

CORPORATE ENVIRONMENTAL DISCLOSURE AND ECONOMIC PERFORMANCE OF COMPANIES IN THE LIBYAN MANUFACTURING SECTOR

Kamal Mahmes

PhD candidate at the University of Brighton

E-mail: K.Mahmes@brighton.ac.uk

Abstract

This paper examines the influence of Corporate Environmental Disclosure (CED) on economic performance in Libya. A representative group of the Libyan accounting community was surveyed to provide their views and perceptions of CED. The study was conducted on 8 largest companies operating in the manufacturing sector in Libya. A survey questionnaire was used to collect data. The results indicate that there is a significant influence of company's environmental disclosure on economic performance, suggesting that, the better the economic performance of a company, the greater its social responsibility. The paper is based on a small sample of manufacturing firms. However, findings will bring efficient contributions to the other studies dealing with the accounting harmonization. The majority of studies on CED are still embedded in the economic and organisational contexts of developed world. This research aims to address this gap by focusing on the CED framework of developing nations such as Libya.

Keywords Disclosure, Corporate environmental responsibility, Environmental disclosure, Manufacturing companies, Libya.

JEL Classification: Q5

1. Introduction

The first Libyan crude oil was exported in 1961 (Abozrida, 1981). Since then Libya has turned to industrialization by engaging in agriculture, forestry and fishing, iron and steel, cement and textile industries. The manufacturing production domain is considered to be a high level competitive industry due to its significant relations to Gross Domestic Products (GDP) growth for the country (Central Bank of Libya, 2006). This sector has been given a high importance in Libya as it considered manufacturing to be a significant element to ensure sustainable economic growth and to provide substitute resources for revenue to achieve a varied productive economy (Ahmed, 2004). In addition to having a substantial manufacturing, construction and service sectors, Libya is also considered to be one of the most important members of the Organisation for Petroleum Exporting Countries (OPEC) having proved crude oil reserves of 48 billion barrels as of January 2014, the largest endowment in Africa, and among the nine largest globally (Oil and Gas Journal, 2014, cited in (U.S. Energy Information Administration, 2014)). As a result of recent competitive environments, businesses are being challenged to develop their CED strategy alongside economic and financial performance in order to continue survival and ensure their position in the marketplace (Deegan et al., 2002). Such challenges compel the corporation to change beyond the traditional and conventional accounting disclosure systems, and employing a novel strategy for managing their businesses towards continuous developments (Hokoma et al. 2008).

CED can be considered as one of these challenges that company should be concerned with. CED has received increased attention for the last three decades, and it is now considered as one of the most significant types of social disclosure (Islam et al., 2005). As environmental costs rise year on year, corporations have become ethically accountable for their activities and it has become increasingly important to report these costs, as they may substantially affect the decisions made by the users of financial statements (Tilt and

Symes, 1999). The Institute of Chartered Accountants in England and Wales (ICAEW, 1992: 3) state" where environmental factors will impact on a company's policy and activities and will impose costs on the company, or affect its asset values or liabilities, actual or contingent, the financial consequences need to be accounted for or reported in accordance with existing accounting requirements". Bayoud et al. (2012b) argue that CED is a supplement to the financial reporting process, which reflects the wider expectation of society concerning the role of the business community in the economy. Hence, the influence of CED of a corporation on its economic and financial health has become a significant issue of growing concern to shareholders, customers, suppliers, government bodies and society at large (Pahuja, 2009). Initially, employing a strategy of CED might be seen as an additional burden leading to increased production costs and reduced profits and therefore has only negative impacts upon a company's economic performance. However, a review of the literature on CED suggests the opposite is true (Islam et al., 2005; Aldrugi, 2013).

Although the impact of CED on economic performance of corporations has widely been recognized, there is still a major gap in academic research. This research has, therefore, taken the initiative to examine such phenomenon in Libya, and to bridge this gap in the CED literature. The research is focused on the Libyan context for the following reasons. First, the majority of studies in terms of CED have conducted in developed territories such as Western Europe, America and Australia, neglecting developing countries and thus evidence should be added about other contexts. Second, there is no known empirical investigation nor has any attention been given to the influence of CED on economic performance of companies in Libya. Third, in contrast to the comprehension of CED from developing countries, there are few studies which attempt to investigate and explain this phenomenon in developing countries. Finally, the relationship between a company's environmental disclosure and economic performance in Arabic countries, of which Libya is one, is still relatively unknown. Therefore, the main purpose of this paper is to add to the literature on CED. This paper seeks to identify whether there is any influence of the CED practice on economic performance of Libyan companies and how CED could help to improve the effectiveness of the financial reports.

The remainder of the paper is structured as follows. The next section contains an overview of corporate environmental disclosure—economic performance. The third section looks briefly at the prior relevant studies on CED as well as hypotheses development. Research method and sample are outlined in the fourth section. The penultimate section then presents and analyses the findings. The final section provides some concluding comments, research limitations, suggestions for further research and policy recommendations.

2. Corporate Environmental Disclosure —Economic Performance

Over recent years there has been a general acceptance that social pressures have generated a need for company managements to pay greater attention to the influence of social and CED on the corporate economic activities and the decision-making process (Kuasirikun, 2005; Al-Drugi and Abdo, 2012). The emergence of well-organised and vocal interest groups, such as the European Environmental Bureau (EEB), Anti-Apartheid Movements (AAM), Amnesty International and Greenpeace (AIGP), Friends of the Earth Europe (FoEE), Climate Network Europe (CNE) and the World Wide Foundation for Nature (WWF), has coincided with the increase in CED (Arnold and Hammond, 1994). The role of these interest groups has been to draw attention to the influence of company's environmental disclosure on economic performance.

CED refers to "accountability to society as a whole with respect to matters of public interest such as community welfare, public safety, and the environment" (Radebauh and Gray, 2002: 119). To justify its continued existence, a company should be held accountable for its performance and actions that impact upon people, their communities and their environment (Arevalo and Aravind, 2011); to create a communication channel with society and legitimise its behaviour and attitudes to society in which it operates (Deegan and Rankin, 1996). The relevance of environmental disclosure derives from the fact that the most of information on CED is financial and quantitative in nature, and it can have a direct impact on the financial and economic performance of the corporation (Marston and Shrivess, 1991). Therefore, it should be noted that environmental responsibility does not require the corporation to abandon its other main operations. However, the economic performance of business enterprises is often considered in correlation with its social and environmental disclosure (Gerbens-Leenes et al., 2003). Organisation spending on environmental disclosure

does not necessarily have adverse influence on economic performance (Freedman and Jaggi, 1994). On the contrary, it can bring numerous short- and long-term advantages for organisations (Deegan et al., 2002; Villiers and Staden, 2011). These advantages might include increased level of activity, expansion of investment opportunity, enhanced image within the community and greater competitiveness (Narwal and Sharma, 2008; Arevalo and Aravind, 2011). Roberts (1992) conclude that the decision to report environmental information is significantly associated with economic performance or profitability, suggesting that economic performance can be a deterrent which is related to the volume of CED.

In this respect, environmental accounting techniques and methods can be used for a number of purposes. They can improve CED, control costs, inform management decisions and encourage investment. Eventually, this reflects positively on company income (Clarkson et al., 2004). Today, society shows greater trust in and support for those organisations that disseminate environmental information (Deegan and Gordon, 1996). Companies which respond most effectively to their environmental effects and activities may be in the strongest competitive position (Gao et al., 2005). Disclosing information related to company's social and environmental activities may enable a company to enhance its image within the community in which it operates (Patelli and Prencipe, 2007). By adopting CED policy, companies may also receive additional financial support, low-cost funding or special tax treatment, that could help in lowering costs of their production (Gibby and Patella, 1993), increasing demand for their products and greater investment, which ultimately may have a positive influence on the outcome of their activities and financial standing (Ince, 1998).

3. Prior Research and Hypotheses Development

CED is a phenomenon that has received much attention from the business, political, and public spheres (Abreu et al., 2012; Akbas and Canikli, 2014). This increase in attention can be partly illustrated by the increasing number of academic research in the area and by the growing recognition by government and non-government bodies to the importance of CED of companies fulfilling their social responsibility. Roberts, (1992) reported that companies tend to report environmental information if they have weak economic performance. He also concluded that factors such as stakeholders' power and economic performance are significantly related to the volume of corporate social and environmental disclosure. In addition to these archival studies, Al-Tuwaijri et al. (2004) investigated the influence of CED on economic performance. They found that management's level of environmental concern is positively related to environmental disclosure. They also concluded that there is a positive influence of CED on economic performance, suggesting that the market rewards firms with higher levels of CED. Aldrugi (2013) also indicates that economic performance of companies is positively influenced by the decision to report social and environmental information. Hu and Karbhari (2015) found that enhancement of brand competitiveness is the main incentive for CED in both Chinese and Malaysian public companies. They suggest that Chinese and Malaysian companies tend to take a strategic approach to CED to portray a positive image to show their legitimacy to society.

Although these earlier studies found a significant influence of CED on economic performance, other studies have generally concluded the influence to be statistically insignificant. Freedman and Jaggi (1992) examined the relationship between pollution performance and economic performance. They found that there is no association between environmental and economic performance, suggesting that no negative impact on the economic performance of the companies from their environmental activities. This result may provide some support to Williams (1999) argument that social and environmental disclosure is more influence by "public" rather than "economic" pressure. Liu and Anbumozhi (2009) arrived at a similar conclusion when exploring the determinants affecting the volume of CED practices. Utilizing the content analysis approach to analyse the annual reports of Chinese listed companies in 2006, the study reveals that there is no significant relationship between CED and economic performance in China. Esa and Ghazali (2012) investigate the relationship between profitability and the extent of CED in Malaysia. They found the association to be statistically insignificant. In the same respect, Rao et al. (2012) examined the relationship between CED and corporate governance attributes of companies in Australia. Their analysis revealed that there is no significant

association between profitability and CED. Other studies arrived at similar findings (see, for example, Hackston and Milne, 1996; Ditlev - Simonsen and Midttun, 2011).

In summary, it can be argued that previous studies on the influence of CED on economic performance have concluded mixed results and contradictory theoretical support. Ullman (1985) stated that the association between CED and economic performance is complex. He also believes that: "a positive correlation could imply that only well-to-do companies can afford the luxury of above-average social performance, but it also could indicate that a company's management is dealing effectively with the firm's external stakeholders and their multiple demands" (p. 541). When stakeholder power is high, economic performance is good (or vice versa). It can be noticed, moreover, from the literature that studies on the influence of CED on economic performance are still embedded in the economic and organisational contexts of Western Europe, America and Australia. This research, therefore, has taken the initiative to address this gap by focusing on the CED framework of developing nations, particularly the manufacturing sector of Libya.

From the Libyan context and literature, the majority of companies disclose information related to their environmental responsibility (Al-Drugi and Abdo, 2012). However, compared with counterparts in developed territories it is still at a low level (Elmogla et al., 2011). CED in Libya is attracting attention from academic accounting researchers (see, for example, Pattern and Mashat, 2009; Aldrugi and Abdo, 2012; Bayoud et al., 2012b). However, there is still a paucity of empirical studies on CED practices in Libya compared with counterparts in developed countries. None of these studies has focused specifically on the influence of CED on economic performance. This paper builds on previous research in developing countries by investigating the influence of CED on economic performance in Libyan manufacturing sector. This study will add to the limited literature on CED in developing countries in general and Libya in particular, providing a useful framework for further studies, especially those in the Arabic region. The discussion above posits that the review of the prior research suggests that CED is positively influenced economic performance. Therefore the following hypothesis is formulated:

H1. There is an influence of CED on economic performance of manufacturing companies in Libya.

However, to be tested this main hypothesis was divided into four sub-hypotheses, namely:

H1.1 There is an influence of CED on corporation's competitiveness within the community in Libya.

H1.2 There is an influence of CED on the enhancement of investment and funding decisions of corporations in Libya.

H1.3 There is an influence of CED on the possibility of exposure to legislative liabilities and financial risks in Libya.

H1.4 There is an influence of CED on the extent of environmental perception of stakeholders in Libya.

4. Research Method and Sample

The literature review revealed a lack of empirical data in particular in a Libyan context. For exploratory purposes, an empirical study is considered essential. The decision was made to use a self-completing questionnaire. In order to minimize biases in research, questionnaire design principles such as the wording and language of questions, scaling these questions and coding after receiving the response were considered. The final Arabic copies of the questionnaire were distributed in the final survey. The questionnaire was designed to investigate whether there is a positive influence of corporation's environmental disclosure economic performance. A group of those representing the Libyan accounting community were surveyed to elicit their views on CED in Libya. They were asked to indicate their assessment of importance and agreement utilising a five- point Likert scale. This scale was designed to allow descriptive statistics to be compiled and to measure the magnitude of the differences in the preferences among the individuals. The study was conducted on 8 largest companies operating in the manufacturing sector in Libya. 34 questionnaires were distributed to accounting department employees; out of these, 31 questionnaires were collected. Thus, a total response rate of 91% was achieved. In order to test the hypotheses the questionnaire

comprised a five sections which sought: information and views on the background of the participants; whether CED influences corporation's competitiveness within the community; whether the absence of CED influences the possibility of exposure to legislative liabilities and financial risks; CED influences the enhancement of investment and funding decisions; and CED influences the extent of the perception of stakeholders of environmental issues.

5. Overview of the Results

5.1 Characteristics of Research Population

A total of 31 questionnaires were analysed. The questionnaire sought information about the participants' years of experience and training programmes attended that related to environmental accounting and disclosure. As can be seen from Table 1, that around two-thirds (64.52 per cent) of participants had professional experience exceeding 15 years, while the remaining participants had less than 10 years of experience. These results indicate that the accounting departments' employees in the manufacturing firms in Libya are generally experienced in their present occupation. More than three-quarters of participants (nearly 91 percent) had attended three courses related to environmental accounting and disclosure to improve their knowledge about CED, as Table 2 shows, again increasing confidence in the results. This concurs with Bebbington et al. (1994: 116) when they state that "there is widespread recognition that environmental disclosure needs the development of environmental management systems to support it. Such developments could normally be expected to affect even the accountant". Based on these results accounting departments' employees in the surveyed organisations were well-equipped in handling CED, suggesting that manufacturing companies have been showing increasing interest in environmental accounting and disclosure training in recent years.

Table 1. Professional experience of participants

Years of experience (years)	Number of participants	%
<5		9.68
5-10		12.9
11-15		12.9
>15		64.52
Total	31	100

Table 2. Training programmes in CED

Number of training programmes in CED	Number of participants	%
None		0
One programme		6.45
Two programmes		3.23
Three programmes		90.32
Total	31	100

5.2 Hypothesis Testing

This section analyses the data collected from participants in part 2 of the questionnaire using statistical methods to test the main hypothesis and four sub-hypotheses.

5.2.1 The Influence of CED on Corporation's Competitiveness

Participants' answers to the questions relating to the hypothesis "There is an influence of CED on corporation's competitiveness within the community" were analysed using the following statistical methods:

- Descriptive statistics; and
- One-Sample t-Test.

First –descriptive statistics. Table 3 shows likely mean and standard deviation of participants on “Does CED helps companies to improve their competitive position”. The likely mean was used to arrange statements based on participants’ familiarity for subjects of study. Statements 7, 6, 1, 5, 2, and 4, were ranked in that order from first to sixth with averages 4.23, 4.13, 3.97, 3.74, 3.58 and 3.52, respectively. As all of these-mentioned means are above the minimum degree of agreement (3.5), it can be concluded that they are accepted by participants to be factors could help companies to improve their competitive position. Statements 8 and 3 were ranked equal seventh with the mean 3.10. Consequently, it can be say that these two statements, which stating that "CED may help companies to gains government support and incentives; CED reduces production and marketing costs in the long term" were not accepted by participants as they less than 3.5, which the minimum degree of agreement.

Table 3: Descriptive Statistic of the Relationship between CED and Corporation's Competitiveness

Statements	USL. RES	1	2	3	4	5	M	SD	Order
1.CED Expands the company's ability to market its products.	31 100%	0 0%	4 13%	10 32%	5 16%	12 39%	3.97	1.19677	3
2. CED Provides several resources of funding.	31 100%	2 6%	4 13%	12 39%	5 16%	8 26%	3.58	1.33602	5
3.CED Reduces production and marketing costs in the long term.	31 100%	6 19.25 %	6 19.25 %	6 19.25 %	6 19.25 %	7 23%	3.10	1.45912	8
4.CED Increases the profitability of corporation in the long term.	31 100%	3 10%	5 16%	5 16%	9 29%	9 29%	3.52	1.33843	6
5.CED Improves the financial and economic performance of corporation.	31 100%	2 6%	3 10%	7 23%	8 26%	11 35%	3.74	1.23741	4
6. CED increases corporation's shares prices in stock market.	31 100%	6 19.3%	5 16%	6 19.3%	6 19.3%	8 26%	4.13	1.38424	2
7.CED Enhances the corporation's image and reputation within society.	31 100%	1 3%	2 7%	4 13%	6 19%	18 58%	4.23	1.11683	1
8. CED Gains government supports such as low-cost funding, special tax treatment, and receive additional financial incentives	31 100%	10 32%	3 10%	3 10%	4 13%	11 35%	3.10	1.73887	7

Key to Table 3: USL. RES= Usable Response. M= Mean; SD= Standard Deviation. 1= Strongly disagree; 2= disagree; 3= Neither disagree nor agree; 4= Agree and 5= Strongly agree.

Second – One-Sample t-Test. Results shown in Table 4 indicates that calculated p-value (0.043) opposite phrases related to "whether CED helps companies to improve their competitive position" is $< \alpha$ p-value. (0.05). Moreover, T table (1.697) is less than calculated T (1.783). Therefore, it can be concluded from the analysis of the first hypothesis of study that there is an influence of CED on corporation's competitiveness within the community, with a general agreement among the subjects of the study in the companies surveyed on the necessity of meeting all of the above-mentioned statements for better environmental and economic performance. Accordingly, the first hypothesis of the study stating that "There is an influence of CED on corporation's competitiveness within the community" is accepted.

Table 4: Results of One-Sample t-Test of Agreement Degree of Participants as one Group of the Influence of CED on Company's Competitiveness

α P-value	Calculate d p-value	One-Sample t-Test	Alternative hypothesis	Zero hypothesis	95 per cent trust interval among means	Standard deviation	Mean
0.05	0.043	1.783	Mean > 3	Mean \leq 3	(0.882-0.0217)	1.41	3.4516

5.2.2 The Influence of CED on the Enhancement of Corporation's Investment and Funding Decisions

Participants' answers to the questions relating to the hypothesis stating that "There is an influence of CED on the enhancement of investment and funding decisions" were analysed using the same statistical methods used with the first hypothesis of the study. The test results are as follows.

First – descriptive statistics, likely mean and standard deviation. Table 5 shows likely mean and standard deviation of responses to questions on "Does CED helps companies to enhance their investment and funding decisions" The likely mean was used to arrange statements based on the familiarity of participants for subjects of study. Statements 4 and 1 come equal first with the same mean (3.65); statements 2, 3 and 5 take the third, fourth, fifth with averages of 3.55, 3.35 and 1.35 respectively. As can be seen from this result it can be say that statements 4, 1 and 2 are accepted by participants while statements 3, which stating that "Does CED enhance decisions related to accept or refuse any investment project ", and 5, which stating that "To what extent do you would invest your money in company that is not eco-friendly" are rejected by participants.

Table 5: Descriptive Statistic of the Influence of CED on the Enhancement of Corporation's Investment and Funding Decisions

Statements	USL. RES	1	2	3	4	5	M	SD	Order
1. There is a number of financial expenses that company may bear as a result of its environmental activities namely:	31 100%	-	-	-	-	-	3.65	1.33037	2
1.1. Expenses related to repair or prevent damage to the physical environment.	31 100%	3 10%	7 23%	6 19%	6 19%	9 29%	-	-	-
1.2. Expenses associated with the removal of hazardous waste at the end of the production process.	31 100%	2 6%	5 16%	5 16%	8 26%	11 35%	-	-	-
1.3. Expenses associated with the treat of environmental damage.	31 100%	1 3%	6 19%	5 16%	6 19%	13 42%	-	-	-
1.4. Expenses related to society development and involvement.	31 100%	1 3%	7 23%	2 6%	10 32%	11 35%	-	-	-
2. CED assists banks and credit institutions to rationalize their decisions and protect their interests.	31 100%	2 6%	6 19%	7 23%	5 16%	11 35%	3.55	3.57861	3
3. CED enhances decisions related to accept or refuse any investment project.	31 100%	5 16%	2 6%	11 35%	3 10%	10 32%	3.35	1.42708	4

Statements	USL. RES	1	2	3	4	5	M	SD	Order
4. CED helps company to enhance its decision related to namely:	31 100%	-	-	-	-	-	3.65	1.25295	1
4.1. Decision-making related to determine the product type.	31 100%	3 10%	4 13%	9 29%	7 23%	8 26%	-	-	-
4.2. Decisions related to product design.	31 100%	2 6%	4 13%	11 35%	8 26%	6 19%	-	-	-
4.3. Decisions related to choose the raw materials.	31 100%	2 6%	4 13%	5 16%	10 32%	10 32%	-	-	-
4.4. Decisions related to the methods of manufacturing adopted	31 100%	4 13%	3 10%	6 19%	7 23%	11 35%	-	-	-
4.5. Decisions related to packaging process and product development.	31 100%	2 6%	3 10%	5 16%	11 35%	10 32%	-	-	-
4.6. Decisions associated with the removal of hazardous waste at the end of the production process.	31 100%	2 6%	3 10%	5 16%	6 19%	15 48%	-	-	-
4.7. Decision related to the expected environmental obligations.	31 100%	2 6%	5 16%	6 19%	6 19%	12 39%	-	-	-
5. To what extent do you would invest your money in company that is not eco-friendly?	31 100%	24 77%	4 13%	2 6%	1 3%	0 0%	1.35	0.75491	5

Key to Table 5: USL. RES= Usable Response; M= Mean; SD= Standard Deviation; 1= Not at all Important; 2= Not important; 3= Neither Unimportant nor Important; 4= Important and 5= Very Important.

Second – One-Sample t-Test. Results shown in Table 6 indicates that calculated p-value (0.015) opposite phrases related to "whether CED helps companies to enhance their investment and funding decisions" is $< \alpha$ p-value. (0.05). Moreover, T table (1.697) is less than calculated T (2.283). Thus, it can be concluded from the analysis of the second hypothesis of the study that there is a positive influence of CED on the enhancement of corporation's investment and funding decisions, with a general agreement among the subjects of the study in the companies surveyed on the necessity of meeting all of the above-mentioned statements for better environmental and economic performance. Accordingly, the second hypothesis of the study stating that "there is positive influence of CED on the enhancement of corporation's investment and funding decisions" is accepted.

Table 6: Results of One-Sample t-Test of Agreement Degree of Participants as One Group of the Influence of CED on the Enhancement of Corporation's Investment and Funding Decisions

α p-value	Calculated p-value	One-Sample t-Test	Alternative hypothesis	Zero hypothesis	95 per cent trust interval among means	Standard deviation	Mean
0.05	0.015	2.283	Mean > 3	Mean ≤ 3	(0.956-0.141)	1.34	3.55

5.2.3 The Influence of the Absence of CED on the Possibility of Exposure to Legislative Liabilities and Financial Risks

Participants' answers to the questions relating to the hypothesis stating that "There is an influence of CED on the possibility of exposure to legislative liabilities and financial risks in Libya" were analysed using the same statistical methods used with the first and second hypotheses of the study. The test results are as follows.

First – descriptive statistics, likely mean and standard deviation. Table 7 shows likely mean and standard deviation of responses to questions on "Does the absence of CED influences the possibility of exposure to financial risks and legislative liabilities" The likely mean was used to arrange statements based on the familiarity of participants for subjects of study. Statements 8 and 7 come equal first with the same mean (3.80); statements 5, 4, 6, 3, 1 and 2 take the third, fourth, fifth, sixth and seventh with averages of 3.65, 3.58, 3.32, 3.23, 3.16 and 3.13 respectively. As can be seen from this result it can be say that whereas statements 8, 7, 5, and 4 are accepted by participants, statements 6, 3, 1, 2 are rejected.

Table 7: Descriptive Statistic of the influence of the absence of CED on the Possibility of Exposure to Financial Risks and Legislative Liabilities.

Non-disclosure of corporate environmental activities may consider to be a reason behind:	USL. RES	1	2	3	4	5	M	SD	Order
1. Influence negatively on business enterprise reputation within community.	31 100%	5 16%	7 23%	5 16%	6 19%	8 26%	3.16	1.46280	7
2. Decrease the share value and price in the stock market.	31 100%	8 26%	4 13%	4 13%	6 19%	9 29%	3.13	1.60711	8
1. Decrease the company revenue, profits and in-cash flows in future.	31 100%	6 19%	6 19%	4 13%	5 16%	10 32%	3.23	1.56439	6
2. Loss satisfaction of consumers and moral investor towards the company.	31 100%	4 13%	5 16%	4 13%	5 16%	13 42%	3.58	1.50054	4
3. Increase the media pressure regarding the need for improvement company's environmental disclosure and disclosure.	31 100%	3 10%	3 10%	8 26%	5 16%	12 39%	3.65	1.35520	3
4. Increase rates of environmental issue, compensations, sanctions and lawsuits.	31 100%	4 13%	6 19%	6 19%	6 19%	9 29%	3.32	1.42331	5
5. Loss funding resources and credit supporters.	31 100%	4 13%	2 6%	5 16%	5 16%	15 48%	3.80	1.44728	2
6. Increase the additional financial burden resulting from the protection of the environment which may lead to increased production costs and reduced profits.	31 100%	3 10%	2 6%	8 26%	4 13%	14 45%	3.80	1.35916	1

Key to Table 7: USL. RES= Usable Response; M= Mean; SD= Standard Deviation; 1= Strongly disagree; 2= disagree; 3= Neither disagree nor agree; 4= Agree and 5= Strongly agree.

Second – One-Sample t-Test. Results shown in Table 8 indicates that calculated p-value (0.027) opposite phrases related to "whether CED help companies to avoid the possibility of exposure to legislative liabilities and financial risks" is $< \alpha$ p-value. (0.05). Moreover, T table (1.697) is less than calculated T (2.003). Thus, it can be concluded from the analysis of the third hypothesis of the study that there is positive influence of the

absence of CED on the possibility of exposure to legislative liabilities and financial risks, with a general agreement among the subjects of the study in the companies surveyed on the necessity of meeting all of the mentioned statements for better environmental and economic performance. Accordingly, the third hypothesis of the study stating that "there is an influence of the absence of CED on the possibility of exposure to legislative liabilities and financial risks" is accepted.

Table 8: Results of One-Sample t-Test of Agreement Degree of Participants as One Group of the Relationship between CED and the Possibility of Exposure to Legislative Liabilities and Financial Risks

α p-value	Calculated p-value	One-Sample t-Test	Alternative hypothesis	Zero hypothesis	95 per cent trust interval among means	Standard deviation	Mean
0.05	0.027	2.003	Mean > 3	Mean \leq 3	(0.0788-0.953)	1.435	3.516

5.2.4 The Influence of CED on the Extent of the Environmental Perception of Stakeholders

Participants' answers to the questions relating to the hypothesis stating that "There is an influence of CED on the extent of the environmental perception of stakeholders in Libya" were analysed using the same statistical methods used with the previous hypotheses of the study. The test results are as follows.

First – descriptive statistics, likely mean and standard deviation. Table 9 shows likely mean and standard deviation of responses to questions on "Does CED influence the extent of the environmental perception of stakeholders". The likely mean was used to arrange statements based on the familiarity of participants for subjects of study. Statements 10, 5, 7, 6, 4 and 8 were ranked in that order from first to sixth with averages 3.97, 3.71, 3.65, 3.61, 3.58 and 3.56 respectively. Statements 9 and 3 were ranked equal seventh with the mean 3.48 while statements 1 and 2 take the ninth and tenth with averages of 3.42 and 3.35 respectively. As can be seen from this result it can be say that statements 10, 5, 7, 6, 4 and 8 are accepted by participants whereas statements 9, 3, 1 and 2 are rejected.

Table 9: Descriptive Statistic of the influence of CED on the Extent of Environmental Perception of Stakeholders

Statements	USL. RES	1	2	3	4	5	M	SD	Order
1. The company provides environmental information in accordance with the reaction of stakeholder to the company's environmental disclosure and social agenda.	31 100%	5 16%	3 10%	7 23%	6 19%	10 32%	3.42	1.45543	9
2. The company provides environmental information in response to government regulations and pressure.	31 100%	5 16%	5 16%	5 16%	6 19%	10 32%	3.35	1.49551	10
3. The company reports environmental information in accordance with its social and ethical responsibility.	31 100%	5 16%	5 16%	4 13%	5 16%	12 39%	3.48	1.52471	8
4. The company provides environmental information to assist the society at large to judge the company's actions and policies.	31 100%	3 10%	3 10%	10 32%	3 10%	12 39%	3.58	1.36074	5

Statements	USL. RES	1	2	3	4	5	M	SD	Order
5. Provides environmental information as a result of the influence of CED on credit decisions granted.	31 100%	2 6%	1 3%	12 39%	5 16%	11 35%	3.71	1.18866	2
6. The company provides environmental information in accordance with the ethical approach in evaluation the company.	31 100%	4 13%	3 10%	6 19%	6 19%	12 39%	3.61	1.43009	4
7. The role played by media towards the environment may enforce company to disclose environmental information.	31 100%	4 13%	2 6%	8 26%	4 13%	13 42%	3.65	1.42708	3
8. The company discloses environmental information in accordance with organisations interested in the CED.	31 100%	4 13%	5 16%	4 13%	4 13%	14 45%	3.56	1.52047	6
9. The company provides environmental information due to the competition between businesses on the basis of environmental performance.	31 100%	4 13%	3 10%	4 13%	7 23%	12 39%	3.48	1.50054	7
10. The company provides environmental information owing to the awareness of the significance of environmental issues by company's management.	31 100%	2 6%	1 3%	7 23%	7 23%	14 45%	3.97	1.19677	1

Key to Table 9: USL. RES= Usable Response; M= Mean; SD= Standard Deviation; 1= Not at all Important; 2= Not important; 3= Neither Unimportant nor Important; 4= Important and 5= Very Important.

Second – One-Sample t-Test. Results shown in Table 10 indicates that calculated p-value (0.016) opposite phrases related to "whether CED influences the extent of the environmental perception of stakeholders" is $< \alpha$ p-value. (0.05). Moreover, T table (1.697) is less than calculated T (2.257). Thus, it can be concluded from the analysis of the fourth hypothesis of study that there is an influence of CED on the extent of the environmental perception of stakeholders, with a general agreement among the subjects of the study in the companies surveyed on the necessity of meeting all of the mentioned statements for better environmental and economic performance. Accordingly, the fourth hypothesis of the study stating that "there is an influence of CED on the extent of the environmental perception of stakeholders" is accepted.

Table 10: Results of One-Sample t-Test of Agreement Degree of Participants as one Group of the influence of CED on the Extent of the Environmental Perception of Stakeholders

α P-value	Calculated p-value	One-Sample t-Test	Alternative hypothesis	Zero hypothesis	95 per cent trust interval among means	Standard deviation	Mean
0.05	0.016	2.257	Median > 3	Median \leq 3	(0.144•1.017)	1.432	3.58

Conclusion

This study was motivated by recent proposals for the accounting profession to measure and report on corporations' performance with respect to issues of environmental concern such as environmental protection and pollution. This study aims to investigate the influence of CED on economic performance, after explicitly

considering that these two corporate functions are jointly determined. This was achieved by exploring and testing the views and experience of a group of those representing the Libyan accounting community in the 8 largest manufacturing companies in Libya. Statistically an influence was shown to exist of CED on a corporation's competitiveness, the enhancement of investment and funding decisions, the possibility of exposure to legislative liabilities and financial risks and the extent of the environmental perception of stakeholders, suggesting that the better the economic performance of a company, the greater its environmental responsibility. The results indicate that accounting departments' employees in the surveyed organisations in general were well-equipped in handling CED, suggesting that manufacturing companies have been showing increasing interest in environmental accounting and disclosure training in recent years although the level of CED in Libya is still low. This could be due to the absence of lack of professional standards, guidance and government policy statements; lack of research in this area; CED not being required by law and limited public demands for environmental reports.

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Acknowledgement: The author would like to express his appreciation to Dr. Rosie Boxer for her helpful comments and suggestions.