capital has been increased to 600 million dinars, and it has recently been increased to one billion dinars.

The company owns and contributes to several construction companies, which include:

1. Libyan Company for marble industry
It is wholly-owned by Libyan Investment and Development Holding Co; it has been established in order to contribute to the provision of the necessary needs of marble in Libyan market and export to the outside to contribute to the raising of gross national product.
2. Company Teknoble Libya Pipe Industries (100%)
3. Alwaha Contracting (70%)
4. Almabr Company Libya to real estate investment and development (50%)
5. Hani Company for General Contracting (40%)

6. Altaff Company for General Contracting (40%)
7. Sombl Company for General Contracting (40%)
8. Libyan Consolidated Contractors Company contribution (35%)
9. Oia Company for major projects (35%)

4.10 Summary

This chapter discusses the environmental factors including the culture, economic, political, legal system and the accounting education and profession within Libya, to understand how these factors affect the way in which CED practices are developed. Furthermore, this chapter highlights the Libyan construction industry and its subsidiary companies, where this study has been undertaken. From this discussion the following points can be summarised.

The most important characteristics of the political system are authoritarianism and repression, in addition to corruption and mismanagement that has led to the marginalization of large segments of the population. These characteristics have resulted in restrictions on the perceived role of accounting to provide the information needed by society. The economic system is a central planned one where the State controls all the sectors, the Libyan economy depends heavily on oil and gas. Although the Libyan economy has achieved satisfactory growth rates during recent years, it has not been reflected on the development of accounting disclosure practices. Although more attention is being given to the environment, the existing laws, legislation and standards of the accounting disclosure practices do not encourage companies to disclose environmental information. Tribal forces and people's relationships with each other play an essential role in Libyan society which is characterised by high levels of uncertainty avoidance. Therefore, it is expected that Libyan companies may not provide sufficient information regarding their activities, such as environmental information. It can be said that the accounting education policies and lack of academic research regarding the environmental disclosure has not encouraged a policy of openness. Given these deficiencies of accounting education policies, it can be said that the accounting profession is still undeveloped. Furthermore, despite the establishment of LAAA more than four decades ago, it has failed to build the theoretical framework for the practice of the profession and to determine the ethics of its practice. With this weak performance, and the absence of the criteria which organize the practice of the profession, the LAAA, is not expected to do anything to upgrade current accounting practices, especially with regard to the issues of social and environmental disclosure. Finally, after review of the construction industry in Libya, it can be said that it has made a contribution to the economy in the recent years. Furthermore, the selected construction companies for this study are considered

the largest in the construction industry in terms of production capacity, and leaders in the use of building materials such as cement, steel and iron.

However, the background material developed in the previous and following chapters which are directed towards an in-depth examination of CED in Libyan construction industry should be linked by selecting a particular research methodology. The following chapter presents the research methodology and methods adopted for this study.

CHAPTER FIVE

Research methodology

5.1 Introduction

The previous chapters have outlined background material including the relevant literature objectives, environmental factors as well as the theoretical framework to help adopt the necessary methodological choices and construct appropriate research design. This chapter attempts to link the background material developed in the previous and following chapters, which are directed towards an in-depth examination of corporate environmental disclosure (CED) in Libyan construction industry. In doing so, in the next section, steps of research process are discussed. Methodological choices are determined in section 5.3. In section 5.4 the available methods for sampling and data collection in both qualitative and quantitative research are outlined. In section 5.5 philosophical considerations and methodological underpinning the current study are outlined. The penultimate section provides the used techniques to collect and analyse data. The summary of chapter is presented in section 5.7.

5.2 Research

Research is defined as “something that people undertake in order to find out things in a systematic way, thereby increasing their knowledge” (Saunders *et al.*, 2009, p. 5). Collis and Hussey (2003) argued that there is no consensus in the literature regarding how research should be undertaken because people have different views about the meaning of research. However, the research process involves a number of steps including research philosophy, research approach, research strategy and data collection in order to answer a particular research question (Saunders *et al.*, 2009). Figure 5.1 summarises the research steps for this study that will be discussed in this chapter.

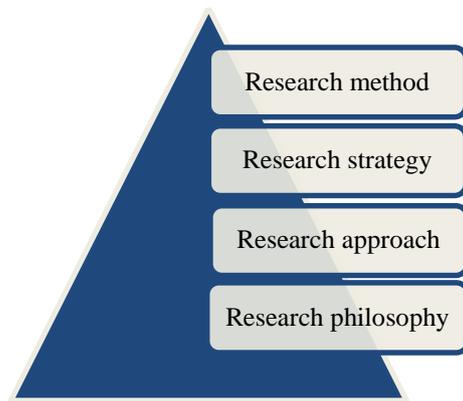


Figure 5.1 Steps of research process (based on Saunders *et al.* (2009))

5.2.1 Understanding research philosophy

According to Easterby-Smith *et al.* (2008, p. 56) understanding the research philosophy is a very important issue for the following reasons: “first, it can help to clarify research designs. This not only involves considering what kind of evidence is required and how it is to be gathered and interpreted, but also how this will provide good answers to the basic questions being investigated in the research. Second, a knowledge of philosophy can help the researcher to recognize which designs will work and which will not. It should enable him or her to avoid going up too many blind alleys and should indicate the limitations of particular approaches. Third, it can help the researcher identify, and even create, designs that may be outside his or her past experience. Moreover, it may also suggest how to adapt research designs according to the constraints of different subject or knowledge structures”. Saunders *et al.* (2009) asserted that the research philosophy will support the research strategy and the methods which have been chosen by the researcher. Hence four assumptions relating to the nature of social science including ontology, epistemology, human nature and methodology (Burrell and Morgan, 1979) are reviewed as follows.

5.2.1.1 Ontology

Ontology is concerned with the nature of social entities (Bryman, 2012). The definition of ontology has been provided by Crotty (1998, p. 10) as “the study of being. It is concerned with 'what is', with the nature of existence, with the structure of reality as such”. In other words, ontology is the reality which has been investigated by the researchers (Healy and Perry, 2000). According to Burrell and Morgan (1979) there are two aspects of ontology, realism and nominalism. Realism is the branch of ontology that believes that social phenomena are outside the scope of external influence. In other words, social phenomena are independent and separate from the actors (Bryman, 2012). In terms of nominalism within the social sciences, labels and

names are attached to experiences and events which are crucial, thus there are no interesting questions concerning the attempt to establish different versions of truth (Easterby-Smith *et al.*, 2008). Therefore, social phenomena are derived, based on the perceptions and actions of social actors (Saunders *et al.*, 2009).

5.2.1.2 Epistemology

Epistemology is defined by Cruise (1997, p. 343) as “the branch of philosophy concerned with the theory of knowledge. Traditionally, central issues in epistemology are the nature and derivation of knowledge, the scope of knowledge, and the reliability of claims to knowledge”. Further Maynard and Purvis (1994, p. 10) have provided a definition of Epistemology as “concerned with providing a philosophical grounding for deciding what kinds of knowledge are possible and how we can ensure that they are both adequate and legitimate”. Hence epistemology is a branch of philosophy; it has provided the philosophical foundation to decide what kinds of knowledge are suitable and legitimate. In this context, there are two aspects of epistemology: positivism and anti-positivism (Burrell and Morgan, 1979). Positivism can be defined as “an epistemological position that advocates the application of the methods of the natural sciences to the study of social reality and beyond” (Bryman, 2012, p. 28). Positivism is associated with the philosophical position of the natural world; in other words, it is dealing with the reality of social life which can be observed, and the final product is very similar to those results that are reached in the physical and natural sciences (Saunders *et al.*, 2009). On the other hand, anti-positivism is the branch of epistemology dealing with determining the differences between people and the objects of the natural sciences in order to interpret the social roles of others in accordance with our own set of meanings (Saunders *et al.*, 2009; Bryman, 2012).

5.2.1.3 Human nature

Human nature assumptions refer to the relationship between human beings and their environment (Burrell and Morgan, 1979). There are two defaults to explain this relationship, namely determinism and voluntarism. Under determinism, human beings and their activities are determined by the situation or environment in which they are located. In the case of voluntarism, human actions are based on their perceptions and experience (Burrell and Morgan, 1979).

5.2.1.4 Methodology

According to Saunders *et al.* (2009, p. 595) methodology describes the “theory of how research should be undertaken, including the theoretical and philosophical assumptions upon which research is based and the implications of these for the method or methods adopted”. Therefore methodology refers to the overall approach to the research process, from the theoretical underpinning to the collection and analysis of the data (Collis and Hussey, 2003). In this regard Burrell and Morgan (1979) identified two contrasting methodological positions, namely ideographic and nomothetic. The ideographic approach is based on the view that social science can be only understood by obtaining first-hand knowledge of the subject under investigation. Thus, the data related on subject is collected through the participation of the researcher in exploring inside situations and obtaining detailed analysis of the insights (Burrell and Morgan, 1979; Belkaoui, 2004). With nomothetic approach, research is based on systematic protocol and technique used in the natural sciences that focus upon the process of testing hypotheses in accordance with the principles of scientific rigour (Burrell and Morgan, 1979).

5.2.2 Research approach

Regarding the relationship between the theory and the research, some researchers endeavour to test the theory using the deductive approach, while others attempt to develop a theory called the inductive approach (Bryman, 2012). In other words, in the deductive approach the hypotheses are developed, in order to test the theory, while in the inductive approach the theory is created or developed as a result of the data analysis (Saunders *et al.*, 2009). In addition, deductive research means to study the theoretical concepts and then test through empirical observation, and thus to reach certain results from general conclusions; therefore, the deductive approach is a transition from the general to the particular (Collis and Hussey, 2003). In contrast, inductive research is the study of certain phenomena by monitoring the empirical reality and thus reach general results from particular cases, that is, transition from the particular to the general (Collis and Hussey, 2003).

5.2.3 Research strategies

In the previous sections of this chapter, a general overview about the different philosophical orientations has been provided that are important because they determine the research strategy (Bryman and Bell, 2011; Bryman, 2012). Research strategy in turn provides the general orientation for data collection and analysis in social research. According to Creswell (2009) there

are three types of research strategies: quantitative, qualitative, and mixed research strategies. The relationship between these methods is a complementary one, both with regard to a particular goal of the objectives of the study or on the level of the study as a whole, thus the use of quantitative methods may be more qualitative methods or vice versa (Creswell, 2009). Hence, the choice of a strategy depends on research questions or objectives, the extent of existing knowledge, the amount of time and other resources available to the researcher (Saunders *et al.*, 2009).

Quantitative research strategy is concerned with the measurement and analysis of causal relationships between variables within a value free framework (Denzin and Lincoln, 2011). Quantitative research emphasizes quantifications, rather than words in the collection and analysis of data (Bryman, 2012). Quantitative studies are in line with realism as an ontological position, and positivism as an epistemological position. Hence, it is typically associated with the deductive approach employed for testing theories rather than generating them (Saunders *et al.*, 2009). According to Creswell (2009) there are two main types of quantitative research methods, namely experiments and surveys. This allows the researcher to collect quantitative data which can be analysed quantitatively using descriptive and inferential statistics (Saunders *et al.*, 2009).

In contrast, qualitative research strategy concentrates on the quality of entities, processes and meanings which are difficult to measure in terms of quantity, or frequency (Denzin and Lincoln, 2011). In other words, qualitative research is dealing with words rather than quantification in the collection and analysis of data (Bryman, 2012). Therefore qualitative research is consistent with nominalism as ontological position and anti-positivism as epistemological position. Thus, it provides a basis to set theories rather than testing them (Bryman, 2012). The main qualitative strategies have been provided by Creswell (2009) as case studies, phenomenology, ethnography, grounded theory and narrative.

There are several benefits for combining methods with different orientations within one research project, including bestowing strengths that offset the weaknesses of both quantitative and qualitative research, providing more comprehensive evidence for analysing problems and helping to answer questions that cannot be answered by a single approach (Creswell and Plano Clark, 2007). Furthermore, credibility and generalizations of the results under one study will be achieved when using various methods (Easterby-Smith *et al.*, 2008).

Indeed, the qualitative and quantitative methods can be used in different ways either sequentially, at the same time (concurrent) or a combination of both (transformative) (Creswell, 2009; Saunders *et al.*, 2009; Bryman, 2012).

According to sequential strategy, the researcher begins by using the interview to explore the dimensions of the problem and then the quantitative survey with a large sample is used. Conversely, the study could be initiated with a quantitative method followed by a qualitative method using a small sample to explore the details (Creswell, 2009; Saunders *et al.*, 2009). The use of quantitative and qualitative data sequentially provides the following advantages: explain and interpret quantitative results. It could be useful to investigate unexpected quantitative results (Creswell, 2009).

According to concurrent strategy, the researcher uses qualitative and quantitative methods at the same time, in order to address a problem in all its aspects; in other words, to analyse various types of questions about the different kind of data that should be collected (Creswell, 2009; Saunders *et al.*, 2009). The use of qualitative and quantitative method at the same time provides the following advantages. A researcher is able to collect the two types of data simultaneously during single data collection phase. It provides a study with the advantages of both quantitative and qualitative data. By using two different methods in this fashion, a researcher can gain perspectives from the different types of data or from different level within the study. It is familiar to most researchers and can result in validated and substantiated findings (Creswell, 2009).

5.3 Methodological choices

This section discusses the relationship between the various philosophical assumptions and two contrasting methodological positions in order to identify methodological choices underpinning research strategy. To facilitate this, the philosophical considerations, research strategies and research approach discussed in the previous sections will be used, which are shown below in Figure 5.2.

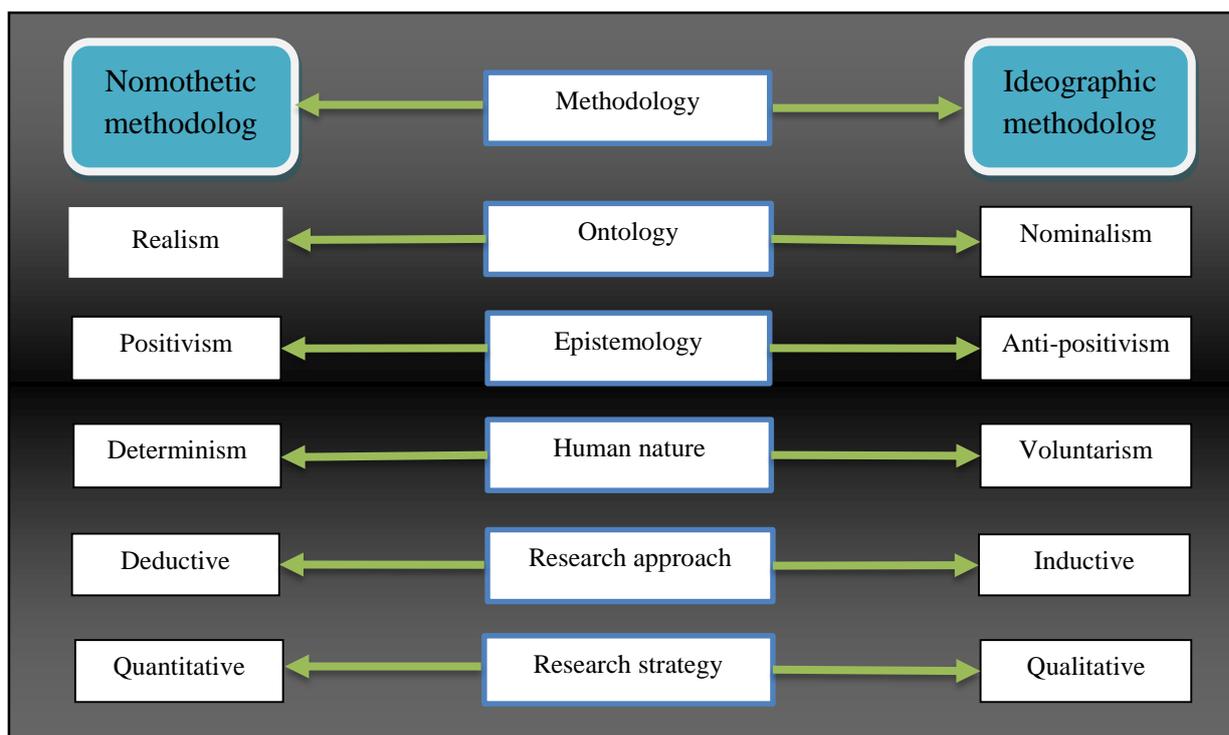


Figure 5.2 Methodology choices depending on the various philosophical assumptions based on Burrell and Morgan (1979)

The nomothetic methodology is in line with realism as an ontological position and positivism as an epistemological position (Burrell and Morgan, 1979) where the realist ontology assumes that the social phenomena are outside the scope of external influence. In other words, social phenomena are independent and separate from the actors (Bryman, 2012). Likewise, the positivist epistemology underpins this approach through emphasizing that positivism in the social world exists externally and that its properties should be measured through objective methods, rather than being inferred subjectively through sensation, reflection or intuition (Easterby-Smith *et al.*, 2008). Based on the previous relationship between philosophical assumptions and methodologies discussed above, the nomothetic methodology is dominated by determinism where human activities are determined by the situation or environment in which they are located (Burrell and Morgan, 1979). Thus, a phenomenon is studied independently from the influence of the researcher, where knowledge is created through observations that directly relate to phenomena under investigation (Easterby-Smith *et al.*, 2008).

All of the assumptions of a nomothetic methodology allow the researcher to use quantitative research strategy where attempts are made to measure and analyse causal relationships between variables within a value free framework (Denzin and Lincoln, 2011; Saunders *et al.*, 2009).

Hence, it is typically associated with the deductive approach employed for testing theories rather than generating them (Saunders *et al.*, 2009).

On the other hand, the ideographic methodology is in line with nominalism as ontological position and anti-positivism as epistemological position (Burrell and Morgan, 1979). This means social phenomena are examined, based on the perceptions and actions of social actors (Saunders *et al.*, 2009). Therefore, the differences between people and the objects of the natural sciences should be questioned in order to interpret the social roles of others, in accordance with our own norms and ideologies (Saunders *et al.*, 2009). Based on the assumptions discussed above, the ideographic methodology is dominated by voluntarism, where human actions are based on their perceptive and experience (Burrell and Morgan, 1979).

All of the assumptions of an ideographic methodology allow the researcher to use a qualitative research strategy which focuses on the quality of entities, processes and meanings, which are difficult to measure in terms of quantity, or frequency (Denzin and Lincoln, 2011). According to the nature of qualitative research, it is better for generating theories than testing them (Bryman and Bell, 2011).

However, Laughlin (1995) argued that all empirical research, which is based on a single stream of the philosophical assumptions, is partial and incomplete. Hence, choosing the midpoint of all philosophical assumptions from ontology, epistemology, human nature and methodology which is called middle-range, allows a researcher to use a variety of methods in observational practice. Furthermore, adopting a mid-point position keeps open the possibility of change, which is not available in other situations (Laughlin, 1995).

5.4 Research methods

As discussed in section 5.2.3 there are data collection and analysis methods peculiar to quantitative research and others peculiar to qualitative research. These methods are associated with different philosophical assumptions that discussed in section 5.3. In this regard, adopting a suitable research method for the research project depends on the nature of the research and the nature of the research question/objectives under investigation (Creswell, 2009; Saunders *et al.*, 2009). The focus of this section is to explain the available methods for sampling, data collection and analysing in both qualitative and quantitative research.

5.4.1 Content analysis

The content analysis approach can be defined as “is an approach to the analysis of documents and texts (which may be printed or visual) that seeks to quantify content in terms of predetermined categories and in a systematic and replicable manner” (Bryman, 2012, p. 289). Generally, content analysis has been used in different aspects of research such as communication, journalism, sociology, psychology, and business for more than fifty years (Neuendorf, 2002). In this regard, content analysis is one of the most important research methods in social science where it has been used over 40 years ago to determine the level of social and environmental disclosure (Milne and Adler, 1999; Krippendorff, 2004). However, content analysis is not a research method; it is a way to analyse the document and texts rather than a method to collect data, although, it is frequently treated as a research method because it has a distinct method of analysing data, which is similar to research methods when used for data collection (Bryman, 2012).

According to Bryman (2012), the advantages of content analysis have been outlined as follows:

- It is a research method that is characterized by a high degree of transparency in terms of the coding system and sampling. Because of this transparency, content analysis is often referred to as a way of analysing data rather than a means of data collection.
- It enables the researcher to easily conduct longitudinal analysis; in other words, through the use of content analysis, the changes can be monitored over a long period of time, or short time, for example, investigating the change in the concerns of newspapers regarding crime over two very different periods.
- It is often an unobtrusive method because it does not involve participants in a study having to take the researcher into account. In this regard, it is an unobtrusive method as it allows the researchers to analyse unstructured data based on the meanings (Krippendorff, 2004).
- Content analysis method has a high degree of flexibility, where it can be used to analyse different categories of unstructured data; although the application of this method has been associated with mass media it can be applied in many areas.

Accordingly, content analysis is a research method which is used to answer the research questions or to meet objectives, like any other traditional research method. Furthermore, based on reviewing the previous studies (see section 2.5) content analysis was the most used research method by the researchers in developing and developed countries in order to determine the level of CED.

5.4.1.1 Sampling techniques

It would be impossible to gather all the data that is available, because there are factors that may affect this process, such as time, money and often access. Therefore, sampling techniques are used to reduce the quantity of data to be collected by adopting the data from a sub-group rather than from the whole population (Saunders *et al.*, 2009). In other words, to make a decision about sample size, the constraints of time and cost must be taken into account (Bryman, 2012). According to Bryman (2012) there are two choices of sampling techniques - probability sampling and non-probability sampling techniques. In this regard, adopting probability sampling may be the right choice if the evaluation question implies the need to generalize from the sample to the population. In contrast, if generalization is not necessary or if probability sampling procedures are not practical, the non-probability sampling will be an appropriate choice (GAO, 1996). Furthermore, Bryman (2012) argued that non-probability sample is used when there are some units in the population that are more likely to be selected than others. The main difference between the previous sampling techniques in probability sampling is that each element in the population has an equal and independent chance of selection in the sample. Non-probability does not follow the theory of probability in the choice of elements from the sampling population, hence it is used when the number of elements in a population is either unknown or cannot be individually identified (Kumar, 2011). Regarding probability sampling, there are several types including random, systematic, stratified, and cluster sampling (Ghauri and Gronhaug, 2005). With random sampling, the process of selection is done randomly where each unit of the population has an equal probability of inclusion in the sample (Bryman, 2012).

With the non-probability sampling techniques, there are several types including convenience, snowball, quota, judgemental and expert sampling techniques (Easterby-Smith *et al.*, 2008; Kumar, 2011). Convenience sampling technique is very common in research where the researcher is affected by convenience in accessing the population (Kumar, 2011). Snowball sampling technique is used when it is very hard to identify individuals or organisations that belong to the population (Easterby-Smith *et al.*, 2008). Hence, the researcher starts collecting data from a few individuals in a group or organisation. They are then asked to identify other people where contacts between individuals become the basis to get further data (Kumar, 2011). With judgemental sampling technique, the researcher purposely chooses people or organisations which, in his opinion, are thought able to provide the best information to achieve the objectives of study (Sarantakos, 2005; Kumar, 2011).

5.4.1.2 Stages of the application of the content analysis method

According to some researchers Wolfe (1991), Weber (1994), GAO (1996), Neuendorf (2002) there are several steps to apply the content analysis method in a systematic way to ensure correct response to the research questions, or to achieve the research objectives. Moreover, a general framework of any content analysis has been provided by Boettger and Palmer (2010); thus, conducting a content analysis may be done according to the following steps.

5.4.1.2.1 Identifying data source

Although environmental disclosure can be made through a variety of alternative channels, such as environmental reports, advertisements, booklets, brochures, labelling of products, newsletters, press releases, supplements to the annual report, video tapes, and websites (Gray *et al.*, 1995b; Jenkins and Yakovleva, 2006; Zeghal and Ahmed, 1990), the majority of studies into CED have focused exclusively on corporate annual reports as the exclusive source in order to determine the level of social and environmental disclosure (see section 2.5). Many reasons for focusing exclusively on the annual reports have been presented in the CED literature (see section 2.2). In terms of practical application, Burritt (1997) presented the justifications of using annual reports as sources of CED including: the annual reports are mandatory documents that have been annually prepared by the company, while the environmental reports are not mandatory and have been prepared on an irregular basis; annual reports could be the most important document used by the company to improve its social image; accounting information, as published in annual reports, provides support for the status quo in terms of political, social and environmental effect.

5.4.1.2.2 Define the categories

In this stage, data should be categorized by researchers, also, the difference between the qualitative and quantitative application of content analysis should be highlighted clearly at this point (Boettger and Palmer, 2010). In quantitative research, content analysis is used to evaluate texts or phrases depending on the predetermined categories in order to draw conclusions regarding the amount of repetition of the existence of these categories (Boettger and Palmer, 2010). In this regard, two decisions should be made when the category is created; the first is whether the categories are to be mutually exclusive and the second is the extent of the scope of the category (narrow or broad) (Weber, 1994).

5.4.1.2.3 Define the recording units

After selecting the sources to obtain data and create categories of data to be investigated comes the next step, which is to define the recording units. In this regard, selection of the recording unit is an important step in content analysis (Sen *et al.*, 2011). A recording unit has been defined by GAO (1996, p. 24) as “the portion of text to which evaluators apply a category label”. According to Weber (1994) there are six commonly used options including word, word sense, sentence, theme, paragraph and whole text to measure the amount of data in textual material. In this regard, many units or a mixture of them have been used by the researchers in previous studies, as shown in section 2.5 to determine the amount of environmental disclosure in the annual reports of companies in developed and developing countries.

With words as a measurement unit, each word is rated separately, thus a content analysis becomes the counting of words. However, when using a computer to analyse the text, it may be hard to choose the right meaning of the word, which would lead to wrong conclusions (Weber, 1994). Using the word as a recording unit may achieve some advantages, for example, Gray *et al.* (1995b, p. 84) stated that “in essence, words have the advantage of lending themselves to more exclusive analysis (are categorized more easily) and have the pragmatic advantage that databases may be scanned for specified words”. Gao *et al.* (2005, p. 238) added that “words lend themselves to a more controllable analysis”. Furthermore, the word is the smallest unit by which to measure and analysis the text and thus it is likely to present the highest degree of investigation relating to social environmental disclosure, particularly when the purpose of measurement is to determine the total quantity for certain themes (Krippendorff, 1980; Zeghal and Ahmed, 1990). However, Unerman (2000) argues that, when using words to determine social and environmental disclosure, graphs, charts or photographs will be ignored.

On the other hand, previous units cannot be used to identify the quality of disclosure (Milne and Adler, 1999). In this context, Gray *et al.* (1995b) have adopted three dimensions to evaluate the social and environmental reporting by UK companies: evidence (monetary, non-monetary, quantitative, and declarative), the news types (good, bad, and neutral), and auditable, which means the information that was disclosed can be reviewed and verified. In addition, positive and negative environmental disclosures and the location of disclosures of environmental information have been used by Deegan and Rankin (1996) to examine the environmental disclosure by Australian companies. However, Gray *et al.* (1995b) found that there is no reason to adopt the location of environmental information in annual reports in order to examine the environmental disclosure. Furthermore, Sen *et al.* (2011) have used the types of news, including neutral and

negative news, related to environmental impact and the nature of information available, including qualitative, physical or financial information, to examine the environmental information.

5.4.1.2.4 Encoding the textual material

In the previous step, the terms and themes of disclosure were determined, in order to conduct a process of analysis of the annual reports of the companies. In this regard there are three most common methods for quantitative content analysis: manual coding, simple Computer-Assisted Method, and Content Analysis Software (Boettger and Palmer, 2010). According to GAO (1996) the textual material can be coded manually, where a coder works with hard-copy documents and simply marks the passages with a pencil or coloured marker. The next phase of the manual encoding is using the coding sheet, where the terms and themes of disclosure are recorded in a manner that can be counted using any statistical program (Boettger and Palmer, 2010). In this regard, the manual method is the simplest method for conducting a conceptual content analysis, where it needs a low level of technology and thus it is easy to implement. When the researcher uses other methods to encode data, some words and phrases that do not belong to specific predetermined categories are included in the text, thus more time will be spent to filter out these items (Boettger and Palmer, 2010).

5.4.1.2.5 Testing the coding of the text

Coding a small sample of the text can ensure the reliability of categories and the possibility of practical application of the encoding process (Weber, 1994). In other words, this test helps in the discovery of possible problems that occur during the application, in addition to the extent of clarity of categories' definitions, and their scope (Wolfe, 1991).

5.4.1.2.6 Evaluate the reliability and validity

Reliability can be defined as “the extent to which a measuring procedure yields the same results on repeated trials. The notion relevant to content analysis is that a measure is not valuable if it can be conducted only once or only by one particular person” (Neuendorf, 2002, p.112). According to Krippendorff (1980), there are three aspects of reliability: stability, reproducibility, and accuracy. Stability means that the findings of the content analysis are the same in different periods of time. In other words, the same results should be obtained when the same coder encodes

the data twice. However, stability is the weakest test of reliability, because the coding of the text is conducted by the one coder. Krippendorff (1980), furthermore, noted that reproducibility indicates that the same results will be obtained when the same text is coded by at least two coders. Accuracy refers to the fact that, to obtain accuracy of data, a comparison should be conducted between the coder's performance and predetermined standards, or known rules (Milne and Adler, 1999). On the other hand, the validity in content analysis can be defined as "is between the validity of the classification scheme, or variables derived from it, and the validity of the interpretation relating content variables to their causes or consequences" (Weber, 1994, p. 260). Weber (1994, p. 263) added that "words or other encoding classified together need to possess similar connotations in order for the classification to have semantic validity".

5.4.2 Interviews

The interview approach can be defined as "a method of collecting data in which selected participants are asked questions in order to find out what they do, think or feel" (Collis and Hussey, 2003, p. 167). Moreover, it can be used to validate data that are related to research questions and objectives (Saunders *et al.*, 2009). Indeed, interview approach is a generic term which includes several kinds of interviews including structured interview, unstructured interview (in-depth interview) and semi-structured interview (Sarantakos, 2005). With semi-structured interview general questions are prepared, however the researcher is able to change the method of asking questions and arrange the order. In other words, this type of interview combines structured and unstructured interviews (Bryman, 2012). Some benefits of semi-structured interview have been defined as:

- It provides a reasonable amount of reliability, with, as far as is known, minimal loss of information or validity (Copeland *et al.*, 1976). Moreover "it provides the opportunity to evaluate the validity of the respondent's answers by observing non-verbal indicators, which is particularly useful when discussing sensitive issues" (Barriball and While, 1994, p. 329);
- It is an appropriate way to explore attitudes, values, beliefs and motives (Barriball and While, 1994);
- It enables the researcher to obtain detailed information about the problem under study (Wengraf, 2001).

- When using the semi-structured interview or other kind of interviews, additional questions can be asked by the researcher that may not be available when using a questionnaire (Collis and Hussey, 2003).
- An interview can be used with any kind of participants such as children, the disabled, and the illiterate (Kumar, 2011).
- More explanation can be provided by the interviewer to ensure that the participants have understood the questions (Kumar, 2011).

Adoption of the appropriate research methods for a research project (the type of interview) is based on the nature of the research and the nature of the research question/objectives under investigation (Creswell, 2009; Saunders *et al.*, 2009).

5.4.2.1 Sampling

It would be erroneous to consider that qualitative research does not use sampling techniques that correspond to the philosophy of this type of research and that are less structured, less quantitative and less strict than the techniques used in quantitative research (Sarantakos, 2005). In this regard, all non-probability sampling designs such as accidental, snowball, quota, judgemental and expert sampling techniques (see section 5.4.1.1) can be used in qualitative research to determine sample size (Kumar, 2011).

5.4.2.2 Preparing the interview

For the purposes of conducting a successful interview, careful preparation should be undertaken by the researcher, where advance planning could prevent mistakes (Saunders *et al.*, 2009). The researcher should have an appropriate level of knowledge about the research problem in order to understand what kind of information should be obtained from an interview before starting it (Ghauri and Gronhaug, 2005). In this regard, Bryman (2012) suggested reviewing the literature is the best way in designing interview questions in order to ensure obtaining the required information.

5.4.2.3 Analysis

To analyse the qualitative data, there are two approaches to be considered; quantifying (informal and formal methods) and non-quantifying methods (Collis and Hussey, 2003). Content analysis represents a formal approach to qualitative data analysis where it provides the following advantages (Collis and Hussey, 2003).

- It is an inexpensive method.
- It is very useful to analyse the data obtained by the semi-structured interview (Jankoe – wicz, 2005). Berg (2009, p.147) stated that “the most obvious way to analyse interview data is content analysis”.

To facilitate analysing interviews, coding units such as a particular word, character, or item which is found in material, should be constructed by the researcher, to achieve an in-depth understanding of the text, using a number of general categories (Collis and Hussey, 2003). In this context, Creswell (2009, p. 186) identified coding as “the process of organizing the material into chunks or segments of text before bringing meaning to information”. According to Patton (1990), there are two strategies when using the content analysis to analyse the interview: case analysis, which means writing all the data for each person interviewed, and cross-case, which means writing the answers of each question obtained from different respondents. However, if open-ended questions are used in the interview, then the cross-case strategy should be adopted, because it is simpler to apply.

5.4.2.4 Validity

The concept of validity in an qualitative research does not indicate the same meaning in quantitative research hence, findings in the qualitative studies should be validated by employing different procedures from those used in quantitative research (Creswell, 2009; Bryman and Bell, 2011; Bryman, 2012). In this regard, Bryman (2012) proposed the trustworthiness concept to assess the findings in a qualitative research to include (credibility or internal validity, transferability or external validity, dependability or reliability, and confirmability or objectivity).

To achieve credibility, research findings should reflect the true reality of an interview (Collis and Hussey, 2003). In doing so Bryman (2012) suggested that the research findings should be sent back to the participants to get their approval that data has been transcribed appropriately. Transferability indicates a possibility of implementation of the findings in a different context (Bryman, 2012). Indeed, the applicability of generalisability would not be realistic in qualitative research, because it is essentially based on a small group, where a wide range of different respondents is not available (Saunders *et al.*, 2009). However, transferability can be applied through conducting additional experiments among groups with different characteristics (Creswell, 2009). Dependability is consistent with the concept of reliability in quantitative research which means the ability of obtaining the similar result when study is repeated (Creswell, 2009; Kumar, 2011; Bryman, 2012). However, this concept cannot be used in qualitative

research to test the reliability of research instruments, hence dependability can be established only by achieving robust record keeping of records of all phases of the research process and allowing them to be audited by external parties (Saunders *et al.*, 2009; Bryman, 2012). Finally confirmability refers to the role of the researcher in using a non-directive approach with the interviewee (Bryman, 2012). Hence, a researcher should avoid pressing the interviewee to get specific perceptions and perspectives which could lead to swaying the conduct of the research and findings derived from it (Bryman and Bell, 2011).

5.4.3 Questionnaire

A questionnaire is defined as “collects data by asking people to respond to exactly the same set of questions. It is often used as part of a survey strategy to collect descriptive and explanatory data about opinions, behaviours and attributes. Data collected is normally analysed by computer” (Saunders *et al.*, 2009, p. 401). This method is suitable for a large sample, when using interviews would need more time and cost for travel (Collis and Hussey, 2003).

Saunders *et al.* (2009) have determined several types of questionnaires according to the method used to distribute them, which are shown in the following figure.

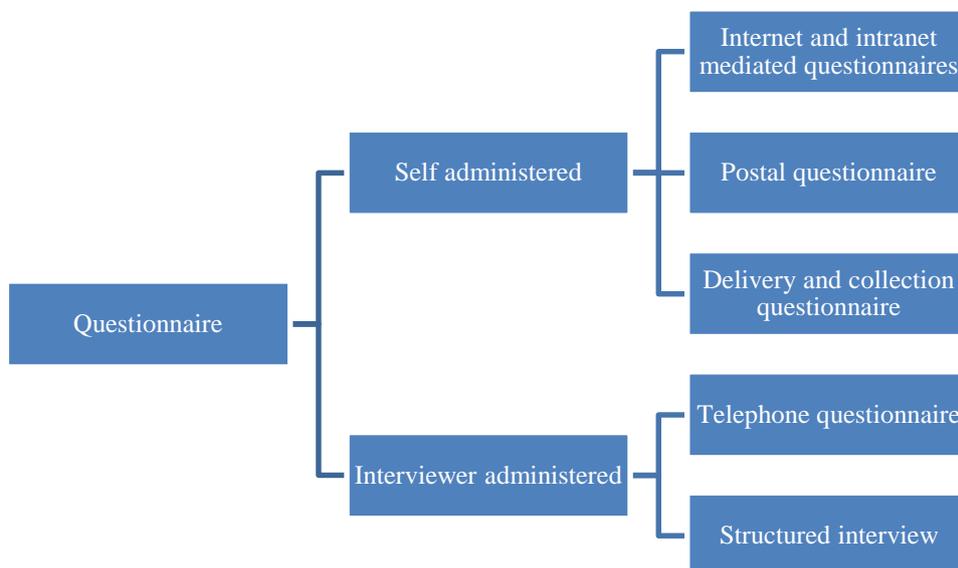


Figure 5.3 Types of questionnaire (Saunders *et al.*, 2009, p. 363).

Based on Figure 5.3 there are two main types of questionnaire, namely self-administered questionnaires which are usually completed by the respondents. In this case the questionnaires are delivered by hand or via email or website. Interview administered questionnaires are recorded by the interviewer either through phone or asking questions face to face.

Regarding choosing an appropriate way to distribute the questionnaire, there are several factors that should be taken into account, including size of sample, the kinds of participants, and the location of the sample (Collis and Hussey, 2003; Saunders *et al.*, 2009).

With interview administered questionnaires, it is difficult to complete a sufficient number of questionnaires because of the limited time and limited resources of this research (Saunders *et al.*, 2009). In contrast with administered questionnaires, a large number of questionnaires can be distributed at the same time by using various means, such as mail, email, and personally administered method. Furthermore, the participants can complete a questionnaire in any place, at any time, and over a fairly unlimited period of time (Collis and Hussey, 2003; Bryman, 2012).

5.4.3.1 Sampling

Contrary to qualitative studies, selecting a sample is a fundamental element of quantitative studies (Collis and Hussey, 2003) where data is taken from a sub-group rather than from the whole population which should be collected using sampling techniques (Saunders *et al.*, 2009). In this regard, the whole population needs to be identified, which is considered the most important element to select a sample (Collis and Hussey, 2003). All sampling techniques that have been discussed in section 5.4.1.1 can be used in quantitative research to determine sample size.

5.4.3.2 Designing the questionnaire

Before you can begin designing questions for a questionnaire “you must know a substantial amount about your subject” (Collis and Hussey, 2003, p. 177). In other words, suitable questionnaires should be sourced by the researcher, to be adopted for the study, which can be adapted, developed, or used as guides to design the new one (Sarantakos, 2005). In this section, the issues that relate to construction of the questionnaire are addressed through the following points. The kind of data that will be collected by the researcher plays a major role in designing the questions (Saunders *et al.*, 2009). In this respect, there are two options facing the researcher when designing the questions: adopt the same question that is found in relevant questionnaires or to design a new question based on them (Sarantakos, 2005). Regarding formulating a question, the decision on the question type should be made by the researcher (Corbetta, 2003). Kumar (2011) has identified two kinds of questions: open-ended and closed questions. In an open-ended question, the answers are not provided, they are written by the participant. In a closed question, the possible answers are provided, and one is selected by the participants. Some advantages and

disadvantages of a closed question are presented by various researchers such as Saunders *et al.* (2009), Kumar (2011), Bryman (2012). It can be easy and quick to answer; the availability of answers may help the participants to understand the meaning of the question, and it is easy to analyse. However, the pre-set answers may be affected by the personal bias of the researcher, which can affect the findings of the study; also, ready-made answers may create an incentive for the participant to answer without thinking.

On the other hand, the quality of data that is collected by the questionnaire depends largely on the wording and tone that is used to design the questions (Kumar, 2011). In this regard, Collis and Hussey (2003) have provided several rules that should be followed when designing the questions in order to enhance the quality of the answers and increase the response rate. Furthermore, regarding the language used in the questionnaire, translating questions and related instructions to another language requires full care (Saunders *et al.*, 2009).

Regarding the order of questions, there are two ways questions are asked in a random way, or questions are arranged in the order which makes sense for the goals of the study (Kumar, 2011). In this regard, Oppenheim (1992) has suggested a funnel approach, which means the questionnaire begins with general questions and then gradually moves to the narrower scope of questions, and finally comes to very specific points. Further, Saunders *et al.* (2009) have recommended using more than two or three filter questions in a questionnaire in order to skip tedious questions.

Finally, the researcher should adopt the suitable rating scales in order to enable participants to give more discriminating responses, and allows them to indicate if they do not have an opinion. In addition, it allows the apportioning of a numerical value to an opinion (Collis and Hussey, 2003). According to Sekaran (2003), there are four different types of scales that are frequently used to measure the variables: dichotomous, category, Likert, and semantic differential scales. In this regard, Likert scale is the most used by researchers to examine how strongly subjects agree or disagree with statements (Sekaran, 2003; Sarantakos, 2005).

5.4.3.3 The pilot test

In the research process, it is useful to conduct a pilot study before administering a questionnaire or structured interview schedule, to ensure that the survey questions function well (Bryman, 2012). In this regard, Sarantakos (2005) argued that a pilot study is concerned with administrative and organisational problems that are related to the whole study and participants. Yin (2009, p.92) added that a pilot study “will help you to refine your data collection plans with

respect to both the content of the data and the procedures to be followed". Thus, pilot study is conducted to test questions to ensure that they can be understood by the participants (Kumar, 2011). In addition, it aims to confirm the validity through examining questionnaires by people who have experience or expertise in a field of study.

5.4.3.4 Analysis

To analyse the quantitative data, a statistical analysis should be employed to include, exploratory data analysis or descriptive statistic, and confirmatory data analysis (Collis and Hussey, 2003). Indeed, quantitative data analysis is something that occurs normally at the late stage in the research; however, this does not mean postponing thinking and planning for tools adopted to analyse the data until this stage (Bryman and Bell, 2011).

In this regard, choosing the statistical technique is dependent on the following factors, according to Collis and Hussey (2003):

- The purpose of data analysis: in this sense, if the purpose is to summarise, describe or display data, exploratory data analysis should be adopted including presenting frequencies, measuring dispersion, measuring location and measuring change. On the other hand, if the purpose is to make inferences from sample data, confirmatory data analysis should be adopted, including estimating from samples, measuring association, measuring difference, and forecasting.
- The ways of distribution: which include normal distribution or skewed; with the first kind, parametric techniques should be used, while the non-parametric techniques are used with the second type of distribution.
- The number of variables to be analysed at the same time.
- The measurement scale of data (nominal, ordinal, interval or ratio): in this sense, using scales appropriate to the type of data.

The following statistical techniques can be used to analyse quantitative data; presenting frequencies: when analysing quantitative data it is useful to begin by identifying the frequency distribution for each variable (Collis and Hussey, 2003). By using the frequencies, characteristics of the sample can be described; in addition, frequency distributions of the variables can be determined by the researcher. Measuring of central tendency: The measures of central tendency are very popular and are the most commonly used by the researchers; they summarise the whole distribution by providing the general trend of the responses to the items in the questionnaire (Sarantakos, 2005). Statistical measures include mean, median, and mode. Non parametric

techniques can be used to analyse skewed data, which is not normally distributed; moreover, they are more suitable with ordinal data (Collis and Hussey, 2003). According to Saunders *et al.* (2009), when a numerical variable is divided into three or more groups using a descriptive variable, the difference of these groups can be assessed by using one way ANOVA test.

5.4.3.5 Reliability and validity

Reliability is essentially concerned with issues of consistency of measurements (Bryman, 2012). In this context, similar result should be obtained when administering an instrument under the same or similar conditions within the same or similar population (Kumar, 2011). According to Saunders *et al.* (2009) there are several methods for testing the reliability including test re-test, internal consistency, and alternative form. In the test re-test technique, the same questionnaire is used to test and retest the same subject; if the same results are obtained, the instrument is reliable (Saunders *et al.*, 2009). However, as a result of a time lag between the two tests, the responses of the participants may change, which affects the reliability of the instrument (Kumar, 2011). Using an alternative form, reliability within questionnaires can be achieved through comparing responses to alternative forms of the same question or groups of questions. This can be done through using so called “check questions” (Saunders *et al.*, 2009). Internal consistency indicates “correlating the responses to each question in the questionnaire with those to other questions in the questionnaire” (Saunders *et al.*, 2009, p. 374). In doing so, Cronbach’s alpha test should be adopted which is considered a common method to test internal reliability (Bryman, 2012). In this regard, Cronbach’s alpha test measures the consistency of responses across either all the questions or sub-group of the questions of questionnaire (Saunders *et al.*, 2009). The value of Cronbach’s α has been determined by Sekaran (2003) as follows: 0.7 or above is considered to be acceptable while less than 0.7 indicates unreliability.

Validity is “the ability of an instrument to measure what it is designed to measure” (Kumar, 2011, p. 178). According to Saunders *et al.* (2009) there are three methods to assess the validity including, content validity, criterion validity and construct validity as shown in the following points: Content validity is concerned with whether the questions used in the questionnaire reflect all the issues under investigation (Saunders *et al.*, 2009; Bryman, 2012). Content validity can be established by asking other people to judge the questionnaire (Saunders *et al.*, 2009; Bryman, 2012).

5.5 Philosophical considerations and methodological underpinning the current study

The main aim of this study (as stated in section 1.4) is to explore current disclosure of environmental issues carried out by Libyan construction companies in order to explain the presence or the absence of CED practices in light of stakeholder and political economy theory. Accordingly, this research could contribute in the development of environmental disclosure which could underpin achieve sustainable development and attracting foreign investments, promoting well-being, social and economic development. Firstly, the study seeks to document a descriptive record of CED practice (quantitatively measured) in Libyan construction industry over a period of five years. Secondly, it seeks to understand and explain the evidence of the presence or absence of environmental disclosure practices. In doing so, the perspectives and perceptions of a sample of financial managers (qualitatively measured) and the users of the annual reports (quantitatively measured) of Libyan construction companies regarding the various aspects of CED are explored.

To fulfil these research objectives, the following philosophical assumptions and methodologies underpin the choice of the research methods for this study. A ‘middle-range’ approach suggested by Laughlin (1995), as discussed in section 5.3, has been adopted in order to provide a broader and complementary view for the research issues.

Ontologically, the current study is likely to take a medium ontological position between nominalism and realism. However, it seems to be closer to nominalism, because primary attention is given to the perspectives of financial managers and the users of the annual reports of Libyan construction companies.

Epistemologically, likewise the study takes a middle-range position. In this research, knowledge comes essentially from people, based on their perceptions and experience. Thus, this study tends to take an anti-positivism approach more than a positivism one.

Regarding the human nature assumptions, the current study adopts a blend of voluntary and determinism where the researcher finds himself in a mid-point between voluntarism and determinism. In some cases, researcher’ activities are determined by the environment in which they are located.

As discussed in section 5.3, the choice of methodology is directly dependent on the ontological, epistemological and human nature assumptions of the researcher. All philosophical assumptions discussed in this section indicating that the study generally adopts a middle-range position. Therefore, this study takes a middle-range methodology between the nomothetic and the

ideographic approaches, where quantitative and qualitative research strategies will be used. Furthermore, based on discussion of quantitative and qualitative research strategies as well as the benefits of combining them as outlined in section 5.2.3, mixed research strategies are employed at two different but complementary stages of this empirical investigation research, to achieve the research objectives outlined in chapter 1, section 1.4.

Prior to seeking explanations for CED practice, the first stage is about exploring environmental disclosure practices in annual reports of Libyan construction companies. The aim at this stage is to gather data and establish a record of the level in terms of amount, type and methods of CED practice existing in construction Libyan industry over a period of five years (see chapter 6). In the second stage, the perspectives and perceptions of a sample of financial managers and the users of the annual reports of Libyan construction companies will be explored by conducting semi-structured interviews and administration of questionnaires (see chapters 7 and 8). Based on the responses given by participants, subjective and context-specific conclusions could contribute in the development of environmental disclosure. In this stage, the interview will be used to validate the results of content analysis where the categories of CED are investigated, based on perceptions of financial managers of Libyan construction companies. Also, it is used to validate most of the findings that have been obtained from the questionnaire. Therefore, mixed research methods will be used sequentially and at the same time during the process of data collection and analysis. Based on discussion of the advantages of using qualitative and quantitative method at the same time and sequentially outlined in section 5.2.3, a transformative triangulation approach will be used in this study in order to address a problem in all its aspects, through analysis of various types of questions about the different kind of data that should be collected.

5.6 Adopted research methods

As discussed above in section 5.5, the study adopts the mixed research methods using a combination of different data collection and analysis techniques to investigate CED and to explain the evidence of the presence or absence of environmental disclosure. The nature of the research question/objectives under investigation indicate that the first, fourth and fifth objectives could only be appropriately investigated through the quantitative approach. The second and third objectives are investigated using a qualitative approach. Therefore, three different strategies of enquiry were used in this study: content analysis, semi-structured interviews and self-administered questionnaire that will be addressed as follows.

5.6.1 The application of the content analysis method in this study

Content analysis has been used in this study to determine the amount, type and methods of environmental disclosure of Libyan construction companies in their annual reports. In doing so, the following steps have been taken by the researcher.

Companies' sample

All the largest companies in the field of construction in terms of production capacity, employees, and total assets (General People's Committee for Industry and Minerals, 2008) have been selected, which appears in the Table 5.1. Thus, the sample has been determined based on judgemental sampling technique, where the researcher believes that the choice of these companies provides the best information to achieve the objectives of study. It can be interpreted that these companies are the largest in Libya and therefore likely to have a broader impact on the natural environment (for more details see section 4.9.2).

Table 5.1 Description of selected companies

Company	Description of company
ACC	The company includes six factories. Actual production is 2502 thousand tonnes/year.
LCC	The company has three cement-producing factories. Actual production is 1772 thousand tonnes/year.
AUCC	Responsible for all acts of construction, contracting and public works, inside and outside Libya. Besides this, it has a cement producing factory. Actual production is 2753 thousand tonnes/year.
LIHC	Carries out all public contracting in the areas of civil, mechanical and electrical.
PNCR	Responsible for all acts of construction of roads and bridges.
LISC	The company comprises seven production factories.
GCC	Carries out all acts of construction and public works.

(ACC: AL-Ahlia Cement Company, LCC: Libyan Cement Company, AUCC: Arab Union Contracting Company, LIHC: Libyan Investments Holding Company, PNCR: Public National Company for Roads, LISC: Libyan Iron and Steel Company, GCC: General Company for Construction).

Given the difficulty to access annual reports of companies in Libya, due to the pretext that they are considered confidential and not to be revealed to outside parties, the researcher used contacts and personal connections to gain sight of these annual reports. Indeed, two companies (PNCR

and GCC) refused to provide their annual reports, hence the final response rates are taken from only five companies, as shown in Table 5.2.

Table 5.2 Response rate

Population	Respondents companies	Response rate %
7	5	71

The annual reports of these companies have been used in this study as a data source, based on the justifications discussed in section 5.4.1.2.1. Regarding the contents of their annual reports, the researcher has focused on all parts of the report, which normally includes at least a Board of Directors Report, Audit Report, Financial Statements, the Explanatory notes attached, the management's analysis of the past year's operations and the goals and policies of the company. In this regard, a prevailing misperception of what an annual report is, was one of the difficulties faced by the researcher where most financial managers considered an annual report to be merely a financial statement.

The collected reports relate to the years 2006-2010, this was for the following reasons. Firstly the periods used by researchers in previous studies on social and environmental disclosure ranged between 2 and 6 years, which was the appropriate basis to evaluate the disclosure in selected companies. Secondly, the selection was based on a previous study of Ahmad (2004) that was conducted in Libya which evaluated the environmental disclosure in a sample of selected industrial companies during the period 1998-2001. Furthermore, in those years, the Libyan construction industry saw a significant investment in infrastructure represented by the establishment of airports, ports, railways, new homes, hotels and resorts, as well as an expansion in the granting of loans for housing construction (see section 4.9)

Categories and recording units

Regarding the determination of categories to be used in coding, previous studies, international standards and guidelines, and the Libyan environmental legislations were scrutinised. Accordingly, five categories were drawn for this study to examine the CED in the Libyan construction industry: environmental policies; products and processes; energy; health and safety; and other (see Appendix one, A).

Based on the advantages of using word as a recording unit as discussed in section 5.4.1.2.3, the number of words is adopted to determine the amount of environmental disclosure in the annual reports of Libyan construction companies. In addition, based on previous studies, two dimensions were adopted to determine the quality of environmental disclosure: the type of information (positive, negative, and neutral) and the evidence (financial information, non-monetary quantitative, and qualitative) (see Appendix one, B and C).

Analysis

Regarding analysing the annual reports of Libyan construction companies, the researcher adopted a manual method which seems suitable for this study based on justifications discussed in section 5.4.1.2.4. The researcher worked with hard-copy documents, where the words that related to the categories predetermined are coloured by using special colour for each category. After completing the process of scanning the annual reports, the coloured words were transferred to a computer which were computed using a word processor (Word Office). Finally, totals of words were recorded in the Tables set out in the Appendix two. To ensure the possibility of practical application of the encoding process, the annual reports for one of the companies were selected randomly (LCC) for analysis. Following the previous stages in applying content analysis and during the application process, the researcher did not observe any fundamental problems that might hamper the application process.

5.6.2 The application of semi-structured interviews in this study

In this study, the researcher decided to use semi-structured interviews according to the nature and objectives of this research, in addition to the advantages of this type of interviews as discussed in section 5.4.2. They have been used to achieve the research objectives (2 and 3) outlined in chapter 1, section 1.4.

Interviewees' sample

CFOs and the departments' accounts managers employed by Libyan construction companies were selected as a sample in section 5.6.1 to analyse their annual reports. Thus, the sample has been determined based on judgemental sampling technique where the researcher believed that the choice of these employees would provide the best information to achieve the objectives of study. Targeting senior managers for interviews is essentially attributed to the following reasons.

All of them are employed at the same companies used for collecting corporate annual reports for content analysis stage, thereby facilitating validation and accurate interpretation of the results of the content analysis. These managers are responsible for formulation of the corporate reports and are expected to have experience regarding the issues of disclosure. Moreover, they are among the top management in selected companies and as such they contribute to the formulation of strategies, policies and procedures within their companies which makes them eligible to provide their perceptions regarding motivations behind the presence or absence of CED practices. The interviews were conducted with ten individuals in five companies as shown in Table 5.3.

Table 5.3 Sample of interviewees

Company	The number of interviews	Position	Code
ACC	2	Financial manager	FM1
		The Chief of accounting department	CAD1
LISC	2	Financial manager	FM2
		The Chief of accounting Information department	CAID
LCC	2	Financial manager	FM3
		The Chief of accounting department	CAD2
AUCC	2	Financial manager	FM4
		The Chief of accounting department	CAD3
LHC	2	Financial manager	FM5
		The Chief of accounting department	CAD4
Total	10		

Preparation

Given that this study investigates the environmental disclosure practices of Libyan construction companies in an attempt to explain the presence or absence of them, the internal and external factors influencing CED have been identified, firstly through reviewing the literature used to design the interview questions which include the following issues.

The researcher started the interview with asking each interviewee an open introductory question about their organisation and the nature of the work assigned to them. These questions enabled the researcher to gain an overview of the interviewee, and also paved the way for a successful interview.

In the second part, more specific questions were asked regarding the existence of any kind of environmental information disclosed expressly or impliedly in annual reports of Libyan construction companies. This part of the interview aims essentially to validate and interpret the

results of the content analysis. The same categories were adopted in order to analyse annual reports of companies used in interview questions. The third domain of questions focused on exploring the financial manager's attitude toward CED. The overall aim of these questions was to gain the perspectives and perceptions of financial managers regarding environmental disclosure issues, by suggesting a number of issues and then poll the opinions of managers on these issues.

Finally, an open ended question was asked regarding the reasons for an underlying absence of environmental disclosure, to gain in-depth insights. This part of the interview also aimed to validate the results of the questionnaire survey.

The first draft of questions was reviewed and evaluated by the supervisory team. The questions were then modified to include more suggestion statements in order to determine the financial manager's attitude toward CED. Because the official language in Libya is Arabic, the questions were translated by the researcher, and were then reviewed by experts who have experience in both the fields of accounting and English. The final draft of the interview guide was formulated as shown in Appendix three, A and B.

Conducting interviews

Ten face-to-face semi-structured interviews were carried out during the period of August and September 2012 and conducted in Arabic language. The appointments with companies' financial managers were made by phone call in order to arrange a suitable time and place preferred by the interviewees; in this regard, all the interviews were conducted in the place of work during office hours, at the behest of the interviewees.

The researcher started the interviews with a brief introduction regarding the themes that would be addressed in the interviews. All the interviews were recorded, with the permission of the interviewees. During all the interviews, notes were taken by the researcher.

Transcribing

After the recording of interviews had been completed, the researcher transcribed interviews. The final transcripts were sent to the interviewees in order to give them the opportunity to check through their texts and make required adjustments. For the purpose of analysing the interviews, the Arabic interview transcripts were translated to English language by the researcher. In this

regard, to aid their readability in English, some replies were paraphrased, although no additional information has been added. The final translated transcripts have been sent to a proof reader to check the texts in terms of spelling and punctuation.

Analysis

The first step was that all the transcripts were read carefully by the researcher who highlighted important themes that were the subject of debate and ignoring replications. All transcripts were re-read to ensure that all important themes were highlighted and at the same time similar themes were highlighted in a different colour. Subsequently the data was categorised into environmental disclosure, management attitude and reasons for non-disclosure. During this step, all statements, relating to these categories were collated. In the next step, data was coded where the researcher organized material into chunks to facilitate analysing data. All codes for the categories have been defined before starting to analyse data which are presented in chapter seven. The researcher used content analysis to analyse data manually rather than using any computer software, because the sample was small, making it easy to analyse. This approach was chosen based on advantages discussed in section 5.4.2.3. To apply content analysis, cross-case strategy was adopted because it is appropriate for open-ended questions.

5.6.3 The application of self-administered questionnaire in this study

A self-administered questionnaire is a suitable type of questionnaire for the purposes of this study according to its advantages that discussed in section 5.4.3. It was used to achieve the research objectives (4 and 5) outlined in chapter 1, section 1.4. The internet and personally administered methods were used to distribute the questionnaires; most of the questionnaires were delivered personally to the participants, while some questionnaires were sent by email. Although the study sample was large, the researcher did not use the postal questionnaire because the postal system in Libya is still below the required standard and therefore cannot be relied upon to distribute the questionnaires.

Participant's sample

In Libyan society, there are various groups of users such as government, customers, suppliers and researchers who can be involved in this questionnaire. However, it would be impossible to survey all of these users, because there are factors that may affect this process, such as time,

money and often access. To identify the whole population for this questionnaire, the researcher focused on those who have the professional and technical ability in the accounting field and who are expected to have concerns on environmental disclosure issues, and its role in promoting well-being, social and economic development.

Therefore, population for this study can be identified in four groups including academic accountants, government officials, bank credit officers and external auditors. These groups have been chosen on the basis that they represent the interests of different sectors of Libyan society. In addition, they are also likely to have experience of different aspects of corporate reporting. Moreover, similar groups were adopted in previous studies Deegan and Rankin (1997), Al-Khater and Naser (2003), Mashat (2005). The following is an overview of these groups and how to determine the sample for each group.

Academics: This group includes all the people who are working full time in the accounting departments in Libyan universities and who are teaching the accounting subjects or interested in research in the field of accounting. The researcher has selected sample units that are easily accessible thus the sample can be described as a convenience sample. The questionnaires were distributed to participants (after the recent crisis in Libya) in universities located in easily accessible regions in terms of travelling time and security situation. As can be observed from Table 5.4, 125, questionnaires were delivered to academic accountants in six universities including University of Tripoli, Misurata University, Academy of Graduate Studies, Aljabar Al Gharbi University, Al-Mergib University and Azzawya University.

Government officials: This group includes accountants who are working as auditors in government units, which oversee the work of companies in Libya. Indeed it would be impossible to identify population of this group because they are spread over different institutions in the country. Therefore, snowball sampling technique was used where the researcher networked using his own business contacts and links in various government organizations. As can be seen from Table 5.4, 97 questionnaires were eventually delivered to Government officials in Audit Bureau (AB), Tax Department, Treasury Department and Central Bank of Libya.

Bank credit officials: This group includes accountants working in departments of loans in commercial banks in Libya and who oversee the operations for the purpose of facilitating finance and loans. As described in the above group, snowball sampling technique were utilised to determine samples taken from a broad cross-section of banks in different regions of Libya. As shown in Table 5.4, 95 questionnaires were delivered to bank credit officials in various branches of Gumhouria Bank, Waha Bank, Sahara Bank, Altijari Bank and National Banking Corporation.

External auditors: All accountants registered with Libyan Accountants and Auditors Association (LAAA) and who have permission to exercise accounting and audit profession in Libya on a regular basis through the offices or companies. Whole population of this group was identified based on a list of audit offices and consulting firms accredited to the Central Bank of Libya amounting to 100 offices operating in accounting and legal review (Central Bank of Libya, 2012). 75 external auditors, as shown in Table 5.4, were selected based on a simple random sampling technique from the list mentioned earlier.

Table 5.4 Participants groups

User Groups	The number of participants	Position of participants
Academics	125	Accounting departments in Libyan universities
Government officials	97	Government units which oversee the work of companies
Bank credit officers	95	Loans departments in Libyan commercial banks
External auditors	75	Associate members of (LAAA)
Total	392	

Designing the questionnaire

Preparation of the questionnaire was based on an extensive review of the literature related to previous work conducted to determine the perceptions of users of annual reports regarding corporate social and environmental disclosure (CSED), for example Deegan and Rankin (1997), Al-Khater and Naser (2003), Ahmad (2004), Mashat (2005).

Closed questions were incorporated in the questionnaire for the following justifications: Due to the large sample size, using open questions leads to the production of a large amount of data, which is difficult to analyse. Some suggestions regarding the disclosure of environmental information in annual reports were drafted in the form of closed questions, and, to avoid forcing the participants to express their opinions, a list of answers were designed to include neither “Neither Agree nor Disagree”, which was used when the answer is not known. In addition, a space for comments and additional information was provided in the end of the questionnaire. Moreover, questions were worded to include the relevant questions and take into account the points referred to in section 5.4.3.2.

The questionnaire’s questions were arranged according to funnel approach and filter questions as follows: The questionnaire begins with the simple questions regarding ethical consent and then moves to the personal questions that do not need much effort by the participant to be

answered. After the participants answer the general questions, the questionnaire moves on to more specific themes, which include the opinions of participants regarding factors that may effect on the environmental disclosure. Finally, the questionnaire comes onto the most specific points, which include the opinions of participants regarding the items of environmental information that should be disclosed, possible location to disclose these items in annual reports, potential benefits of the environmental disclosure, and the methods to be used to measure these items.

Regarding measuring the responses, the category scale was used in the first part of questionnaire to enable participants to choose the appropriate answer from the options that were given. The respondents were asked to state their current occupation, the highest level of academic qualification, the range of work experience, the country where they obtained their qualifications, and any professional qualification in accounting. In parts two and three, Likert scales were adopted by the researcher to measure the respondents' answers because they are considered the most used scale for examining the views of the participants.

The pilot test

The pilot study was carried out during the months of May and June 2012; eight questionnaires were distributed to five academics and three external auditors. This pilot survey focused on the feedback about the questions in order to remove ambiguity in the wording of questions and hence enhance the validity. Based on observations obtained through the pilot study, some modifications were made to the questions, in order to reach the final version of the questionnaire; these modifications are summarised in the following:

- ✓ Filter questions were integrated into some parts of questionnaire to make the process of answering questions more comfortable.
- ✓ Some questions were interpreted as having more than one meaning; these questions were modified to provide the same meaning to all participants.
- ✓ The way of asking questions was modified, to be more appropriate with Likert scales.
- ✓ The translations of some questions were revised, to ensure understanding of the questions without loss of the desired meaning.

As a result the questionnaire that is used in this research can be described through the following points (see Appendix four, A):

- The introduction of the questionnaire contains the main objective of the research, and reference to other research methods used, in addition to the purpose of using the questionnaire.
- Two simple questions regarding the ethical consent are used, as requested by the Ethics Committee of the University.
- The first part includes questions regarding data on the participants in the questionnaire in order to get an overview of the respondents; these questions are regarding: current occupation, work experience, educational qualification, the place where the educational qualification(s) were obtained and professional qualifications in accounting.
- The questions regarding the factors that may have an impact on CED are included in part two. In this part, the respondents are asked to give the opinions regarding suggested statements which were constructed to represent these factors.
- The third segment contains the questions regarding the disclosure of environmental information in the annual reports of Libyan construction companies. In this part, four subjects of CED are examined by getting the perceptions of the participants regarding the following issues:
 - The listed items should be disclosed by Libyan companies in their annual reports.
 - The possible location to disclose environmental information by the Libyan companies.
 - The list of potential benefits that can be obtained by disseminating environmental information.
 - The possible methods that can be used by Libyan companies to disclose the environmental information in their annual reports.
- At the end of the questionnaire, a space has been allocated for the participants to write any comments or propositions that may be important from their viewpoint.

The questionnaire was initially designed in English given that the designing of questionnaires in this study relied on the questionnaires in previous literature designed using English language. Moreover, designing the questionnaire in English is required by the Ethics Committee at the university.

The questionnaire was translated into Arabic language, where significant attention was given to the translation process which was done as follows:

The researcher has reviewed the questionnaires related to corporate social responsibility (CSR) in general and CED in particular which were written in English and translated into Arabic for data gathering such as Al-Khater and Naser (2003), Ahmad (2004), Mashat (2005). Some accounting terms, and expressions that are commonly used in the relevant questionnaires, were used by the researcher to translate the questionnaire. The questionnaire has been translated by the researcher using personal experience and then the translation process has been tested via a pilot study where the questionnaire in Arabic was sent to the members of the faculty in the field of accounting whose native language is Arabic. Indeed, substantive comments about the process of translation have been taken into account when writing the final version of the questionnaire in Arabic (see Appendix four, B).

Administration

392 questionnaires were distributed to four groups as previously identified above, most of them were delivered personally to the participants by the researcher, while some of them were sent by email. Regarding the questionnaires that were delivered personally to the participants, the process took two months. 97 questionnaires were collected by the researcher; as for the rest, two people were authorised by the researcher, and a further 101 questionnaires were collected which took more than four months, these were sent from Libya to UK. A further 9 questionnaires were sent and collected via the researcher's personal email. There were a large number of questionnaires which had not been filled, in addition, a large group of the questionnaires were found to be incomplete, forcing the researcher to exclude it. Eventually, 190 usable questionnaires were collected, with a response rate of 48% as shown in the table 5.5 this percentage is considered reasonable, especially if one takes into account the difficulties faced by the researcher during the distribution of the questionnaires (for more details see section 9.7).

Table 5.5 Response rate of questionnaire

User groups	Distributed questionnaires	Received questionnaires	Excluded questionnaires	Usable questionnaires	Response rate
Academics	125	53	4	49	39%
Government officials	97	66	3	63	65%
Bank credit officers	95	59	5	54	57%
External auditors	75	29	5	24	32%
Total	392	207	17	190	48%

Analysis

Collected data was analysed using statistics software called Statistical Package for the Social Sciences (SPSS) hence the first step was the data being input into SPSS. The second step was choosing the statistical technique to analyse data, in this regard, the researcher relied on factors discussed in section 5.4.3.4 to adopt appropriate statistical techniques that included the following.

Frequencies were used by the researcher to identify respondents' characteristics, including work experience, country of study, the levels of education, and the professional qualification where these characteristics were used to determine the extent of reliance on responses of participants in this study.

Measures of central tendency: the main purpose of this questionnaire is to poll the opinions and perceptions of different users regarding CED hence the 'mean' was the main statistical analysis used in to analyse the participants' responses.

Non parametric techniques : The researcher decided to use a Kruskal-Wallis one way ANOVA test to determine whether there is a significant difference in opinion among the various categories of users surveyed. This was justified by the fact that the data contained in this questionnaire showed abnormal distribution across more than two groups, as indicated in the normality test (see Table 1 of Appendix five).

5.7 Summary

This chapter discusses philosophical assumptions and methodology underpinning the choice of research methods for this study. In this regard, choosing methodology is directly dependent on the ontological, epistemological and human nature assumptions of the researcher. Based on research objectives, all philosophical assumptions indicate that the study generally adopts a middle-range position. Thus, this study takes a middle-range methodology between the nomothetic relating to a deductive approach and the ideographic approaches associated with the inductive approaches, as shown in Figure 5.4 where quantitative and qualitative research strategies are used. Therefore, in this study mixed research strategies are employed at two different but complementary stages of this empirical investigation research to achieve the research objectives outlined in chapter 1, section 1.4. Transformative triangulation approach is used in order to address a problem in all its aspects, through the analysis of various types of questions about the different kind of data that should be collected.

Regarding the nature of the current study, it is descriptive and exploratory; as for the research objectives; there are different types of objectives which require different approaches. Therefore, three different strategies of enquiry (see Figure 5.4) were used in this study: content analysis, semi-structured interviews and self-administered questionnaire. Content analysis is used to achieve the first objective, which is to determine the amount, type and methods of environmental disclosure of Libyan construction companies in their annual reports. In order to recognize the reasons underlying the current environmental disclosure practices of Libyan construction companies, conducting interviews is considered the best method. Also, semi-structured interviews will help in accomplishing the third objective, which aims to identify the financial managers' attitudes and beliefs of the Libyan construction companies towards environmental disclosure. To fulfil the fourth objective, which is to examine the extent of the impact of the social, environmental and political and economic influences on the CED questionnaires will be administered. The last objective, which is to develop a framework for the environmental disclosure in the construction industry in Libya, will be achieved through administered questionnaire.

Based on the above, this chapter has provided a base to link between the theoretical perspective and the empirical analysis of the study. The next chapter presents the results of analysing the Libyan construction companies' annual reports.

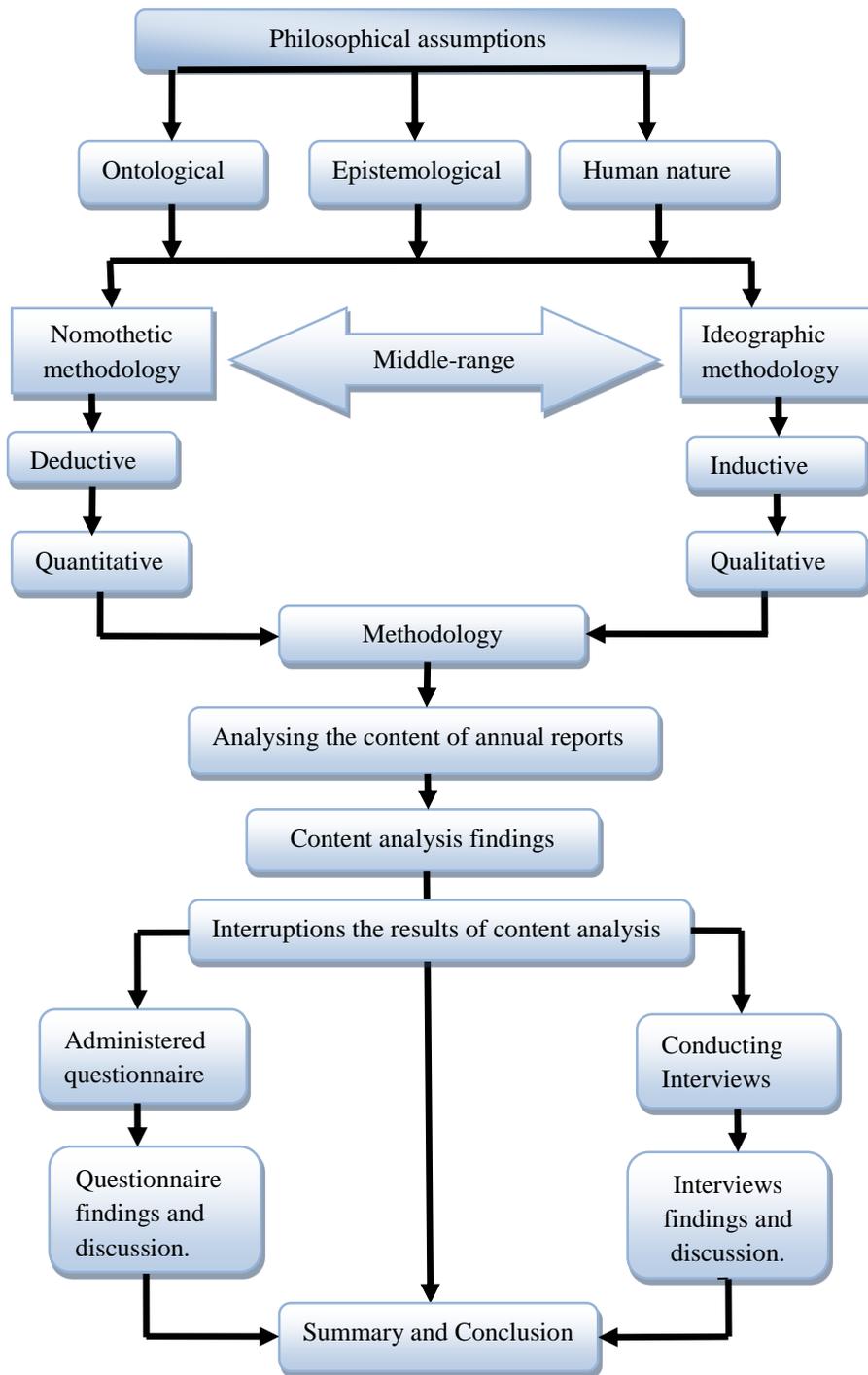


Figure 5.4 Research process

CHAPTER SIX

Evaluating the environmental disclosure in the annual reports of Libyan construction companies

6.1 Introduction

Following discussion of the methodological choices, including the appropriate philosophical considerations and methodologies underpinning the current study, and determining research design depict the necessary steps for proceeding in the empirical study. This chapter presents and discusses the results from analysing the content of the Libyan construction companies' annual reports. The first objective of the study outlined in chapter one forms the main theme of analysis and discussions conducted in this chapter. The organisation of the chapter is as follows. The next section shows the total level of corporate environmental disclosure (CED) in order to determine the general trend of environmental disclosures of contracting firms. The third section describes the volume of disclosure detailed by category themes to ascertain those categories which receive more attention. In addition, types of information and the methods used by companies to disclose environmental information are addressed in the fourth and fifth sections respectively to clarify the nature of the environmental disclosure. Finally, the sixth section is dedicated to displaying the summary of the chapter.

6.2 General level of corporate environmental disclosure

Overall the average volume of disclosure over the five years period was 58 words (written in Arabic) (Max 77; Min 35) as reported in Table 6.1.

Table 6.1 General level of corporate environmental disclosure

Statement	The number of words							Average
	2006	2007	2008	2009	2010	Total	%	
Name of company								
ACC	158	195	214	230	265	1062	73.2	212.4
LCC	6	6	23	33	35	103	7	21
AUCC					12	12	0.8	2.4
LIHC			29	29	29	87	6	17.4
LISC	10	54	10	67	44	185	13	37
Total	174	255	276	359	385	1449	100	58
Average	35	51	55	72	77	58		

Based on Table 6.1 and Figure 6.1, the period between 2006 and 2010 has witnessed an increased level of disclosure. The figure was 174 words in 2006 with an average of 35, subsequently reaching 385 words with an average of 77, in 2010. Compared with level of disclosure in previous studies, the result was very low. This result supports the evidence that has been obtained by the study of Ahmad (2004). In addition, Table 6.1 shows the level of disclosure for each company where the highest level of disclosure was found in the ACC reports with 73.2 % of total of disclosure while the lowest level of disclosure has been recorded in the AUCC, with 0.8 % of total of disclosure. Despite, this low level of disclosure, it is not confined to a limited category but included most of the categories selected as the basis for evaluation of disclosure, thus, it can be said that there is a trend toward developing this disclosure especially in some companies such as ACC, and LISC; this result supports the evidence that has been obtained by a previous study Ahmad and Mousa (2010). They found that the CED was developed by the Libyan companies, the authors suggest that this change of the disclosure has been caused by the Libyan stock market and the introduction of the Libyan environmental law.

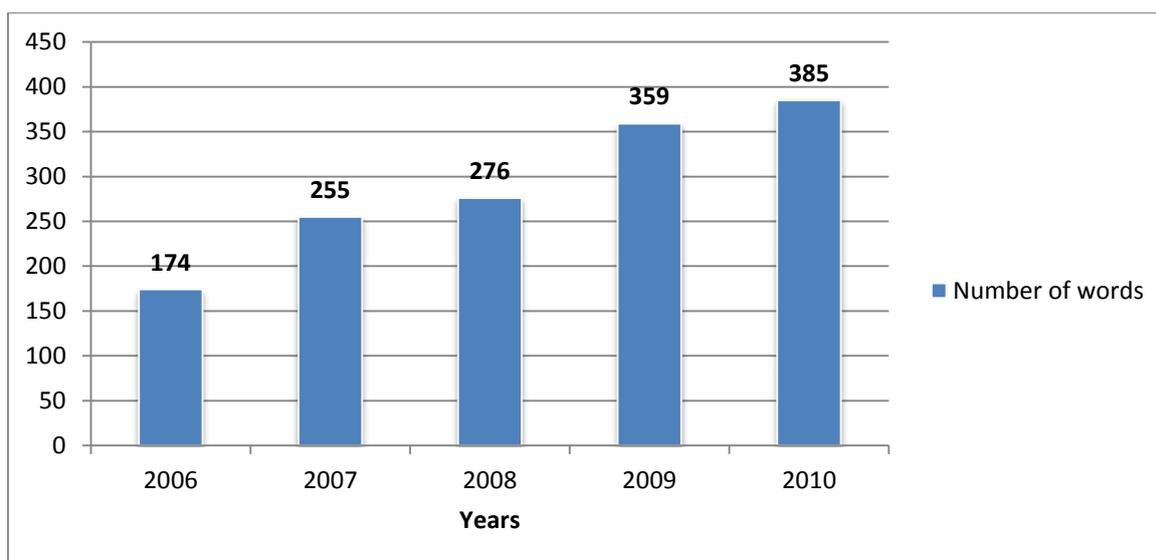


Figure 6.1 Total of disclosure over the five years period

6.3 Amount of environmental information by categories

Table 6.2 below gives a detailed breakdown of the number of words disclosed by companies that relates to CED by categories. Despite this low level of disclosure, the disclosing of environmental information has included all the categories that were selected as the basis to evaluate CED, in this study.

Table 6.2 Amount of environmental information by categories

Statements	Number of words					
	Product and processes	Energy	Health and safety	Environmental policies	Others	Total
Company						
ACC	156	17	246	545	98	1062
LCC	29	-	57	-	17	103
AUCC	12	-	-	-	-	12
LHC	-	-	-	87	-	87
LISC	-	-	50	129	6	185
Total	197	17	353	761	121	1449
%	13.50%	1.20%	24%	53%	8.30%	

Figure 6.2 shows clearly that the environmental policy is the most common category present in the annual reports followed by health and safety category while products and processes and other categories were given least priority to disclose. The least reported theme is the information related to energy. This finding is consistent with that of Zamir *et al.* (2012) where environmental policy was the most commonly cited category reported by Pakistani companies. From this, it can be deduced that there is a trend toward developing environmental disclosure, especially in some companies, such as ACC, and LISC as mentioned in section 6.2. where adopting environmental policy is a preliminary step undertaken by companies toward disclosing the environmental information (UNEP, 1994).

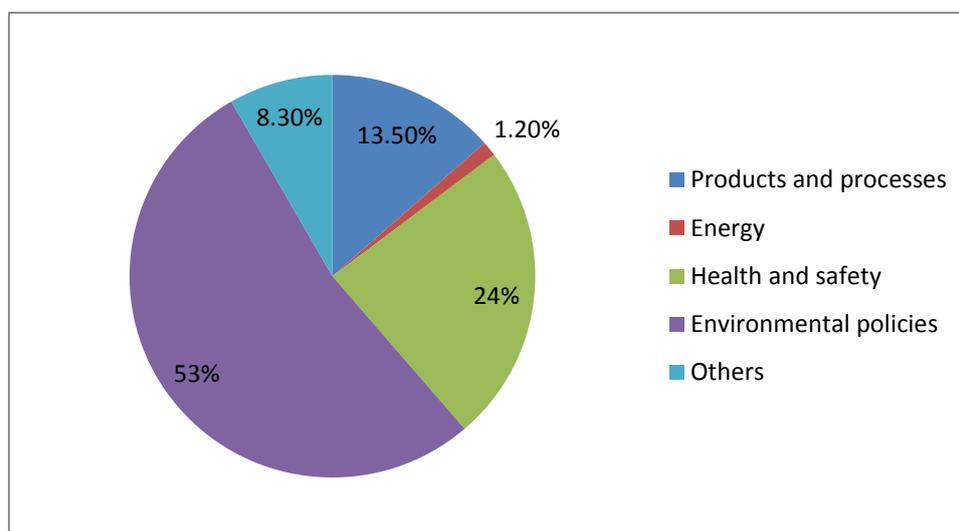


Figure 6.2 Proportion of disclosure

For example, below are some environmental policies, which were mentioned in the public policies of ACC, LISC, and LIHC.

“We believe that, our success in the long term depends on respecting the human and the public interest and the future of generations to come. Therefore, we do not aim just to comply with laws and regulations, but also to accomplish our business goals according to the principles of sustainable development and clean production taking into account the views of others views in the local and international community” (ACC).

“We aim to use natural resources more effectively and efficiently and minimize waste and harmful air pollutants, to improve the landscape and biodiversity, in order to protect the workers and environment. To achieve that, we commit to apply the safety standards in operating, maintenance, substitution, development, training, and management” (ACC).

“Adherence to local and global standards regarding environmental elements affecting the atmosphere, via improving systems and surveillance equipment and environmental measurement. In addition, a reduction of soil pollution using the best equipment and technologies and systems to work for the rational use of energy and resources, improving the work environment, and providing the elements of comfort and entertainment for employees” (LISC).

“To ensure the safety and health of all workers during work, the following rules are applied: no smoking, speed limits, wearing protective equipment, reporting of accidents, and reporting of hazardous conditions” (LIHC).

With regard to health and safety category, Libyan construction companies are aware of the significance attached to this area of disclosure due to the following. Providing appropriate conditions of work is required by Libyan law, and hence the companies should provide all the tools and measures taken required to protect the workers from any dangers that may affect them. Therefore, all the data regarding the workers such as procedures relating to the health and safety of workers, accident statistics, and expenses incurred by the company to maintain the health and safety of workers, will be provided by the company to the relevant authorities in the State. In this regard, Table 6.3 indicates the accidents statistics during the work for five years (2006-2007) for ACC.

Table 6.3 Accidents statistics during the work for four years (2007-2010) for ACC

Statement									
Years	The number of work accidents	The kind of work accidents							
		Burns	Injuries	Fractures	Bruising	Eye disorders	Amputation	Fainting	Death
2007	40	3	7	7	17	2	2	1	1
2008	42	2	7	7	23		1	2	
2009	39	5	9	9	10	4	1	1	
2010	41	10	8	7	15	1			

Source: ACC

In addition, in LISC, there is a department for industrial accident prevention, where it is considered a cost centre independent from the rest of the centres. From within the department expenses, there are expenses related to the health and safety of workers, such as the expenses of buying equipment and medical supplies, as shown in Table 6.4.

Table 6.4 Expenses of industrial accident prevention department related to the health and safety of workers

Statements	The current expenditures in Libyan Dinar			
	Safety equipment	Medical items	Expenses of medical services	Workers allowance
Months				
Jun-10	11250	55221	348284	1638
Jul-10	7177	27308	396700	50087
Aug-10	5021	47160	436855	1091
Sep-10	5012		2225	454

Source: LISC

Furthermore, Table 6.5 shows some expenses related to the health and safety of workers that are found in the annual reports of LCC.

Table 6.5 Some expenses related to the health and safety of workers which were mentioned in the annual reports of LCC

Statements	The expenses in Libyan Dinar	
	The social and health expenses	The residential camps expenses
Years		
2006		
2007	150366	5385
2008	121906	7778
2009	187173	39767
2010	189685	19797

Source: LCC

According to Figure 6.2, the category of products and processes accounts for about 13.5% of the total disclosure. In this context, although companies focus on the air pollution resulting from production processes in their environmental policies, they do not show enough information whether financial or descriptive, in their annual reports. In addition, some environmental information has been included in the annual reports of the company not explicitly, such as, the cost of installing filters, where the costs of these filters are classified within the capital cost of the plant, while these costs were spent by the company, in order to preserve the environment. For example, it was stated that in the annual report of 2010 of ACC within the cost of projects under construction 30 million Libyan dinars represent the cost of installation of filters in cement factories, in order to reduce the output and spread of dust in the atmosphere.

Regarding the category of ‘Other’ which should be included in the items that could not be classified into the above categories, it represented about 8.3% of the total disclosure as shown in Figure 6.2. Based on Table 6.2 ACC has a large share of this item for example Table 6.6, shows the intangible assets of the company, which are amounts, paid to the AJA company to obtain a quality certificate from the British National Council.

Table 6.6 Balances of intangible assets at the end of each year from (2006-2010)

Years	2006	2007	2008	2009	2010
Statement					
The value of the intangible assets in Libyan Dinar	87046	83261	79476	75692	71907

Source: ACC

In addition, below is some environmental information, which was mentioned in the annual reports of the LCC, which can be classified under other items:

“According to the social commitment towards staff, we have implemented a number of social projects, such as, establishing the public school in the ‘Afattauh’ area, and maintaining the medical clinics in ‘Afattauh’ and Benghazi. We focus on hygiene and commitment to implement systems in all the factories and company premises; moreover we have started work in the implementation of the natural grass project in the areas surrounding factories” (LCC).

Based on Figure 6.2, the category of energy represented a small percentage, about 1.2 %, where only one company (ACC) has disclosed some information regarding this item (see Table 6.2).

6.4 Types of environmental information disclosed in annual reports of companies

Analysis of annual reports as presented in Table 6.7 revealed that companies have a propensity to disclose only positive and negative information while neutral information was not used.

Table 6.7 Types of environmental information (positive and negative)

Statements	Number of words									
	Positive					Negative				
Type of information										
Years	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Companies										
ACC	143	151	157	169	202	15	44	57	61	63
LCC	6	6	23	33	35					
AUCC					12					
LHC			29	29	29					
LISC	10	54	64	44	13					
Total	159	211	273	275	291	15	44	57	61	63
	1209					240				
%	83.4					16.6				

The pie chart in the Figure 6.3 showed that positive information was the most widely used; it represented 83.4 % of the total disclosure, while the negative information accounted for only 16.6 %. This is consistent with the results of previous literature investigating environmental disclosure practices for example, Harte and Owen (1991), Deegan and Rankin (1996), Cowan and Gadenne (2005), Uwalomwa and Jafaru (2012). In this context, Deegan and Rankin (1996, p. 59) stated that the companies prefer to provide positive information because, “they believe there is a need to legitimize the existence of their operations”. Furthermore Yusoff and Lehman (2006) have found that Malaysian companies have disclosed just positive environmental information, due to maintaining a good image in the community. However, the above result can be explained in the framework of political, economic and social factors, where the companies in Libya are reluctant to disclose negative information, in order to avoid criticism and problems encountered in the future.

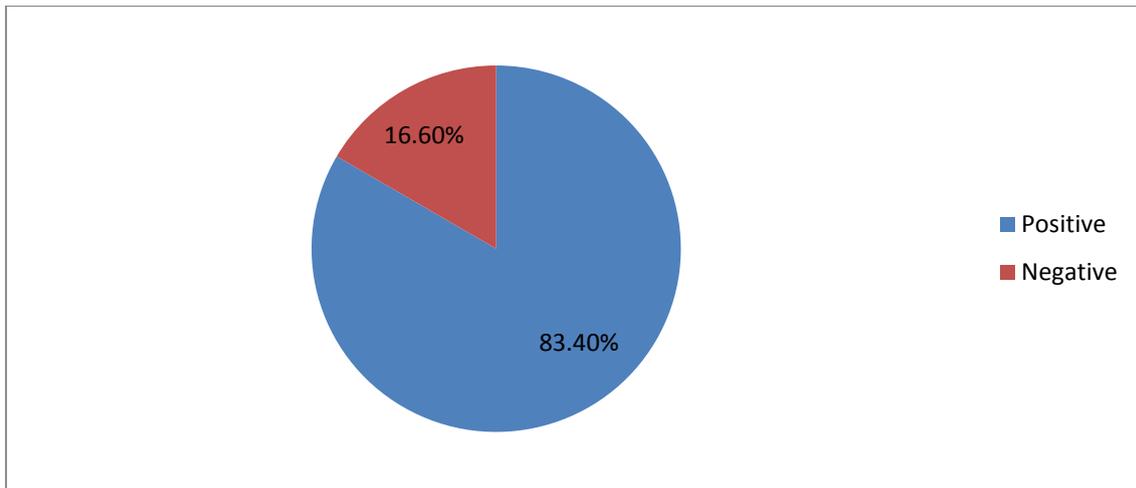


Figure 6.3 Proportion of types of information

6.5 Methods used to disclose environmental information

From Table 6.8, it is evident that companies sample used qualitative, financial and quantitative methods to disclose environmental information.

Table 6.8 Used methods to disclose the environmental information

Statements	Number of words														
	Financial information					Non monetary quantitative information					Qualitative information				
Years	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Companies															
ACC	34	42	48	60	95	15	44	57	61	61	109	109	109	109	109
LCC	6	6	6	6	6								17	27	29
AUCC															12
LIHC													29	29	29
LISC	10	10	10	13	13							44		54	31
Total	50	58	64	79	114	15	44	57	61	61	109	153	155	219	210
%	25.2					16.4					58.4				

The Figure 6.4 illustrates that environmental disclosures of the companies are largely confined to qualitative information, where it represented 58.4 % of the total percentages of the total disclosure and the remaining formed 25.2 % and 16.4 respectively.

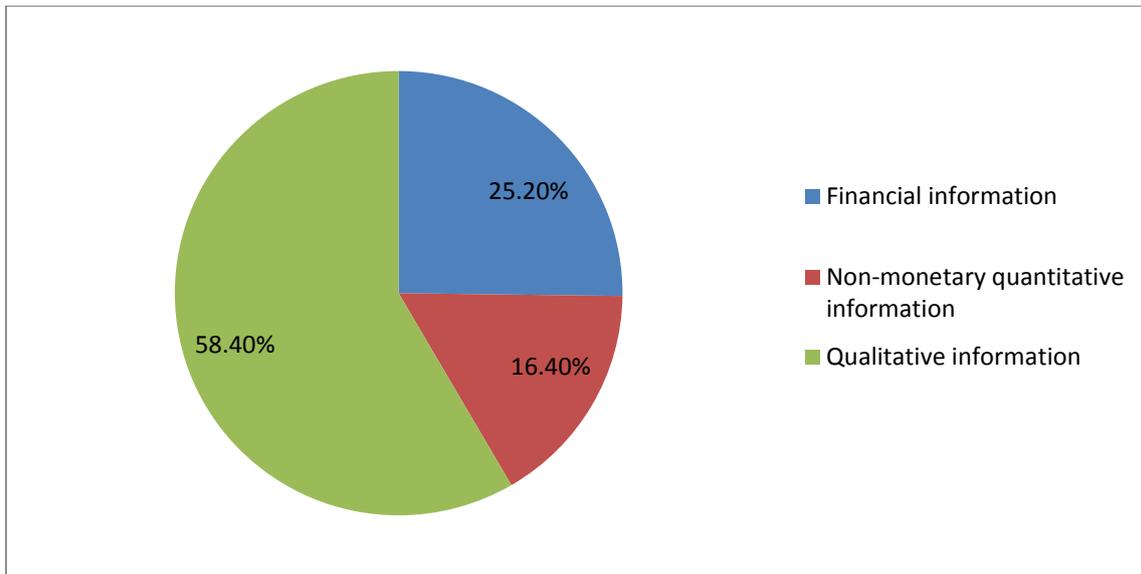


Figure 6.4 Proportion of using the methods of disclosure

The above result is consistent with the findings of Deegan and Rankin (1996), Harte and Owen (1991), Raar (2002), Ahmad and Sulaiman (2004), Zamir *et al.* (2012); Which can be interpreted that the environmental policy was the most category reported in the annual reports presented in a qualitative form.

To sum up, environmental information was disclosed by Libyan construction companies according to methods of monetary, non-monetary quantitative and declarative along with positive and negative information as shown in Tables 6.9 and 6.10.

Table 6.9 Combination of types of environmental information and methods used by companies

Company	ACC	LCC	AUCC	LIHC	LISC	Total
Type and methods						
Financial and positive	277	30			56	363
Financial and negative	2					2
Financial and neutral						
Quantitative and positive						
Quantitative and negative	238					238
Quantitative and neutral						
Qualitative and positive	545	73	12	87	129	846
Qualitative and negative						
Qualitative and neutral						
Total	1062	103	12	87	185	1449

Table 6.10 Summary of the types of environmental information and the methods used to disclose them.

Statements	The number of words									
	Positive					Negative				
Type of information	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Years										
Methods										
Financial information	50	58	73	88	121					2
Non monetary quantitative information						15	44	57	61	61
Qualitative information	109	153	146	210	201					
Total	159	211	219	298	322	15	44	57	61	63
	1209					240				

In this respect, Table 6.11 shows funds expended on products and processes of ACC during 2010 that may have a positive reflection on the company, such as replacement of dust filters.

Table 6.11 Positive financial disclosures

Statements	The amount in Libyan Dinar
Station sewage treatment	4387266
Replacement of dust filters	1707608
Replacement and development of packaging machines	5273
ISO 14001.	50000
TQM ISO 9001	24950

Source: ACC

In contrast, Table 6.12 shows the funds that were paid by ACC to owners of agricultural lands, in order to compensate them for the damage suffered by trees and soil. These funds are classified as negative financial disclosures because they reflect negatively on the company.

Table 6.12 Allowance of judicial compensation (negative financial disclosures)

Years	2006	2007	2008	2009	2010
Statements					
Allowance of judicial compensation in Libyan Dinar			2884109	2849070	2651337

Source: ACC

Table 6.13 shows quantitative information from ACC that may have a negative reflection on the company, such as lost days due to work accidents.

Table 6.13 Some information regarding the work accidents (negative quantitative information)

Statement	The lost days due to work accidents	The recurrence rate of injury	The rate of lost days (lost day/ injury)
Years			
2006		6.5	35.1
2007	2151	7	49.2
2008	2382	6.07	47.4
2009	1535	5.8	31
2010	1670	4.6	41

Source: ACC

Regarding the positive qualitative disclosures, it can be noted some information which is mentioned in the annual reports of LCC is shown in the following quotation.

“In 2008 the company invested more than 45 million Euros, to implement the dust reduction project, which included installation of filters in factories, completed in 2010. As a result, dust emissions have declined to (10 mg/Nm³) level or less, similar to European standards” (LCC).

6.6 Summary

This chapter discusses the results obtained from analysing the content of the Libyan construction companies’ annual reports. The level of environmental disclosure was very low compared to the environmental disclosures in the developed countries, which indicates that disclosure is still in its initial stages. The environmental information included all the categories, specially the environmental policies, representing about 53 % of the total disclosure. In addition, two types of information were disclosed (positive and negative), where the first one was most widely used, representing 83.4 % of the total disclosure. Financial, quantitative, and qualitative methods were used by companies, the most widely used were the qualitative, which represented 58.4% of the total percentages of the used methods. However, these results are just a record of CED practice of Libyan construction companies which serve as a starting point in attempting to understand and explain the evidence of the presence or absence of environmental disclosure practices. Hence, to enhance the understanding of the content analysis of corporate annual reports, the following chapters 7 and 8 serve to explain and understand this evidence of CED practices. This will be done by conducting interviews with financial managers of Libyan construction companies and completing the questionnaires by corporate annual reports’ users.

CHAPTER SEVEN

Perceptions of financial managers regarding corporate environmental disclosure

7.1 Introduction

This chapter presents and discusses the results from analysing data collected through semi-structured interviews as a part of complementary phase to the content analysis of the corporate annual reports, in order to totally understand the phenomenon of corporate environmental disclosure (CED) in the Libyan construction industry. The second and third objectives of the study outlined in chapter one form the main themes of analysis and discussions that are conducted in this chapter. Furthermore, the aim of conducting semi-structured interviews was to validate the quantitative findings obtained from analysing the annual reports of companies and administration of questionnaire. This chapter has been divided into the following sections. The next section shows perceptions of financial managers regarding the current state of CED. Financial manager's attitudes toward CED are described in third section. The reasons for not disclosing the environmental information in annual reports are addressed in section four. The summary of chapter is presented in section five.

7.2 Perceptions of financial managers regarding the current state of environmental disclosure of Libyan construction companies

In this section, perspectives and perceptions of financial managers relating to current state of environmental disclosure have been explored to obtain insights into the companies' practices of CED. Furthermore, these perceptions have been used to validate the results of content analysis, discussed in the chapter six. Respondents were asked if there is any kind of environmental information in general or in specific in annual reports of companies, thus the responses were coded into six categories as shown in Table 7.1.

Table 7.1 Participant's Perceptions regarding the current state of environmental disclosure

Categories	Ten Interviewees										Total			
											Disclosure		Non disclosure	
	FM1	CAD1	FM2	CAID1	FM3	CAD2	FM4	CAD3	FM5	CAD4	Number	%	Number	%
General level of CED	√	√	X	X	X	X	X	X	X	X	2	20	8	80
Products and processes	√	X	X	X	X	X	X	X	X	X	1	10	9	90
Energy	X	X	X	X	X	X	X	X	X	X	0	0	10	100
Health and Safety	X	X	X	X	X	√	X	√	X	X	2	20	8	80
Environmental Policies	√	X	√	√	X	X	X	√	X	√	5	50	5	50
Others items	√	X	X	√	√	X	X	√	X	X	4	40	6	60

7.2.1 Perceptions regarding the general level of environmental disclosure

A minimal number of the interviewees (see Table 7.1) 2 out of 10 (20 %) said there is some information regarding environmental pollution and environmental policies in the annual reports of companies, but it does not appear clear, explicit, and up to the required standard. The following comments reflect this opinion:

“There is some information such as judicial compensation that is paid to owners of agricultural lands, which are near the company's factories. This compensation is included in the annual reports of the company. Thus, it is considered as a one of the manifestations of environmental disclosure. In addition, the company has installed filters in cement factories, in order to reduce the spread of dust in the atmosphere. Costs of these filters are classified within the capital cost of the plant, while these costs are incurred by the company, in order to preserve the environment” (FM1).

Moreover, one Chief of accounting department stated: “Indeed, some environmental information has been included in the annual reports of the company inexplicitly, such as judicial compensation, and the cost of installing filters” (CAD1).

From the above comments, it can be said that Libyan construction companies do disclose an element of environmental information in their annual reports. The above view is supported by the previous study conducted in Libya by Elmogla (2009) who found that a small amount of environmental information which includes environmental policies, waste, pollution, and others was disclosed by some companies. Moreover, Ahmad and Mousa (2010) have provided the confirmation to support this opinion, where they found the CED had been developed by Libyan companies, especially with regard to damaging the environment, health and safety. Furthermore,

the above results are consistent with the findings obtained in this study, by analysing the annual reports of Libyan construction companies, where the general level of environmental disclosure was very low (see chapter six).

However, the majority of the interviewees (see Table 7.1) 8 out of 10 (80%) have emphasized that there is no environmental disclosure in annual reports of the companies as reflected in the following quotations:

One of them said: “There are not any items relating to environmental information that appear in the company’s annual reports. With regard to waste, there are contracts between the company and the companies specializing in this area where this waste is removed by these companies” (FM4).

Another interviewee stated: “There is no information in the annual reports of the company that can be considered as environmental information” (CAD3).

In addition, another financial manager said: “The company does not disclose the environmental information” (FM5).

According to the respondents' answers regarding the kind of environmental information that may be disclosed in the annual reports of companies, the majority of interviewees stated that, there is not any kind of environmental information in the annual reports of Libyan construction companies. This result is consistent with the previous findings which were confirmed by previous studies carried out in Libya by Ahmad (2004), Ahmad and Gao (2005), Ahmad and Mousa (2010).

7.2.2 Perceptions regarding the information related to products and processes

Based on Table 7.1 just one interviewee out of ten (10%) said there is some information relating to products and processes that has been disclosed by some companies such as, disclosing costs of installing filters in cement factories, in order to reduce the spread of dust in the atmosphere, and establishing the processing units to reduce the pollution of the soil.

The following statement seem to reflect the above result:

“Regarding the treatment of waste resulting from manufacturing operations, the company has established processing units, in order to reduce the leakage of oils to the soil and contaminating it. In addition, filters have been installed to reduce the spread of dust. These costs have appeared in the annual reports of the company within the projects under achievement” (FM1).

According to the above comments, information relating to the products and processes is disclosed by Libyan construction companies in their annual reports. This result is consistent with the findings obtained in this study, by analysing the annual reports of Libyan construction companies, the products and processes category represented about 13.5% of the total disclosure.

In contrast, the vast majority of the interviewees 9 out of 10 (90%) said there is no environmental information relating to the theme of products and processes. The following comments reflect this opinion:

“The company did not disclose any information regarding the above items, in other words, the nature of the products means they do not need packaging, and therefore there are no packaging operations. As for the waste from production processes, there are sold to specialized companies” (CAID1).

Another participant confirmed that:

“The company did not disclose any information regarding the above items; however, I think the company has focused on increasing production, without damage to the environment” (FM3).

In addition, another financial manager said

“With regard to the manufacturer of cement, in fact it is considered one of the biggest factories in Libya, and for the impact on the environment, it is a newly established factory and contains filters to reduce dust emissions, therefore there are no adverse effects on the environment in my opinion”(FM4).

According to the above respondents' answers regarding the information relating to products and processes, there is no information in the annual reports of Libyan construction companies. This result is in line with the results of the study conducted by Ahmed (2004) who examined the annual reports of Libyan industrial companies, where the findings indicated that there was no environmental information related to products and processes, energy and environmental policies.

7.2.3 Perceptions regarding the information related to energy

Based on Table 7.1, all participants said there is no environmental information relating to the theme of energy. This opinion can be illustrated via the following quotations:

“In fact, the company does not disclose any information relating to this item” (FM2).

One Chief of Accounting Department stated that “I think this type of information does not receive any interest from the company's management” (CAD4).

Another interviewee added: “I think there is no information regarding energy in annual reports of company” (FM3).

On the other hand, some companies have a program to rationalize energy consumption in order to reduce the cost of the product. This also helps to preserve the environment, but there is no environmental disclosure related to the energy in their annual reports. For instance, one financial manager said:

“The company has a program to rationalize energy consumption in order to reduce the cost of the product; as a result, the company applies specific policies that will preserve the environment” (FM1).

According to the previous quotations, it can be said Libyan construction companies do not disclose any information relating to energy in their annual reports. This result is consistent with the findings obtained in this study, by analysing the annual reports of Libyan construction companies, where the information relating to energy represented about 1.2% of the total disclosure. In addition, it is in line with the results of the study conducted by Ahmed (2004).

7.2.4 Perceptions regarding the information related to health and safety

All the participants said there is an administration or a special section dedicated to the health and safety of workers or occupational safety in the company. This means that there is interest by companies in these issues in order to improve working conditions and maintain the safety of workers. In spite of this, only two participants (20%) as shown in Table 7.1 said there is some information related to the health and safety appearing explicitly in the annual reports of companies, such as, documenting incidents and injuries during work, as mentioned in the following quotations:

“Yes, there is concern with this kind of information, within the department of safety and security, issuing the brochures that include tips and guidance for workers in the factories of the company plus preparing reports on incidents during work” (CAD3).

And: “Yes, there is some information disclosed relating to the health and safety of workers, such as the social and health expenses and the residential camps expenses” (CAD2).

In contrast 8 out of 10 (80%) emphasized that there is no environmental information relating to the theme of health and safety as shown in Table 7.1. For instance one financial manager said:

“Despite the existence of the management safety committee of the company in fact, there is no environmental disclosure of these items in the annual reports of company” (FM5).

Another also said,

“Although the existence the company's environmental policy includes some of the rules and instructions relating to the health and safety of workers, no information whatsoever is disclosed related to this item” (CAD4).

On the other hand, some of the participants said although the Occupational Safety Administrations incorporated a budget relating to the health and safety of workers and documenting incidents and injuries during work, the health and safety information was stated indirectly.

In this context another interviewee stated that:

“In fact, due to the nature of the company's activity, the company spends money on several items related to the health and safety of workers, such as, expenses of periodic tests conducted by the company on employees and safety equipment. However, the methods used in the classification of accounts in the company meant that the costs did not appear in the financial statements under the health and safety of workers, but they have been classified under other industrial expenses” (CAID1).

Another financial manager said: “Indeed, the company has an Occupational Safety Administration, which is responsible for performing the following tasks: provide protective equipment to minimize the risk of injuries, training for safety to identify potential hazards and explain safety rules, and prepare incidents reports. However, according to the method that has been used to classify the accounts in the company these expenses, have appeared under other industrial expenses instead of being classified under the expenses of health and safety of workers” (FM3).

According to the above comments, there is some information related to the health and safety appearing explicitly in the annual reports of Libyan construction companies. Given the previous result, it can be said it is consistent with the findings obtained in this study, by analysing the annual reports of Libyan construction companies, where the information related to health and

safety has represented about 24% of the total disclosure which is considered a positive result compared to other categories.

7.2.5 Perceptions regarding the information related to environmental policies

Half of the interviewees (50%) (see Table 7.1) acknowledged the existence of environmental policies that are classified within the general policies and goals of the company. In other words, the environmental policies have not been classified under a separate item in the annual reports of the companies. This opinion can be described through the following quotations:

“The company does not have a plan or a structured program to protect the environment, however, these goals or policies have been included within the general goals of the company, for example, of the company's goals to provide a high quality product without damaging the environment”(FM1).

One company financial manager added that “In fact, the reference was made to some of the environmental policies within the general policy of the company” (FM2).

Another interviewee expressed that “It can be said that the environmental policies exist, but are not disclosed or followed” (CAD3).

Another interviewee emphasized that “Some goals and plans regarding protecting of employees during work may have been included within the general policies of company” (FM5).

According to the above quotations, it can be said that Libyan construction companies disclose information relating to the theme of environmental policies within the general policies and goals of the company. This result is consistent with the findings obtained in this study, by analysing the annual reports of Libyan construction companies, where the environmental policies represented about 53% of the total disclosure.

However, the remainder of interviewees stated that there is no environmental information relating to the theme of environmental policies as shown in Table 7.1. The following comments reflect this opinion.

“There is no clear and definitive environmental policy within the annual reports of the company” (CAD2).

Another also said,

“To be honest, there are no environmental policies disclosed by the company, although some of the goals and plans relating to the environment may be included through the general goals and policies of the company” (FM3).

7.2.6 Perceptions regarding the information related to others items

Number of interviewees (see Table 7.1) 4 out of 10 (40%) indicated that different types of environmental information has been disclosed under above category. For example, fitting of water treatment plants, creation of green areas inside the factories, acquiring the ISO certificates, construction of public facilities, and compensation paid by the companies. The following are more details about this information, as described by the participants:

“In fact, the company has instigated several activities including the following. Fitting of water treatment plants in every factory and taking advantage of this water in the creation of green areas inside the factories. Installation of dust filters, where the biggest problem caused by the company is the emission of dust, despite the prohibitive cost of these filters, but it is classified as industrial expenses” (FM1).

“As we know, the existence of a clean place to work supports the environment and improves the behaviour and reduces the potential risks. From this point, the company has implemented a range of projects, such as, setting up a public school, establishment of green spaces, and maintenance of medical clinics, however, most of the costs of these projects have been classified as industrial expenses” (FM3).

“Indeed, there are no issues against the company forcing it to pay compensation to those affected by their activities despite the damage they cause the environment. In addition, the company has acquired the ISO certificates, where there is a cost centre for these certificates” (CAID1).

According to the above comments, there is some information which can be classified under ‘others items’ disclosed by Libyan construction companies in their annual reports. This result is consistent with the findings obtained in this study, by analysing the annual reports of Libyan construction companies, where the information related to other items represented about 8.3% of the total disclosure.

However, the rest of the interviewees 6 out 10 (60%) said, there is not any kind of information which can be classified under this item. This opinion can be illustrated via the following quotations:

“In fact, the company does not disclose any environmental information, regarding these items in the annual reports” (FM5).

“There is not any kind of information which can be related to these items” (CAD4).

In fact, through a review of the views of managers in the corporate finance departments regarding the assessment of environmental disclosure in annual reports, it can be observed that the companies do not disclose any kind of information, especially those related to products and processes, and energy. However, some information related to health and safety, environmental policies, and others items, has been disclosed by companies in their annual reports whether explicitly or implicitly.

In addition, based on the interviews, it can be observed that companies spend exorbitant sums in order to preserve and protect the environment. These amounts are not classified correctly, and are included under other items, such as, other expenses, and industrial expenses. In this regard, it can be said that the environmental information already exists, particularly the financial environmental information, where it needs reclassification to be under a separate item showing the extent of a company's contribution in preserving and protecting the environment. As a result, incorrect classification may be considered as one of the obstacles to disclosing the environmental information in the annual reports of companies. In other words, the stereotypes in the design of accounting systems and the lack of experience regarding environmental disclosure among the accountants are factors that prevent the classification of these expenses under an independent item showing the purpose of spending these expenses (see sections 4.7 and 4.8).

7.3 Financial manager's attitude toward corporate environmental disclosure

In this section, the interviewees were asked to provide their perceptions and beliefs about a number of statements, in order to determine their attitudes toward environmental disclosure. Hence, the responses were coded into six categories as shown in Table 7.2.

Table 7.2 Participant's attitude toward corporate environmental disclosure

Categories	Ten Interviewees										Total	
	FM1	CAD1	FM2	CAID1	FM3	CAD2	FM4	CAD3	FM5	CAD4	Number	%
Environmental protection is important issue	√	√	√	√	√	√	√	√	√	√	10	100
A company should protect the environment	√		√	√	√	√	√	√	√	√	9	90
Environmental disclosure is important issue	√		√	√	√	√	√	√	√		8	80
Company is responsible for providing the environmental information	√	√	√	√	√	√	√	√	√	√	10	100
Company will benefit from the environmental disclosure					√	√		√	√		4	40
Stakeholders have a right to get environmental information	√		√	√	√	√	√		√		7	70
Environmental disclosure will be general practice in near future.	√		√		√	√	√				5	50

7.3.1 Environmental protection in Libya should be an important issue, or less important when compared to economic and social issues

All the interviewees (see Table 7.2) stressed that environmental protection should be a priority issue in the community. The following comments indicate interviewees' opinions regarding this issue:

“According to my personal opinion, the protection of the natural environment should be a priority that must be accorded great interest by government. Where the concern for the environment contributes indirectly to support the social and economic issues” (CAID1).

“It is a very important issue, where the preservation of the environment means the best use of resources to ensure the future of the coming generations” (FM2).

“It is an important issue, where the environmental protection is considered a condition of achieving sustainable development” (CAD2).

“Protection of the environment should be a key demand by all members of the community, where it has a direct impact on the life of the individual” (FM5).

According to the above quotations, the interviewees believed that protection of the environment is important and necessary for the following reasons: The environment has a direct impact on the lives of individuals, to maintain public health, ensure the future of the coming generations, it contributes indirectly to support the social and economic issues, and it is considered a condition of achieving sustainable development. This result is consistent with the findings of Jaggi and Zhao (1996), where the attitudes of managers were examined, they revealed that environmental protection is important for Hong Kong firms. Furthermore, Kuasirikun (2005) found that the protection of the environment has been considered very important by the managers of companies.

7.3.2 A company should protect the environment, because that is part of their social responsibilities

The vast majority of interviewees 9 out of 10 (90%) as shown in Table 7.2 said environmental protection is the responsibility of the company's management, as can be seen through the following quotations:

“In my opinion, the company should contribute to the protection of the environment, because that it part of its responsibilities towards society” (FM2).

Another participant stated:

“I agree that protecting the environment is part of the company's obligations towards the community, where the large part of the damage to the environment is a result of the production processes” (CAID1).

Another interviewee added:

“I agree that the environment should be protected by the companies, where the protection of the environment should be among the general goals of the company” (CAD2).

Likewise another participant confirmed that:

“I think the duty of the company is to protect the environment, also the government should monitor companies to make sure they are doing this role” (FM5).

According to the above quotations the interviewees believed that the company is primarily responsible for the protection of the environment, because it is part of the company's obligations towards the community. In addition, the large part of the damage to the environment is a result of the productive activities of the company. This is in line with the findings of Bhattacharyya (2011) which indicated that the most of the environmental accountability items received considerable attention by respondents.

7.3.3 Environmental disclosure should be considered as important an issue as financial disclosure

Based on Table 7.2, the overwhelming majority of interviewees 8 out of 10 (80%) said, environmental disclosure is an important issue where this opinion can be illustrated via the following quotations:

“In my opinion, environmental and financial information has the same importance, however, financial information may be more important because it is required by law” (FM1).

Another interviewee added:

“In fact, the disclosure of environmental information is equal in terms of importance to the disclosure of financial information, whereas the latter is used to determine the financial position of the company, the environmental information is used to show the damage done to the natural environment, and the actions that have been taken to redress it, thus achieving transparency” (FM3).

Similarly another participant stated:

“I think that the financial information is more important compared with the environmental information. However, the latter is necessary in order to censor the companies with respect to environmental performance” (FM4).

According to above quotations, the interviewees believed that the environmental information should be at the same level of importance as financial information, so that it can be used by a company to disclose the damage done to the natural environment and the efforts made to protect it. This finding is similar to that of Ahmad *et al.* (2005) where most respondents considered environmental disclosure in annual reports an important issue.

However, some of the participants, 2 out of 10 (20%) considered that environmental disclosure is not an important issue. One participant provided the reason for disagreeing with this statement as follows:

“I do not agree that environmental disclosure is an important issue, because the disclosure of environmental information is not required by law in Libya” (CAD4).

7.3.4 Management of the company is responsible for providing the environmental information in their annual reports

All the interviewees (see Table 7.2) said the task of preparation and dissemination of environmental information should be undertaken by the management of the company, where it can be observed through the following comments:

“The financial management in any company is responsible for the preparation and dissemination of any accounting information, the environmental information is part of this information. Thus, the administration is responsible for preparing and publishing it” (CAD1).

Another interviewee added:

“Preparation of the environmental information and disclosing it is a responsibility of the management of the company” (FM2).

Another interviewee stressed:

“Certainly the disclosure of environmental information and preparing its own reports is the responsibility the management of the company” (FM4).

According to the above comments, the participants believed that the company is responsible for providing the environmental information in their annual reports. This result is consistent with the findings of Jaggi and Zhao (1996) who indicated that the management is responsible for disclosing environmental information.

Even though all the interviewees agreed that a company is responsible for the preparation and dissemination of environmental information, one of them suggested that a special department should be established to deal with the environmental disclosure issues. This opinion can be illustrated via the following quotation.

“The preparation and dissemination of environmental information in the company should be done through a special section to assume this task” (FM5).

7.3.5 A company will get a number of benefits, if it discloses the environmental information

Some of the interviewees 4 out of 10 (40%) as shown in Table 7.2 said that the disclosing of environmental information would provide benefits for the company.

As one participant said:

“I believe that the adoption of environmental disclosure by companies achieves several benefits, perhaps the most prominent illustrates the extent of the company’s commitment to preserving the environment” (CAD2).

Another interviewee added:

“I think the company can obtain some benefits from the dissemination of environmental information, such as improving its image in the community” (CAD3).

Therefore, adopting environmental disclosure by the company achieves several benefits. This result is consistent with the findings of Jaggi and Zhao (1996), who indicated that the company will have a better image if it discloses environmental information.

However, the rest of interviewees 6 out of 10 (60%) said, disclosure of environmental information may not achieve any benefits of the company where this belief can be illustrated via the following quotations:

“I am not so sure, obtaining the benefits from the dissemination of environmental information, depends on the level of awareness regarding the environmental disclosure among companies in particular and society in general” (FM2).

Likewise, another participant confirmed that:

“I think that in Libya, the companies do not benefit from environmental disclosure, because the environmental information is not important, also the government does not encourage companies to publish this type of information” (FM4).

Another participant stated:

“I think in order to recognise the benefits, the environmental information should be disclosed by companies” (CAID1).

According to the above quotations, the interviewees believed that achieving the benefits of environmental disclosure depends on companies adopting environmental disclosure and the level of awareness regarding environmental disclosure among the users of annual reports. Deegan and Rankin (1997, P. 568) confirmed that “it is difficult to understand how benefits will arise from mandated environmental disclosures, if the users do not really consider or demand environmental disclosures, then perhaps it would not matter how, or whether, environmental disclosures are made”.

7.3.6 Stakeholders have a right to get environmental information

The vast majority of interviewees (see Table 7.2) 7 out of 10 (70%), said, the company should inform stakeholders about the environmental information. This attitude can be illustrated via the following quotations:

“I believe that if the stakeholders are informed periodically, with information on the environmental impacts of the company, some kind of regulation will be imposed through this information, thus the company will commit to its responsibilities towards the environment” (FM1).

Another participant explained

“I believe that the environmental information can be used for several purposes, such as making decisions, therefore stakeholders have a right to obtain it to use for this purpose” (FM2).

As one participant said:

“The disclosure of environmental impacts of the company receives attention by several parties in the community such as, consumers, government, and workers. Thus, they have a right to glean this information” (FM4).

Another interviewee added:

“I think environmental information should be disclosed to all stakeholder to help them make decisions, for example government may use environmental information to impose some kind of control over companies with respect to their environmental performance” (CAID1).

Based on the above quotations, the participants believed that stakeholders have a right to access environmental information in order to use it for several purposes such as, making decisions, imposing a kind of censorship, and having information regarding the environmental impacts of company. Similar results have been found by Wilmshurst and Frost (2000) who examined the management attitudes regarding environmental disclosure, where the right of shareholders or investors to obtain the information were considered to be the most important factors that impact on the decision to disclose environmental information.

Conversely, the rest of interviewees (see Table 7.2) 3 out of 10 (30%), tend to favour the idea that environmental information should not be disclosed to all stakeholders, because this information may affect negatively on the company in terms of financial and risk of legal accountability towards third parties.

As one participant said:

“I think environmental information should not be available to all, because in my opinion, some people may use this information to sue the company and it might be used by competitors which leads to inflict of losses to the company” (CAD4).

Another participant explained:

“This type of information should be disclosed to the competent authorities in the State, such as Environment Public Authority, in order not to be abused by others, such as competitors” (CAD3).

7.3.7 Disclosure of environmental information by companies will become general practice in near future

Based on Table 7.2 half of interviewees (50%) said environmental disclosure will be adopted widely in the near future, where this opinion can be explained via the following quotations:

“I agree that the environmental disclosure practice will be developed in future, due to radical changes that have occurred recently in Libya. I think that there will be a remarkable development on various aspects of economic and social life. This will result in increased attention to the environment and environmental disclosure” (FM1).

Another participant explained:

“I agree that in order to keep abreast of developments in the field of environment, the companies should adopt environmental disclosure” (FM2).

Another participant stated:

“I agree with this statement and that in order to achieve that, the reasons behind the lack of adoption of environmental disclosure by companies should be considered” (FM4).

According to the above quotations, the interviewees have shown a positive attitude toward the previous statement, where they believe that environmental disclosure practices will be developed in the future, as a result of the radical changes that have occurred recently in addition to keeping abreast of developments in the field of the environment. This is in line with the findings of Kuasirikun (2005), who found that the interviewees and the questionnaire respondents believed that the social and environmental accounting would become important in the future.

However, a few of the interviewees seemed pessimistic toward this issue, where they said the environmental disclosure is unlikely to be adopted widely in Libya in the short term.

As one participant said:

“I do not think so, there are many factors that could affect the development of environmental disclosure in Libya” (CAD3).

Also another participant stated:

“Is not clear that environmental disclosure will be adopted fully in the near future” (FM5).

Hence, the interviewees believed that there are many obstacles preventing developing environmental disclosure in the short term. This result is consistent with the findings of Jaggi and Zhao (1996). In this context, based on a review of the environmental factors including the cultural, economic, political, legal system and the accounting education in Libya, it can be said that most of these factors may adversely affect the development of environmental disclosure (see chapter four). Based on the perceptions of the financial managers regarding the previous statements, overall, it can be said, that the managers’ attitudes were positive towards the natural environment and environmental disclosure.

7.4 Reasons underlying the absence of environmental disclosure

In this section, the interviewees were asked to identify potential reasons that may be behind the lack of disclosure of environmental information by Libyan construction companies in their annual reports. Consequently, the responses were coded into nine categories, based on the proposed reasons provided by participants as shown in Table 7.3. Furthermore, the results that support the findings of questionnaire are highlighted to allow the researcher to validate quantitative findings against qualitative findings.

Table 7.3 Reasons for non-disclosure of environmental information

Categories	Ten Interviewees										Total	
	FM1	CAD1	FM2	CAID1	FM3	CAD2	FM4	CAD3	FM5	CAD4	Number	%
Legal requirements	√		√	√	√	√					5	50
Environmental awareness	√		√	√	√	√	√	√		√	8	80
Civil society organizations		√	√	√	√		√		√	√	7	70
Experience and knowledge among professional accountants		√				√		√	√	√	5	50
Confidential of environmental information		√	√	√	√			√	√		6	60
Avoiding any criticisms			√	√	√	√		√	√	√	7	70
Demand for environmental information	√	√		√	√	√	√	√	√		8	80
Academic research	√		√	√	√	√	√	√	√	√	9	90
Awareness, experience, qualifications and training among accountants				√			√				2	20

7.4.1 Environmental disclosure not required by laws

Based on Table 7.3, half of the interviewees 5 out of 10 (50%) said, environmental disclosure should be required by law in order to oblige companies to disclose environmental information in their annual reports. This attitude can be illustrated via the following quotations:

“I think an absence of legal requirements affects the environmental disclosure process, so if this kind of disclosure was imposed under the law, companies would be obliged to disclose the environmental information in their annual reports” (FM1).

In addition another participant said:

“In my opinion, if this kind of disclosure was imposed under the law, companies will undertake to disclose any environmental information in their annual reports” (FM3).

Another also said:

“The absence of law may be a reason for not disclosure of environmental information, that is where the importance of imposing laws as well as modifying an organisation’s attitude towards environmental disclosure lies in changing the ethos of companies (CAD2).

According to above quotations, the Libyan construction companies avoid disclosing environmental information because it is not required by law. In this regard, the companies do not consider environmental disclosure an important issue which could benefit the company, but rather it is routine to be executed if legally required. In other words, it can be argued that most Libyan companies are controlled by the public sector, where competition is absent, thus, the companies do not take the initiative to adopt any measures that would improve their image for example, with environmental disclosure.

Depending on the above, the absence of a legal requirement is the fundamental reason that companies do not disclose environmental information in their annual reports. This is in line with the findings of Solomon and Lewis (2002), De Villiers (2003), Ahmad (2004), Ahmad *et al.* (2005), Ishwerf and Eaton (2010), Belal and Roberts (2010), Belal and Cooper (2011), Suttipum and Stanton (2012). Therefore, the Libyan construction companies will only provide the environmental information when it is mandatory. The above reflects the results of the quantitative survey, which indicated that the statement “the environmental disclosure should be required by law”, has recorded a high score where the mean was 4.04.

7.4.2 Lack of environmental awareness among the public

Based on Table 7.3 the large majority of the interviewees, 8 out of 10 (80%) said public awareness of environmental issues makes companies more cautious towards the environment, thus, they may disclose the necessary information related to the environmental issues. In other

words, they have contended that lack of environmental awareness amongst public might be a cause for non-disclosure.

As one participant said:

“I agree an important reason for not disclosing environmental information is the lack of sufficient awareness, and not keeping pace with the developments taking place in the environmental community, making people unaware of their rights toward companies” (CAD3).

Another participant stated:

“I think the lack of awareness among people of the seriousness of the damage caused by the companies, has led to the neglect of environmental information, thus the companies do not disclose it” (CAID1).

Another interviewee added:

“I think that a lack of awareness could be a reason because, if the people have an awareness of damage caused by the company, they will demand the state to put pressure on companies to shoulder their responsibilities towards the environment” (FM3).

Moreover another participant confirmed that:

“The lack of awareness among the people makes them unable to demand their rights, which reduces a company’s accountability” (FM2).

According to the previous quotations, it can be said the lack of awareness among the people is an important reason for not disclosing the environmental information in the annual reports of companies. If people have an awareness of damage caused by the company, they will demand the state to put pressure on companies to shoulder their responsibilities towards the environment. The above result is consistent with the findings of Ishwerf and Eaton (2010), which indicated that the general public do not have enough knowledge regarding the importance of environmental information. Perry and Sheng (1999) also found the main reason for non-disclosing environmental information is the lack of environmental awareness, the sense that the environmental impacts of organisations’ activities are unknown by Singaporeans citizens. Furthermore, it can be said this outcome of the interviews reinforces the quantitative study which established that the absence knowledge of environmental issues affects negatively on environmental disclosure.

7.4.3 Lack of civil society organizations

Given the fact that the civil society organizations have an important role in shaping public opinion in society, the majority of respondents, (see Table 7.3) 7 out of 10 (70%) said the absence of civil society organizations is an important reason for not disclosing environmental information.

The following comments reveal this view:

“I think the lack of civil society organizations is one of the factors negatively affecting environmental disclosure, because in my opinion these organizations have a significant role in public awareness” (CAID1).

“In my opinion, these institutions may have an important role, to encourage companies to carry out its responsibilities toward the environment, which in turn lead to adoption of environmental disclosure by companies” (FM2).

“In my personal opinion, I think that these organizations have an important role in shaping public opinion and therefore put pressure on the government to issue laws that require companies to disclose their responsibilities towards the environment” (FM3).

According to the above, the absence of civil society organizations has been considered as a reason that companies do not disclose environmental information in their annual reports. This is in line with the findings of Ishwerf and Eaton (2010). Moreover, this result clearly confirms the quantitative findings which indicated that the lack of civil societies movements affects negatively on environmental disclosure. In this regard, in Libya, despite the presence of some civil society organizations, they have no active role in the society, because the existing political system limits the activity of these organizations making them unable carry out their functions (see section 4.3). Thus, the absence of an effective role of these organizations has a negative impact on environmental disclosure.

7.4.4 Lack of professional accountants who have experience and environmental knowledge to deal with environmental disclosure

Based on Table 7.3 half of interviewees (50%) contended that some of the reasons for non-disclosure might be attributed to lack of knowledge and experience amongst professional accountants (external auditor). This attitude can be explained via the following quotations:

“In my opinion, the lack of development of environmental disclosure may due to poor performance, stereotypes at work and not keeping up with modern developments in the field of accounting which are hallmarks of the work of the external auditor in Libya” (CAD3).

Another interviewee added:

“I think professional accountants should encourage the company to disclose environmental information” (FM5).

According to the above, the professional accountants should encourage companies to disclose the environmental information in their annual reports, thus, the professional accountants should have enough knowledge to deal with these issues.

In Libya it can be said that in the light of weak performance of professional accountants and the absence of the criteria which organizes the practice of the profession, they are not expected to do anything in order to develop an accounting profession, especially with regard to the issues of social and environmental disclosure.

Though the above results formulated are based on 50% of interviewees’ responses, most participants in the questionnaire believed that a lack of experience and knowledge among professional accountants has an adverse impact on environmental disclosure in concurrence with the qualitative findings.

7.4.5 Confidentiality of environmental information

Most of the respondents, (see Table 7.3) 6 out of 10 (60%) have stressed that the confidentiality of environmental information could be a reason for not disclosing the environmental information. The company hides this kind of information in order to avoid any problems that may arise from access to it by others, especially external parties.

This view can be illustrated via the following quotations:

“The level of confidentiality could affect the environmental disclosure, depending on the kind of environmental information, whether it is of a positive type, in which case it could support the company and improve its image in the community, whereas if the information is negative, the company may prefer not to publish” (CAD1).

“I think the company could conceal environmental information, especially if it is negative, for fear it would find itself in trouble that may make it difficult to be addressed” (FM3).

“Confidentiality of environmental information, could affect environmental disclosure, where disclosing this kind of information may affect the company” (FM5).

Indeed, the reason suggested above is not surprising, because the confidentiality and non-publication of any information, whether positive or negative, are considered part of the culture of the community planted by the former regime in Libya. Thus, the confidentiality of environmental information can be considered as a reason for not disclosing the environmental information in the annual reports of companies. It can be noted that the above result is consistent with the findings of Solomon and Lewis (2002) where the incentives and disincentives for CED have been investigated; they found that reluctance to report sensitive information was considered significantly more important than the majority of other disincentives. Furthermore, Ishwerf and Eaton (2010) found that the Libyan companies thought that the environmental information is sensitive, and thus, they prefer to hide them or disclose them in a different guise.

7.4.6 Avoiding any accountability by the public or government

Based on Table 7.3, the majority of the interviewees, 7 out of 10 (70%) said the companies do not disclose environmental information to avoid any accountability by the public or government. They believed that disclosure of environmental information (especially the negative information) may create obligations for others which could affect the company in the future.

The following responses reveal some of the respondents' opinions:

“The company may be exposed to accountability both by the people or the government if it discloses any kind of environmental information” (CAID1).

Another interviewee added:

“I think that the desire of the company's management to avoid accountability by the government or the people would make them reluctant to disclose any information” (CAD2).

Also another participant stated:

“I think that in the absence of legislation, which obliges the company to disclose environmental information thus, the company will have the choice of disclosing or not disclosing the information. As result, I think the company will not disclose any information to avoid any accountability” (FM3).

In addition another participant said:

“I think a company may be exposed to accountability, both by the people or the government, if the environmental information, especially that of a negative nature, has been disclosed by company” (FM5).

According to the above quotations, the Libyan construction companies avoid disclosing environmental information, because they are afraid of the reaction of the society and the state. This result is line with the findings of Solomon and Lewis (2002), who found, that avoiding disclosing incriminating information to regulators, was considered as a disincentive for CED. In addition, Ahmad *et al.* (2005) have confirmed that avoiding any accountability by the public or government, is an important reason for not disclosing the environmental information.

Furthermore, this result is in conformity with the quantitative findings where the desire of companies to avoid any claim or interference from the public or competent authorities has an adverse impact on CED.

7.4.7 Lack of demand for environmental information

The large majority of respondents 8 out of 10 (80%) as shown in Table 7.3 indicated that lack of demand by stakeholders for environmental information is a major cause of not disclosing it by companies. This attitude can be illustrated via the following quotations:

“I think that the information is similar to commodities, thus, if there is a demand for it, it will be provided by the company, whether voluntary or compulsory” (FM1).

“Absolutely, the lack of demand for this kind of information is a major cause for not disclosing it” (CAID1).

“I think the information is like goods, thus, must be required to be displayed in the market, therefore, the company will not disclose this information unless it has been requested by the users of the company's annual reports” (FM3).

“In my opinion, the environmental information does not receive any attention by the users of the annual reports of companies, this in turn leads to the reluctance of companies to adopt environmental disclosure” (CAD3).

“Because there is no demand of this kind of information, we do not disclose it in the annual reports” (FM5).

According to the above quotations, the absence of environmental information can be justified as a result of lack of demand by stakeholders for this kind of information. In general, Gray *et al.* (1997) confirmed that the absence of demand by stakeholders for the information has been considered as a reason for not disclosing it. In particular, if there is a lack of interest in environmental information from clients, it is better to reduce the environmental information or not disclose it at all (Campbell and Slack, 2011).

In this regard, Solomon and Lewis (2002) have argued that, in a free market, the demand for environmental information operates according to the market mechanism, and thus, if such information is demanded, the market will provide it.

However, in Libya, it cannot be said the demand for environmental information operates through the market mechanism, because it is a unique economic system where competition is absent to a large extent, and almost all the companies are owned by the public sector (see section 4.4). Thus, the demand for environmental information in Libya may come as a result of increasing environmental awareness, or the growing pressure imposed by regulatory authorities for this information.

In empirical studies, the absence of demand for environmental information has been found by De Villiers (2003) as an important reason for not disclosing this kind of information. Ahmad *et al.* (2005) added that among the reasons for the absence of environmental disclosure, was lack of attention to environmental issues by the Malaysians. However, Ishwerf and Eaton (2010) found that the lack of demand for environmental information as a less important reason.

7.4.8 Lack of academic research related to environmental disclosure

Given the fact that academic research and empirical studies are the main source to develop the practical application, almost all the respondents shared this view, 9 out of 10 (90%) as shown in Table 7.3. They said the lack of academic research may negatively affect developing environmental disclosure, where companies need a theoretical basis to guide practice. The following comments reveal this view:

“In my opinion, much of the research and studies in this area may increase the awareness of companies and members of the community regarding the importance of environmental disclosure, additionally they provide a theoretical basis, in order to develop process of environmental disclosure” (FM1).

“I agree that the lack of academic research related to environmental disclosure, impacts negatively on the environmental disclosure, in this regard, since the establishment of the company, this research is the first one that addresses this subject” (CAID1).

“Indeed, the academic research related to environmental disclosure, may be an influential factor in the development of environmental disclosure. In other words, if the company has a desire to adopt environmental disclosure, it will need a theoretical basis that may be provided by such research” (CAD1).

“In my opinion, lack of research in the environmental disclosure area is a major cause. I have been working in this company for a long time, in fact, this is the first research that I have encountered on this topic” (FM4).

According to the above quotations, the absence of environmental disclosure by Libyan construction companies in their annual reports might be attributed to lack of academic research. This is indeed a direct confirmation of the quantitative finding that the absence of academic research limits the ability of the companies to adopt environmental disclosure. In this regard, it can be said that the issue of environmental disclosure has not received proper attention by educational institutions in Libya, which has led to the absence of theoretical frameworks and ideas, necessary to develop the topic (see section 4.7).

7.4.9 Lack of awareness, experience, qualifications and training of accountants in companies

Based on Table 7.3 very few of the participants, 2 out of 10 (20%) have considered the lack of awareness, experience, qualification and training amongst accountants as a reason for not disclosing the environmental information. The following comments reflect this opinion:

“I think the lack of a necessary qualification and experience of accountants in a company is the reason for not disclosing the environmental information. In this context, the expenses are not classified properly, for example, the cost of installing filters to purify the floating dust has been classified as an industrial cost, added to the factory’s cost centre, despite the presence of a particular cost centre to monitor and protect the environment” (CAID1).

“I think that the lack of scientific and practical experience is one of important reasons behind the company’s failure to adopt environmental disclosure. The company is interested in achieving financial gain only, without regard to the issues of environmental disclosure in terms of

rehabilitation and training of accountants to make them more efficient to deal with these issues” (FM4).

According to the above quotations, the lack of awareness, experience, qualification and training of accountants in companies is a less important reason for not disclosing the environmental information by Libyan construction companies in their annual reports. However this reason has received a high score (4.26) in the quantitative study.

In fact, in Libya, it can be expected. The accounting education system does not include any courses related to social and environmental disclosure in the Bachelor's degree, though the Master's program of some universities contains an optional course that addresses social accounting. Thus, the graduates may not have a background in social and environmental disclosure issues.

It can be noted that the above result is consistent with the findings of Ahmad and Sulaiman (2004) where the reasons for non-disclosure of environmental information were investigated. They revealed that lack of scientific and practical experience of accountants is an important reason. In addition, Ahmad *et al.* (2005) found the lack of management expertise as a reason for not disclosing the environmental information. Moreover, Salehi *et al.* (2011) argued that the lack of scientific qualification and practical experience in this area, and deficiency of awareness among managers are obstacles preventing the adoption of environmental disclosure.

7.5 Summary

This chapter has offered the descriptive analysis of data collected from the semi-structured interview. The main part of the interview was aimed to validate the quantitative findings obtained from analysing the annual reports and administration of questionnaire. The findings of this chapter have been classified into three main points.

Regarding perceptions of financial managers relating to current state of environmental disclosure, it can be observed that the companies do not disclose any kind of information, especially pertaining to products and processes, and energy. However, some information related to health and safety, environmental policies, and others items, were disclosed by companies in their annual reports, whether explicitly or implicitly. Moreover, the findings indicate that in most cases the interview' findings were similar to the results of analysing the annual reports.

The majority of participants believed that the protection of the environment is important and necessary, as well as agreeing that the company is primarily responsible for the protection of the

environment. Also, the majority of interviewees believed that this information should be at the same level of importance as financial information. In this context, they have stated that the company is responsible for preparation and dissemination of environmental information in its annual reports. Some interviewees considered that the adoption of environmental disclosure by the company would achieve several benefits. A proportion of them believed that achieving these benefits depends on the adoption of environmental disclosure by companies and the level of awareness regarding the environmental disclosure among the users of annual reports. According to the viewpoint of the majority of the participants, stakeholders have a right to receive environmental information. Furthermore, they believe that the environmental disclosure practices will be developed in the future as a result of the radical changes that have occurred in Libya recently, in addition to keeping abreast of developments in the field of environment.

Finally, a number of reasons for not disclosing the environmental information were determined by the interviewees. The most prominent of these identified by financial managers are absence of environmental awareness, lack of demand for environmental information and dearth of academic research. Similarly, managerial perspectives reveal that the absence of environmental disclosure is mainly due to lack of grass-roots community groups and the avoidance of any accountability by the public or government. Interviewees also indicated that legal requirements, confidentiality of environmental information and lack of experience and knowledge among professional accountants have been considered as major causes of not disclosing environmental information. Lack of awareness, experience, qualifications and training of accountants in companies has emerged as a less important cause of the absence of environmental disclosure. Furthermore, the findings indicate that in most cases, the interview findings were similar to the results of questionnaire.

However, obtaining primary data through examining users' perceptions regarding the nature and practices of CED provides a fully understanding of CED practice in the Libyan construction industry. The next chapter explores the perspectives and perceptions sample of users of the annual reports of Libyan construction companies regarding the various aspects of CED. This is done by administration of the questionnaire.

CHAPTER EIGHT

The extent of the impact of the social, political and economic environment on corporate environmental disclosure

8.1 Introduction

This chapter presents and discusses the results from analysing data collected through questionnaire as a part of complementary phase to the content analysis of the corporate annual reports in order to fully understand the phenomenon of corporate environmental disclosure (CED) in the Libyan construction industry. The questionnaire survey has been carried out with the aim of examining the extent of the impact of the social, environmental and political and economic influences on CED while developing a framework for the environmental disclosure in the construction industry in Libya. The chapter has been divided into the following sections, the next section shows general information about the participants in the questionnaire. The perceptions of the users of Libyan construction companies' annual reports regarding the factors that influence CED have been discussed in the third section. The fourth section focuses on revealing the perceptions of the annual reports' users regarding the issues of environmental disclosure, while the summary of chapter has been presented in section five.

8.2 General information about the participants

This section focuses on respondents' characteristics, including their work experience, country of study, the levels of education, and the professional qualification, in order to determine the extent of reliance on responses of participants in this study. The following analysis outlines background information of the participants as follows:

8.2.1 Years of experience

The findings in Table 8.1 indicated that more than 32% of the participants have practical experience extending from six to 10 years. Moreover, 59 user groups (31%) have practical experience extending up to 5 years or less while, 33 of users groups (17.4%) have between 11 and 15 years' experience. In addition, 26 participants (13.7%) have between 15 and 20 years' experience, and 11 of them (5.8%) have more than 20 years. It can be said the most of the participants have practical experience extending from one year to 10 years, while the rest of them

have experience stretching from eleven years to more than twenty years, which suggests that they hold a reasonable duration of working experience.

Table 8.1 Experience of participants

Users groups	Period of experience										Total	
	0-5 years		6-10 years		11-15 years		15-20 years		Over 20 years			
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Government officials	10	15.9	19	30.2	13	20.6	16	25.4	5	7.9	63	100
Academic accountants	17	34.7	25	51	4	8.2	2	4.1	1	2	49	100
Bank credit officers	31	57.4	8	14.8	7	13	5	9.3	3	5.5	54	100
External auditors	1	4.2	9	37.5	9	37.5	3	12.5	2	8.3	24	100
Total	59	31	61	32.1	33	17.4	26	13.7	11	5.8	190	100

8.2.2 Country of study

The results in Table 8.2 show that the majority of participants (91%) achieved their highest qualifications from universities or institutes located in Middle East and North African region such as Libya, Egypt, and Jordan. In addition, the rest of the participants obtained their qualifications from the following regions, 7.4% from UK, 1.1 % from European Union, and 0.5% from other regions such as Malaysia and Australia. Accordingly, a large portion of participants obtained their highest degrees from abroad, which indicates that they may have the essential knowledge to understand the phenomenon under investigation.

Table 8.2 Country of study

Users groups	Country of study								Total	
	Middle east and north African region		United kingdom		European union		Others			
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Government officials	61	96.8	2	3.2	0	0	0	0	63	100
Academic accountants	35	71.4	11	22.4	2	4.1	1	2.1	49	100
Bank credit officers	54	100	0	0	0	0	0	0	54	100
External auditors	23	95.8	1	4.2	0	0	0	0	24	100
Total	173	91	14	7.4	2	1.1	1	0.5	190	100

8.2.3 Highest qualifications of respondents

Based on Table 8.3, more than a third of respondents hold a bachelor's degree. A significant percentage of the participants in the study (36.8) hold a Master's Degree, while 14 of them (7.4%) hold a higher diploma. Moreover, 13 of them (6.8%) hold a PhD, and only nine of them (4.7%) hold an Intermediate diploma. It can be observed that the significant percentage of the

participants in the study hold advanced degrees in accounting, which suggests that they have the essential knowledge about the subject of the study.

Table 8.3 Highest level of the academic qualification

Users groups	Academic qualification										Total	
	Intermediate diploma		Higher diploma		Bachelor degree		Master degree		PhD degree			
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Government officials	5	8	7	11.1	38	60.3	13	20.6	0	0	63	100
Academic accountants	0	0	0	0	1	2	38	77.1	10	20.4	49	100
Bank credit officers	4	7.4	5	9.3	42	77.7	3	5.6	0	0	54	100
External auditors	0	0	2	8.3	3	12.5	16	66.7	3	12.5	24	100
Total	9	4.7	14	7.4	84	44.2	70	36.8	13	6.8	190	100

8.2.4 Professional qualification for respondents

The results in Table 8.4 indicate that the vast majority of participants (75.8%) do not have any professional qualification in the accounting field whereas a significant percentage of the participants (24.2%) have a certificate from the Libyan Accountants and Auditors Association (LAAA) and hence, they may have a different view about the subject of the study.

Table 8.4 Professional qualification

Users groups	Professional qualification												Total		
	Non		LAAA		IAAA		ACCA		AICPA		Others				
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	
Government officials	59	93.7	4	6.3	0	0	0	0	0	0	0	0	0	63	100
Academic accountants	33	67.3	16	32.7	0	0	0	0	0	0	0	0	0	49	100
Bank credit officers	52	96.3	2	3.7	0	0	0	0	0	0	0	0	0	54	100
External auditors	0	0	24	100	0	0	0	0	0	0	0	0	0	24	100
Total	144	75.8	46	24.2	0	0	0	0	0	0	0	0	0	190	100

LAAA: Libyan Accountants and Auditors Association.

IAAA: Institute of Arabic Accountants and auditors.

ACCA: Association of Chartered Certified Accountants.

AICPA: American Institute of Certified Public Accountants.

8.3 Perceptions of users of the Libyan construction companies' annual reports regarding the factors that influence corporate environmental disclosure

The group of statements were provided by the questionnaire, which were constructed to represent the factors that may affect environmental disclosure. The respondents were asked to choose a

score from 1 (strongly disagree) to 5 (strongly agree) to indicate the extent of their agreement with a number of suggested statements, that may affect environmental disclosure. A summary of the descriptive statistics and the results of Kruskal-Wallis test of the responses of the study participant are shown in Table 8.5 and (for more details see Table 2 of Appendix five). Thus, the purpose of this section is to present and discuss participants' attitudes toward these statements as shown in the following points:

Table 8.5 Analysing the views regarding the factors that influence on corporate environmental disclosure

Statement	Mean	Mean Rank	Kruskal-Wallis Test		
			Chi-Square	The level of significance	Result
The environmental disclosure should be required by laws.	4.04	7	2.085	0.555	Not significant
The government should introduce laws.	3.97	11	3.824	0.281	Not significant
There is sufficient legislation in Libya to encourage companies to disclose their responsibilities towards the environment.	2.75	15	2.278	0.517	Not significant
The absence of environmental standards by the relevant central authorities such as the Environment Public Authority impacts negatively on the environmental disclosure.	3.99	9	1.098	0.778	Not significant
The independent accounting bodies such as (LAAA and AB) should standardise what companies disclose in their annual reports.	4	8	8.83	0.032	Significant
The lack of academic researches impacts negatively on environmental disclosure.	4.09	5	2.231	0.526	Not significant
The lack of accountants who have qualifications and expertise in the companies impacts negatively on environmental disclosure.	4.26	2	8.461	0.037	Significant
The lack of professional accountants who have sufficient guidance on dealing with environmental issue impacts negatively on environmental disclosure.	3.72	13	7.551	0.056	Not significant
The lack of civil societies movements impacts negatively on environmental disclosure.	3.98	10	12.621	0.006	Significant
The desire of companies to avoid any claim or interference from people or competent authorities impacts negatively on corporate environmental disclosure.	3.72	13	8.557	0.036	Significant

Table 8.5 continues

Statement	Mean	Mean Rank	Kruskal-Wallis Test		
			Chi-Square	The level of significance	Result
One of the negative factors on environmental disclosure is the public lacks enough knowledge of environmental issues.	4.12	4	9.56	0.023	Significant
Environmental protection is important in Libya.	4.62	1	6.214	0.102	Not significant
According to the teachings of the Islamic religion the Libyan companies should disclose the damage to the environment.	4.06	6	14.838	0.002	Significant
The environmental issues in Libya are less important when compared to other economic and social issues.	3.79	12	1.911	0.591	Not significant
The environmental disclosure is seen as criticism of government policies, thus companies avoid this disclosure.	3.48	14	3.382	0.336	Not significant
The environmental protection is necessary even if it leads to a reduction of corporate profits.	4.21	3	7.871	0.049	Significant
The negative environmental information in Libya is confidential information which must not be disclosed.	2.67	16	3.115	0.374	Not significant

As can be seen from Table 8.5, the statement of “environmental protection is important in Libya”, it received the highest score where the mean was 4.62. In addition, according to Kruskal-Wallis test, the result was not significant, which means there is no significant difference among the study participants' opinions, and thus this provides additional support to the above statement. It can be interpreted from these responses, that in recent years, the awareness among people has increased slightly regarding environmental damage, especially that which can be easily observed, such as air and soil pollution, thus it can be said that their attitudes have become more positive towards the environment. Nevertheless, the dominant culture still remains in Libya among the public which is not consistent with the principles of the protection of the environment. Gamble *et al.* (1996) confirmed that the companies working in the countries which have a high social conscience tend to disclose more environmental information.

The lack of accountants with qualification and expertise in the companies impacts negatively on environmental disclosure which received a high score (4.26). However, based on the Kruskal-Wallis test, the level of significance was 0.037 which means there is a significant difference in the average perceptions amongst the groups involved in the survey. The difference in the views of the participants came as a result of the difference in the degree of approval, which ranged between agree and strongly agree. In other words, the mean for the government officials was

4.10 (the lowest), while for external auditors it was 4.50 (the highest), it can be explained that the external auditors group have more knowledge and experience regarding the disclosure practices and its requirements, thus, their responses were to strongly agree (see Table 2 of Appendix five). This result is to be expected, because adopting environmental disclosure in companies requires academic qualifications and practical experience, thus the absence of these elements adversely affects environmental disclosure. Regarding academic qualifications, the issues of social and environmental disclosure in the accounting education system in Libya does not exist. There are no courses dealing with these issues in the Bachelor's degree, however, the Master's Program of some universities, contains an optional course that addresses social accounting (see section 4.7). Moreover, the Libyan construction companies do not have enough experience regarding environmental disclosure issues, because this kind of disclosure is still in the initial stages. The above result is consistent with the findings of Bebbington (1997) who found that the accounting education in general and environmental accounting in particular, should develop in order to enable future generations of accountants to deal with issues of environmental disclosure.

As stated above, the statement of “environmental protection is necessary even if it leads to reduction of corporate profits” recorded a high score, where the mean was 4.21. This indicated that the environmental awareness among different user groups is growing, where they consider the environmental protection a priority that should be taken into account by companies. In addition, it emphasizes their positive attitude towards the environment. According to Table 8.5, which displays the results of Kruskal-Wallis test, there is a significant difference between the study participants' opinions, where (the lowest mean) for the bank credit officers was 3.94 , while the highest score was 4.54, for the external auditors (see Table 2 of Appendix five). It can be interpreted that bank credit officers group have a different view towards this statement compared to other groups.

The statement “One of the negative factors on environmental disclosure is the public’s lack of knowledge of environmental issues”, received a score of 4.12 indicating that this statement was considered by the study participants as an important factor. The results of the Kruskal-Wallis test indicate significant differences in the study participants' opinions concerning the above statement. In general, there was agreement that the lack of awareness among the people is an influential factor in the evolution of environmental disclosure and with this there was a disparity in the views of the participants in the degree of importance of this factor, as shown in the Table 2 of Appendix five. It can be noted that the above opinion is consistent with the findings of Gamble *et al.* (1996) where environmental disclosure in 27 countries was investigated, in order

to determine the significant difference in the type and level of disclosure on a global basis. They found that there is a difference between the environmental disclosure practices by the companies in different countries. The companies working in the countries which have a high social conscience, tend to disclose more environmental information. The highest levels of environmental disclosure were recorded in the United States, UK and Canada. In UK, Solomon and Lewis (2002) also found that the general lack of awareness of environmental issues is considered as disincentive factor to environmental disclosure.

It is also evident that the respondents agreed that the lack of academic research as a factor has an adverse effect on the environmental disclosure, where the mean was 4.09. According to the results of the Kruskal-Wallis test (see Table 8.5) there are no significant differences in the study participants' opinions, thus, this provides additional support to the above agreement.

As shown in Table 8.5, a similar mean score was given for the statement of "According to the teachings of the Islamic religion the Libyan companies should disclose the damage to the environment". According to Table 8.5, which displays the results of Kruskal-Wallis test, there is a significant difference between the study participants' opinions, where (the lowest mean) for the bank credit officers was 3.70, while the highest score was 4.29 for the external auditors (see Table 2 of Appendix five). It can be interpreted that the bank credit officers group have a different view towards this statement compared to other groups. The above result reflects the role of religion as a key element of the cultural system in the Libyan society. Thus, the Islamic religion may be a positive factor in order to adopt the environmental disclosure by companies in Libya.

Similar to the above, the statement "the environmental disclosure should be required by law", recorded a high score where the mean was 4.04 (see Table 8.5). In addition, the results of the Kruskal-Wallis test indicated a general agreement amongst the groups involved in the study, one can therefore conclude that these groups have a similar view towards this statement. This reflects the role of the body responsible for issuing state laws, in terms of issuing the necessary legislation to encourage companies to adopt environmental disclosure. Indeed, in Libya the existing laws do not require companies to disclose the environmental information in their annual reports (see section 4.5). It can be noted that the above opinion is consistent with the findings of Deegan and Rankin (1997) where they found that the participants' views tend to consider that environmental disclosure should be a mandatory component in the annual reports. Thus, the legal system adopted may affect the administration's decision on environmental disclosure (Williams, 1999; Jorgensen and Soderstrom, 2006). In this context, Jorgensen and Soderstrom (2006) determined the effect of institutional factors on environmental disclosure countries around the

world. They found that environmental disclosure depends on legal systems in place, for example, Denmark has the highest level of environmental disclosures at the global level, which is attributed to the recent laws issued which oblige companies to disclose environmental information.

Another finding is that the independent accounting bodies, such as LAAA and Audit Bureau (AB) should determine the environmental information required to be disclosed by companies in their annual reports, where the mean was 4.00 see Table 8.5. These bodies include the AB, which is responsible for providing guidelines on the disclosure of environmental information in annual reports as well as the LAAA which has a role in regulating the accounting and auditing profession through the issuance of accounting standards. According to the results of Kruskal-Wallis test, a significant difference in the responses was found of those who answered the questionnaire regarding the former statement. As can be seen from Table 2 of Appendix five, the mean of academic accountants and the external auditors was 4.33 and 4.17 respectively, while the mean of bank credit officers and government officials was 3.87 and 3.79 respectively. This confirms that there is consensus among participants regarding the role of the independent accounting bodies but a disparity remains in their views on the degree of importance this role. The above result is consistent with the similar findings of Deegan and Rankin (1997), who found that there is partial agreement among the participants, so there is a need for independent accounting bodies to provide guidelines on the disclosure of environmental information in annual reports.

Likewise, “the absence of environmental standards by the relevant central authorities, such as the Environment Public Authority affects negatively on environmental disclosure” recorded the mean of 3.99. According to Table 8.5 the Kruskal-Wallis test provides an additional support to the above findings where it points to no significant difference among the study participants’ opinions. This means that the specialized bodies in the affairs of the environment should perform their role through the issuance of technical standards and regulations relating to the protection of the environment in order to induce companies to improve their environmental performance and produce the goods in an environmentally friendly way (General People’s Committee, 1999). In Libya, although the Environment Public Authority has been established since 1999, it has not reflected positively on environmental disclosure.

Similar to the above, the statement of “The lack of civil societies movements impacts negatively on environmental disclosure” recorded the mean of 3.98. According to Table 8.5, there is a significant difference in the respondents’ opinions where the level of significance was 0.006. By

reference to the Table 2 of Appendix five it can be noted that (the lowest mean) for the government officials was 3.70, while the highest score was 4.25 for the external auditors. In this regard, it can be said that civil society organizations have a role in educating people regarding environmental damage, and encourage companies to shoulder their responsibilities towards the environment. Thus, they will have an indirect impact on the evolution of environmental disclosure. In Libya, despite the presence of pressure groups, they have no influence over government policy which limits their roles, making them unable to fulfil all their functions (see section 4.3). The above result is in line with the findings of Deegan and Gordon (1996), where a positive correlation was found between CED and environmental lobby groups concerned with the environmental performance of companies.

In other findings, the respondents demonstrated the mean of 3.97, for the statement “the government should introduce laws imposing environmental disclosure”. That means the majority of participants think the government is the entity responsible for issuing the laws regarding environmental disclosure. As shown in Table 8.5, no significant differences can be found in the respondents opinions that can be considered as a support to this statement. The above result is consistent with the similar findings of Deegan and Rankin (1997), who found that there is less agreement among the participants, that the government should issue the laws relating to environmental disclosure.

Another finding is that the environmental issues in Libya are less important when compared to other of economic and social issues, where the mean was 3.79 as shown in Table 8.5. According to the results of the Kruskal-Wallis test, there is no significant difference which means there is a general agreement between the participants in this study regarding the above statement. Thus, the environmental issues are less important compared with the other economic and social issues. This result is not a surprise where in the developing countries characterized by weak economic performance, concern for the natural environment and environmental disclosure are not a priority. Jorgensen and Soderstroim (2006) confirmed that the countries with weak economic performance have a low level of environmental disclosure and regulation of environmental reporting. For example, the lowest level of environmental disclosure was recorded in the developing market economies.

As shown in Table 8.5, a similar score (Mean = 3.72) was given for the statement “desire of companies to avoid any claim or interference from people or competent authorities impacts negatively on CED”. This means that companies do not disclose environmental information, especially the negative type, to avoid any criticism by the public or government that may create

obligations for others, which will be borne by the company in the future. The results of the Kruskal-Wallis test indicate significant differences in the study participants' opinions concerning the above statement. By reference to Table 2 of Appendix five, it can be noted that the lowest mean for the government officials was 3.49, while the highest score was 4.00 for academic accountants. It can be interpreted that, the academic accountants group have the most positive view towards this statement compared to other groups. In Libya, it can be said that the policy of blackout which was pursued by the government and its affiliated companies in terms of not giving any information whether inside or outside the country reflects the previous opinion (see section 4.3). This confirms findings of Solomon and Lewis (2002), that avoiding disclosing incriminating information to regulators is the main barriers to developing environmental disclosure.

Equal to the above, the statement of “the lack of professional accountants who have a sufficient guidance on dealing with environmental issues impacts negatively on the environmental disclosure” has recorded the same score, this means that the external auditors can help the company with regard to the adoption of environmental disclosure if they have enough experience and knowledge in this area. According to Kruskal-Wallis test, there is no significant difference, between the means of the four groups that participated in the study, and thus this provides additional support to the above statement.

The responses of users of the annual reports reveal that environmental disclosure appears as a criticism of government policy (mean of 3.48) as shown in Table 8.5. In addition, Kruskal-Wallis test indicated that there is general consensus between the four groups where they expressed their agreement with the above statement. That means that companies may hesitate in disclosing environmental information if it was seen as criticism of government policies. This reflects the authoritarian nature of the political system in Libya, which does not accept any kind of criticism (see section 4.3). In this regard, Archambault and Archambault (2003) stated that there is a positive relationship between political freedom and the accounting disclosure practices. Thus, the above result is consistent with the findings of Williams (1999) who investigated the effects of socio-political and economic factors on the voluntary environmental and social disclosure practices in seven nations across the Asia- Pacific region, where the findings indicated that the political system has considerable influence on the social and environmental disclosure.

The statement of “there is sufficient legislation in Libya” has received the low score (mean of 2.75), that means absence of adequate laws to oblige companies to adopt environmental disclosure. In addition, the results of the Kruskal-Wallis test (see Table 8.5) reveal that there is

no significant difference in the study participants' opinions, thus, this provides additional support to the former statement. It can be said the above result reflects the shortcomings of the legal system in Libya in terms of the response to developments regarding the protection of the environment (see section 4.5). In this regard, Archambault and Archambault (2003) stated that the legal system has been mentioned in literature as a factor to influence the accounting disclosure practices. Thus, the above result is consistent with the findings of Jorgensen and Soderstrom (2006) where they found that the development of environmental disclosure practices depends on the nature of the legal system adopted.

The lowest score (mean of 2.67) was given for the confidentiality of negative environmental information, which means that this kind of information is not considered confidential information. This result may reflect the changes that have occurred recently in Libya, where the participants answered the questionnaire in different conditions dominated by freedom of expression that has been lost for decades (see section 4.3). Moreover, the Kruskal-Wallis test indicates no significant difference in the respondents' opinions about above statement.

8.4 Perceptions of users of the Libyan construction companies' annual reports regarding the issues of environmental disclosure

This section mainly deals with the perceptions of users of the annual reports about the mechanism of disclosure of environmental information in the annual reports. This requires discussing in more detail about environmental disclosure in order to extract conclusions that can be adopted in the future. Hence, this section addresses the analysis of the opinions of the groups involved in the survey, regarding the items of environmental information that should be disclosed, possible location to disclose these items in annual reports, potential benefits of the environmental disclosure, and the methods to be used to measure these items.

8.4.1 Categories of environmental information

A set of proposals regarding the kinds of environmental information were presented to the participants in the questionnaire, in order to survey their views about the extent of their agreement to disclose these items in the annual reports of companies.

Table 8.6 Analysing the views on proposed kinds of environmental information

Statements	Mean	Mean Rank	Kruskal-Wallis Test		
			Chi-Square	The level of significance	Result
Environmental policies	3.95	5	5.516	0.138	Not significant
Health and safety issues	4.16	1	16.231	0.001	Significant
Energy issues	4.1	2	6.768	0.08	Not significant
Products and processes	3.96	4	11.564	0.009	Significant
Others	4.04	3	7.018	0.071	Not significant

As shown in Table 8.6, all categories of environmental information were accepted by the participants in the study, to be disclosed in the annual reports of companies where the category of health and safety recorded the highest score (mean of 4.16). However, the Kruskal-Wallis test showed significant difference in the respondents' opinions regarding the previous category. With reference to Table 3 of Appendix five it can be noted that the (the lowest mean) for the government officials was 3.87, while the highest score was 4.35 bank credit officers. It can be interpreted that the difference was caused by those whose answers ranged between agree and strongly agree.

Although the category of products and processes received a high score (3.96), the results of Kruskal-Wallis test revealed a significant difference between the study participants' opinions. It can be interpreted that the participants in the study had differing points of view, which were reflected in their responses.

From the previous view, it can be said that the participants tended to disclose environmental information in a detailed and sufficient manner, using several categories of this information which may indicate their desire to have access to environmental information. However, the category of health and safety was given the highest score, which can be attributed to awareness among the participants regarding the importance of this category. The above result is consistent with the similar findings of Deegan and Rankin (1997), where they found that all environmental items, such as health and safety issues, environmental policies, and environmental performance were considered as important items.

8.4.2 Location of environmental information

A range of proposals regarding the location of environmental information were presented to the participants involved in the questionnaire, in order to investigate their opinions about the extent of their agreement on proposed locations to disclose environmental information.

Table 8.7 Analysing the views on proposed locations for the disclosure of environmental information

Statements	Mean	Mean Rank	Kruskal-Wallis Test		
			Chi-Square	The level of significance	Result
A separate booklet attached to the annual report	3.31	3	24.389	0	Significant
In any section within the annual report	3.25	4	8.315	0.04	Significant
In the directors' statement within annual report	3.66	2	1.013	0.798	Not significant
In a separate section entitled 'environmental disclosure' or the equivalent in annual report	3.71	1	14.148	0.003	Significant

Based on results in Table 8.7, the highest score (mean of 3.71) was given for the statement of “In a separate section entitled environmental disclosure or the equivalent in annual report”. The results of the Kruskal-Wallis test indicate significant differences in the study participants' opinions concerning the above statement. By reference to Table 4 of Appendix five it can be noted that the (the lowest mean) for the bank credit officers was 3.24, while the highest score was 4.00 academic accountants. It can be interpreted that the academic accountants group have the most positive view towards this statement compared to other groups.

The divulging of environmental information in the directors' statement within the annual report was accepted by the respondents as another possible location, where the mean was 3.66. In addition, the results of the Kruskal- Wallis test indicate to a general agreement amongst the groups involved in the study, one can therefore conclude that these groups have a similar view towards this proposed location.

The next score was given for “a separate booklet attached to the annual report” as a possible location for disclosing environmental information where the mean was 3.31. From Table 8.7 it can be noted that there are significant differences in the study participants' opinions concerning the above result. By reference to Table 4 of Appendix five, it can be observed that (the lowest mean) for bank credit officers was 2.70, while the highest score was 3.79 for the external auditors. It can be interpreted that the bank credit officers group have a different view towards this proposed location, compared to other groups.

The option of disclosing environmental information in any section within the annual report received the lowest score, where the mean was 3.25. The results of Kruskal-Wallis test revealed a significant difference between the study participants' opinions which is attributed to the fact that credit officers group have a different view towards this proposed location compared to other groups.

Based on the above, all the proposed locations were accepted by the participants in order to disclose the environmental information. However, they preferred to disclose environmental information in a separate paragraph of the annual report, entitled environmental disclosure or the equivalent, hence this reflects the importance of environmental disclosure from their perspective. This is consistent with similar results of Deegan and Rankin (1997), who found 67.8% of respondents prefer to read about environmental information from the annual report.

8.4.3 Probable benefits of corporate environmental disclosure

The opinions of the users of the annual reports were surveyed in order to determine the extent of their agreement, regarding the proposed benefits that may be achieved as a result of CED.

Table 8.8 Analysing the views on possible benefits of environmental disclosure

Statements	Mean	Mean Rank	Kruskal-Wallis Test		
			Chi-Square	The level of significance	Result
Serve society at large	4.32	2	4.48	0.214	Not significant
Serve customers	4.23	4	7.684	0.53	Not significant
Protect environment	4.38	1	11.184	0.011	Significant
Encourage environmental investment	4.21	5	4.892	0.18	Not significant
To make decision	4.03	6	6.951	0.073	Not significant
Emphasize the role of accounting as an effective information system	4.31	3	7.351	0.062	Not significant

It can be observed from Table 8.8, that all the proposed benefits were accepted by the participants, to be benefits for the detection of environmental information in the annual reports of companies.

Protecting the environment was considered the main benefit of disclosing the environmental information, where the mean was 4.38. However, the Kruskal-Wallis test shows a significant difference in the study participants' opinions concerning the above result, with reference to the Table 5 of Appendix five it can be said the difference was mainly between the degree of approval, which ranged between agree and strongly agree.

Similarly, serving the society at large and emphasising the role of accounting as an effective information system, received high scores, recorded respectively 4.32, and 4.31. Moreover, the results of the Kruskal- Wallis test indicated a general agreement amongst the groups involved in the study, one can therefore conclude that these groups have similar views towards these proposed benefits.

It is also evident that the respondents agreed to consider the rest of the statements (serve customers; encourage environmental investment; and making decision) as potential benefits of

disclosing the environmental information, recorded respectively 4.23, 4.21, 4.03. In addition, the results of the Kruskal-Wallis test (see Table 8.8) reveal that there are no significant differences in the study participants' opinions regarding the above, hence this provides additional support to the former statements.

According to the above, the participants believed that the disclosing of environmental information achieves several benefits, whether for the company or society. This is consistent with the findings of Deegan and Rankin (1997) where the environmental information was considered as very important in making decisions.

8.4.4 Methods of disclosing environmental information

In order to disclose environmental information in the annual reports of companies, a suitable method should be adopted for this purpose. In this regard, a set of proposed methods were presented to the participants in the questionnaire in order to survey their views about the extent of their agreement to use these methods.

Table 8.9 Analysing the views on proposed methods to disclose environmental information

Statements	Mean	Mean Rank	Kruskal-Wallis Test		
			Chi-Square	The level of significance	Result
In descriptive manner	3.39	6	6.707	0.082	Not significant
Quantified but non-monetary (statistical)	3.46	5	12.159	0.007	Significant
Monetary	3.59	4	10.984	0.012	Significant
Descriptive and statistical	3.63	3	6.827	0.078	Not significant
Quantitative and monetary	3.83	2	6.202	0.102	Not significant
Descriptive, quantitative and monetary	4.26	1	22.631	0	Significant

As shown in the Table 8.9, it can be seen that all the proposed methods met with acceptance by the participants, however, the methods which comprised descriptive, quantitative and monetary information, were accepted by the majority of the respondents where the mean was 4.26. According to the Kruskal-Wallis test, a significant difference in the responses was found of those who answered the questionnaire regarding the former statement. By reference to Table 6 of appendix five, it can be said, the difference is mainly between the degree of approval, which ranged between agree and strongly agree.

Disclosing environmental information using either quantitative and monetary data, or descriptive and statistical manner, received the mean of 3.83 and 3.63 respectively. In addition, the results of the Kruskal-Wallis test (see Table 8.9) revealed that the participants have the same perceptions

towards the above and thus this provides additional support to the former methods. Similarly, the following averages were given to display the information in a monetary manner or using quantity data, which were 3.59 and 3.46 respectively. However, the results of the Kruskal-Wallis test indicated significant differences in the study participants' opinions concerning the above methods. With reference to Table 6 of appendix five it can be interpreted that the participants in study have different points of view, which were reflected in their responses.

The lowest mean was given to the method which uses descriptive data to disclose the environmental information, where the mean was 3.39. Moreover the Kruskal-Wallis test provided an additional support to the former method where it points to no significant difference among the study participants' opinions.

According to the above, the participants accepted all the proposed methods to disclose environmental information. However, using a combination of descriptive, quantitative and monetary methods at the same time received the highest score. This means that the company, as seen from the perspective of the participants, has the option to adopt an appropriate method to disclose environmental information, thereby giving it a greater opportunity to adopt environmental disclosure.

8.5 Summary

This chapter has presented quantitative results obtained from analysis data gathered by the questionnaire survey.

Regarding the general information about the participants, it can be summarized as follows. Most of the participants have practical experience, ranging from one year to 10 years, while the rest of them have experience stretching from eleven years to more than twenty years. Also, a significant percentage of the participants in the study hold advanced degrees in accounting, where a large portion of participants obtained their highest degrees from abroad such as Egypt, Jordan, UK and Malaysia. Furthermore, a significant percentage of the participants have professional certificate in accounting field from the LAAA. Therefore, participants' responses from the four groups appeared to be dependable.

Based on the perceptions of users of the Libyan construction companies' annual reports regarding the factors that influence CED, it can be summarized as follows.

The survey reveals that the majority of the participants have a positive view towards the natural environment, where the majority of them perceive environmental protection to be an important

and integral issue, even if it leads to reduction of corporate profits. However, there is a minimal amount of support for the belief that the environmental issues in Libya are less important when compared to others of economic and social issues.

With regard to sufficient knowledge to deal with environmental disclosure among accountants, the majority of the participants believed that the lack of academic qualifications and practical experience affect negatively on environmental disclosure. Also, they firmly asserted that academic research is necessary for the development of environmental disclosure. Furthermore, there is support, although not very strong, that the lack of qualified external auditors affects negatively on environmental disclosure.

Regarding environmental awareness, the vast majority of participants believed that the public lacks enough knowledge of environmental issues considered the most frequent explanation given for non-disclosure. However, the teachings of the Islamic religion may encourage companies to disclose the damage to the environment, according to the viewpoint of the majority of the participants.

On the other hand, the majority of participants strongly supported that there is no sufficient legislation in Libya regarding the environmental disclosure. Hence, the majority of respondents were supportive of mandatory environmental disclosure, to be introduced by the government.

A large portion of participants believed that the absence of environmental standards by the relevant central authorities and the lack of lobby groups impact negatively on environmental disclosure. Also they strongly agree that companies do not disclose environmental information to avoid any claim or interference from people or competent authorities. Furthermore, a substantial number of respondents perceived that environmental disclosure appears as a criticism of government policy and hence company may avoid disseminating environmental information. However, most respondents do not believe that negative environmental information is confidential information which should not be disclosed.

With regard to perceptions of users of the Libyan construction companies' annual reports concerning CED, it can be summarized as follows: generally, all the categories of environmental information were accepted by the participants that they needed to be disclosed by companies. However, the category of health and safety was given the highest score which can be attributed to awareness among the participants regarding the importance of this category to the workers in particular and society in general. In addition, all the proposed locations were accepted by the participants in order to disclose the environmental information. However, they preferred to

disclose environmental information in a separate paragraph of the annual report, entitled environmental disclosure or the equivalent. Moreover, all the proposed benefits were accepted by the participants, to be benefits for the detection of environmental information. Finally, the participant accepted all the proposed methods to disclose environmental information. However, using a combination of descriptive, quantitative and monetary methods at the same time received the highest score.

Having presented and discussed all the findings in chapters 6, 7 and 8, the following chapter summarises the whole research in order to make conclusions and recommendations that may be helpful to develop environmental disclosure in the Libyan construction industry.

CHAPTER NINE

Conclusion and recommendations

9.1 Introduction

The research has examined the current disclosure of environmental issues as carried out by Libyan construction companies with the aim of explanation of the presence or absence of corporate environmental disclosure (CED) practices. Accordingly, this research could contribute to the development of environmental disclosure, which could underpin the achievement of sustainable development while attracting foreign investments, promoting well-being, social and economic development. In doing so, the perspectives and perceptions of a sample of financial managers and the users of the annual reports of Libyan construction companies regarding the various aspects of CED are explored. The next section summarizes the findings incorporated in chapters 6, 7 and 8 in order to draw conclusions related to the research objectives. In the third section, possible explanations for the environmental disclosure in light of stakeholder theory and political economy theory is provided while the procedures conducted to validate of results of study are outlined in section four. The contributions of study and the most important recommendations to promote the environmental disclosure of Libyan construction companies are presented in sections 5 and 6 respectively. The remainder of the chapter (sections 7 and 8) are devoted to showing the limitations of study and the suggestions for future research.

9.2 Meeting the objectives and conclusion

This section demonstrates the way in which the objectives of the research have been achieved and the conclusions drawn.

9.2.1 To determine the amount, type and methods of environmental disclosure of Libyan construction companies in their annual reports

The study reveals that the level of environmental disclosure of Libyan construction companies is very low and still at its embryonic phase. The average volume of disclosure over the five years period was 58 words (written by Arabic language) (Max 77; Min 35) as reported in Table 6.2. It can be said there is an increasing trend in disclosure, where the average volume of environmental disclosure has increased from 35 words in 2006 to 77 words in 2010. At the corporate level, ACC was the company with the highest level of disclosure with 73.2% of total of disclosure,

while the AUCC was the company with the lowest levels of disclosure with 0.8% of the total of disclosure.

Despite this low level of disclosure, the environmental information has included all the categories that were selected as the basis to evaluate CED in the Libyan construction industry. The environmental policy has represented about 53% of the total disclosure, while health and safety related information came in second place with 24% of the total disclosure. The category of products and processes, other related information and the category of energy formed respectively 13.5%, 8.3% and 1.2 % of the total disclosure.

The study also discovers that most of the sample companies have revealed positive or negative information, but none of them have disclosed any neutral information. The positive information was the most widely used; it represented 83.4% of the total disclosure, while the negative information accounted for only 16.6%.

Furthermore, financial, quantitative and qualitative methods were used by companies sample to disclose environmental information. Qualitative information was used widely, representing 58.4 of the total percentages of the used methods. The rest of the methods (financial information and non-monetary quantitative) represented respectively 25.2 % and 16.4% of the total percentages of the used method.

Consequently, it can be concluded that Libyan construction companies are failing to disclose complete and comprehensive environmental information. Furthermore, the predominance of positive information and qualitative, as opposed to negative information and financial or quantitative information, also suggest that environmental disclosures appear to be selective tending to portray selected aspects of companies.

9.2.2 To critically review the reasons underlying the current environmental disclosure practices of Libyan construction companies

Semi structured interviews were used to explore the perceptions of interviewees about the current state of environmental disclosure to obtain insights of CED phenomenon and to validate the results of content analysis.

Indeed, it can be observed that the companies do not disclose any kind of information especially that relate to products and processes, and energy. However, there is some information relating to

health and safety, environmental policies, and others items being disclosed by companies in their annual reports, whether explicitly or implicitly.

The validation for content analysis was based on five categories: environmental policies, products and processes, energy, health and safety and other. The result is that interview findings are consistent with the findings obtained by analysing the annual reports of Libyan construction companies. The results indicate that companies spend exorbitant sums in order to preserve and protect the environment. However, these amounts are not classified correctly, and are included under other items, such as, other expenses, and industrial expenses. This is evidence that there is an element of environmental disclosure currently in existence. Hence, in order to highlight the company's contribution in preserving and protecting the environment, this item needs to be broken down more specifically, other than being listed under the category of 'financial' as is the current practice.

Hence, it can be concluded that incorrect classification may be considered as one of the reasons for non-disclosure of environmental information in the annual reports of companies. A lack of experience among the accountants of how to report environmental disclosure and a prescribed format of annual reports, has prevented them from presenting the information as an independent item.

Furthermore, the findings showed a number of reasons for the absence of environmental disclosure in Libyan construction companies including the following:

The absence of a legal requirement has been considered as a fundamental reason for non-disclosure, the interviewees appear to be in favour of mandatory requirements for CED in Libyan construction industry because the current voluntary disclosure system is ineffective. This is mainly due to the socio-economic and cultural features of the Libyan context which do not encourage the voluntary disclosure initiatives.

The lack of academic research is the most important reason for not making environmental disclosures by Libyan construction companies in their annual reports. In this regard, it can be said that the issue of environmental disclosure has not received proper attention by educational institutions in Libya, which has led to an absence of theoretical frameworks and ideas, necessary to develop the environmental disclosure (see section 4.7).

A lack of public awareness is an important reason for not disclosing environmental information in the annual reports of companies. If there was a greater awareness of the damage caused by a

company, there would be more pressure on the state to shoulder their responsibilities towards the environment.

The absence of civil society organizations has been considered as an essential reason for companies not disclosing environmental information in their annual reports. Despite the presence of some pressure groups, they have no active role in society because of the existing political system that limits their activities making them unable carry out their functions (see section 4.3). Thus, the absence of an effective role of these organizations has a negative impact on environmental disclosure.

Reference was made to the lack of knowledge of professional accountants (external auditor) in the area of environmental disclosure as a reason for not disclosing environmental information in their annual statements and reports.

Currently accountants in Libya are not required to consider the implications of environmental damage from business activity, so it would be conducive to their continuing professional development if this topic was included in their agenda of responsibility.

Confidentiality of environmental information can be considered as a reason for not disclosing environmental information, where the company may hide this kind of information in order to avoid any problems that may arise from access to it by others, especially external parties. Indeed, it was not surprising that the confidentiality and non-publication of any information whether positive or negative, are considered part of the culture of the community that was planted by the former regime in Libya, which in turn has led to hindering development in various fields.

Libyan construction companies prefer to not disclose environmental information to avoid any accountability to the public or government, where these criticisms may create onerous obligations in the future.

In addition, the lack of demand for environmental information is a major cause of not disclosing it by companies. In this regard, Solomon and Lewis (2002) have argued that, in a free market the demand for environmental information operates according to the market mechanism, thus, if such information is demanded the market will provide it. However, in Libya, it cannot be said that the demand for environmental information operates through the market mechanism. This is because Libya holds monopolistic economic power, where competition is absent to a large extent, and almost all the companies are owned by the public sector (see section 4.4). Thus, the demand for environmental information in Libya may come as a result of increasing environmental awareness, or to meet the needs of regulatory authorities for this information, or the

environmental information becomes significant information to support grant applications for future investment.

A lack of awareness, experience, qualification and training of accountants in companies has emerged as a less important reason than most other reasons. In Libya, because the accounting education system does not include any courses related to social and environmental disclosure in the Bachelor's degree, though the Master's program of some universities contains an optional course that addresses social accounting, the graduates may not have a background in social and environmental disclosure issues.

To sum up, the most important reasons for non-disclosure are the absence of environmental awareness, lack of demand for environmental information and a dearth of academic research. Moreover, a lack of civil society organizations and the avoidance of any accountability by the public or government were considered as the significant reasons. Similarly, interviewees also alluded that legal requirements, confidentiality of environmental information and lack of experience and knowledge among professional accountants are all considered important causes for non-disclosure. Finally, a lack of awareness, experience, qualifications and training among accountants in companies has emerged as a less important cause for absence of environmental disclosure. Based on the above, it can be concluded that managerial perspectives regarding the reasons for absence of environmental disclosure may serve as an attempt to explain CED practices in the Libyan construction industry.

9.2.3 To identify the financial managers' attitudes and beliefs of the Libyan construction companies towards environmental disclosure.

The following conclusions were drawn from the analysis of the financial managers' attitudes and beliefs towards natural environment and environmental disclosure.

Most of the participants believed that the protection of the environment is important and necessary for the following reasons: The environment has a direct impact on the lives of individuals, to maintain public health, ensure the future of the coming generations, it contributes indirectly to support the social and economic issues, and is considered a condition of achieving sustainable development. Also, the vast majority of interviewees agreed that the company is primarily responsible for protection of the environment. They believed that companies have the social responsibility to incur costs voluntarily to repair the damage to the environment as a result of the productive activities of the company. With respect to importance of environmental information, the majority of interviewees believed that this information should be at the same

level of importance as financial information, where it can be used by a company to disclose the damage inflicted on the natural environment and the efforts made to protect it. In this context, they have contended that the company is responsible for preparation and dissemination of environmental information in its annual reports. In addition, some interviewees considered that adoption of environmental disclosure by the company achieves several benefits. While a portion of them believed that achieving these benefits depends on the adoption of environmental disclosure by companies and the level of awareness regarding the environmental disclosure among the users of annual reports. According to the viewpoint of the majority of the participants, stakeholders have a right to receive environmental information. They have justified that this information can be used for several purposes such as, making decisions, and to establish regulatory monitoring of companies in order to fulfil their social responsibilities. Indeed, half of the participants seemed optimistic regarding environmental disclosure. They believe that the environmental disclosure practices will be developed in the future as a result of the radical changes that have occurred recently, in addition to keeping abreast of developments in the field of environment. Some of the interviewees felt there were many obstacles preventing the growth of environmental disclosure in the short term.

On an overall basis, the results indicate that financial managers are sensitive to environmental issues in Libya, but lack conviction for some issues of environmental disclosure. Owing to the mixed opinions of the participants, the results do not provide strong enough support for the argument that environmental disclosure is beneficial. There is support, although it is not very strong, that the environmental disclosure practices will be developed in the future. Generally it can be concluded that the manager's attitudes (internal factors), were positive towards the natural environment and environmental disclosure indicating there is a growing awareness of environmental protection.

9.2.4 To examine the extent of the impact of the social, environmental and political and economic influences on the corporate environmental disclosure.

The following conclusions were drawn from the analysis of the perceptions of the users of Libyan construction companies' annual reports regarding factors affecting environmental disclosure.

The participants have a positive view towards the natural environment, where the majority of them perceive environmental protection as being important as well as necessary, even if it leads to reduction of corporate profits. There is support, although it is not very strong, that the environmental issues in Libya are less important when compared to other aspects, such as

economic and social issues. It can be concluded that in the developing countries characterized by weak economic performance, concern for the natural environment and environmental disclosure are not a priority. Thus, it can be said that the level of economic activity can be an influential factor in the evolution of environmental disclosure.

With regard to sufficient knowledge to deal with environmental disclosure among accountants, the majority of the participants believed that the lack of academic qualifications and practical experience affect negatively on environmental disclosure. Also, they strongly support the notion that academic research is necessary for development of environmental disclosure. Furthermore, there is support, although not very strong, that a lack of qualified external auditors affects negatively on environmental disclosure. In this regard, the majority of the participants believed that the independent accounting bodies, such as Libyan Accountants and Auditors Association (LAAA) and Audit Bureau (AB) should provide guidelines on the disclosure of environmental information in annual reports. It can be said that the accounting education in Libya is considered a factor influencing the development of environmental disclosure in terms of ability to provide curriculum and research in the field of environmental disclosure. Furthermore, the accounting profession may play an essential role in developing environmental disclosure practices in terms of assistance to companies regarding reporting procedures for environmental performance.

Regarding environmental awareness, the vast majority of participants believed that the public lacks enough knowledge of environmental issues which are considered the most frequent explanation given for non-disclosure. However, the teachings of the Islamic religion may encourage companies to disclose the damage to the environment according to the viewpoint of the majority of the participants. It can be concluded the dominant culture in Libya among the public is not consistent with the principles of the protection of the environment and hence culture may have a negative impact on environmental disclosure. However, the Islamic religion could be a positive factor to adopting the environmental disclosure by companies in Libya.

On the other hand, the majority of participants strongly supported that there is insufficient legislation in Libya regarding the environmental disclosure. Hence, the majority of respondents were supportive of mandatory environmental disclosure, which should be introduced by the government. Thus, this reflects the importance of the legal system in Libya as a key factor in adopting the environmental disclosure by Libyan construction companies.

A large portion of participants believed that the absence of environmental standards by the relevant state authorities and a lack of lobbying groups impact negatively on environmental disclosure. Also, they affirm that companies do not disclose environmental information to avoid

any claim or interference from people or competent authorities. Furthermore, a substantial number of respondents perceived that environmental disclosure appears as a criticism of government policy and hence a company may avoid disseminating environmental information. However, most respondents do not believe that the negative environmental information is confidential information which should not be disclosed. These results reflect the characteristics of the political system in terms of the degree of political rights, civil liberties, and the type of political system which means that the political system may have an adverse effect on accounting disclosure in general, and the environmental disclosure in particular (Belkaoui, 1983; Hassabelnaby *et al.*, 2003).

From the above results, it can be concluded that the external factors including political, economic, legal systems, culture, accounting education and profession are considered as effective factors in CED practices in the Libyan construction industry. In other words, a low level of environmental disclosure is largely due to the social, political and economic environment features of the Libyan society, which does not encourage or facilitate the voluntary disclosure initiatives.

9.2.5 To develop a framework for the environmental disclosure in the construction industry in Libya.

The following conclusions were drawn from the analysis of the perceptions of the users of Libyan construction companies' annual reports, regarding the determination of the mechanism of disclosure of environmental information.

Regarding the disclosure of environmental information, a set of proposals of the environmental information items were presented to the participants in the questionnaire in order to survey their views about the extent of their agreement to disclose these items in the annual reports of companies. In general, all the categories of environmental information including environmental policies, health and safety issues, energy issues, products and processes and other items, were accepted by the participants in the study to be disclosed in the annual reports of companies. In particular, the category of health and safety was given the highest score where it can be attributed to an awareness among the participants of the importance of this category of information, and the benefits that can be obtained from disclosing this information for the workers, in particular, and society in general.

Concerning the locations of disclosure of environmental information, a range of proposed locations were presented to the users of annual reports involved in the questionnaire in order to investigate their opinions about the extent of their agreement to adopt these locations to disclose

environmental information. All the proposed locations were accepted by the participants in order to disclose the environmental information. However, the preferred location to disclose environmental information was in a separate paragraph of the annual report, entitled 'environmental disclosure' or the equivalent, which reflects on the importance of environmental disclosure from their perspective.

Also, the participants believed that the disclosing of environmental information achieves several benefits, whether for the company or society, where all the proposed benefits in the questionnaire were accepted to be benefits for the detection of environmental information in the annual reports of companies.

Furthermore, the participants accepted all the proposed methods to disclose environmental information. However, disclosing environmental information by using a combination of descriptive, quantitative and monetary methods at the same time received the highest score. This means that the company, from the perspective of the participants, has the option to adopt an appropriate method to disclose environmental information, giving it a greater opportunity to adopt environmental disclosure.

It can be concluded that the themes of environmental information should be disclosed by companies to include products and processes, energy, health and safety, environmental policies, others. These themes are disclosed in a separate paragraph of the annual report, entitled 'environmental disclosure' or the equivalent, using a combination of descriptive, quantitative and monetary methods simultaneously. Furthermore, the adoption of environmental disclosure achieves several benefits that were proposed and accepted by the participants.

Reflecting on the whole study, it can be said that although managers are positively inclined toward environmental performance and disclosure by the companies, the results of the study reveal that the level of environmental disclosure in Libyan construction companies is very low. These attitudes do not correlate with current practices, due to the social, political and economic features of the Libyan society which do not encourage or facilitate environmental disclosure initiatives. Thus, it can be concluded that the CED practices of the Libyan construction industry are influenced by internal factors (management attitude and cognition) and external factors including, local culture, accounting education, the economic and political system, and the legal system.

9.3 Interpretation of environmental disclosure practices in light of stakeholder theory and political economy theory

In this section, possible explanations for the absence or presence of environmental disclosure of Libyan construction companies is provided based on stakeholder theory and political economy theory adopted in the theoretical framework of this study (see sections 3.3 and 3.4).

9.3.1 Stakeholder theory

According to Gray *et al.* (1995a) social and environmental disclosure can be considered as part of the dialogue between the company and its stakeholders. The financial and social information are used to determine and manage the stakeholders in order to gain their support and approval or change their opinions on certain issues (Gray *et al.*, 1996).

In Libya, most of the construction companies are owned by the state, and thus, the accounting information is unavailable to the public. This information is only provided to the state and their representative bodies as needed, such as The Ministry of Economy, Tax Office, and AB.

Except for the state and its bodies, there is no connection between the company and its other stakeholders such as creditors, employees, customers, suppliers, local communities and the general public. Thus, it is unlikely that there will be a dialogue between the company and its stakeholders. This therefore explains the very low level of environmental disclosure of Libyan construction companies.

However, despite this low level of disclosure, the disclosing of environmental information has included all the categories that were selected as the basis to evaluate CED in the Libyan construction industry, where the environmental policy represented about 53% of the total disclosure, the health and safety category came in second place with 24% of the total disclosure.

In this regard, under the perspective of managerial stakeholders, the corporate social and environmental disclosure (CSED) can be explained in that the management of a company might seek to satisfy particular groups of stakeholders (typically powerful) by providing financial and social information required (Deegan and Unerman, 2011).

Therefore, Libyan construction companies have showed response to the most powerful party of stakeholders, where the state and their representative bodies are considered as most powerful party of stakeholders. In this context, the category of health and safety came in second place with 24% of the total disclosure. This result can be explained in that, providing appropriate conditions

of work is required by Libyan law and therefore the companies are bound to provide all the equipment and procedures to protect the workers from any potential dangers. Additionally, all the data regarding the workers, such as procedures relating to the health and safety of workers, accidents statistics, and expenses incurred by the company to maintain the appropriate health and safety standards, will be provided by company to the relevant authorities in the state, this data can constitute environmental disclosure in company reports.

Despite the positive attitude of the corporate management towards the natural environment and environmental disclosure, the level of disclosure was very low; from their point of view, it can be due to the following reasons. The absence of environmental awareness, lack of demand for environmental information and a dearth of academic research. Similarly, managerial perspectives reveal that the absence of environmental disclosure is mainly due to a lack of civil society organizations and the avoidance of any accountability to the public or government. Financial managers also alluded that legal requirements, confidentiality of environmental information and a lack of experience and knowledge among professional accountants have been considered a major cause of non-disclosure of environmental information.

In this regard, the stakeholders theory assumes that the community groups may attempt to press the organization through legislation or the threat of legislation in order to urge them to disclose social and environmental information (Gray *et al.*, 1996). All the stakeholders have a relationship with the organization, under which there will be the needs or demands of each party. For example, the government provides infrastructure and services, but in return expects companies to abide by the laws and regulations regarding protection environment (Clarkson, 1995). In addition, community organizations such as environmental lobbying groups may provide some support to companies via awareness campaigns, and in exchange, the companies must show a commitment to their responsibilities towards the environment (Clarkson, 1995). In this context, the absence of CED can be explained as a result of the lack of civil society organizations or an absence of their active role in society. Therefore, the managerial branch of stakeholders theory seems to provide a good explanation for the absence and the presence of environmental disclosure of Libyan construction companies.

9.3.2 Political economy theory

Bourgeois political economy theory can be used to interpret the social and environmental disclosure in the light of social, political and economic context, (Belal, 2008). The social and environmental information is disclosed by organizations in order to respond to the pressures of

the social, political and economic systems that surround them (Williams, 1999). In this context, the political system has a significant influence on accounting disclosure practices through three elements: the degree of political rights, civil liberties, and the type of political system (Belkaoui, 1983). In addition, the political system indirectly affects the accounting disclosure practices via its effect on the local culture and economic system (Hassabelnaby *et al.*, 2003). The above view was supported by the users of Libyan construction companies' annual reports who participated in this study, due to the prevalent perception amongst them that the political, economic, legal systems, culture, accounting education and profession are considered as effective factors in CED practices.

Hence, to explain a low level of environmental disclosure of Libyan construction companies according to the political economic theory, traits of the environmental factors including the culture, economic, political, legal system and the accounting education within Libya is discussed as follows.

According to the mechanism of action of the political system in Libya for the period between 1969 and 2011, there is a big gap between the theory and practical aspect, where all decisions were made by the revolution leader in an ad hoc way. Thus, the system of governance was distinctly dictatorial. Therefore, a number of flaws resulted from this system of governance such as a lack of equal opportunities among citizens leading to the marginalization of large segments of the population. In addition, the spread of poverty, low level of health services and level of education along with the spread of corruption in the administrative units exacerbated these flaws. These conditions led to ignoring the important mechanisms in the field of accounting thought and action, which have important implications for its future development. The experience of other countries, such as the balanced institutional environment in the development of financial accounting standards should be used as a template for further development in this field (Alhsadi, 2007). Finally, the fundamental change that has taken place in Libya in the recent period may not have a significant impact on the social, political and economic environment where improvements will take time and require building legal and administrative structures within the Libyan state (Christopher and Chivvis, 2014). Hence the available opportunities to develop social and environmental disclosure are almost non-existent in the short term.

The most important feature of the economic system in Libya is central planning, where the state controls all sectors, in addition to its large dependence on revenues from the oil sector, which represents a majority of the exports. Due to fluctuations in oil prices, and the sanctions that were imposed on the Libyan economy, it was suffering from recession, which led to the suspension of

the development process. Despite remarkable growth in recent years, the accounting systems did not receive any attention. Today, after the passage of nearly three years from the triumph of the revolution, Libya faces a long road to begin changing its socialist economy and benefit from the experiences of others with respect to the diversification of sources of income and not to over-dependence on oil.

Regarding the review of the legislation and standards of the accounting disclosure practices, the existing laws do not encourage companies to disclose the environmental information in their annual reports. However, some of the laws and decisions related to protecting the environment in Libya, have been issued, which indicates that attention that has been given to the environment recently which did not include the accounting disclosure practices.

Regarding the Libyan culture, which includes cultural values, language, religion and other social values, there may not be adequate opportunities for the development of environmental disclosure practices. However, the Islamic religion could be an influential element in people's behaviour, in terms of commitment to justice, and tolerance and not to commit acts that harm others.

The accounting education system in Libya offers very limited support to the issues of social and environmental disclosure, where there are no study programs related to social and environmental disclosure in the Bachelor's degree, however, the Master's Program of some universities, contains an optional course that addresses social accounting. Thus students who have graduated from universities, whether undergraduate or postgraduate, may not have a background in social and environmental disclosure issues, thus, they, are not able to deal with these issues, whether in the practical or academic fields.

Regarding the evolution of the accounting profession in Libya, despite an increase in the number of graduates and the creation of many of the accounting and auditing offices, it can be said the accounting profession did not develop. This is due to several reasons, the most important reason is the failure of the LAAA to establish a theoretical framework for the practice of the profession and to determine the ethics of its practice. Therefore, with this weak performance, and the absence of the criteria which organizes the practice of the profession, the LAAA is not expected to do anything in order to develop the accounting profession, especially with regard to the issues of social and environmental disclosure.

It can be concluded that the traits of the Libyan society does not encourage CED and it could thus have a negative impact on the disclosure of company performance which is consistent with the bourgeois political economy theory. However, it seems political economy theory is not able

to interpret the disclosure or limited disclosure of environmental issues, which emphasizes that a single theory may not be totally able to explain the phenomenon of CED in this study.

9.4 Validation of results

9.4.1 Evaluating the reliability and validity of content analysis results

To achieve reliability and validity of content analysis results, the following steps were taken.

- 1- The intensive review for the previous studies regarding the process of coding data was undertaken by the researcher to understand the mechanism of coding and then refer to the necessary rules and procedures for the application, which have been followed by the researcher and the independent coder.
- 2- The annual reports for one of the companies, selected randomly (LCC) were analysed to test the practical application of the encoding process twice on different dates. The results indicated that there is a small difference between the analyses both times, which supports the stability of findings of the content analysis.
- 3- The annual reports of two companies that were selected randomly (ACC, AUCC), were analysed by the researcher and the independent coder (PhD student who is doing a research in the field of accounting). Despite slight discrepancies between the two coders, these differences were discussed in order to understand the causes and to reach the right opinion about the coding process.
- 4- Semi-structured interviews were used to validate the results of content analysis. The validation for content analysis was based on five categories: environmental policies, products and processes, energy, health and safety and other.

9.4.2 Validity of interview results

To validate the data, the researcher followed necessary procedures as discussed in section 5.4.2.4.

- 1- To achieve the reliability, the final transcripts were sent to participants via email. Reliability was achieved by assessing plausibility in terms of participant's responses.
- 2- To enhance confirmability, the researcher's neutrality indicates that the researcher had no influence on participant's responses.

9.4.3 Reliability and validity of questionnaire results

An alternative method to achieve reliability is the use of check questions which were found to be unsuitable, so was not used. The use of a re-test technique is also not feasible because of a time lag between the two tests, making the responses unreliable. However, this study could benefit from the triangulation approach to evaluate the quantitative findings by using the qualitative approach. Accordingly, semi-structured interviews were used to validate most of the findings obtained from the questionnaire, as shown in section 7.4. Cronbach's alpha test was also used to measure the consistency of responses across all the questions of the questionnaire. By using the reliability statistics in the Statistical Package for the Social Sciences (SPSS) programme, the result of Cronbach's Alpha scale for the entire questionnaire was 0.845 as shown in Table 9.1 which is considered an acceptable value. This means that the questions have a good level of internal consistency producing consistent findings.

Table 9.1 Reliability statistics

Number of itmes	Cronbach's Alpha
43	0.845

To assess the validity of questionnaire, there are three methods mentioned in section 5.4.3.5. In this study, the content validity was used to verify the questionnaire through a pilot study which is discussed in section 5.6.3.

9.5 Contribution of the study

The main contribution of the current research is its being the first study, based on the review to examine the internal and external factors that may affect CED in the Libyan construction industry. Using a theoretical framework that proposes a number of factors and with stakeholder and political economy theories as explanatory power, to interpret the presence or absence of the environmental disclosure in the Libyan context.

This study addresses a requirement to conduct further studies and research in developing countries, including Libya, regarding challenges and problems that impede the development of environmental disclosure. It is useful to expand the literature regarding the CED, by providing further Libyan evidence to develop environmental disclosure which could underpin the attainment of sustainable development and foreign investment, promoting well-being, social and economic development. In addition, this study focuses on a single sector (Libyan construction

sector) to gain in-depth insights regarding the environmental disclosure practices (Ahmad and Mohamad, 2013).

This study has adopted a theoretical framework based on the previous work of Hibbett (2004) which aimed to interpret the environmental disclosure practices made by European companies. The use of such a framework in a developing country such as Libya, is considered a major contribution to the literature in terms of examining the proposed factors within a theoretical framework to interpret the presence or absence of environmental disclosure practices in Libyan construction companies underpinned by stakeholder and political economy theory.

The present study differs from previous studies in the following aspects:

Firstly, in the study, multiple theories have been adopted to interpret the results, instead of relying on a single theory where there is no one theory providing a complete basis to explain the CSED practices. In this regard, Gray *et al.* (1995a) indicated that social and environmental disclosure practices are complex activities that cannot fully be explained by a single theoretical perspective or from a single level of resolution.

Secondly, in this study, mixed research methods (qualitative and quantitative) have been adopted, which exceeded the methods used in previous studies in order to meet the different types of research objectives, where three research methods were used namely: the content analysis, semi-structured interviews, and self-administered questionnaire. These methods have been used to investigate all aspects of environmental disclosure by identifying the points of view of not only management, but other parties who have experience regarding different aspects of corporate reporting; in addition, they represent the interests of different sectors of Libyan society.

Thirdly, this study adopts users' perceptions alongside the views of managers in assessing the internal and external factors that may have an influence on CED in Libya. There are many parties that may have experience regarding different aspects of corporate reporting. In this regard, Neuman (2010) indicated that in the form of observing something from different angles or more views, one can achieve deeper insight.

Fourthly this study has adopted the five years to determine the level and trends of environmental disclosure rather than relying on a single year.

On the other hand, this study opens broad prospects for further research with respect to environmental disclosure in Libya, in order to explore all aspects of environmental disclosure. In addition, a number of recommendations have been proposed for the construction industry in

Libya as to the best approach to promote environmental disclosure at the corporate level within construction business entities.

9.6 Recommendations

Based on the research findings, the following recommendations are made to develop environmental disclosure which could underpin the achievement of sustainable development and foreign investment, promoting well-being, social and economic development.

- I. The findings would suggest that it is unlikely that CED could develop voluntarily within the Libyan context without the intervention of the government through enforceable legislation. This is due to the social, political and economic characteristics of the Libyan society which does not encourage or facilitate the environmental disclosure initiatives. From this evidence, Libyan construction companies are unlikely to disclose environmental information on a voluntary basis. Therefore, the government should include aspects of environment protection in its political agenda to encourage and require such practice to be developed. In this regard, an accountability mechanism regarding the environmental performance of companies should be instigated to give the topic more focus and receive more attention by Libyan companies.
- II. The findings suggest that accounting education plays an essential role in raising awareness of environmental responsibility of companies by providing graduates with initial training and academic studies within the field of accounting. In doing so, it is recommended that the accounting curriculum of Libyan universities and colleges be amended in line with local cultural and social context, to be more focussed on social and environmental topics.
- III. Public awareness of environmental issues makes companies more cautious towards the environment, thus the Libyan government should improve the awareness through the media. This would encourage companies to disclose their activities related to protection of the environment, in other words, increasing demand for environmental information by different sectors of Libyan society.
- IV. The Libyan government should offer bespoke training courses through their educational institutions regarding environmental management systems and environmental disclosure issues to encourage take up from businesses to provide training placements for their

accountants. This would raise their efficiency in the area of preparation and dissemination the environmental information as well as provide continuing professional development.

- V. The Libyan construction companies should disclose the environmental information to include products and processes, energy, health and safety, environmental policies, others in a separate paragraph of the annual report, entitled 'environmental disclosure' or the equivalent. A combination of descriptive, quantitative and monetary methods at the same time should be used in a user-friendly format in order to achieve all the proposed benefits in this study.

9.7 Limitations

This thesis has several limitations that can be topics for future studies. The first limitation is that the study was limited to the construction sector in Libya which impacts on the possibility of generalizing the results on other industries.

Secondly, based on the results, the annual reports are the most important means that can be used by companies to provide environmental disclosures (Wiseman, 1982; Tilt, 1994; Cormier *et al.*, 2004). This study has adopted the annual reports of Libyan construction companies to identify the present state of CED. However, there are other means which can be used to disclose environmental information, such as environmental reports, advertisements, booklets, brochures, labelling of products, newsletters, press releases, video tapes, and websites (Gray *et al.*, 1995b; Jenkins and Yakovleva, 2006; Zeghal and Ahmed, 1990). Thus, using the annual reports can be considered as one of the limitations of this study.

Thirdly, there were limitations in accessing data, where many problems were faced by the researcher in this area including: it was very difficult to access the annual reports of companies in Libya, because companies considered them as confidential and to reveal them to outside parties could have an adverse effect on their status. In addition, the prevailing misperception of what an annual report consisted of was one of the difficulties of data collection, where most CFOs in selected companies considered an annual report to be just the financial statements of the company.

On the other hand, Libyan culture is one of the important factors that has negatively affected the filling of questionnaires, where most Libyan people thought that the research is not useful to them. Thus, they declined to answer questions and to share in any survey which led to there

being a significant number of questionnaires which were not completed. In addition, a large group of the questionnaires were incomplete, forcing the researcher to exclude them.

Moreover, there were logistical limitations requiring the researcher to travel from one place to another in order to collect the annual reports, conducting the interviews and distribution of the questionnaires where these companies and target groups of the questionnaire existed in places far apart, especially if the current security situation in Libya is taken into account.

9.8 Suggestions for the future studies

Given the results demonstrated earlier and the limitations of the study, some ideas can be suggested that may be topics for future studies which include the following:

Reliance on a variety of sources that may be used to disclose environmental information would be more useful to determine the level of CED. Hence, future research should adopt the annual reports along with other sources of information, such as the environmental reports and websites.

Future research can be extended to include all business organizations, especially those that have an impact on the natural environment in Libya, thus, there will be a greater chance to investigate CED practices, in addition, to extending the interviews with the financial managers of companies to obtain more understanding regarding the obstacles of adopting the environmental disclosure.

In addition, further research is needed to shed light on the role of a particular factor in influencing the environmental disclosure practices such as accounting education and practice. Whilst this was considered to a certain extent in this research, it was not as extensive as future investigation into these areas could be.

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THE APPENDIXES

Appendix one the key rules for environmental disclosure

Appendix one, A Categories of environmental disclosure used in the study

Energy:

Energy saving and conservation

Energy efficiency of products

Use of waste to produce energy

Exploration of new sources of energy

Any information related to compliance with laws and government decisions in energy field

Other energy-related disclosures

Health and safety:

The health and safety of workers at work

Any information related to laws and government decisions for health and safety

Comprehensive information to employees on health and safety issues

Any statistics related to days lost through illness, stress, industrial injury, etc.

Employee training in relation to the system of health and safety

Any statistics related to accidents at work

The information related to product and process:

Waste;

Packaging;

Pollution emissions, air emissions, noise, odours,

Recycling;

Products and product development;

Land contamination and remediation;

The environmental policies:

The actual statement of policy;

The statements of formal intentions, commitments and targets

The mission statements, targets and company strategies in relation to environmental protection

Other environmental information, which could not be categorized under the former categories, such as:

The landscaping and habitats, public amenity provision;

The environmental education and publicity;

Any references to environmental prizes;

Any references to compliance with the ISO 14001 standards;

Any references to lawsuits and compensations related to environmental issues.

Appendix one, B The methods used to investigate the environmental information

The Financial information: where actual numbers are used to disclose the amounts incurred by the company regarding the environmental issues, such as, social and health expenses, replacement of dust filters, establishing sewage treatment stations and judicial compensations.

The quantitative information non-monetary: where the actual numbers of a non-financial nature are used to disclose the statistics and quantities, regarding the environmental issues, such as, accidents statistics during the work.

The qualitative information: which is different from the previous types where words and statements are used in order to disclose the environmental information such as the policies and the general goals of the company.

Appendix one, C The type of environmental information

The positive information which includes any kind of environmental information that may have a creditable or neutral reflection on the company, such as: Winning prizes in the field of environmental protection.

The negative information, which includes any kind of environmental information that may reflect negatively on the company, such as, accident statistics during work.

The neutral information which includes any kind of environmental information which is difficult to determine its reflection on the company

Appendix two Tables of analysis of annual reports of Libyan construction companies

Table 1 Categories of CED of ACC

Statements	Number of words					
Ctegrories	Product and processes	Energy	Health and safety	Environmental policies	Others	Total
Years						
2006	24	-	15	109	10	158
2007	25	-	44	109	17	195
2008	30	-	57	109	18	214
2009	34	6	61	109	20	230
2010	43	11	69	109	33	265
Total	156	17	246	545	98	1062

Table 2 Types of environmental information of ACC

Statements	Number of words									
Type of information	Positive					Negative				
Years	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Categories										
Products and processes	24	25	30	34	43					
Energy				6	11					
Health and safety					8	15	44	57	61	61
Environmental policies	109	109	109	109	109					
Others	10	17	18	20	31					2
Total	143	151	157	169	202	15	44	57	61	63
	822					240				

Table 3 Used methods to disclose the environmental information of ACC

Statements	Number of words														
The methods	Financial infomation					Non monetary quantitative information					Qualitative information				
Years	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Categories															
Products and processes	24	25	30	34	43										
Energy				6	11										
Health and safety					8	15	44	57	61	61					
Environmental policies											109	109	109	109	109
Others	10	17	18	20	33										
Total	34	42	48	60	95	15	44	57	61	61	109	109	109	109	109
	279					238					545				

Table 4 Summary of the types of environmental information and the methods used to disclose them of ACC

Statements	The number of words									
Type of information	Positive					Negative				
Years	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Methods										
Financial information	34	42	48	60	93					2
Non monetary quantitative information						15	44	57	61	61
Qualitative information	109	109	109	109	109					
Total	143	151	157	169	202	15	44	57	61	63

Table 5 Categories of CED of LISC

Statements	Number of words					
Ctegrories	Product and processes	Energy	Health and safety	Environmental policies	Others	Total
Years						
2006			10			10
2007			10	44		54
2008			10			10
2009			10	54	3	67
2010			10	31	3	44
Total			50	129	6	185

Table 6 Types of environmental information of LISC

Statements	Number of words									
Type of information	Positive					Negative				
Years	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Categories										
Products and processes										
Energy										
Health and safety	10	10	10	10	10					
Environmental policies		44		54	31					
Others				3	3					
Total	10	54	10	67	44					
	185									

Table 7 Used methods to disclose the environmental information of LISC

Statements	Number of words														
The methods	Financial infomation					Non monetary quantitative information					Qualitative information				
Years	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Categories															
Products and processes															
Energy															
Health and safety	10	10	10	10	10										
Environmental policies				3	3						44		54	31	
Others															
Total	10	10	10	13	13						44		54	31	
	56										129				

Table 8 Summary of the types of environmental information and the methods used to disclose them of LISC

Statements	The number of words									
Type of information	Positive					Negative				
Years	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Methods										
Financial information	10	10	10	13	13					
Non monetary quantitative information										
Qualitative information		44		54	31					
Total	10	54	10	67	44					

Table 9 Categories of CED of LCC

Statements	Number of words					
Ctegrories	Product and processes	Energy	Health and safety	Environmental policies	Others	Total
Years						
2006			6			6
2007			6			6
2008	8		15			23
2009	10		15		8	33
2010	11		15		9	35
Total	29		57		17	103

Table 10 Types of environmental information of LCC

Statements	Number of words									
Type of information	Positive					Negative				
Years	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Categories										
Products and processes			8	10	11					
Energy										
Health and safety	6	6	15	15	15					
Environmental policies										
Others				8	9					
Total	6	6	23	33	35					
	103									

Table 11 Used methods to disclose the environmental information of LCC

Statements	Number of words														
The methods	Financial infomation					Non monetary quantitative information					Qualitative information				
Years	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Categories															
Products and processes													8	10	11
Energy															
Health and safety	6	6	6	6	6										
Environmental policies													9	9	9
Others														8	9
Total	6	6	6	6	6								17	27	29
	30										73				

Table 12 Summary of the types of environmental information and the methods used to disclose them of LCC

Statements	The number of words									
Type of information	Positive					Negative				
Years	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Methods										
Financial information	6	6	6	6	6					
Non monetary quantitative information										
Qualitative information			17	27	29					
Total	6	6	23	33	35					

Table 13 Categories of CED of AUCC

Statements	Number of words					
Categories	Product and processes	Energy	Health and safety	Environmental policies	Others	Total
Years						
2006						
2007						
2008						
2009						
2010	12					12
Total	12					12

Table 14 Types of environmental information of AUCC

Statements	Number of words									
Type of information	Positive					Negative				
Years	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Categories										
Products and processes					12					
Energy										
Health and safety										
Environmental policies										
Others										
Total					12					

Table 15 Used methods to disclose the environmental information of AUCC

Statements	Number of words														
The methods	Financial information					Non monetary quantitative information					Qualitative information				
Years	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Categories															
Products and processes															12
Energy															
Health and safety															
Environmental policies															
Others															
Total															12

Table 16 Summary of the types of environmental information and the methods used to disclose them of AUCC

Statements	The number of words									
Type of information	Positive					Negative				
Years	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Methods										
Financial information										
Non monetary quantitative information										
Qualitative information					12					
Total					12					

Table 17 Categories of CED of LIHC

Statements	Number of words					
Categories	Product and processes	Energy	Health and safety	Environmental policies	Others	Total
Years						
2006						
2007						
2008				29		29
2009				29		29
2010				29		29
Total				87		87

Table 18 Types of environmental information of LIHC

Statements	Number of words									
Type of information	Positive					Negative				
Years	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Categories										
Products and processes										
Energy										
Health and safety										
Environmental policies			29	29	29					
Others										
Total			29	29	29					
	87									

Table 19 Used methods to disclose the environmental information of LIHC

Statements	Number of words														
The methods	Financial information					Non monetary quantitative information					Qualitative information				
Years	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Categories															
Products and processes													29	29	29
Energy															
Health and safety															
Environmental policies															
Others															
Total													29	29	29
											87				

Table 20 Summary of the types of environmental information and the methods used to disclose them of LIHC

Statements	The number of words									
Type of information	Positive					Negative				
Years	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Methods										
Financial information										
Non monetary quantitative information										
Qualitative information			29	29	29					
Total			28	29	29					

Appendix three guide of interview (English and Arabic versions)

Appendix three, A The guide of interview in English

Liverpool John Moors University

School of Built Environment

Semi-structured interview guide

First Part: General information

Date and time of interview:

Company name:

Respondent name

Respondent's job title/role:

Second part: Determine the current state of environmental disclosure of Libyan construction companies.

1- Does your company disclose any kind of environmental information in annual reports?

A- Does the company disclose any items related to the products and processes for example: environmental degradation; recycling, waste (s); packaging; product development; air emission information; water discharge information; land contamination and remediation; and other population abatement actions?

B- Does the company disclose any items related to energy for example: saving and conservation, use/ development/ exploration of new sources; efficiency; insulation etc.?

C- Does the company disclose any items related to health and safety for example: health and safety at work for example, toxic hazards to employees and the public, accidents statistics, and others?

D- Does your company have any environmental policies, for example: the actual statement of policy, statements of the formal intentions, objectives and general statements of the company?

E- Does the company disclose any others items which could not be classified into the above categories, such as: environmental awards; sustainable development; landscaping; public amenity provision; environmental education schemes; compliance with the ISO 14001 standards; general information on lawsuits with respect to environmental issues; discussion of the impact of new laws and regulations regarding environmental issues; etc.?

Third part: the financial manager's attitude toward the CED

2- What do you think regarding the following statements?

- The environmental protection is an important issue in Libya, or is less important when compared to issues of economic and social status.
- The company should protect the environment, because that is part of their social responsibilities.
- The environmental disclosure should be considered as important an issue as financial disclosure.
- Management 'companies are responsible for providing environmental information in their annual reports.
- The company will derive great benefit from disclosing environmental information.
- The stakeholders have a right to receive information about the environmental impacts of a company.
- Disclosing of environmental information by companies will become general practice in near future.

Fourth part: the reasons for not disclosing the environmental information:

3- What are the reasons in your opinion that may prevent a company from disclosure of environmental information?

بسم الله الرحمن الرحيم
جامعة ليفربول جون مورس
دليل المقابلات شبه المنظمة

الجزء الاول : معلومات عامة:

- تاريخ اجراء المقابلة

- اسم الشركة:

- اسم الموظف :

- الوظيفة الحالية:

الجزء الثاني :الاسئلة الخاصة بتقييم الافصاح البيئي في التقارير السنوية للشركات:

1-هل تقوم الشركة بالإفصاح عن اي نوع من المعلومات البيئية في تقاريرها السنوية ؟

ا- هل تقوم الشركة بالإفصاح عن اي بنود تتعلق بمنتجات الشركة و عمليات الانتاج مثال ذلك اعادة التصنيع , النفايات , تعبئة و تغليف المنتجات ,تطوير المنتجات ,تلوث الهواء و التربة , مياه الصرف الصحي وغيرها ؟

ب- هل تقوم الشركة بالإفصاح عن اي بنود تتعلق بالطاقة بمعنى المحافظة علي الطاقة وذلك بالاستخدام الكفؤ للطاقة ومحاولة ايجاد مصادر بديلة لها؟

ج- هل تقوم الشركة بالإفصاح عن اي بنود تتعلق بصحة وسلامة العاملين مثال ذلك اجراءات السلامة اثناء العمل ,احصاءات الحوادث وغيرها؟

د- هل لدى الشركة اي سياسات بيئية و التي تشمل اي سياسات تنتهجها الشركة حاليا او اي سياسات تنوي تنفيذها في المستقبل ؟

هـ- هل تقوم الشركة بالإفصاح عن اي بنود لم تتضمنها الاسئلة السابقة مثال ذلك التعويضات البيئية , المناظر الطبيعية , توفير اسباب الراحة العامة , برامج التوعية البيئية , الامتثال لمعايير الأيزو 14001، و غيرها ؟

الجزء الثالث: موقف المدراء الماليين من الافصاح البيئي للشركات

2- ما رأيك في العبارات التالية:

- حماية البيئة قضية هامة في ليبيا او انها اقل اهمية بالمقارنة مع القضايا الاقتصادية و الاجتماعية.

- يجب علي الشركة حماية البيئة لان ذلك جزء من مسؤولياتها الاجتماعية.

- الافصاح عن المعلومات البيئية قضية هامة مثل الافصاح عن المعلومات المالية

- ادارة الشركة هي المسؤولة عن الافصاح عن المعلومات البيئية في تقاريرها السنوية.

- تجني الشركات عدة فوائد من جراء التزامها بالإفصاح البيئي

- من حق اصحاب المصلحة (المستهلكين-العاملين-الحكومة- العملاء- الموردين-المجتمع - المستثمرين- المصارف) الحصول علي المعلومات المتعلقة بالآثار البيئية للشركة.

- سوف يتم تبني الافصاح البيئي بشكل كبير من قبل الشركات في المستقبل القريب.

الجزء الرابع الاسباب الكامنة وراء عدم قيام الشركة بالإفصاح عن المعلومات البيئية

3- ما هي الاسباب حسب رأيك التي قد تمنع الشركة من الافصاح عن المعلومات البيئية؟

Appendix four questionnaire (English and Arabic versions)

Appendix four, A The final draft of the questionnaire in English



Liverpool John Moors University

School of Built Environment

QUESTIONNAIRE

ON CORPORATE ENVIRONMENTAL DISCLOSURE IN LIBYA

The main aim of this study is to explore current disclosure of environmental issues as carried out by Libyan construction companies in an attempt to explain the presence or the absence of corporate environmental disclosure (CED) practices. This study contributes to the development of environmental disclosure, which underpins the achievement of sustainable national growth as well as encouraging foreign investment, promoting a thriving socio-economic status. In doing so, the perspectives and perceptions of a sample of financial managers and the users of the annual reports of Libyan construction companies regarding the various aspects of CED are explored. A questionnaire survey is part of a PhD research project that aims to examine and evaluate the opinions of four groups of users of annual reports (the academic accountants, government officials, bank credit officers and external auditors) regarding the factors affecting CED and the mechanism of disclosing the environmental information.

Before starting to file the questionnaire please tick consent statements:

I have read and understood the participant information sheet:

I am happy to take part in the study:

PART ONE – GENERAL INFORMATION ABOUT THE PARTICIPANTS:

Please tick or fill in the blank

1- Your current occupation

Government officials []

Academic accountants []

Bank credit officers []

External auditors []

2- Your experience of work

Less than 5 years [] from 6-10 years [] from 11-15 years []

From 15 - 20 years [] more than 20 years []

3- Highest qualification obtained

Intermediate diploma [] higher diploma [] bachelor []

Master degree [] PhD degree []

4- Location of last degree

Medial east and North Africa [] the United Kingdom [] European Union []

The United States of America [] other please specify.....

5- Do you have any of the following professional qualification in field of accounting?

None []

Libyan Accountants and Auditors Association (LAAA) []

The institute of Arabic Accountants and Auditors. (IAAA) []

The Association of Chartered Certified Accountants. (ACCA) []

The American Institute of Certified Public Accountants. (AICPA) []

Other please specify

PART TWO- THE PERCEPTIONS OF FOUR DIFFERENT GROUPS, REGARDING THE FACTORS THAT INFLUENCE CED

Please answer whether you agree or disagree with the following sentences and tick in right place

The scale below are ranged as (1= strongly disagree, 2= disagree, 3= neither disagree nor agree, 4= agree, 5=strongly agree)

Statement	1	2	3	4	5
6. Environmental disclosure should be required by laws.					
7. The government should introduce laws.					
8. There is sufficient legal legislation in Libya to encourage companies to disclose its responsibilities towards the environment.					
9. The absence of environmental standards by the relevant central authorities such as the Environment Public Authority affects negatively to the environmental disclosure.					
10. The independent accounting bodies such as (LAAA and AB) should be standardise what companies disclose in their annual reports.					
11. The lack of academic researches affects negatively on the environmental disclosure.					
12. The lack accountants who have qualification and expertise in the companies affects negatively on the environmental disclosure.					
13. The lack of professional accountants who have sufficient guidance on dealing with environmental issue affects negatively on the environmental disclosure.					
14. The lack of civil societies movements affect negatively on environmental disclosure.					
15. The desire of companies to avoid any claim or interference from people or competent authorities affect negatively on corporate environmental disclosure.					
16. The one of the negative factors on environmental disclosure is the public lacks enough knowledge of environmental issues.					
17. Environmental protection is important in Libya.					
18. According to the teachings of the Islamic religion the Libyan companies should disclose the damage to the environment.					
19. The environmental issues in Libya are less important when compared to issues of economic and other social.					
20. The environmental disclosure seems as the Criticisms government policies, thus companies avoid this disclosure.					
21. The environmental protection is necessary even if it leads to reduction of corporate					
22. The negative environmental information in Libya is confidential information which must not be disclosed.					

PART THREE- PERCEPTIONS OF THE FOUR DIFFERENT GROUPS REGARDING THE DISCLOSURE OF ENVIRONMENTAL INFORMATION IN ANNUAL REPORTS OF LIBYAN COMPANIES

23- Please state the extent to which you agree whether Libyan organizations should disclose each of the listed items in their annual reports on the understanding that such disclosure will have beneficial socio-economic effects.

The scale below are ranged as (1= strongly disagree, 2= disagree, 3= neither disagree nor agree, 4= agree, 5=strongly agree)

Statement	1	2	3	4	5
Environmental policies					
Health and safety issues					
Energy issues					
Products and processes					
Others: those which could not be classified into the above categories					

24- Please state the extent to which you agree with each of the following as a possible location to disclose environmental information by the Libyan companies.

The scale below are ranged as (1= strongly disagree, 2= disagree, 3= neither disagree nor agree, 4= agree, 5=strongly agree)

Statement	1	2	3	4	5
Separate booklet attached to the annual report					
In any section within the annual report					
In the directors' statement within annual report					
In a separate section entitled 'environmental disclosure' or the equivalent in annual report					

25. The following is a list of potential benefits that can be obtained from disseminating Environmental information. Please determine the extent of agreement on the importance of these items as potential benefits of environmental disclosure

The scale below are ranged as (1= strongly disagree, 2= disagree, 3= neither disagree nor agree, 4= agree, 5=strongly agree)

Statement	1	2	3	4	5
Serve society at large					
Serve customers					
Protect environment					
Encourage environmental investment					
To make decision					
Emphasize the role of accounting as an effective information system					

26. The following are possible methods that can be used by Libyan companies to disclose the environmental information; please indicate the extent to which you agree with each of these methods.

The scale below are ranged as (1= strongly disagree, 2= disagree, 3= neither disagree nor agree, 4= agree, 5=strongly agree)

Statement	1	2	3	4	5
In descriptive manner					
Quantified but non-monetary (statistical)					
Monetary					
Descriptive and statistical					
Quantitative and monetary					
Descriptive, quantitative and monetary					

If you have any comments or propositions you might think appropriate regarding the issues presented and covered by this questionnaire, please do not hesitate to write them down

Please return the completed questionnaire as soon as possible to email L.M.Ibrahim@2010.ljmu.ac.uk or keep it using the enclosed envelope until collected it by researcher.

Thank you very much for your assistance

The Researcher



بسم الله الرحمن الرحيم

جامعة ليفربول جون مورس

استبيان حول الافصاح البيئي للشركات في ليبيا

الهدف الرئيسي- لهذه الدراسة هو التحقيق في ممارسات الافصاح البيئي لشركات المقاولات الليبية في محاولة لتفسير وجود او عدم وجود هذه الممارسات وذلك لتطوير الافصاح البيئي والذي من المرجح ان يساهم في تحقيق التنمية المستدامة و جذب الاستثمارات وبالتالي تعزيز الرفاه و التنمية الاجتماعية والاقتصادية. لتحقيق ذلك يتم استكشاف وجهات نظر و تصورات عينة من المديرين الماليين و مستخدمي التقارير السنوية لشركات البناء الليبية بشأن مختلف جوانب الافصاح البيئي. في هذا الصدد يعتبر الاستبيان جزء من هذه الدراسة حيث يهدف الي دراسة و تقييم آراء اربع مجموعات من مستخدمي التقارير السنوية بما في ذلك المحاسبين الأكاديميين, الموظفين الحكوميين, رؤساء وموظفي اقسام القروض و التسهيلات الائتمانية بالمصارف التجارية والمدققين الخارجيين بشأن العوامل المؤثرة علي الإفصاح البيئي والية الكشف عن المعلومات البيئية. أخي المشارك ان مساهمتك سوف تكون عامل مساعد لإنجاز هذا البحث مع التأكيد بأن إجاباتكم علي هذا الاستبيان سوف تعامل بشكل سري ولأغراض البحث العلمي فقط و اخيرا لا يسعني الا ان أشكركم جزيل الشكر على حسن تعاونكم

قبل البدء في ملء الاستبيان يرجى وضع علامة داخل المربع لتأكيد موافقتكم على المشاركة في هذه الدراسة

لقد قرأت و فهمت المعلومات المرفقة المتعلقة بالمشاركة في الاستبيان []
انا سعيد للمشاركة في هذه الدراسة []

الجزء الاول : معلومات شخصية: من فضلك ضع علامة داخل المربع أو أملأ الفراغات

1- وظيفتك الحالية هي:

- موظف حكومي (الموظفين التابعين للهيئة العامة للبيئة و ديوان المحاسبة وغيرها من الوزارات ذات العلاقة بقضايا البيئة) []
- أكاديمي(عضو هيئة تدريس بأحد اقسام المحاسبة بالجامعات الليبية) []
- موظف بقسم القروض و التسهيلات الائتمانية بمصرف تجاري []
- محاسب قانوني (مراجع خارجي) []

2- سنوات خبرتك في هذا المجال هي:

- أقل من 5 [] من 6- 10 [] من 11-15 []
- من 15-20 [] أكثر من 20 []

3- أعلى شهادة أكاديمية تحصلت عليها هي

- دبلوم متوسط [] دبلوم عالي [] بكالوريوس []
- ماجستير [] دكتوراه []

أخرى حدد.....

4- مكان الحصول علي اخر شهادة علمية:

- الشرق الاوسط وشمال افريقيا [] المملكة المتحدة [] الاتحاد الاوربي []

الولايات المتحدة الامريكية [] أخرى حدد

5- هل لديك (او لا) اي من المؤهلات المهنية التالية في مجال المحاسبة

لا يوجد []

عضوية نقابة المحاسبين و المراجعين الليبيين []

شهادة عضوية المجمع العربي للمحاسبين القانونيين []

شهادة عضوية جمعية المحاسبين المعتمدين بالولايات المتحدة الأمريكية []

شهادة عضوية جمعية المحاسبين القانونيين المعتمدين ببريطانيا []

أخرى حدد

الجزء الثاني اراء و ملاحظات الاربع مجموعات من مستخدمي القوائم المالية حول العوامل المؤثرة على الافصاح البيئي للشركات

يرجى التكرم بالإجابة عما اذا كنت توافق او لا توافق على الجمل الآتية و ذلك بوضع علامة في المكان المناسب

1 = غير موافق بشدة 2 = غير موافق 3 = لا اختلف ولا اوافق (محايد) 4 = موافق 5 = موافق بشدة

5	4	3	2	1	العبارة
					6- الافصاح عن المعلومات البيئية في التقارير السنوية يجب ان يكون امر مطلوب من قبل القانون
					7- الحكومة هي المعنية بإصدار القوانين التي تنظم ما يجب ان توضح عنه الشركات فيما يتعلق بأداءها البيئي.
					8- هناك تشريعات قانونية كافية في ليبيا لتشجيع الشركات على الإفصاح عن مسؤولياتها تجاه البيئة.
					9- غياب المعايير البيئية من قبل السلطات المركزية ذات الصلة مثل الهيئة العامة للبيئة يؤثر سلبا على الافصاح البيئي للشركات.
					10- الهيئات المحاسبية المستقلة مثل نقابة المحاسبين و المراجعين الليبيين و ديوان المحاسبة يجب ان تقوم بتحديد معايير اداء الافصاح البيئي.
					11- قلة الدراسات والابحاث الاكاديمية في مجال الافصاح البيئي يؤثر سلبا على الافصاح البيئي للشركات.

					12- افتتار الشركات الى الخبرة و المؤهلات و التدريب الكافي في مجال الافصاح المحاسبي عموما و الافصاح عن الاداء البيئي خصوصا يؤثر سلبا على الافصاح البيئي للشركات.
					13- نقص الخبرة بقضايا الافصاح البيئي لدى المراجعين الخارجيين يؤثر سلبا على الافصاح البيئي للشركات.
					14- عدم وجود او قلة منظمات المجتمع المدني يؤثر سلبا على الافصاح البيئي للشركات.
					15- رغبة الشركات في تجنب اي تدخل او شكوى من قبل الجمهور او الجهات المختصة في الدولة يؤثر سلبا على الافصاح البيئي للشركات.
					16- جهل الجمهور بالقضايا البيئية مثال ذلك الاضرار التي تسببها الشركات للبيئة
					17- حماية البيئة الطبيعية في ليبيا امر مهم.
					18- طبقا لتعاليم الدين الاسلامي الشركات في ليبيا يجب عليها الافصاح عن اي معلومات بما فيها المعلومات البيئية.
					19- القضايا البيئية في ليبيا هي اقل أهمية بالمقارنة مع القضايا الاجتماعية والاقتصادية الأخرى.
					20- الافصاح البيئي يبدو و كأنه انتقاد لسياسات الحكومة المتبعة و بالتالي فان الشركات تتجنب هذا النوع من الافصاح.
					21- حماية البيئة امر ضروري حتى لو ادى ذلك الي انخفاض ارباح الشركة .
					22- المعلومات البيئية خصوصا السلبية منها هي معلومات سرية لا يجب الافصاح عنها.

الجزء الثالث: آراء و ملاحظات الاربع مجموعات من مستخدمي القوائم المالية حول الافصاح عن المعلومات البيئية في التقارير السنوية للشركات البيئية:

23- القائمة التالية تتضمن اهم البنود المتعلقة بالإفصاح البيئي يرجى تحديد مدى موافقتك علي تضمين هذه البنود في التقارير السنوية للشركات و ذلك بوضع علامة في المكان المناسب:

5	4	3	2	1	العبارة
					السياسات البيئية التي تطبقها الشركة او تنوي تطبيقها.
					قضايا الصحة والسلامة المتعلقة بالعمالين (اجراءات السلامة اثناء العمل ,احصاءات الحوادث وغيرها).
					البنود المتعلقة بالطاقة (المحافظة عليها ,الاستخدام الكفؤ , ايجاد مصادر بديلة).
					بنود تتعلق بمنتجات الشركة و عمليات الانتاج (اعادة التصنيع , النفايات, تعبئة و تغليف المنتجات ,تطوير المنتجات , تلوث الهواء و التربة , مياه الصرف الصحي وغيرها).
					البنود الاخرى و التي لم تتضمنها البنود السابقة (مثل ذلك التعويضات البيئية , المناظر الطبيعية , توفير اسباب الراحة العامة , برامج التوعية البيئية , الامتثال لمعايير الأيزو 14001، وغيرها.

24- القائمة التالية تتضمن مواقع مقترحة للإفصاح عن المعلومات البيئية في التقارير السنوية للشركات يرجى تحديد مدى موافقتك على هذه المقترحات كمواقع محتملة للإفصاح و ذلك بوضع علامة في المكان المناسب:

5	4	3	2	1	العبارة
					ان تكون في كتيب منفصل مرفق بالتقرير السنوي.
					ان تكون من ضمن محتويات التقرير السنوي من خلال ادراجها ضمن اي جزء من اجزاءه.
					ان تكون من ضمن محتويات التقرير السنوي بحيث يتم ادراجها في تقرير مجلس الادارة.
					ان تكون من ضمن محتويات التقرير السنوي كفقرة مستقلة بعنوان المسؤولية الاجتماعية او اي عنوان اخر يعبر عن مضمون هذه المعلومات.

25- القائمة التالية تتضمن المنافع التي يمكن تحقيقها من خلال نشر المعلومات البيئية في التقارير السنوية للشركات يرجى تحديد مدى موافقتك على اهمية هذه البنود كمنافع محتملة للإفصاح و ذلك بوضع علامة في المكان المناسب:

5	4	3	2	1	العبارة
					خدمة المجتمع ككل
					حماية المستهلك
					حماية البيئة
					التشجيع علي الاستثمار البيئي (الاستثمار الصديق للبيئة)
					لاتخاذ القرارات
					التأكد على دور المحاسبة كنظام معلومات فعال

26- القائمة التالية تتضمن مجموعة من الطرق التي يمكن استخدامها للإفصاح عن المعلومات البيئية في التقارير السنوية للشركات يرجى تحديد مدى موافقتك على هذه الطرق باعتبارها الانسب للشركات و ذلك بوضع علامة في المكان المناسب:

5	4	3	2	1	الاساليب
					باستخدام تعابير وصفية (بأسلوب وصفي)
					باستخدام تعابير كمية ولكن غير مالية (احصائية)
					باستخدام تعابير مالية
					وصفية و احصائية
					كمية و مالية
					وصفية كمية (احصائية) ومالية

اذا كان لديك اي تعليقات او مقترحات ترى انها مفيدة بشأن القضايا المطروحة والتي يشملها هذا الاستبيان لا تتردد في كتابتها

شكرا جزيلاً على حسن تعاونكم
الباحث

Appendix five analysis of data collected by questionnaire

Table 1 The test of normality

Statements	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	Df	Sig	Statistic	Df	Sig
The environmental disclosure should be required by laws.	0.278	190	0	0.826	190	0
The government should introduce laws.	0.299	190	0	0.825	190	0
There is sufficient legislation in Libya to encourage companies to disclose their responsibilities towards the environment.	0.214	190	0	0.89	190	0
The absence of environmental standards by the relevant central authorities such as the Environment Public Authority impacts negatively on the environmental disclosure.	0.318	190	0	0.79	190	0
The independent accounting bodies such as (LAAA and AB) should standardise what companies disclose in their annual reports.	0.284	190	0	0.81	190	0
The lack of academic researches impacts negatively on environmental disclosure.	0.32	190	0	0.759	190	0
The lack of accountants who have qualifications and expertise in the companies impacts negatively on environmental disclosure.	0.266	190	0	0.72	190	0
The lack of professional accountants who have sufficient guidance on dealing with environmental issue impacts negatively on environmental disclosure.	0.336	190	0	0.805	190	0
The lack of civil societies movements impacts negatively on environmental disclosure.	0.267	190	0	0.823	190	0
The desire of companies to avoid any claim or interference from people or competent authorities impacts negatively on corporate environmental disclosure.	0.265	190	0	0.855	190	0
The one of the negative factors on environmental disclosure is the public lacks enough knowledge of environmental issues.	0.246	190	0	0.811	190	0
Environmental protection is important in Libya.	0.411	190	0	0.579	190	0
According to the teachings of the Islamic religion the Libyan companies should disclose the damage to the environment.	0.229	190	0	0.824	190	0
The environmental issues in Libya are less important when compared to other economic and social issues.	0.265	190	0	0.842	190	0
The environmental disclosure is seen as criticism of government policies, thus companies avoid this disclosure.	0.265	190	0	0.874	190	0
The environmental protection is necessary even if it leads to a reduction of corporate profits.	0.248	190	0	0.779	190	0
The negative environmental information in Libya is confidential information which must not be disclosed.	0.198	190	0	0.871	190	0

Table 1 continues

Statements	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	Df	Sig	Statistic	Df	Sig
Environmental policies.	0.344	190	0	0.763	190	0
Health and safety issues.	0.254	190	0	0.802	190	0
Energy issues.	0.299	190	0	0.784	190	0
Products and processes.	0.308	190	0	0.801	190	0
Others	0.307	190	0	0.804	190	0
Separate booklet.	0.284	190	0	0.868	190	0
In any section within the annual reports.	0.223	190	0	0.898	190	0
In the directors statement within annual reports.	0.297	190	0	0.852	190	0
In the separate section in annual reports.	0.236	190	0	0.873	190	0
Serve society at large.	0.28	190	0	0.723	190	0
Serve customers.	0.266	190	0	0.756	190	0
Protect environment.	0.291	190	0	0.649	190	0
Encourage environmental investment.	0.294	190	0	0.721	190	0
To make decision	0.254	190	0	0.824	190	0
Emphasize the role of accounting as an effective information system	0.286	190	0	0.727	190	0
In descriptive manner	0.227	190	0	0.9	190	0
Quantified but non-monetary (statistical)	0.238	190	0	0.875	190	0
Monetary.	0.241	190	0	0.886	190	0
Descriptive and statistical.	0.269	190	0	0.856	190	0
Quantitative and monetary.	0.308	190	0	0.813	190	0
Descriptive and quantitative and monetary.	0.309	190	0	0.728	190	0

Table 2 Analysing the views of four different groups regarding the factors that influence on CED

User groups	Government officials		Academics accountants		Bank credit officers		External auditors		Total	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
Statements										
Environmental disclosure should be required by laws.	63	4.06	49	4.12	54	3.94	24	4	190	4.04
The government should introduce laws.	63	3.94	49	4.14	54	3.83	24	4	190	3.97
There is sufficient legislation in Libya to encourage companies to disclose their responsibilities towards the environment.	63	2.73	49	2.57	54	2.81	24	3	190	2.75
The absence of environmental standards by the relevant central authorities such as the Environment Public Authority impacts negatively on the environmental disclosure.	63	3.95	49	3.94	54	4.07	24	4.04	190	3.99
The independent accounting bodies such as (LAAA and AB) should standardise what companies disclose in their annual reports.	63	3.79	49	4.33	54	3.87	24	4.17	190	4
The lack of academic researches impacts negatively on environmental disclosure.	63	4.14	49	4.1	54	3.96	24	4.21	190	4.09
The lack of accountants who have qualifications and expertise in the companies impacts negatively on environmental disclosure.	63	4.1	49	4.27	54	4.35	24	4.5	190	4.26
The lack of professional accountants who have sufficient guidance on dealing with environmental issue impacts negatively on environmental disclosure.	63	3.65	49	3.84	54	3.52	24	4.13	190	3.72
The lack of civil societies movements impacts negatively on environmental disclosure.	63	3.7	49	4	54	4.17	24	4.25	190	3.98
The desire of companies to avoid any claim or interference from people or competent authorities impacts negatively on corporate environmental disclosure.	63	3.49	49	4	54	3.72	24	3.75	190	3.72
One of the negative factors on environmental disclosure is the public lacks enough knowledge of environmental issues.	63	3.94	49	4.31	54	4.22	24	4	190	4.12
Environmental protection is important in Libya.	63	4.49	49	4.65	54	4.74	24	4.63	190	4.62
According to the teachings of the Islamic religion the Libyan companies should disclose the damage to the environment.	63	4.14	49	4.24	54	3.7	24	4.29	190	4.06
Environmental issues in Libya are less important when compared to issues of economic and other social.	63	3.7	49	3.84	54	3.74	24	4.04	190	3.79
Environmental disclosure seems as the criticisms government policies, thus companies avoid this disclosure.	63	3.6	49	3.49	54	3.22	24	3.71	190	3.48
Environmental protection is necessary even if it leads to reduction of corporate profits.	63	4.33	49	4.16	54	3.94	24	4.54	190	4.21
Negative environmental information in Libya is confidential information which must not be disclosed.	63	2.52	49	2.94	54	2.56	24	2.75	190	2.67

Table 3 Analysing the views of four different groups on proposed kinds of environmental information

User groups	Government officials		Academics accountants		Bank credit officers		External auditors		Total	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
Statements										
Environmental policies	63	3.83	49	4.16	54	3.83	24	4.13	190	3.95
Health and safety issues	63	3.87	49	4.29	54	4.35	24	4.25	190	4.16
Energy issues	63	3.9	49	4.24	54	4.15	24	4.21	190	4.1
Products and processes	63	3.78	49	3.98	54	4.19	24	3.87	190	3.96
Others	63	3.86	49	4.08	54	4.22	24	4	190	4.04

Table 4 Analysing the views of four different groups on proposed locations for the disclosure of environmental information

User groups	Government officials		Academics accountants		Bank credit officers		External auditors		Total	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
Statements										
Separate booklet attached to the annual report	63	3.59	49	3.37	54	2.7	24	3.79	190	3.31
In any section within the annual report	63	3.3	49	3.47	54	2.96	24	3.33	190	3.25
In the directors' statement within annual report	63	3.6	49	3.71	54	3.74	24	3.5	190	3.66
In a separate section entitled 'environmental disclosure' or the equivalent in annual report	63	3.79	49	4	54	3.24	24	3.92	190	3.71

Table 5 Analysing the views of four different groups on possible benefits of environmental disclosure

User groups	Government officials		Academics accountants		Bank credit officers		External auditors		Total	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
Statements										
Serve society at large.	63	4.22	49	4.39	54	4.35	24	4.37	190	4.32
Serve customers.	63	4.17	49	4.16	54	4.39	24	4.12	190	4.23
Protect environment.	63	4.17	49	4.61	54	4.5	24	4.17	190	4.38
Encourage environmental investment.	63	4.06	49	4.47	54	4.15	24	4.17	190	4.21
To make decision.	63	4.05	49	4.2	54	3.8	24	4.17	190	4.03
Emphasize the role of accounting as an effective information system.	63	4.16	49	4.33	54	4.44	24	4.33	190	4.31

Table 6 Analysing the views of four different groups on proposed methods to disclose environmental information

User groups	Government officials		Academics accountants		Bank credit officers		External auditors		Total	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
Statements										
In descriptive manner	63	3.17	49	3.63	54	3.43	24	3.42	190	3.39
Quantified but non-monetary (statistical)	63	3.19	49	3.57	54	3.54	24	3.75	190	3.46
Monetary	63	3.62	49	3.67	54	3.31	24	3.96	190	3.59
Descriptive and statistical	63	3.44	49	3.86	54	3.61	24	3.71	190	3.63
Quantitative and monetary	63	3.68	49	4.04	54	3.83	24	3.79	190	3.83
Descriptive, quantitative and monetary	63	3.83	49	4.49	54	4.41	24	4.58	190	4.26