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Managerial Finance

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Article information:

To cite this document:
Yousef F. Jahamani, (2003),"Green accounting in developing countries: the case of U.A.E. and Jordan", Managerial Finance, Vol. 29 Iss 8 pp. 37 - 45
Permanent link to this document:
http://dx.doi.org/10.1108/03074350310768418

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Green Accounting in Developing Countries: The Case of U.A.E. and Jordan

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Abstract

Research presented in this paper focuses on three environmental aspects, environmental awareness, environmental involvement, and environmental reporting**.** Developed countries have achieved a lot of progress in these fields. Developing countries such as Jordan and U.A.E. are still in their early stages. Two samples of corporate decision-makers in these countries were utilized to examine the above aspects. The results show that they are aware of environment protection issues, but their commitment to environment protection is still low. Few of them report their environment performance. The results of Mann-Whitney test show that there is no difference between Jordan and U.A.E. in terms of circumstances leading to environmental awareness, environmental awareness and involvement.

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I. Introduction

Governmental agencies, and communities in both developed, and developing countries have recently given greater attention to environmental issues. Consequently, many companies disclose environmental information in their annual reports.

Developed countries, such as the USA and the UK have achieved a significant progress in both theory and practice regarding the environment. This is evidenced by the issuance of a number of environmental laws (Roussey, 1992, p.98), and number of firms that disclose environmental practice. Despite their concern about environment protection, not all countries issue environmental laws. Jordan and the United Arab Emirates (U.A.E.) are among these countries that introduced such laws. They have taken the necessary measurements to protect the environment.

The Institute of Management Accountants in the USA defined environmental accounting as " the identification, measurement, and allocation of environmental costs, the integration of these environmental costs into business decisions, and the subsequent communication of the information to a company's stakeholders.

The purpose of this paper is to examine the extent to which corporate decision-makers in Jordan and United Arab Emirates are aware of, involved in and report the environmental responsibility of their companies.

II. Enviromental laws in U.A.E. and Jordan

U.A.E. issued two federal laws on the protection of the environment and development of water resources. The first law (Law No. 23, 1999) is to provide better protection and conservation of environment from both the short-term and long- term negative effects or damages related to the economic, industrial agricultural and urban development programs. The law calls for setting up a national monitoring system and emergency plans for facing environmental disasters and hazards due to all kinds of pollution. It sets harsh and

stiff punishments for violators including the death sentence and fines ranging from DH 1 million to DH 10 million for those who import any banned materials or nuclear wastes, dump or store them in any form inside the country. The decision to include the death penalty as a punishment for contravening the new Federal Law underlines the commitment of the United Arab Emirates to protecting the country's environment.

The second law (Law No. 24, 1999) seeks to utilize, develop, and protect marine life resources. The law stipulates rules regarding fishing in order to ensure the development of marine wealth. The rules forbid the discharge of oil and waste ballast water into the sea, a major source of oil pollution along the United Arab Emirates coastline. The law includes eighteen articles on the requirements for ships carrying oil and other hazardous materials and around 28 articles on the fines, which would be imposed on offending vessels.

In Jordan, Law of Environment Protection (LTP) was issued in 1995. It aims to conserve the environment, which includes water, air, and soil and what they include. Article 3 (a) of LEP requires the formation of an official public establishment entitled "the Public Establishment for the Environment Protection" with a legal personality and financial and administrative independence. The functions of the establishment include:

- To operate the general policy of the environment protection, to prepare to the required national strategy, to protect the environment and to prepare plans and the programs to implement them
- To measure the environmental elements and prepare the specifications and standards of these elements.
- To monitor the public and private establishments including companies and projects for investigating their commitment to the approved environmental specifications and standard.

LEP, however, does not require the publication of environmental reports, by companies and organizations nor does it compel them to appropriate part of their normal annual reports to disclose the impact of their operations on the environment. Many organizations though have voluntarily provided environmental reports.

The law established the Council of Environment Protection, which is composed of twenty-three individuals, among the members are ten secretary-generals and three specialized and experienced individuals elected by the minister for two renewable years. The Council is the highest authority assigned to approval of the general policy of the environment protection and the specifications and standards for the environment elements and so on.

However, it should be pointed out that neither LEP nor U.A.E.'s laws specified the role of accounting or accountant, even though the responsibility of enterprises toward the environment will be expressed in terms of financial responsibility.

III. Socio-Economic Framework:

Since Accountancy provides a service function in the socio-economic and politics, therefore, it has a major bearing on accountancy (Enthoven, 1978). Several researchers (Adler,

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1983a, 1983b, 1986, Hofstede and Bond 1988, Jaeger 1986, Belkaoui and Picur, 1991, Fechner and Kilgore, 1994, Doupnik and Salter 1995) have shown culture to be a major factor affecting the structure of business and society and lately, accounting (Bloom and Naciri 1989, Gray 1988).

Hofstede (1991) defined 'culture' as the collective programming of mind, which distinguishes the members of one group or category of people, who share the same social and cultural environment, from another. In general, culture may include beliefs, values, and traditions, which are shared in a specific society at specific time. Therefore, religion, education, norms customs, and history are essential components of a culture. Similarly, the legal structure and the development of stock markets in a society affect its accounting structure (Doupnik and Salter, 1994).

Jordan and the U.A.E. are both Moslem countries. U.A.E., as other Arabian Gulf countries, is still deeply rooted in the traditional social and economic structures of the past. Tribal and extended families are still the dominant forces. Within this socioeconomic structure, entrepreneurship is the main impetus for production in almost all-economic activities.

In the area of education, in the U.A.E., there is a shortage of graduates in specific fields and still depends on graduates and skilled labor from other countries. There is one national university established in 1970s, in addition to five other universities, two of them national universities and three privates. In general there is a lack of proper and effective education and knowledge of accounting and financial subjects.

In Jordan, there are eighteen universities; eight of them national universities and the others are private universities. Graduates in different fields are in the surplus. The first national university was established in the 1960s. In general, there is a sound educational system in Jordan.

U.A.E. is an oil producer country. The oil sector provides the main source of fiscal revenue and export earnings. The banking system comprises of the central bank and forty-six banks. The stock market is already established this year.

Jordan is a non-oil producer and lacks natural resources. It depends mainly on taxation and foreign remittances from Jordanian expatriate workers to finance its expenditure. There are twenty-one banks, in addition to the central bank. Amman Financial Market (AFM) was established in 1976 and started its business in 1978. AFM's law requires the public listed companies to apply international accounting standards.

Based on the above, the characteristics, Jordan and U.A.E., are supposed to be reflected in the perceptions and involvement of decision-makers of companies in these countries.

IV. Hypotheses:

H_1: There is no difference between circumstances leading to environmental awareness of corporate decision-makers in Jordan and those in U.A.E.

H_2 There is no difference between the awareness of corporate decision-makers in Jordan and those in U.A.E.

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H_3 There is no difference between the involvements of corporate decision-makers in Jordan and those of U.A.E.

V. Methodology:

The population of this study consists of all decision-makers of U.A.E. companies and the Jordanian Shareholding Companies included in both United Arab Emirates Industrial Directory for the year 1998 and Amman Financial Market Directory for the year 1998 respectively. Both directories include companies of four sectors: industry, commerce, insurance, and finance.

A sample of decision-makers of industrial, commercial and insurance companies sectors were randomly selected. Insurance sector was specifically selected due to their impact on the environment or their financial responsibility arising from claims on pollution. A questionnaire was designed for the study. Pilot tested on four potential respondents. After the pilot testing, a revised questionnaire administered to a random sample in decision-makers in those sectors. Dyckman (1988) criticizes surveys of this nature because of two reasons.

First, the respondents may be motivated to present arguments that support their long-term goals rather than genuinely held beliefs and second, because the framing of the question may influence the response. These criticisms are recognized so the interpretation of the results of the study requires caution.

Table (1) provides information on the sampling and return rates. A five point Likert scale was employed to measure the responses for a number of key questions. Response I = least important; 5 = most important. This study analyses the perceptions of the three groups of corporate decision-makers regarding their environmental responsibility. The data are analyzed by computing the means, median, and standard deviations.

Table (1)
Type of Respondents Included in the Sample

Respondents	No. Given out	No. Received	Response Rate	Percent of Total Sample
Jordan				
Industrial Com.	45	35	77.7%	40.7%
Commercial Com.	40	32	80.0%	37.2%
Insurance Com.	25	19	76.0%	22.1%
Total	110	86	78.2%	100%
U.A.E.				
Industrial Com.*	60	43	70.0%	44.7%
Commercial Com.	40	27	67.5%	28.7%
Insurance Com.	40	25	62.5%	26.6%
Total	140	94	67.0%	100%

* More than half of these companies involved in oil industry.

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VI. Results and Analysis:

For a company to become involved in environmental protection it must first have an awareness of its environmental role. Next comes environmental involvement in order to fulfill its environmental responsibility. This must be followed by environmental reporting whereby reports are published concerning the company's environmental performance (Teoh & Thong, 1986). The final step is an environmental audit where the effectiveness of environmental performance can be evaluated. Thus environmental responsibility may be conceived as consisting of four progressive levels: environmental awareness, environmental involvement, environmental reporting, and environmental audit. The discussion of the empirical results of the study focused on the first three levels since companies in both Jordan and U.A.E. have not reached the third level.

VI.1 Environmental Awareness:

Table (2) lists circumstances leading to environmental awareness with responses being ranked in order of their importance. These circumstances were suggested by Teoh & Thong, (1986). Responses of decision makers of Jordanian companies indicated that the environmental laws are the most important factors that contributes to environmental awareness in Jordan followed by the philosophy of top management. On the other side philosophy of top management is the most important factor that leads to environmental awareness in U.A.E. followed by environmental laws. This is due to the fact that environmental laws were issued in Jordan earlier than those of U.A.E. The third important factor from the decision-makers of Jordanian companies point of view is the suggestions from Environmental Protection Society, which indicates the active role played by it. The third important factor in the U.A.E. is alignment with parent company. This is perhaps due to the fact that many of the U.A.E. companies are subsidiaries of foreign companies or have strong relationships with foreign companies.

Table (2)
Ranked responses concerning circumstances leading to awareness

Jordan*										
	Circumstances leading to awareness	1	2	3	4	5	6	7	8	Total
1	Environmental Laws	36	14	11	5	2	1	-	-	**69**
2	Suggestions from individuals	4	8	6	4	1	-	-	-	23
3	Suggestions from employees groups union	6	11	7	3	2	1	-	-	30
4	Suggestions from customers	3	4	11	-	-	-	-	-	18
5	Suggestions from Environmental Protection	23	12	9	7	4	3	-	-	**58**
6	Suggestions fom communities	4	5	4	9	3	-	-		25
7	Philosophy of top management	29	12	8	4	2	3	3	1	**62**

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8	Alignment with parent company	10	9	11	2	5	3	1	-	41
9	Others	2	-	3	-	-	-	-	-	5
U.A.E.*										
	Circumstances leading to awareness	1	2	3	4	5	6	7	8	Total
1	Environmental Laws	22	17	11	5	4	2	2	-	**63**
2	Suggestions from individuals	4	8	5	4	1	-	1	-	21
3	Suggestions from employees groups union	4	11	7	3	2	1	-	-	28
4	Suggestions from customers	3	4	11	-	2	1	-	-	21
5	Suggestions from Environmental Protection	14	9	8	5	1	4	2	-	43
6	Suggestions from communities	4	5	4	9	3	-	-		25
7	Philosophy of top management	35	11	8	6	2	1	3	1	**67**
8	Alignment with parent company	21	11	9	2	5	3	1	-	**52**
9	Others	2	3	4	-	-	-	-	-	9
*Mann-Whitney test result W= 87.5 (significant at 0.8946).										

When Mann-Whitney test was run to test the difference between two samples, the result supports the acceptance of H_1, that there is no difference between circumstances leading to awareness in Jordan and U.A.E.

In order to enable responding companies to indicate their understanding of environmental responsibility, four question listed in table (3) were asked. The mean scores for the first question are 4.45 and 4.2 in Jordan and U.A.E. respectively. This means that they agreed that the company has human and economic resources that make it capable for environmental responsibility. Responses to questions 2,3, and 4 indicate that decision- makers in both countries are supportive to extent that environment protection does not require them to close their plants. At this point their attitudes change drastically. The mean scores for answers of question 4 below are 2.8 and 2.1 in Jordan and U.A.E. respectively.

The result of Mann-Whitney test support H_2 that there is no difference between the two samples in terms of corporate decision-makers awareness of environmental protection.

VI. 2 Environmental Involvement

Table (4) shows the percentage of environmental involvement of companies under consideration. Thirty-five percent of Jordanian companies and thirty-seven percent of U.A.E. companies have environmental units. It is worth noting that most industrial companies in both countries have environmental units while other companies do not. With regard to financial aspect, approximately half of the companies in both countries set aside annually

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Table (3)
Decision-Makers Perceptions of Environmental Protection

Questions	Jordan			U.A.E.			Mann-Whitney test. W= 21.0
	Mean	S.D .	Median	Mean	S.D .	Median	
1. The company has human and economic resources that make it capable for environmental responsibility	4.45	.651	4	4.20	1.260	4	Significant at 0.4705
2. The company must safely dispose of industrial waste.	4.42	1.019	4	4.12	.972	4	
3. The company must safely dispose of industrial waste in spite of its losses.	3.92	1.018	4	3.70	1.095	4	
4- The company must safely dispose of industrial waste even if it has to shut down.	2.80	1.190	3	2.10	1.135	2	

amount of money for environment protection. Less than that number has programs and procedures to reduce natural resources consumption. Perhaps company size has a significant impact on that.

Table (4)
Degree of Environmental Involvement

Questions	Jordan		U.A.E.		Mann-Whitney test
	Yes %	No %	Yes %	No %	
1. Is there an environmental unit in your company?	35%	65%	37%	63%	W= 18.5
2. Does your company set aside annual amount for environmental protection?	49%	51%	50%	50%	Significant at 1.00*
3. Does your company have programs and procedures to reduce natural resources consumption?	45%	55%	41%	59%	
4. Does your company take into consideration the environmental attributes of machinery when its acquired	41%	59%	38%	62%	

* Cannot be rejected at alpha -0.05

The fourth question is only applied to industrial companies. It is interesting to note that almost all industrial companies in Jordan take into consideration environmental attributes when acquiring machinery. A majority of the U.A.E. companies do that. Perhaps the timing of issuance of environmental laws has significant impact on that.

Based on the result of Mann-Whitney test, H_3 that there is no difference in environmental involvement of in both countries is accepted.

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VI.3 Environmental Reporting

The annual reports of companies under consideration were surveyed to examine the extent of environmental disclosure. Only nine and eleven companies in Jordan and U.A.E. respectively issued environmental reports. The Jordanian companies issued such information as part of their annual financial report. The size of such information varies from nine pages to a few paragraphs. In U.A.E., four companies issued separate reports while the others issued then as a part of their annual financial reports. It is interesting to note that the line of business of these companies is oil industry. The size of such information varies from four pages to a few lines. It is worth noting to note that all these information is mainly descriptive.

VII. Conclusion:

Developed countries have achieved a lot of progress in the field of environment accounting. Developing countries such as Jordan and U.A.E. are still in their early stages. Corporate decision-makers in both countries are aware of the importance of environment protection. Environmental laws, philosophy of top management, suggestions from environmental protection society, and alignment with parent company are the main factors that lead to the awareness. Their awareness of environmental issue should be reflected on their involvement and reporting, which was less than expected and less than ambitious. They are not willing to shut down their plants if environmental protection necessitates that.

In addition, few companies in both countries report their environmental performance. Therefore, governmental agencies should direct them to attend environmental workshops, conferences, lectures, and alike in order to deepen their understanding and to encourage them to report their environmental performance.

As with most research, this study has some limitations, Companies studied in this paper were from one region. A logical extension would be to examine companies from other developing countries. These countries have perhaps different circumstances and different environmental laws. Moreover, this study focused on general environmental issues, specific issues such as water, air, soil pollutions, waste and recycling maybe considered as subjects for other studies.

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