

# Environmental Quality Website Disclosure in Oil and Gas Sector: The Case of MNCs in Yemen



Nahg Abdul Majid Alawi<sup>1,\*</sup>, Abdullah Masood<sup>1</sup>

<sup>1</sup> University of Aden, Yemen Geomatika University, Malaysia

ARTICLE INFO	ABSTRACT			
<b>Article history:</b> Received 6 January 2018 Received in revised form 11 March 2018 Accepted 22 March 2018 Available online 28 April 2018	In this paper, we explored the quality of environmental disclosure, made by the Multinational Companies (MNCs) working in oil and gas sector in Yemen, and to examine some companies characteristics relationship with this type of disclosure. Websites are used as a medium of communication and four-point scale (0-3, 3 for monetary disclosure, numerical disclosure 2 and 1 for narrative form) is employed to examine the quality of environmental disclosure. 20 MNCs operating in the oil and gas sector in Yemen were examined. The study revealed that, the quality of environmental disclosure by MNCs on their websites is not high. Most of the reported environmental aspects are expressed in discursive rather than numerical or monetary terms. For the influence of company characteristics, it becomes evident that the type of activity has a significant influence over environmental disclosure on the web.			
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Environmental disclosure, quality disclosure, website disclosure, oil gas sector and MNCs	Copyright © 2018 PENERBIT AKADEMIA BARU - All rights reserved			

#### 1. Introduction

The oil and gas sector, is an important sector for Yemen in terms of its contributions that range between (30 to 40) % value of gross domestic product (GDP) and this accounts for more than 70% of the total revenues of the state budget, and constitutes more than 90% of the value of the country's exports in 2010 (UNP, 2010). But, what makes the oil and gas sector unique, is the control of Multinational Companies (MNCs), in the sector.

However, recently in Yemen, there were reports that talked about serious environment violations by the illegal dumping of toxic wastes, left behind by the work of exploration and extraction of oil materials. These reports confirm that, the waste caused the extermination aspects of life in more than one area in Hadramout, through the spread of diseases and epidemics, most notably cancer, which affects disease with nearly 600 people a year in the province of Hadramout alone. In addition to the desertification of agricultural areas, and caused the death of livestock in the vicinity where exploration and production usually take place (Studies and economic media

\* Corresponding author.

E-mail address: dr.nahg@geomatika.edu.my (Nahg Abdul Majid Alawi)



center, 2014) Moreover, there is demand for companies to invest in cleaner technologies to change the process and product, so as to cause less environmental damage. In the operational context, companies are urged to recycle materials and reduce energy consumption [65]

Unfortunately, in Yemen there are no such regulations and statutory requirements for the companies to disclose their environmental sustainability [3]. Moreover, a weak accounting system, absent of stock market and the lack of powerful NGO groups in Yemen [2], unorganised civil society and the government that does not strongly promote CSR in general [32] contrary to those in the industrialized countries might give the MNCs working in Yemen the advantage to avoid meeting main requirements with respect to transparency and environmental responsibility of their operations. Despite the need for environmental reporting in less developed countries and newly industrialized countries was particularly acute given the presence of large numbers of developed country MNCs operating in these countries, environmental reporting is the only a means of ensuring that, these MNCs are made responsible for their environmental impacts [30] and that their local CSR engagement at an international level and thus actively engage in the negotiation, diffusion, and adoption of international CSR frameworks [57].

In Yemen, there have not been prior studies that have attempted to evaluate the environmental disclosure of oil and gas sector in Yemen, which is dominated by MNCs [4]. Therefore, the question raise here is what is the quality of environmental disclosure made by MNCs? By addressing this question, this paper provides a new perspective to the social and environmental literature through its exploration of environmental disclosures quality on a corporate website. Therefore, the primary objective of this paper is to examine the quality of environmental information disclosed on websites of MNCs companies, working in oil and gas sector in Yemen. Specifically, the study responds to the following question:

RQ1. What is the quality of environmental disclosure, on websites of MNCs companies working in the oil and gas sector of Yemen?

RQ2.Are the companies' characteristics associated with the quality of environmental disclosure on websites of MNCs companies working in the oil and gas sector in Yemen?

The remaining part of the paper, is organized as follows: firstly, the paper presents the theoretical framework for environmental disclosure using legitimacy theory. Secondly, the paper discusses the hypotheses development, followed by the research design and the method of content analysis. Thirdly, the discussions of the paper findings are presented. Finally, summary and conclusions are drawn.

#### 2. Literature Review

Legitimacy functions as an organizational resource [72] and failing to fulfill society's expectations can result to a legitimacy gap [66], which may affect the ability of a company to continue operation [18]. Organizational legitimacy reduces possible products boycott and other disruptive actions [23] this provides the top management, with a degree of freedom about how and where the business is conducted. Thus, companies try to gain legitimacy by disclosing social and environmental verifiable data and information [7,8,12,17,45].

Legitimacy theory is compatible with ethical stakeholder's theory, as it considers all stakeholders groups have the right to be provided with information [10,46,59,71] Consistent with the expectation of legitimacy theory, it is conjectured that businesses provides social information to the public, regarding their community involvement, human resources, physical resources, environmental contribution and products and services contributions, with the aim of legitimizing their activities and positively influencing the perceptions of, public and stakeholders about their



organization. Thus, firms use social disclosure to guard their reputation and identity [8,43,49,51] to achieve legitimacy. Given the wide-spread adoption of legitimacy theory, in explaining corporate environmental reporting, this study adopts legitimacy theory for its theoretical framework.

In a country like Yemen, where Islam is the main religion in the country, religious practices have become a norm and integrated into the people's way of life. This scenario forms a unique perception and expectation from the community point of view. The practice of giving, protecting the environment, fair treatment towards the employees, and honesty are important components in Muslims' way of life. Thus, it is also expected that, companies in this context perform in a way that promoted the religion, as any violation to the society's expectations may cause serious damage to the company's reputation.

The current paper examines environmental disclosure on web sites. Since the mid-1970s, many previous studies investigated the environmental disclosure at different time periods. Hackston and Milne [38] investigated the social and environmental disclosure practices, by conducting study with a sample of 50 companies listed on the New Zealand Stock Market, at 31 December 1992 using content analysis of CSR number of sentences and pages to determine the effect of three variables of companies' characteristics (size, profitability, and industry type). They concluded that like USA, UK and Australia, in New Zealand, 'human resources' is the most social disclosures theme, and that, this disclosure has a descriptive nature and is about good news, while environment and community disclosures also have significant attention. Moreover, the amount of social disclosure covered on average about three quarters of an annual report page. Compared with US and UK companies' CSR disclosures, New Zealand companies are lower CSR disclosures on average. They found also that there were relationships between corporate size and type of industry with the CSR disclosure in New Zealand.

Ng [53] conducted an examination, to determine the environmental disclosure in 200 HK listed companies using content analysis. His study found that 18 of the 200 HK listed companies reported environmental information in their annual reports and no company disclosed financial data, concerning environmental performance. He also found that the disclosures were in general statements indicating company's support for environmental protection and describing projects undertaken. These descriptions were located in either the directors' report or the chairman's statement.

In the UK, Harte and Owen [40] examined the annual reports of 30 UK companies using content analysis. They found that, from year 1989 to 1990 the level of environmental disclosure in UK has increased. Furthermore, they argued that, despite the increase in environmental disclosure in annual reports, it was not in details about one page located in the separate section in the annual reports. The study by Gray *et al.*, [29] that covered 13 years in UK using content analysis of annul reports indicated that, at a general level, there was a rise in both the proportion of companies disclosing and the range of the disclosure. However, the results of the study demonstrated that, social and environmental performance is still a relatively low priority for companies. In least developed countries, a number of studies examined environmental disclosure. In Uganda, Kisenyi and Gray (1998) examined four companies in Uganda, and they found that not all of the companies made any environmental disclosure. They concluded that social and environmental disclosure in Uganda is scarce, low grade and of little importance'. Belal [9] conducted a survey of environmental reporting in Bangladesh. The study covered 30 annual reports of Bangladeshi companies relating the year 1996. Belal found that, the quantity and the quality of environmental reporting "is an inadequate and poor".

Moreover, online environmental disclosure was also investigated; Dincer and Dincer [20] examined small and medium sized enterprises, concerning their online CSR disclosure. Using



content analysis of web pages of 56 companies a sample of 113 SME's. They found that the CSR information disclosed on their websites, was very low and it covered between one to three pages in 90 percent of the sample.

Tagesson, Blank, Broberg, and Collin [61] examined the extent of social and environmental disclosure information on 267 Swedish corporations' websites and the effect of the size, industry, profitability, ownership structure and ownership identity upon this disclosure. Using a checklist divided into three areas: environmental disclosures, ethics disclosures, and human resource disclosures, they concluded that the extent to which companies do so varies among the three different areas. The regression analysis indicated that size and profitability are positively associated, with the content of social disclosure information on these websites. State-owned corporations disclose more social information on their websites than privately owned corporations use to do. The results also suggested that, there are significant differences between different industries.

Branco and Rodrigues [11] compared the level of CSR disclosure, in the websites and annual reports of 49 listed companies and examined the factors that influence this disclosure. Using content analysis of the presence or the absence of CSR information, they found that companies in Portugal disclosed more CSR information in their annual reports than websites. They also found that, company size is positively related to both CSR disclosures on the websites and in annual reports, while media exposure was found related to CSR disclosure in annual reports only. Also Gamerschlag, Möller, and Verbeeten [27] examined the CSR web disclosures of 130 listed German companies between 2005 and 2008, based on the guidelines of Global Reporting Initiative (GRI) and using content analysis of numbers of words. They also examined the relationship between company's characteristics and CSR disclosure. The characteristics of a company include the variables of visibility, profitability, shareholder's structure and the relationship with US stakeholders. Their study found that, CSR disclosure in Germany was positively associated with higher companies' visibility, a more dispersed shareholder ownership structure, and the relationship with US stakeholders. Profitability affects only environmental dimension of CSR disclosure. Additionally, they found that the size and type of industry as control variables were positively associated with CSR disclosure.

Lately, Lee [47] examined the relationship between the quantity and the quality of environmental disclosure reports of Australian mining and metal companies using content analysis. The study found that the size and that market capitalization of firms influence both the quantity and the quality of corporate environmental disclosure. The study also confirmed that, there is a very high significant, positive correlation between quantity (number of words) and quality of environmental disclosure.

Although, the majority of previous research has focused on environmental disclosure for companies in developed countries however, only few focus on developing countries, including Arab region [22]. Moreover, the environmental disclosures in MNCs companies have been mentioned in the literature whereby, there are many studies on environmental disclosure and the various activities undertaken by MNCs companies. In contrast, most research did not mention the impact MNCs have on their subsidiaries or about procedures of the disclosure which subsidiaries operating in such as an environment different to the environment work of the parent company, although, subsidiaries do have influence on their parent firm's legitimacy [60].



## 3. Analytical Framework and Hypothesis Formulation

#### **Number of Blocks**

According to legitimacy theory, Cormier and Gordon [13] and Lee [47] suggested that, larger firms for reasons of accountability and visibility are expected to disclose more on CSR activities. Extending this argument to the oil and gas sector, it is expected that, companies with a greater number of blocks will disclose more environmental information than companies with a fewer number of blocks. This is because companies with greater number of blocks, have more responsibility to behave responsibly due to their visibility and brand image.

 $H_1$ : The quality of environmental disclosure is influenced by number of blocks



Fig. 1. Research framework

## Activity Type

Consistent with the legitimacy theory, it is believed that high profile companies with their high public profile due to the nature of their products, cause frequent public-policy controversy over the availability and pricing of their products [42] and their great concern to improve corporate image [11]. In this study, we use the type of activity within the same sector, to analys the environmental disclosure by differentiating production companies from exploration companies. The idea is that, production companies tend to be more profitable, and profitability gives companies the freedom and flexibility [39] which is why they are able to implement and disclose social responsibility activities to stakeholders to legitimize their existence. Moreover, production companies exposed to more environmental issues due to high political visibility of these companies. Thus, we expect that production companies will disclose significantly more environmental information than exploration companies.

H<sub>2</sub>: The quality of environmental disclosure is influenced by activity type

# **Country of Origin**

It is expected that foreign owned companies from developed countries will disclose more social information as would their parent companies [67]. The study by Gray *et al.* [29] concluded that, corporate social and environmental disclosure does appear to be related to the country in which the company reports and the country of company ownership. Deegan [16] and Cormier, Magnan, and Velthoven [15] confirm that CSR disclosures influenced is by the country of origin. Farache *et al.* [24] analysed for a comparative study between companies in the oil industry in UK and Brazil and found evidence that the country of origin of the corporation exercises an influence over CSR communication on the web.

 $H_3$ : The quality of environmental disclosure is influenced by country of origin of the firm



# 4. Sample of the Study

Table 1

Secondary data was used to provide answers to the mentioned research questions. The population of the study consists of all international oil and gas companies registered with the Ministry of Ministry of Oil and Minerals in Yemen. As at March 2014, 23 companies were registered.

	Company Name	Country of origin	Number of Block	Activity Type
1	Total E & P Yemen	France	E. Shabwah (Block-10	Production
2	Canadian Nexen Yemen Ltd.	Canada	E.Al-Hajr (Block-51)	Production
3	Jannah Hunt Oil Co	USA	Jannah (Block-5)	Production
4	Dove Energy Ltd	UK	Ras Hoaira (Block-73)	Production
5	Gallo Oil Yemen Inc.	Indonesia	Al-Armah (Block-13) E. Al-Mabar(Block-R2)	Exploration
6	Occidental Petroleum, Yemen	USA	Al-Sabatain (Block-20) Markha (Block-75)	Production
7	OMV	Austria	Al-Mabar (Block-2) S. Sanau (Block-29)	Production
8	Reilance	India	Jeza (Block-34) Marait (Block-37)	Exploration
9	Calvalley Petro. (Cyprus) Ltd	Cyprus	Malik (Block-9)	Production
10	Oil Search Middle East Ltd.	Papua New Guinea	Jardan (Block-3) Barqa (Block-29)	Exploration
11	GSPC	India	Al Jawf (Block-19) N. Bellhaf (Block-28) Al Rayan (Block-57)	Exploration
12	KNOC	Korea	Qamar (Block-16) Ataq (Block-70) Damqaut (Block-39)	Production
13	CCC for Oil & Gas	Greece	Al-Furt (Block-33) S. Al-Furt (Block-45) E.S. Al-Mabar (Block-49)	Exploration
14	MOL Yemen Inc.	Hungary	, Mukalla (Block-48)	Exploration
15	EPSILON	Canada	W. Mukalla(Block-41)	Exploration
16	Medco Energy	Indonesia	Wadi Amed (Block-82) Wadi Arat (Block-83)	Exploration
17	Midas For Oil & Gas	UAE	Asaker (Block-8) Ghayl Bin Yumain(Block- 65)	Exploration
18	SINOPEC	China	Mashaf (Block-69) Al-Qarn (Block-71) Amakeen (Block-1)	Exploration
19	Kuwait Energy	Kuwait	Mukalla (Block-15) Hood (Block-35) Qusa (Block-74)	Exploration
20	DNO Yemen	Norway	S. Hood (Block-47) Al-Ain (Block-72) Saar (Block-52)	Production



## 5. Measurement

#### 5.1 Environmental Disclosure

Content analysis is used to measure the quality of environmental website disclosure by MNCs working in the Oil and Gas sector in Yemen. Content analysis has been defined as a research technique for making replicable and valid inferences from data according to their context [70] and has been used extensively as popular method in assessing corporate disclosures [29]. This study adopt the four-point scale (0-3, 3 for monetary disclosure; numerical disclosure 2 and 1 for narrative form) used by Cormier and Magnan [14]; Guthrie *et al.* [31]; Walden and Schwartz [64].

Other alternative of disclosure ranking systems such as a five-point quality scale developed by Van Staden and Hooks [63] where 0 = no disclosure; 1 = minimum disclosure, little detail and general terms; 2 = descriptive, effect on firm or policies clearly defined; 3 = quantitative, effect clearly defined in monetary values or physical quantities; 4 = comprehensive, extensive disclosure benchmarking against best practice, Gamble *et al.* [26] and Raar [56] used a 7-point scale However, Hassan *et al.* [41] argued that using a ranking system that consists of many points could reduce reliability in the measurement, as an increasing number of points leads to a greater opportunity for the existence of a subjective judgement of measurement.

In this study, Environmental Disclosure Index (ENDI) on websites developed using Global Reporting Initiatives (GRI) indicator. The GRI index was used in this study for several reasons. Firstly, GRI provides an internationally recognized framework for CSR reporting [25], which is relevant in a study that examines CSR reporting practices at international level. Secondly, using an internationally recognized framework to measure CSR disclosure enables replication of the study. Thirdly, GRI is comprehensive; it covers all reporting aspects such as social, environmental and economic performance. Fourthly, GRI is also considered as the latest and innovative measures for CSR reporting7. Fifthly, GRI adopted by a vast majority of the oil and gas companies increases transparency, credibility and comparability in sustainability reporting [4]. Finally, previous studies that examine CSR issues such as environmental reporting (e.g. [37,63]) ethical and social reporting (e.g. [1]) and sustainability reporting (e.g. [54, 25]) utilize GRI as a framework to develop their disclosure indices. The Index (ENDI) comprising of 30 environmental disclosure items grouped into nine aspects (materials, energy water biodiversity emissions, effluents, and waste products and services compliance transport overall).

#### 5.2 Content Analysis of Web Sites

Each company's web site was accessed and examined entirely during 2014 each environmental theme relating to any of the environmental categories disclosed would be added to the scoring sheet based on the scale. The examination of each company's web site was based on McMurtrie [48] approach, in which, all links were followed, except for the following:

- Web pages that were not rooted in the company's name, and excluding all external links that took the user outside the sphere of control of the target company.
- Neither on-line copies of the annual report [55] were included in the web page analysis;
- Links to external press release disclosures were also excluded (but press releases of the companies will be examined for CSR disclosure) following the suggestion of Patten & Crampton [55].



## 6. Data Analysis

The current study uses multiple regressions in examining the variability in the quality of environmental web disclosure. Multiple regressions have been used extensively in previous CSR research [38, 69, 39, 6]. Based on the above discussion of dependent and independent variables, the following regression model is developed:

QTYENDIS = B0 + B1NBLOCKi + B2CONi + B3ACTPi + ei	
Where	
QTYENDIS = Total quality of environmental web disclosure	
B0 = intercept	
NBLOCK = number of bocks	
CON = 1 if the company from advanced developed countries; 0 other	wise
ACTP = 1 if the activity type of the company is oil producing; 0 otherw	ise
ei = error terms	

#### 7. Results

7.1 Descriptive Statistics

Table 2 shows the average quality of environmental disclosures according to the nine aspects in GRI index using the four-point scale (0-3, 3 for monetary disclosure; numerical disclosure 2 and 1 for narrative form). Overall, results appear to suggest that, the highest score was 73.2% for the water aspect (EN8, EN9 and EN10) followed by energy aspect (EN3 to EN7) 68.3%. Most aspects in the index (6) scored below 50% overall. Therefore, the result of this study shows that, most companies are not reporting high quality of environmental information on their websites; however, there are others that are doing reasonably well.

Table 3 shows that, for multiple regressions analysis, adjusted  $R^2$  was 0.565 which means that 56.5% the quality of environmental web disclosure variance is explained by company's characteristics (number of blocks, type of activity and country of ownership). According to this result, it seems that the legitimacy theory is the most relevant theory to explain the quality of environmental web disclosure of oil and gas MNCs. Thus, MNCs companies based on their company's characteristics report on environmental web disclosure in order to legitimize their existence and build image or symbolic impression of itself that, a firm is conveying to the outside world to control its political or economic position [52, 58].

Number of blocks is expected to have a significant influence on the quality of environmental web disclosure. However, the regression result report that statistically, no impact (P>0.981) of number of blocks on the quality of environmental web disclosure. Such findings imply that, the number of blocks as hypothesized does not really help to improve the quality of environmental web disclosure Therefore, hypothesis H1 is rejected.

Companies engaged in oil and gas producing activities are expected to disclose high quality of environmental information on their websites. The regressions result suggests that, there is relatively strong positive association between the activity type and the quality of environmental web disclosure. Obviously, companies engage in oil and gas producing activities are highly visible and they have to take consideration about social responsibility activities and disclosure, in order to enhance their reputation. Moreover, producing companies are more profitable and therefore reports more to publicize their image and legitimize their activities.



## Table 2

Quality scores of environmental web disclosure based on cate	gory
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Score	Ν	%
Aspect: Materials (EN1, EN2)		,,,
0	23	57.5
1	1	2.5
2	16	40
3	0	0
Aspect: Energy (EN3 TO EN7)		
0	35	33.9
1	15	14.5
2	52	50.4
3	1	0.9
Aspect: Water (EN8,EN9,EN10)		
0	16	26.6
1	6	10
2	37	61.6
3	1	1.6
Aspect: Biodiversity (EN11 TO EN15)		
0	41	41
1	8	8
2	51	51
3	0	0
Aspect: Emissions, Effluents, and Waste (EN16 TO EN25)		
0	106	50.2
1	5	2.3
2	100	47.3
3	0	0
Aspect: Products and Services (EN26,EN27)	27	
0	27	67.5
1 2	5 8	12.5 20
3	8 0	0
Aspect: Compliance (EN28)	0	0
0	13	65.0
1	5	25.0
2	2	10.0
3	0	0
Aspect: Transport (EN29)	0	0
0	11	55.0
1	6	30.0
2	3	15.0
3	0	0
Aspect: Overall (EN30)	U U	Ť
0	13	65.0
1	2	10.0
2	0	0
3	5	25



# 7.2 Regression Analysis

In this study the Hypothesis H3 predicts that the country of origin of the company have positive association with the quality of environmental web disclosure. However, the result shows no significant (P>0.560) association between the country of origin of the company and the quality of environmental web disclosure. Therefore H3 is rejected.

## Table 3

**Result of Regression Analysis** 

					Change Statistics				
			Adjusted R	Std. Error of	R Square				Sig. F
Model	R	R Square	Square	the Estimate	Change	F Change	df1	df2	Change
1	.752a	.565	.484	.484 .178	.565	6.929	3	16	.003***
	Independent variables		25	Coefficient		t stat			P value
		NBLOCK		.001		.025			.981
		ACTPE		.429		3.069			.007***
		CON		083		596			.560

## 8. Conclusion and Discussion

Since many companies may use their website, as media of communication to demonstrate social responsibility disclosures [5,28,39,68]. This study is concerned with the quality of environmental information disclosed by MNCs working in the Oil and Gas sector, in Yemen on their websites and the possible factors that could explain the variability in this disclosure. However, the result of this study shows that, most companies are not reporting high quality of environmental information on their websites. It can be argued that, pressures from the public and NGO in less developed countries to demonstrate social responsibility towards the environment, gives many MNCs companies the freedom not to comply with their social environmental responsibilities, and therefore not disclosing social and environmental information, because one of the barriers to developing environmental reporting is the limited level of public demand for environmental information [21]. Moreover, there are no generally accepted rules and principles regarding many issues. These concerns include what should be the contents of environmental reports, which indicators should be used in reporting, as well as, the problems of collecting and analysing environmental data, other issues include how verification of environmental disclosure should be carried out, the absence of professional standards and final guidelines for environmental disclosure. All these issues, actually provide companies with an excuse to avoid environmental disclosure [21]. The regression results of this study, found an interesting result that only the activity of oil and gas companies do contribute to the quality of information disclosed by MNCs on their website. This result could be due to some activity types of oil and gas companies are environmentally sensitive such as production [33], therefore these companies may use social environmental disclosure, to improve image or gain marketing benefits and also impact on the public perception towards companies' operations. This is in line with the legitimacy theory proposition. As a result of the pressure exerted by the four legitimacy strategies, company attempt



to educate the public about the real changes in their corporate performance and activities, to fill the legitimacy gap, which arises from their deteriorating performances.

Second, businesses attempt to affect the perception of society to reduce the misperceptions on the activities of those companies which can affect society. Third, businesses attempt to control the perception of society by diverting the attention of public from the serious issues such as pollution to other issues such as social or environmental charities. The last strategy businesses attempt is to change the understanding of the public when the public have unclear ideas about the performance of the company. Thus, it can be expected that, businesses will provide social information for the public in order to legitimize their activities with the aim of influencing the perception of the public and stakeholders about the organization. This legitimacy will entitle them to economic benefits that will ensure their survival [19, 50] and manage reputation [35, 62]. Hybels [44] argues that economic exchange is identical with legitimacy.

Other factors, the regression analysis however finds no significant relationship with the quality of environmental information disclosed by MNCs on their website. This result was unexpected, since MNCs from advance developed countries have a long history of sustainable developments and also having a lot of blocks makes the company more visible and therefore it will try to publicize their image and legitimize their activities.

#### 8.1. Implications

There are important potential implications from the results of this study. Firstly, this study indicated that, legitimacy theory appears to support the findings of this study. The legitimacy theory suggests that organizations utilize environmental web disclosure of social responsibility to justify and legitimize their conducts to the society. Thus, this study established the argument that the company's characteristics within specify industry affect environmental disclosure. Secondly, this research also provides additional insights on the CSR and environmental disclosure literature, in response to call for additional research on the quality of environmental disclosure [63].

#### 8.2. Limitations

The current study has two important limitations. Firstly, the sample of the study consists of only 20 MNCs working in the oil and gas sector in Yemen. Hence, extending the sample by including other types of companies would provide extra evidences of quality environmental disclosure. Secondly, this study is only examining website disclosure, while annual reports is the main channel of reporting by companies for both financial and non-financial information [6]. Lastly, the study's model which examined the relationship between companies' characteristics (number of blocks, activity type and country of origin) and the quality of environmental disclosure on website. Other characteristics omitted, could possibly affect the quality of environmental disclosure on website. Future studies could also increase the number of companies in order to generalize results and to look for evidence of quality environmental disclosure beyond the websites. Research could extend the current study by adding other characteristics for companies such as years of contract and location.

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