Nassr Saleh Mohamad Ahmad
Academy of Graduate Studies, Libya

Abstract
Purpose: This paper aims to utilise the national culture dimensions to explain the low level of Corporate Environmental Disclosure (CED) in Libya.
Design/methodology/approach: The literature in the Libyan context indicated that CED practices within Libyan companies are limited. Thus, the Hofstede-Gray framework, which associates accounting values with cultural dimensions, was used in this study to interpret the results.
Findings: The results of this study suggest that national culture elements within Libyan enterprises were distance, high masculinity, uncertainty avoidance (slightly high) and collectivism. This means that culture dimensions influence the level of CED practices within Libyan firms.
Research limitations: Through a review of the literature on CED practices and culture dimensions in the Libyan context, this paper provides theoretical support for the Hofstede-Gray framework. Thus, an empirical study based on this theoretical support is needed.
Originality/value: While there have been several contributions in the literature attempting to extend or refine the Hofstede-Gray framework in understanding the influence of culture on financial disclosure, there are few studies which do so in social and environmental disclosure, especially in developing countries. Thus, this study provides a valuable contribution to fill this gap.

Keywords: Corporate environmental disclosure, Libya, Culture dimensions, Hofstede-Gray framework, Developing countries
INTRODUCTION

There is no doubt that since the 1990s, corporate environmental responsibility by corporations has received much attention. This responsibility has created pressure for corporations to engage in environmental accounting and disclosure (Al-Drugi and Abdo, 2012; Mahdeo et al., 2011). Margolis and Walsh (2003: 28) argued that: “From society’s perspective, creating wealth and contributing to material wellbeing are essential corporate goals. But restoring and equipping human beings, as well as protecting and repairing the natural environment, are also essential objectives. Companies may be well designed to advance the first set of objectives, yet they operate in a world plagued by a host of recalcitrant problems that hamper the second set”. Thus, CED has become a hot topic of discussion and investigation among accounting academic researchers (Mathews, 1997, 1998; Deegan, 2002; Reverte, 2009).

According to Reverte (2009), previous studies on corporate social disclosure, including CED, are characterised by three kinds of research. Firstly, there are “descriptive studies” which report on the extent and nature of CED with some comparisons between countries and periods. Secondly, “explicative studies” focus on the potential factors influencing levels of CED. Thirdly, there are studies on the effect CED has on various users with an emphasis on market reaction. The present study is explicative, as it aims to utilise the national culture dimensions to explain the low level of CED in Libya. To do so, it uses the Hofstede-Gray framework, which associates accounting values with cultural dimensions. The previous studies in this area have largely restricted their focus to the European, North American, Asian and Australian regions. Very little attention, if any, has been given to countries in the African region. The researcher has, therefore, taken the initiative to bridge this gap in the CED literature by focusing on the Libyan context.

The remainder of the paper is organised as follows. The next section contains an overview of prior research, specifically similar studies that relate social and environmental disclosure to culture. Further sections examine the Hofstede-Gray framework and CED practices in Libya, using the Hofstede-Gray framework to interpret CED practice in Libya. The final section presents the conclusion and limitations.
In the simplest form, culture is defined as the “ideas, beliefs, and customs that are shared and accepted by people in a society” (Longman Dictionary, 2000: 330). According to Hofstede (1980: 25), culture is “the collective programming of the mind which distinguishes the members of one human group from another”. The importance of culture in influencing accounting practices has received much attention (Arpan and Radebaugh, 1985; Gray, 1988; Mathews and Perera, 1996; Baydoun and Willett, 2000). For example, Mathews and Perera (1996: 349) stated that “Culture is often considered to be one of the powerful environmental factors impacting upon the accounting system of a country. Accounting is a socio-technical activity involving dealing with human and non-human resources or technology as well as with the interaction between the two. Therefore, it can be argued that, although the technical aspect of accounting is less culturally dependent than the human aspect, since the two interact, accounting cannot be culture free”. Thus, a number of studies have utilised the Hofstede-Gray framework and provide evidence of the influence of culture on firm-level financial disclosures (Hope, 2003; Askary et al., 2008; Akman, 2011; Asiyaban and Abdoli, 2012; Hashim, 2012). However, while there have been several contributions in the literature attempting to extend or refine the Hofstede-Gray framework in understanding the influence of culture on financial disclosure, few studies do so in social and environmental disclosure.

Williams (1999) tested the relationship between two of Hofstede’s dimensions (uncertainty avoidance and masculinity versus femininity) and voluntary social and environmental disclosure (VSED) in the Asia-Pacific Region. He found that uncertainty avoidance and masculinity explain part of the variation of VESD between companies operating in different nations in the Asia-Pacific Region.

Mathews and Reynolds (2001) tested a possible classification of Corporate Environmental Disclosure based on the Hofstede-Gray framework. Their sample was drawn from the Wood Products Index and a questionnaire was sent to senior management in 500 companies in Finland, Norway, Sweden and the US. They showed that differences in corporate environmental disclosure levels between countries relate to Hofstede’s dimensions.

Van Der Laan Smith et al. (2005) performed an analysis of social and environmental disclosure which is more extensive than Williams’s (1999)
study because they analysed both the extent and quality of disclosure. They conducted content analysis on 32 Norwegian-Danish companies and 26 US companies in the electric power generation industry. Based on Hofstede's masculinity-femininity concept (for more details about this concept, see next section), they contend that a masculine society is more concerned about power and economic status, whilst feminine society puts more emphasis on social goals such as relationships, helping others and the physical environment. Thus, they hypothesize that there should be greater CED in Norwegian-Danish companies than in US companies. Their findings provide significant support for this hypothesis.

Rene Orij (2010) investigated whether corporate social and environmental disclosure levels relate to national culture. National culture was represented by Hofstede's national culture dimensions separately or combined in constructed culture measures. Instead of a comparison between two nations, as is undertaken by Van Der Laan Smith et al. (2005), his sample consisted of 600 large companies from 22 countries: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, Netherlands, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, UK and USA. The results of Van Der Laan Smith et al. (2005) were largely supported by his findings. He concluded that corporate social and environmental disclosure levels are likely to be influenced by national culture.

Adnan et al. (2011) conducted content analysis on 403 annual reports, corporate websites and corporate social and environmental disclosure stand-alone reports of 203 companies operating in socially and environmental sensitive industries in four countries: China, India, Malaysia and the UK. They examined whether culture interacts with the governance structure and government ownership in influencing the quantity and quality of corporate social and environmental disclosure. One of their hypotheses was: national culture influences the quantity and quality of CED information across China, India, Malaysia and the UK. Overall, their results demonstrated the effect of culture in the CED reporting model, and thus found support for their hypothesis.

Consequently, to get a better understanding for CED in a given country, it is important to take cultural values into account, as the cultural values of managers in the nation may make them take a specific view of what is an acceptable, tolerable and sensible level of disclosure (Puxty et al., 1987). However, as the previous studies mentioned above
had largely restricted their focus to the European, North American, Asia and Australian regions, no attention was given to countries in the African region. The researcher has, therefore, taken the initiative to bridge this gap in the CED literature by focusing on the Libyan context.

**THE HOFSTED-GRAY FRAMEWORK**

From an extensive empirical study of IBM and its subsidiaries in 1970 (Hofstede, 1980) examining the differences and similarities of societal (cultural) values of different countries, Hofstede (1980) identified four distinct dimensions of values: Individualism (IDV) versus collectivism (CTV) (1); large versus small Power-Distance (PDI) (2); strong versus weak Uncertainty Avoidance (UAI) (3); and Masculinity (MAS) versus Femininity (FEM) (4), which he considered to reflect the cultural orientation of a given country. A fifth dimension, long-term orientation (LTO), was added by Hofstede (2001). There are no details in the literature about the score for this cultural dimension in the Libyan context, and thus it is not included in this study.

Gray (1988), based on Hofstede’s work (1980), developed a model which illustrates “the mechanism by which values at the societal level are linked to values at the accounting subculture level as it is these values which are likely to influence the development of accounting systems in practice” (Gray, 1988: 5). He developed his own classification by identifying four accounting values at the subculture level: professionalism versus statutory control, uniformity versus flexibility, conservatism versus optimism, and secrecy versus transparency.

As this study considers with corporate environmental disclosure, it focuses on secrecy (SEC). Gray (1988: 8) describes the accounting value of secrecy as “a preference for confidentiality and the restriction of disclosure of information about the business”. SEC manifests itself through a tendency to restrict the disclosure of information available to outsiders. The SEC hypothesis is developed as follows:

To what extent, then, can secrecy be linked to societal value dimensions? It is argued here that secrecy can be linked most closely with the uncertainty-avoidance, power-distance and individualism dimensions. A preference for secrecy is consistent with strong uncertainty avoidance following from a need to restrict information disclosures so
as to avoid conflict and competition to preserve security. A close relationship with power-distance also seems likely in that high power-distance societies are likely to be characterised by the restriction of information to preserve power inequalities. Secrecy is also consistent with a preference for collectivism, as opposed to individualism, with its concern for those closely involved with the firm rather than external parties. A significant but less important link with masculinity also… following from this analysis it may be hypothesised that: the higher a country ranks in terms of uncertainty avoidance and power-distance and the lower it ranks in terms of individualism and masculinity then the more likely it is to rank highly in terms of secrecy (Gray, 1988: 11).

These relations are summarised in Table 1.

**CED PRACTICES IN LIBYA**

Libya is a developing Arab state. Arabic is the official language, and English and Italian are used in trade. The religion in Libya is Islam. It is located in the north-central part of Africa and is bounded 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 country occupies an area of 1,760,000 square kilometers and is the fourth largest state in Africa. The results of the general census for the year 2006 show that the population resident in Libya is 5,298,152. Most Libyan people are young; almost 50 per cent are under 20 years old, and 86 per cent are urban, which gives Libya one of the highest urbanization rates in the world (General Information Authority, 2008). In addition to being a major oil exporter, Libya also has substantial manufacturing, construction and service sectors. Recently, Libya witnessed a new revolution on 17 February 2011, which finished the Qaddafi regime.

<table>
<thead>
<tr>
<th>Societal values</th>
<th>IDV</th>
<th>COV</th>
<th>Large PDI</th>
<th>Small PDI</th>
<th>Strong UAI</th>
<th>Weak UAI</th>
<th>MAS</th>
<th>FEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEC</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
</tbody>
</table>

Low IDV + Large PDI + Strong UAI + Low MAS = High SEC (low level of CED)

High IDV + Small PDI + Weak UAI + High MAS = Low SEC (High level of CED)

**Table 1. Matrix of relationship of SEC value with societal values**
The empirical evidence available in CED practices in Libya is limited because environmental accounting has not been a major issue on the agenda of Libyan researchers. An early study was carried out by Ahmad (2004), who analysed the environmental information disclosure practices of the thirteen largest public industrial companies in Libya over four years, from 1998 to 2001. Although seven out of ten companies who responded disclosed environmental information in their accounts, the scope of disclosure was found to be limited. A detailed analysis of content showed that all of the disclosure in all years related to health and safety. None related to general environmental effects of products and processes, energy usage or environmental policy. Most of the information was inward-looking and related primarily to employee safety rather than public safety. In addition, the number of companies with CED drops to three if internal reports are excluded.

Pratten and Mashat (2009) analysed the annual reports of 56 Libyan private and public companies from the industry, service, and bank and insurance sectors using content analysis to examine if the disclosure of the nation’s social and environmental information differs from that found in the western world. During the period of their study (1999 to 2002) they revealed that four companies mentioned “waste, pack, pollution, recycling, product and land” in 1999, with 0.2 pages devoted to the topic. This had risen to ten by 2002, using an average of 0.71 pages. They also found that Libyan companies offered a lower level of CED than more developed nations.

Ahmad and Mousa (2010) have examined the extent of CED practice in Libya by analysis of the environmental information forms of the 17 largest Libyan industrial companies using content analysis as compared with Ahmad’s (2004) study. They concluded that compared with Ahmad’s (2004) study of 2001 reported results, CED in Libya, both in terms of its quantity and quality has been developed a little over the period between the two studies. They noted that this increase and development of CED can be explained in the shadow of the reciprocal direct and indirect accountability of industrial companies within the relationship with the Industrial Ministry (IM). They also observed that this information was provided only to IM while, it should be revealed to all stakeholders or users and available to the public. That means that these reports are not available to the public.
Elmogla et al. (2011) analysed corporate social and environmental disclosure in the annual reports made during the period from 2001 to 2005 by 54 industrial companies, both public and private, using content analysis. They concluded that Libyan companies are at a very early stage in their consideration of environmental information. They found that only five Libyan public companies (9.3% of total sample) disclosed only a small amount of environmental information in their annual reports and seemed to be uninterested in disclosing any environmentally related information. This environmental information related only to three environmental issues over the period of study in both private- and government-controlled companies which include: environmental policy, (waste, packaging, pollution, recycling, production, land) and any other environmental issue.

Ishwerf (2011), in addition to exploring the perceptions and requirements of a wide group of stakeholders in relation to corporate environmental responsibility and disclosure in Libya, used content analysis to turn qualitative data, which was collected via open-ended questions, into numerical data using NVivo software. The results indicate that in general, stakeholders are interested in, and positively disposed towards CED. However, interviewees generally perceive that CED is fairly significant to business, but current CED practice is viewed as negative and weak. The results also indicated that lack of legal requirements, lack of knowledge/awareness, absence of demand, issues management, fear of bad publicity, companies’ emphasis on economic performance, the sensitivity and confidentiality of the information, the absence of pressure by government states, and the absence of NGOs appeared to be impeding CED practices.

Al-Drugi and Abdo (2012) analysed CED in the annual reports of 43 national and foreign oil and gas companies from 2002 to 2009 using content analysis. Although almost 100% of companies disclosed environmental information in their accounts, the mean CED word count in annual reports in 2009 was about 192 words compared to 16 words in 2002. This score suggests a very low level of CED. The finding also revealed that the ratio of total CED of foreign companies (63%) is higher than the ratio of total CED of local companies (37%). The quantitative findings revealed that company size, company privatization and company’s nationality have a positive relationship with the level of CED. On the other hand, it was found that age of company is insignificant and negatively related to the level of CED.
Bayoud et al. (2012) analysed the annual reports of 40 Libyan companies from four different sectors, namely: manufacturing companies, service companies, banks and insurance companies. They used content analysis to examine whether company age, industry type and company size have a potential influence on levels of corporate social disclosure. During the period of their study (2007 to 2009), they revealed that consumer information and employee information are high compared with community and environmental information, which were low in the four sectors. The quantitative findings reveal that there is a positive relationship between company age and industry type and level of disclosure.

Eljayash et al. (2012) examined the quantity and quality of CED in oil companies in the Arab oil exports. They analysed 174 annual reports of 58 national companies for the years 2008–2010. A detailed analysis of content showed that Arab Emirates and Saudi Arabia had the highest amount of disclosure in annual reports, amounting to 356 words and 326 words respectively. In contrast, the lowest numbers of words in annual reports are 22 and 26 words for Libyan and Tunisian companies, but overall, CED in the Arab oil countries is still low compared with other oil companies in developed countries.

In summary, the literature above suggests that Libyan companies do not pay a lot of attention to their environmental information. This was interpreted by using managers’ perception (Ahmad, 2004), stakeholders’ perception (Ishwerf, 2011), attitude of accountant and financial managers (Pratten and Mashat, 2009; Elmogla et al., 2011; Bayoud et al., 2012) or company’s characteristics (Al-Drugi and Abdo, 2012; Bayoud et al., 2012). No attention was given to the influence of national culture dimension on CED practices in Libya. This is identified as a major gap and will be addressed in the next section.

**USING THE HOFSTEDE-GRAY FRAMEWORK TO INTERPRET CED PRACTICE IN LIBYA**

Table 2 presents Hofstede’s (1980) national cultural indices of individualism, masculinity, power-distance, and uncertainty avoidance for Arabic countries (including Libya), USA, UK, Canada, Norway, Singapore and world average for comparison.

Rene Orij (2010: 886), however, criticized the use of such scores in developing countries. He said that “Hofstede’s dimensions were
identified and established more than 30 years ago and there is no development over time with dimensions scores. It can be assumed that developing countries in particular might have experienced changing national culture dimensions”. However, this argument is not true for the Libyan context. Twati (2008) explored societal and organisational culture factors that influence the adoption of information systems in Libya’s Oil and Banking sectors. He used a structured survey questionnaire based on the work of Hofstede’s Value Survey Module (VSM 94) in which 400 questionnaires were administered to middle and top management employees in more than fifteen government and public organisations in the two named industry sectors.

Surprisingly, in an era of technology, globalization and the internet, Twati’s (2008) results were almost similar to Hofstede’s (1980) index, as presented in Table 3. It is clear that Libya has IDV and MAS scores lower than the world average for these dimensions and PDI and UAI scores higher than the world average for these dimensions. These values indicate that Libyan organisational culture is likely to be more inclined to a control-oriented culture and mechanistic structures (Hosen et al., 2011).

Moreover, as stated in Table 1 earlier, these values indicate that Libyan organisations have a high level of secrecy (Low IDV + Large PDI + Strong UAI + Low MAS = High SEC). Thus, this high level of SEC produces the low level of CED, which is informed by previous studies in Libya. This supports theoretically one of the hypotheses of Gray (1988) and Orij (2010), namely: Secrecy, as a combination of

<table>
<thead>
<tr>
<th></th>
<th>IDV</th>
<th>MAS</th>
<th>PDI</th>
<th>UAI</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>91</td>
<td>62</td>
<td>40</td>
<td>46</td>
</tr>
<tr>
<td>UK</td>
<td>89</td>
<td>66</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>Canada</td>
<td>80</td>
<td>52</td>
<td>39</td>
<td>48</td>
</tr>
<tr>
<td>Norway</td>
<td>69</td>
<td>8</td>
<td>31</td>
<td>50</td>
</tr>
<tr>
<td>Singapore</td>
<td>20</td>
<td>48</td>
<td>74</td>
<td>8</td>
</tr>
<tr>
<td>Arab countries</td>
<td>38</td>
<td>53</td>
<td>80</td>
<td>68</td>
</tr>
<tr>
<td>World average</td>
<td>43</td>
<td>50</td>
<td>55</td>
<td>64</td>
</tr>
</tbody>
</table>

Table 2. Scores on Hofstede’s (1980) National Cultural Dimensions
Consequently, the needs of central authorities such as IM (those closely involved stakeholders as suggested by Gray, 1988) are the ultimate determinants of what companies should disclose. As their reports are not available to the public (high SEC), Libyan companies have paid particular attention to the area that concerns the central authorities, who are concerned as internal stakeholders rather than external stakeholders (Ahmad, 2004). This narrowing down of information to the needs or requirements of the central authorities in the Libyan context was identified by Kilani (1988); Bakar (1997); Buzied (1998); Saleh (2001) (5) and Hosen et al. (2011). The results of Ahmad’s (2004) study also indicate that managers thought that the main reason for Libyan companies to make CED disclosure is basically related to the need “to inform the central authorities”. It received the highest ranking amongst the other listed reasons (control-oriented culture and mechanistic structures). Thus, CED practice in Libya is likely to catch on if central authorities ask for or require such information (need-to-know). This can be confirmed by Ahmad and Mousa’s (2010) survey, since their results revealed that CED has been improved as more environmental information has been requested by IM via their issue of decision No. 18 of 2001, which asks Libyan companies to provide the IM with the required CED quarterly and annually by using a pre-designed form regarding damage to the environment (IM, 2001).

**CONCLUSION**

This study aimed to utilise the national culture dimensions to explain the CED practice in Libya. It used the Hofstede-Gray framework, which associates accounting values with cultural dimensions. It has reviewed

<table>
<thead>
<tr>
<th></th>
<th>IDV</th>
<th>PDI</th>
<th>UAI</th>
<th>MAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hofstede’s index</td>
<td>38</td>
<td>80</td>
<td>68</td>
<td>53</td>
</tr>
<tr>
<td>Twati’s index</td>
<td>18</td>
<td>72</td>
<td>71</td>
<td>45</td>
</tr>
<tr>
<td>World average</td>
<td>43</td>
<td>55</td>
<td>64</td>
<td>50</td>
</tr>
<tr>
<td>High SEC</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
</tbody>
</table>

Table 3. Scores on Hofstede’s (1980) and Twati’s (2008) Libyan Cultural Dimensions

national culture dimensions, is negatively related to corporate social (and environmental) disclosure levels.
the previous studies on CED practices in Libya. This review suggests that Libyan companies do not pay a lot of attention to their environmental information. They offer a lower level of CED. Based on the available literature, this study found that Libyan culture displays a high power-distance, high uncertainty avoidance, collectivism and low masculinity. These values indicate that Libyan organisations have a high rank of secrecy, which produces the low level of CED found by previous studies in Libya. Thus, this study gives theoretical support for the Hofstede-Gray framework and other related studies. However, an empirical study based on this theoretical support is needed.

REFERENCES


Industrial Ministry (IM)(2001), *Decision No.18 Regarding the Approval of Data and Reports Forms of Related Companies*, (in Arabic), IM, Tripoli, Libya.


**ABOUT THE AUTHOR**

Dr Nassr Saleh Mohamad Ahmad is an associate professor in accounting at the Academy of Graduate Studies, Tripoli, Libya. He has held teaching appointments at Al-Jabel Al-Garbi University (Libya) and Sultan Qaboos University (Oman). He is a member of the editorial board and ad-hoc reviewer of various academic journals, including Business School (Academy of Graduate Studies), Al-Jabel Al-Garbi University Journal, Afro-Asian Journal of Finance and Accounting, SA Journal of Accounting Research (Cape Town University) and Journal of International Business and Economic Affairs (Teesside University). He has published various research papers in local and international academic journals. He has taught various undergraduate and postgraduate courses in Financial Accounting, Social Accounting, Management Accounting,
Islamic Accounting and Auditing. He has successfully supervised numerous MSc Dissertations and four PhD students. He is a member of numerous local professional committees.

**NOTE:**

1. **IDV:** the fundamental issue addressed by this dimension is the degree of interdependence a society maintains among individuals. It relates to people's self-concept: “I” or “we”. It is the opposite of collectivism (**COV**).

2. **PDI:** the fundamental issue addressed by this dimension is how society handles inequalities among people when they occur. This has obvious consequences for the way people build their institutions and organisations.

3. **UAI:** the fundamental issue addressed by this dimension is how a society reacts to the fact that time only runs one way and the future is unknown, and whether it tries to control the future or just lets it happen. UAI also has consequences for the way people build their institutions and organisations.

4. **MAS:** the fundamental issue addressed by this dimension is the way in which a society allocates social roles to the sexes. It is the opposite of Femininity (**FEM**).

5. The provision of information to central authorities in the Libyan context was explained by Saleh (2001) by using the notion of “information enclosure”. Information enclosure occurs often upon request, by event or to meet legal and accountability requirements (More secrecy). Information enclosure differs from information disclosure in that the latter involves providing information to stakeholders who include the general public, whereas the former involves providing information to particular members of the public.