ACCOUNTANTS AND ENVIRONMENTAL ACCOUNTING AND REPORTING IN MALAYSIA: AN AGENT FOR SUSTAINABILITY PRACTICE?

HASLINDA YUSOFF¹, RADIAH OTHMAN²* AND NORMAHIRAN YATIM¹

¹Accounting Research Institute & Faculty of Accountancy, Universiti Teknologi MARA (UiTM) Malaysia, 40450 Shah Alam, Selangor, Malaysia. ²School of Accountancy, Massey University, Private Bag 11222, Palmerston North 4442, New Zealand.

*Corresponding author: r.othman@massey.ac.nz

Abstract: The purpose of this paper is to investigate the potential role of accountants and their contribution towards a successful implementation of environmental reporting practice i.e. a reporting practice that add to the greater good of the country's sustainable development. The paper employs a mixed method approach through questionnaire surveys and personal interviews of corporate accountants in selected publicly listed companies in Malaysia. The main findings showed that there are two distinct roles of accountants in Malaysia pertaining to environmental accounting and reporting. Many of the accountants signal reactive role towards business-environmental accounting and reporting practices. The paper also found that accountants in Malaysia failed to recognise themselves as agents of sustainable development in their organizations. Accountants' role towards successful implementation of environmental reporting in Malaysia is still limited and unclear. This study contributes to the accounting research literature on two dimensions. First, it explores and gathers understanding about current attitudes of accountants from organizational perspective. Second, offers ideas and directions for greater involvement amongst the Malaysian accountants in environmental accounting and reporting, hence undertake the role as agents to internalise corporate sustainable practices.

KEYWORDS: Environmental accounting, environmental reporting, accountants, role, Malaysia, sustainability

Introduction

Environmental accounting and reporting are going to gain importance in the years ahead and corporations would become increasingly accountable for the impact of their businesses on the environment. This is evidenced by ongoing discussions between the governments and businesses globally. The increase in global environmental problems alongside the introduction of the *Brundtland Report* in 1987 has influenced business corporations to engage in environmental accounting and reporting practices.

Not many has realised that the interest and concern for accountants' role for social and environmental matters had begun as early as in the 1970s, where for instance, according to Francis (1973), accountants have limited capability in evaluating and facilitating the resolution

of social problems. Apart from being the prime providers of financial information about corporate performance, accountants nowadays have greater business-social role. The most influential calls for a change in the accountants' role come from accounting bodies including the International Federation of Accountants (IFAC), Associations of Certified Chartered Accountants (ACCA) and Chartered Institute of Management Accountants (CIMA). Over the years, calls for a new accounting and reporting model have intensified (see Gray, Owen & Maunders, 1987; Gray, 1992; 2001; Gray, Bebbington & Walden, 1993; Gray, Owen & Adams, 1996; Gray & Bebbington, 2001). The new model expected pertains to one that move away from a traditional financial system to a system that encourages business interrelationships with the natural environment and society at large, while highlighting the importance of accountability

and morality. Such an expectation signals a need for accountants to broaden their horizons beyond financial accounting and reporting system and practice.

Currently, in terms of reporting, accountants have a wide opportunity to lead in the development and establishment of sustainability reporting. With their knowledge, skills and experience, accountants are able to play a vital role in the development of the sustainable development agenda as public agencies take up sustainability reporting. One visible development in the role of accountants is reflected in the International Financial Reporting Standards (IFRS 137): Contingent Liability Reporting and Provisions for Future Environmental Costs; in which environmental issues are operationalized in accounting through the inclusion of environmental information in the financial reporting. With such a development in the accounting and reporting framework, accountants can no longer be reluctant to change and accept the fact that their roles are well-beyond 'bean counters'. As the Head of Professional Accountants in Business (PAIB) Service Delivery at the International Federation of Accountants (IFAC), Stathis Gould mentioned that accountants have an essential role ahead in establishing the business case for sustainability. In relation to environmental he further added that:

Accountants can lead the way in developing a reporting and disclosure strategy that will yield high-quality reports that provide a more complete picture of an organisation's performance. This will involve reflecting sustainability impacts in financial statements, such as environmental impacts on assets, liabilities, income and expenditure.

(Gould, 2011, p. 19 - 20)

Often, accountants are deemed to involve highly in the conventional accounting areas including budgeting, costing and measurement. Consistently, empirical evidence shows a low level of involvement of accountants in environmental accounting practices (e.g. Bebbington *et al.*, 1994; Davey & Coombes,

1996; Perera, 2006). This finding put forward some insights about the need for improved approaches to assist accountants in accounting and public reporting for the environment (see Jane & Prem, 1999). Despite the widespread pressures and expectation on accountants and their engagement with environmental matters in business, research work on accountants and environmental accounting and reporting is rather limited. More particularly, studies exploring the attitudes and perceptions of accounting personnel have yet to provide clear solution on the integration of environmental matters into the conventional accounting and reporting system. From such an understanding, we may be better positioned to foster a greater recognition of the role that accountants could play in this process.

Local research studies concluded that social and environmental reporting practices in Malaysia are minimal, and that the disclosures of environmental information are low, both in quality and quantity (e.g. Thompson & Zakaria, 2004; Yusoff, Lehman & Mohd Nasir, 2006; Yusoff & Lehman, 2008). The Malaysian findings generally signal the embryonic level of environmental reporting practice in Malaysia. Such a condition put forward a need to understand the potential role of accountants for greater implementation of environmental accounting and reporting in the country. Hence, a focus on Malaysia will contribute to the development of environmental accounting and reporting for a developing economy.

This study thus contributes to the accounting research literature on two dimensions. First, it explores and gathers understanding about current attitudes of accountants from organizational perspective. Second, offers ideas and directions for greater involvement amongst the Malaysian accountants in environmental accounting and reporting, hence undertake the role as agents to internalise corporate sustainable practices.

Literature Review

Environmental accounting and reporting have grown from being a subset of traditional financial accounting to functioning as part

of public communications; towards greater "organizational transparency, stakeholder accountability and participative democracy" (Owen, Gray & Bebington, 1997, p. 195). People are concern about the accountability roles of businesses, whether they are doing what they are supposed to and that the matters of serious concern have been well communicated. These arguments imply that environmental accounting and reporting has a role in facilitating the discharge of a corporation's accountability and at the same time increases environmental transparency. Along with this social expectation on business setting, accountants, the backbone of business accounting and reporting system and practice can no longer be the living fossils in the back-office. This is highlighted in various definitions of environmental accounting and environmental reporting such as below.

'Environmental reporting' according to Schaltegger and Burritt (2000) refers to "data gathered in accounting systems, recognized, classified, measured, calculated or estimated, recorded, verified and then disclosed" (p. 272). Gray *et al.* (1996) provide a comprehensive definition of corporate social and environmental reporting:

[the] process of communicating the social and environmental effects of organisations' economic actions to particular interest groups within society and to society at large. As such, it involves extending the accountability of organizations (particularly companies), beyond the traditional role of providing a financial account to owners of capital, in particular, shareholders. Such an extension is predicated upon the assumption that companies do have wider responsibilities than simply to make money for their shareholders (p. 3).

The literature indicates accountants' attitude towards accounting and reporting for the environment is uncertain. Nevertheless, in an attempt to gain better understanding of the accountants' role in relation to business-environmental and reporting practices, Gray *et*

al. (1993) and Bebbington et al. (1994) have categorised their role into three:

- 1. Conventional role: the accountant is essentially passive and works within the conventional accounting rules and procedures (i.e. reactive);
- New issues: the accountant recognises the new accounting areas but still works in a conventional role; and
- New role: the accountant explores new accounting issues as part of a new way of conceiving and controlling organisations (i.e. proactive).

There have been numerous studies that have examined the role of the accountant from a private sector perspective in environmental accounting (see, for example, Bebbington et al. 1994, Gray et al. 1995, Deegan et al. 1995, Wilmshurst & Frost 2001) with findings generally indicating that accountants are not being involved as they could be in the environmental accounting practices of their respective organizations. Many finance and management officers in Western countries also view their responsibility for advocating environmental agenda as limited (e.g. Gray et al., 1993; Bebbington et al., 1994; Deegan et al., 1995; Frost & Wilmshurst, 1996; Williams, Wilmhurst & Clift, 2010). Deegan et al. (1995) mentioned that accountants in Australia provide little support for any efforts toward establishing accounting standard that integrates social and environmental issues. The accountants also failed to view themselves as the agent of change towards social and environmental accounting and reporting.

The study by Williams *et al.* (2010) discovered that accountants have been found to be mostly involved in areas related to provision of financial information, financial costing and advisory role. The least indicated roles of accountants found in the study relate to being key-decision maker in sustainability reporting process and being part of the sustainability reporting team. The findings indicate that accountants are still viewed in their traditional role as financial accountants in some local

authorities in Australia. Interviews conducted by Lodhia (2003) revealed that corporate accountants fail to see a role for them to get involved in environmental matters and that they are reluctant to incorporate environmental issues into accounting reports. In particular, the accountants strongly believe that environmental issues are matters best handled by the management. In comparison, a study on companies in UK and Germany by Zvezdov, Schaltegger & Bennett (2010) revealed that there is an existence of accountants' involvement and support in sustainability-related issues.

In Asia, a number of research studies had explored the role of accountants in accounting and reporting for the environment. For instance, through questionnaire surveys of corporate and professional accountants, Jaggi and Zhoa (1996) examined the attitudes of accountants in Hong Kong towards environmental performance and reporting. Their study indicated that 30% of the corporate accountants do not perceive environmental reporting as part of their responsibility, while 59% of professional accountants mention that their involvement with environmental issues is limited to assisting clients in matters such as the recognition of potential liabilities, estimation of costs for environmentrelated activities, evaluation of clean-up costs, and development of measurement techniques and reporting procedures for environmental accounting. Within the local context, over the years, some progression has been identified pertaining to accountants' perceived role to account and report for the environment. Based on a questionnaire survey of 300 local accountants registered with the Malaysian Institute of Accountants (MIA), Nik Ahmad, Sulaiman & Shaari (2005) observed that local accountants acknowledge their responsibility in assisting corporate environment-related matters. The study however discovered that accountants do not view themselves as the primary change agent for environmental accounting and reporting.

In another study, Zulkifli (2005) examined the perceptions of Malaysian accounting practitioners and accountants concerning their roles toward social and environmental responsibilities. Similarly, Zulkifli found that Malaysian accountants are aware and supportive of social and environmental matters nevertheless their actual involvement is minimal (see also Shaari, Ahmad & Sulaiman, 2004; Nik Ahmad et al., 2005). Recently, a Malaysian study by Mohd Aini & Sayce (2010) demonstrated similar direction of local sustainability agenda in which, the initiative is predominantly philanthropic rather than environmental in nature. Knowledge gathered about the attitudes and role of accountants towards environmental accounting and reporting has the potential to shed light on the effective ways to inculcate business sustainability practice. Consequently, the professional bodies may also consider spearheading their activities in re-training and re-educating their members on sustainable development practices.

Research Methodology

This study applied a mixed-method approach, which comprised of questionnaire survey and personal interview. First, a postal questionnaire survey was performed to explore the perceptions of accountants in Malaysia. The survey sought to answer a number of questions: have environmental and sustainability issues been given high importance? Are accountants and geared up for environmental and sustainability matters? The motive for involvement of accountants in environmental accounting and reporting meant to improve the environment, or simply to boost the corporate image? The questionnaire survey employs a closed question approach to reduce subjectivity and assist statistical analysis and discourage incomplete and vague answers (Fowler, 1993).

A pilot survey was carried out to pretest the survey instrument for its comprehension, clarity, ambiguity and difficulty (Punch, 2003). Draft copies of questionnaires were sent to 15 selected companies—the top 10 and bottom 5 of the top 50 publicly listed companies to attain feedback about similar strata from the two populations. Feedbacks obtained from the pilot survey were used to improve the questionnaire set. Selected

Corporate accountants were part of the sample for administering the questionnaire. Being the most appropriate accounting personnel with control over corporate accounting and reporting systems and were, therefore, accountants are in a position to comment on the reasons for environmental accounting and reporting (Freedman & Stagliano, 1992; Wilmshurst & Frost, 2000). Moreover, accountants have relevant background and in-depth knowledge of the overall corporate information systems including the production of corporate annual reports. The survey applies a double sampling method (i.e. stratified sampling) on the basis of the homogeneous nature of the sectors into which the publicly listed companies in Bursa Malaysia are categorised. Simple random sampling was also used to identify the sample size for each industry sector. Refer Table 1 for the sampling details.

A qualitative technique via semi-structured interview was also used. The use of a personal interview technique is useful in uncovering issues studied and understanding "what lies behind any phenomenon about which little

Table 1: Actual Number of Malaysian Companies and Sample Size Selected.

	Sector	Actual	Sample
1	Consumer Product	133	92
2	Industrial Product	285	197
3	Constructions	64	59
4	Trading/Services	186	130
5	Finance	58	41
6	Hotels	5	-
7	Properties	102	72
8	Plantations	43	37
9	Mining	1	1
10	Infrastructures	8	8
11	Technology	22	22
	TOTAL:	907	659

is yet known" and helps "gain novel and fresh slants on things about which quite a bit is already known" (Strauss & Corbin, 1990, p. 19). It is an approach deemed appropriate for obtaining in-depth information about accounting and reporting for the environment, in particular in getting the story behind a person's experience (Mutchnick & Berg, 1996), in addition to being a common approach for qualitative research (Bloch, 1996, quoted in Goulding, 2005).

Table 2: Sample of Companies for Interview Survey.

Indi	ıstry	Core	Positions
Nature	Type	Code/interviewee	
Diversified	Trading & services	M-TS1	Financial Controller
Utility	Trading & services	M-TS2	Manager-Finance &
			Accounts
Plantation	Plantation	M-P1	Chief Financial Officer
Pharmaceutical	Trading & services	M-TS3	Chief Financial Officer
Food & beverage	Consumer product	M-CP1	Head of Accounting
			Department
Apparel &	Consumer product	M-CP2	Executive Director
Textile			
Oil & gas	Industrial product	M-IP1	General Manager-
			Finance
Manufacturing	Trading & services	M-TS4	Group Finance Manager
Construction	Trading & services	M-TS5	Head of Accounting
			Department
Finance	Finance	M-F1	General Manager-
			Finance
Energy	Industrial product	M-IP2	Head of Financial
			Reporting & Budget

Table 3: Role of Accountants towards Environmental Accounting and Reporting: Comparisons with Other Studies.

Role	Curre study	nt	Nik Al et al. (2005)	hmad	McGo et al. (2000)		Bebbin et al. (_
	Malaysia		Malaysia		Australia		The U.K.	
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D
Accountants' roles are solely on	2.85	1.2	-	-	2.43	na	1.8	1.1
Innovate and develop a new financial	3.57	.9	-	-	-	na	4.6	.7
information system								
Be involved in the preparation of	3.28	.9	3.4	1.1	3.25	na	3.1	1.0
environmental information	• • •							
Agents to promote social and	2.87	.9	-	-	-	na	=	-
It is a subject to which I have not yet	2.87	1.1	2.8	1.2	2.98	na	3.1	1.3
given much thought								
Current job scope is already	3.43	1.0	2.6	1.1	2.34	na	2.4	1.1
The primary initiator for	2.35	.9	2.6	1.1	2.54	na	2.7	1.1
Will only react upon mandatory	3.38	1.1	-	_	2.75	na	3.4	1.3
Do not have the expertise on	3.86	1.0	-	-	-	na	-	-
It should be dealt by the	4.04	1.1	-	-	-	na	-	-
environmental managers/engineers								
N (cases)	141		45		62		181	

^{1 =} strongly disagree; 2 = disagree; 3 = moderate; 4 = agree; 5 = strongly agree

na - not available

Thirty Malaysian companies were randomly selected for further interviews and their accountants or financial personnel with similar job responsibilities were targeted as potential interviewees. Of the total companies contacted, 11 corporate accountants agreed to participate in the interviews. They held positions as Chief Financial Officer, Chief Accountant, Financial Controller, or Group Finance Manager (see Table 2 above).

The data collection involved two main stages: (1) contacting potential participants for the interview and (2) conducting interviews with participants who agreed to be interviewed. Each interview session ranged from 45 minutes to one and 1 1/2 hours in duration. The interviews were recorded (where agreed) and written notes were made.

Results and Discussion

Of the total questionnaires sent, 141 accountants had responded to the questionnaire survey (21.4%). Table 3 is a meta-analysis of the accountants' attitudes towards their role in environmental accounting and reporting and provides a comparison between the results of this study and of those obtained from prevailing literature: such as Bebbington *et al.* (1994) in the U.K., McGowan *et al.* (2000) in Australia, and Nik Ahmad *et al.* (2005) in Malaysia.

Table 3 also shows that Malaysian accountants had strong beliefs that they are not in a position to initiate any environmental undertakings. They marginally disagree that they have the ability to promote any social and environmental change (mean score of 2.87). Such a result of marked disinclination is also relatively similar to the mean response of 2.64

^{*} Deegan et al. (1995) - mean score: 2.64; standard deviation: 1.18

(S.D. 1.18) obtained in Deegan *et al.*'s (1995) study. In general, the findings suggest that corporate accountants across countries have similar attitudes toward their involvement in environmental accounting and reporting.

It is also interesting to note that the respondents indicated the challenging nature of their daily jobs (mean score of 3.43). This, when compared to previous studies (see Table 3), suggests that the accounting profession generally has experienced change and that the accountants are currently experiencing a stressful working situation was due to the adoption of international accounting standards, increasing demands from new and rapid changes of accounting standards, or the increasing managerial demands of respective companies. The Malaysian accountants strongly indicated that environmental managers engineers are the most suitable persons to manage environmental issues (mean score of 4.04). Accordingly, Table 3 also shows that the accountants are lack of expertise in accounting and reporting for the environment (mean score of 3.86). This finding is consistent with the rather low response relating to the accountants who did not perceive themselves as an agent to promote social and environmental change or as a primary initiator of environmental accounting and reporting (mean scores: 2.87 and 2.35 respectively).

Overall, the analysis suggests that over the years and between three different countries, accountants perceived that they have a moderate role in accounting and reporting for the environment, and are neither the 'main player' nor the *agent of social change* in their company (see also, Lodhia, 2003).

Classification of Corporate Accountants' Role towards Environmental Accounting and Reporting

In this study, factor analysis has been conducted to examine some form of relationship patterns among the variables in the survey (see Tabachnick & Fidell, 2001). In particular, principal factor analysis (PFA) was used on the basis that it is the suitable method to detect the structure of variables. Factors were extracted via the oblique rotation method — Direct Oblimin and Kaiser Normalization process (KMO), which was guided by two common statistical criteria: (1) Kaiser criterion (Kaiser, 1960), and (2) scree test (Cattell, 1966)¹.

Reliability test has been conducted; in which a common measure of scale reliability called Cronbach's alpha coefficient, α was relied upon. The common acceptable value of Cronbach's α has also been argued to range between 0.7 and 0.8². Table 4 below provides the factor loadings of the data and the results are presented according to variable loads highly related to a factor. Based on the factor loadings, the role of Malaysian accountants towards environmental accounting and reporting are categorised into two (Gray *et al.*, 1993 and Bebbington *et al.*, 1994):

- Factor 1: The reactive type; the factor loadings that describe the accountants' reluctance to embrace environmental accounting and reporting.
- Factor 2: The proactive type; consisting of statements that expose accountants' proactive attitudes and beliefs regarding the environmental accounting and reporting process.

Kaiser (1960) recommends retaining all factors with Eigenvalues, also called latent root, that are greater than 1.0. A scree test is a graphical representation of Eigenvalues against associated factors in a decreasing order of magnitude, which describes the relative importance of each of the factor examined (Field, 2005). Both the Kaiser criterion and the scree test, based on Eigenvalues, measure the proportion of variance among a number of factors. An Eigenvalue measures the variance of the variables accounted for by a particular factor.

² A lower α is, however, possible for social science data (Kline, 1999), in addition, Hair et al. (1998) recognise a lower limit of acceptability within the range 0.6 and 0.7.

Table 4: Rotated Factor Loadings for the Type of Role of Accountants.

Perceived Role	Factor 1	Factor 2
Will only react upon mandatory regulation	.649	
Current job scope is already demanding	.646	
It should be dealt by the environmental managers/engineers	.639	
Do not have the expertise on environmental issues	.634	022
Agents to promote social and environmental change		.832
Be involved in the preparation of environmental information		.670
Eigenvalue	1.972	1.594
Percent of variance (%)	37.485	12.587
Total variance $(\%) = 50.071$		
Cronbach's a	.753	.732

Extraction Method: PFA

Rotation Method: Oblimin with Kaiser Normalization

The scores for each variable under the two factors ranged between 0.634 and 0.832, with Factor 1 explaining 37.485% of the total variance and Factor 2 explaining 12.587%. Cronbach's Alpha coefficient indicated the reliability of the scales for each factor, and in this case, both factors met the reliability level of a >0.7 (Factor 1: 0.753 and Factor 2: 0.732). This finding of the factor loadings data suggest that some accountants perceived are hostile towards change and are complacent with their traditional financial role hence they are deemed to be reactive towards environmental accounting and reporting. Nevertheless, others are receptive to the 'new' corporate environmental accounting and reporting practice; this, which implies proactive attitudes towards environmental accounting and reporting. Overall, the two identified role are consistent with the findings of previous literature (i.e. Frost & Wilmshurst, 1996; Jaggi & Zhoa, 1996; Bebbington et al, 1998; Lodhia, 2003; Nik Ahmad et al, 2005).

Accountants' proactive role found in this study, are visible in terms of support given for environmental and social change in their organisation. These accountants viewed themselves as one of the key personnel to proactively involve in business environmental accounting and reporting activities. However, it is also established in this study that accountants' engagement with environmental accounting and reporting is triggered upon directives and imposition of mandatory policy and regulation. For such group of accountants, they will only

play a role and be involved in environmental matters when instructed by top management.

Rationalising Accountants' Role towards Corporate Sustainability Practices

Environmental accounting can be seen to be a topical issue from a variety of perspectives but to be useful in measuring and reporting upon the impact of the actions of the firm it must necessarily be absorbed into the repertoire of accounting practitioners and into the systems of organizational control and reporting.

(Crowther, 2002, p. 61)

A conventional accounting stance deems accountants as a guardian and financial information provider. Day-to-day accounting tasks of an accountant include identifying operating costs, preparing accounts and statements as well as providing advisory services. As urged by Luis Perera in PAIB (2006):

There is a need to bridge the unintegrated worlds of the financial and the environmental/sustainability figures...
The accountants should be the suppliers of trusted information, comprising not only financial information, but also non-financial information related to data, as well as to business systems, processes and behaviors.

(Luis Perera, Partner in charge of Sustainable Business Solutions,

PricewaterhouseCoopers, Chile – an interview; Information Paper, PAIB, 2006, pp. 24-25)

Perera's comment above reflects the idea that environmental and sustainability matters need to be a key agenda of the accounting profession. Accountants therefore should no longer see themselves as 'bean counters' or 'number crunchers', and need to progress with 'new' areas including environmental accounting and reporting.

Interview feedbacks in this study have been used to interpret and gain better insights about the attitude and role of corporate accountants towards environmental accounting and reporting in Malaysia. In agreement with the questionnaires survey, Malaysian accountants interviewed showed a mixed attitude towards environmental accounting and reporting, and that some signifies reactive role while others perceived proactive role.

Reactive Role

One accountant voiced out his scepticism on the integration of environmental matters with the current accounting and reporting system hence reactive, as he said:

...as head of the accounting, my role is to prepare the financial statement, so basically I'm very much focused on figures and the normal balance sheet...Environmental reporting? We maintain the traditional accounting system until the country starts looking at it seriously and regulation being imposed and we will remain as it is. What's our contribution beyond our scope of work?how a very confined and focused job can incorporate social environmental and contribution? (M-TS5.Head of Accounting Department).

This interview feedback justifies some of the reasons behind *minimal direct involvement* of accountants in corporate environmental accounting and reporting system and practice hence no worthy reason for them to engage with environmental accounting and reporting. Among the reasons were they were not aware if they could contribute coupled with the absence of clear guidelines and available benchmarks, and that current organisational setting did not place environmental matters under the authority of the accounting department. This interview finding is consistent with the findings in prevailing accounting literature (e.g. Bebbington et al., 1994; Deegan et al., 1995; McGowan et al., 2000; Lodhia, 2003); in which, accountants portray reactive role towards accounting and reporting for the environment.

In terms of the complexity of current business environment and *regulatory pressures*, one accountant commented:

As an accountant and being in a business, it's not easy to juggle both because things are getting more and more complicated and complex. Businesses are getting more complex.... and then these regulations [IFRS] coming up. It is quite difficult to manage time and responsibilities. It is very difficult and time- consuming... preparing the accounts, help manage the business. It is very challenging! I'm not saying that I'm reluctant or negative towards this [environmental accounting and reporting]; the issue was whether I have the resources to do it or not (M-IP2, Head of Financial Reporting).

Some preferred to wait and observe as another accountant commented:

...any new regulations, we will eventually get to know about them. The same goes to environmental accounting and reporting. When the time comes, only then we will be ready (M-TS4, Group Finance Manager).

The reactive accountants further described the reasons behind their hostile attitudes for accounting and reporting of the environment. One of the obvious reasons highlighted was the time factor and absence of sufficient knowledge:

...in our case (nature of the business), it will be very difficult and time consuming to report every aspects such as type of pesticides, the fertilizers that we use for the plantations...and these will be very costly. You need to have a special team to do all this. They need to be trained to identify the required environmental information.

It is definitely very difficult. How do you quantify zero burning technique? What about quantifying the environmental systems, the methods to reduce rats and snakes in the plantation areas? These are part and parcel of the company's overall practice, so it is quite difficult to distinguish between them (M-P1, Chief Financial Officer).

Another interviewee concerned about the time to be spent,

...Time is a problem to prepare these [environmental] reports, and we don't have the financial capacity at this stage. Every penny is important...if we were making quite a good profit then it would be something that they considered, but at the moment I'd say no! (M-IP1, General Manager-Finance).

In terms of disclosures, one of the accountants made comments on the intended disclosures. He said,

"...There's no point reporting the same thing, the same words every year in the annual report. But I do know some companies make the same disclosures every year in their annual report. What's the point? Disclosures should cover on improvements such as how the company treat the wastage, the emission level in the input, process and output stages of operations (M-TS1, Financial Controller).

This was supported by a Head of Financial Reporting and Budget,

It [environmental accounting and reporting] is quite subjective in a way. It depends on your interpretation. Like us, a component of that is to control the emission level. Not only that, it starts from coals that we purchase and depends on the quality of coals that we purchase. So how do you account for that?...I'm not saying it is not important...but how do you account for that, how do you make it objective? (M-TS2, Head of Financial Reporting and Budget).

Another obvious reason was the *cost* factor. Cost has always been an essential aspect for any corporation in line with the aim for maximizing business profit. According to a number of accountants interviewed, accounting and reporting for the environment greatly demands not only time but money. This would increase and add to their burden.

Also, the *subjectivity* of the environmental subject itself has posed a challenge to accounting and reporting. For instance, some interviewed accountant raised the issue of measurement as a predicament for company's involvement in environmental accounting and reporting:

It [environmental accounting and reporting] is quite subjective in a way. It depends on your interpretation. Like us, a component of that is to control the emission level. Not only that, it starts from coals that we purchase and depends on the quality of coals that we purchase. So how do you account for that?...I'm not saying it is not important...but how do you account for that, how do you make it objective? (M-TS2, Head of Financial Reporting and Budget).

It is definitely very difficult. How do you quantify zero burning technique? What about quantifying the environmental systems, the methods to reduce rats and snakes in the plantation areas? These are part and parcel of the company's

practice, so it is quite difficult to separate them (M-P1, Chief Financial Officer).

Another major difficulty in the reporting process according to the accountants relate to the *unavailability of environmental data*. Some of the Malaysian accountants interviewed argued that there was no information significant enough to be reported.

Generally, the above comments imply that *reactive* accountants signal their unwillingness to support and be part of the 'new' accounting and reporting initiatives due to various reasons inhibiting their active involvement. One accountant proposed a mandatory approach as the best and appropriate way to encourage business engagement with environmental accounting and reporting:

... for environmental reporting, it must be the regulation, the mandatory requirement, then only itwill work...Companies will engage if the [environmental] practice offers financial benefits to them. So it goes back again to the materiality issue, i.e. making sure the marginal gain that they can get out of it. But in terms of environmental reporting, for me, a voluntary approach will not work. The ultimate solution is regulation. Once there is a law to report environmental information, then people will start doing it (M-TS1, Financial Controller).

On mandatory issue, one accountant opposed to the idea of making the reporting as mandatory.

I wouldn't say mandatory, because it means that I have to do it, which I don't really want to. But if voluntary, I wouldn't do it. So, if you want companies to do it, then make it mandatory. Like it or not they [accountants] will have to comply...but if possible, don't make it mandatory (M-IP2, Head of Financial Reporting and Budget).

Proactive Role

Not all accountants were negative as some accountants signal their proactive role towards accounting and reporting for the environment. They acknowledged that environment is an evolving subject, and that there is a need for their engagement with environmental accounting and reporting matters. In relation to that, below is an excerpt from an interview:

At the end of the day, we will have to do the costing in order for us to be able to justify why we spend our money on environmental matters, activities and certification. It's not only money, the resources and man hours. So why do this kind of things are initiated, other than regulatory requirements? I think accountants definitely will need to start thinking about how to quantify it...(M-TS3, Chief Financial Officer).

Highlighted here is another accountants' positive change of view on environmental matters that goes beyond the traditional duty of a financial personnel:

But now with you talking to me, maybe I need to look at it. You make me think of what I can do more (M-TS5, Head of Accounting Department).

In sum, two obvious attitudes have been identified from the accountants surveyed: (a) reactive and traditional accounting attitudes and (b) proactive and perhaps a more socially aware attitude. These comments from the semi-structured interviews support the findings of the questionnaire survey earlier conducted regarding the types of accountants and their perceived role in accounting and reporting for the environment. Nevertheless, from the interview feedbacks, the accountants in Malaysia largely signalled negative attitude hence *reactive* towards environmental accounting and reporting.

Conclusion

The fundamental role of an accountant is that of the guardian of financial information i.e. a steward and compliance officer of a company. Nevertheless, the fast-moving market and global demands and pressures had caused the role of accountants to evolve; this, which include updating themselves with emerging accounting standards, having wider job scope (e.g. strategic planning, financial planning, and risk management), and, in particular, accounting and reporting for the environment.

The findings from the questionnaire survey indicated that accountants in Malaysia moderately view themselves as the major or key personnel to engage in corporate environmental accounting and reporting process. In general the accountants had mentioned that environmental engineers/managers are most appropriate person to take charge. Additional examination through factor analysis identified that the role of Malaysian accountants pertaining to environmental accounting and reporting currently comprised of proactive and reactive role. The interview feedbacks gathered further provide insights to the two roles of accountants identified. Some accountants are quite negative especially towards the increasing pressure for the accountants' involvement in environmental accounting and reporting hence their role was reactive. For some other proactive accountants, business environmental matters are viewed as part of the regular corporate activities, and that accounting and reporting environmental information is not problematic. What is apparent is the ambiguity that surrounds the degree of an accountant's involvement in environmental reporting undertakings – hence a need exists for the accounting profession to take a lead in these matters and set the scene.

The findings of this study implied that full engagement of accountants in Malaysia towards a successful implementation of environmental accounting and reporting hence achieving the sustainability objectives of their company is still a long journey. Individual company as well as the relevant accounting and business-related

bodies should strategize ways for accountants to recognise and understand their potential role in contributing to managing of company's sustainable issues.

What is clear from this study is that unless comprehensive innovative. practical and Malaysian systems are developed to enable effective business practices, environmental accounting and reporting will remain fragile and vague to tackle and manage both local and global sustainability concerns. This study recommends that a sturdy business-environment-society relationship from the accounting and reporting perspective could be achievable only through reform of the accounting profession itself. In order for accountants to be able to internalise sustainability practices, the profession must first acknowledge that human value for the natural environment is crucial for the development of an accounting and reporting system that works under the notion of sustainability. Hence, there is a need for the involvement of accountants in corporate decision-making process, together with a sense of self-appreciation and care for the natural environment.

As Purcel (2011) put it,

...it is doubtful that the accounting profession can just sit back and allow developments to take place around it. Such a passive approach would be foolhardy as integrated reporting has the potential, according to its advocates, to be part of a significant reshaping of the way in which economic wealth is generated, addressing in particular the performance of companies and how markets operate (para 4).

Acknowledgements

We would like to thank the participants of International Conference on Governance and Accountability (ICGA) 2010, Indonesia, for their helpful comments. Special thanks to the journal reviewers for their constructive comments and suggestions.

References

- Bebbington, J., Gray, R., Thomson, I., and Walters, D. (1994). Accountants' Attitudes and Environmentally Sensitive Accounting. *Accounting and Business Research*, 24(94): 109-120.
- Berg, B. L. (2004). *Qualitative Research Methods for the Social Sciences* (5th ed.). MA: Pearson/ Ally and Bacon, Boston.
- Bloch, C. (1996). Emotions and discourse. *Human Studies*,16(3): 323-41.
- Brundtland Report. (1987). Our Common Future, Report of the World Commission on Environment and Development. New York: Oxford University Press.
- Cattell, R. B. (1966). The Scree Test for the Number of Factors. *Multivariate Behavioural Research*, 1: 245-276.
- Cavana, R. Y., Delahaye, B. L., and Sekaran, U. (2001). *Applied Business Research: Qualitative and Quantitative Method.* Milton, Qlds: John Wiley & Sons, Australia.
- Chanstain, C. E. (1973). Environmental Accounting. *Accountancy*, September: 10-13.
- Crowther, D. (2002). A Social Critique of Corporate Reporting: A Semiotic Analysis of Corporate Financial and Environmental Reporting. Ashgate, Hampshire.
- Davey, H. And Coombes, R. (1996). A Review of Accountant and Corporate Involvement in Environmental Accounting in New Zealand. *Asian Review of Accounting*, 4(2): 100-124.
- Deegan, C., Geddes, S., and Staunton, J. (1995). A Survey of Australian Accountants' Attitudes on Environmental Reporting. Accounting Forum, 19(2/3): 143-162.
- Dillman, D. A. (2000). *Mail and Internet Surveys: The Tailored Design Method* (2nd ed.). New York: John Wiley & Sons.
- Field, A. P. (2005). *Discovering Statistics using SPSS.* (2nd ed.), London: Sage.
- Fowler, F. J. J. (1993). *Survey Research Methods* (2nd ed. Vol. One). California: SAGE Publications.

- Francis, M. E. (1973). Accounting and the Evaluation of Social Programs: A Critical Comment. *The Accounting Review*, 45-257.
- Freedman, M., and Stagliano, A. J. (1992). European Unification, Accounting Harmonization and Social Disclosure. *The International Journal of Accounting*, 27(2): 112-122.
- Gorden, R., L. (1980). *Interviewing: Strategy, Techniques and Tactics* (3rd ed.). Illinois: The Dorsey Press.
- Gould, S. (2011). Accounting for Sustainability. *Accountancy Plus*, Iss. 1:19-20.
- Goulding, C. (2005). Grounded Theory, Ethnography and Phenomenology: A Comparative Analysis of Three Qualitative Strategies for Marketing Research. *European Journal of Marketing*, 39(3/4): 294-308.
- Gray, R. (1991). *Trends in Corporate Social and Environmental Accounting*. London: BIM.
- Gray, R. (1992). Accounting and Environmentalism: An Exploration of the Challenge of Gently Accounting for Accountability, Transparency and Sustainability. *Accounting, Auditing & Accountability Journal*, 17(5): 399-425.
- Gray, R. (1994). The Accounting Profession and the Environmental Crisis: (Or Can Accountancy Save the World?). *Meditari*, 1-51.
- Gray, R. (2001). Thirty Years of Social Accounting, Reporting and Auditing: What (If Anything) Have We Learnt?. *Business Ethics: A European Review,* 10(1): 9-15.
- Gray, R., and Bebbington, J. (2001). *Accounting for the Environment* (2nd. ed.). London: Thousand Oaks.
- Gray, R., Bebbington, J., and Walden, W. D. (1993). Accounting for the Environment: The Greening of Accountancy Part II. London: Paul Chapman.
- Gray, R., Owen, D., and Adams, C. (1996).

 Accounting & Accountability: Changes
 and Challenges in Corporate Social

- and Environmental Reporting. London: Prentice Hall.
- Gray, R., Owen, D., and Maunders, K. (1987). Corporate Social Reporting: Accounting & Accountability. Hemel Hempstead: Prentice Hall.
- Hair, J. F., Anderson, R. E., Tatham, R. L., and Black, W. C. (1998). *Multivariate Data Analysis* (5th ed.), Prentice-Hall International Inc., New Jersey.
- Jaggi, B., and Zhao, R. (1996). Environmental Performance and Reporting: Perceptions of Managers and Accounting Professionals in Hong Kong. *The International Journal* of Accounting, 31(3): 333-346.
- Jane, G. and Prem, L. J. (1999). A Survey Of Environmental Accounting and Reporting in Bahrain. *Journal of Applied Accounting Research*, 5(1): 4-36.
- Kaiser, H. F. (1960). The Application of Electronic Computers for Factor Analysis. Educational and Psychological Measurement, 20: 141-151.
- Kline, P. (1999). *The Handbook of Psychological Testing* (2nd ed.). London: Rutledge.
- Kuasirikun, N. (2005). Attitudes to the Development and Implementation of Social and Environmental Accounting in Thailand. *Critical Perspective on Accounting*, 16(8): 1035-1057.
- McGowan, S., Lehman, G., and Smith, M. (2000). Stakeholder Accountability and Corporate Environmental Perspectives. *Accounting, Accountability and Performance*, 6(2): 63-88.
- McKinnon, J. (1988). Reliability and Validity in Field Research: Some Strategies and Tactics. *Accounting, Auditing & Accountability Journal*, 1(1): 34-54.
- Mohd. Aini, A., and Sayce, S. (2010). Disclosing Environmental and Sustainability Practices and Initiatives in the Annual Reporting Process of Property Investors: Evidence from Malaysia. Paper presented at the 17th European Real Estate Society Conference 2010, 23-26 June, Milan,

- Retrieved from: http://www.eres2010.org/contents/papers/eres2010_146_Mohd_Aini_DISCLOSING_ENVIRONME.pdf.
- Moradzadehfard, M. and Moshashaei, M. (2011). The Accountants' Role in Organizations' Sustainability (Regarding Sustainability Framework of the International Federation of Accountants (IFAC)). European Journal of Scientific Research, 59(3): 396-402.
- Mutchnick, R. J., and Berg, B. L. (1996). Research Methods for the Social Sciences: Practice and Applications. Boston: Allyn and Bacon.
- Owen, D., Gray, R., and Bebbington, J. (1997). Green Accounting: Cosmetic Irrelevance or Radical Agenda for Change. *Asia-Pacific Journal of Accounting*, 4(2): 175-198.
- Perera. (2006). Professional Accountants in Business Committee (PAIB) (2006). Information Paper, *Professional Accountants* in Business - At the Heart of Sustainability, 22-25.
- Punch, K. F. (2003). *Survey Research: The Basics*. London: SAGE publication.
- Purcel, J. (2011). Time to Rethink The Accounting Profession Has a Role to Play in Reshaping Reports to Make Them More Useful to Stakeholders. *InTheBlack:* CPA, Retrieved from http://www.itbdigital.com/ tools-of-the-trade/2011/11/01/time-for-arethink/.
- Schaltegger, S. and Burritt, R. (2000). Contemporary Environmental Accounting: Issues, Concept and Practice. Sheffield: Greenleaf.
- Shaari, A. L., Nik Ahmad, N. N., and Sulaiman, M. (2004). A Survey of Accountants' Perceptions. *Accountants Today, May*, 24-27.
- Strauss, A., & Corbin, J. (1990). *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Newbury Park: CA Sage Publications.
- Tabachnick, B. G., and Fidell, L. S. (2001). *Using Multivariate Statistics* (4th ed.). MA: Allyn & Bacon.

- Thompson, P., and Zakaria, Z. (2004). Corporate Social Responsibility Reporting in Malaysia: Progress and Prospects. *Journal of Corporate Citizenship*, 13: 125-136.
- Wallace, R. S. O., and Cooke, T. E. (1990). NonresponseBbias in Mail Accounting Surveys: A Pedagogical Extension. *British Accounting Review*, 22(3): 283-288.
- Williams, BR., Wilmshurst, TD. and Clift, RC. (2010). *The Role of Accountants in Sustainability Reporting A Local Government Study*. Conference Proceedings APIRA 2010, Sydney Australia, 11-13 July 2010.
- Wilmshurst, T. D., and Frost, G. R. (2000). Corporate Environmental Reporting: A Test of Legitimacy Theory. *Accounting, Auditing and Accountability Journal*, 13(1): 10-26.
- Yusoff, H. and Lehman, G. (2008). International differences On Corporate Environmental Accounting Developments: A Comparison between Malaysia and Australia, in M. Burrow (Ed.), Accounting and Finance in Transition, Greenwich University Press, 4: 92-124.

- Yusoff, H., Lehman, G., and Mohd. Nasir, N. (2006). Environmental Engagements Through the Lens of Environmental Disclosures: A Malaysian story. *Asian Review of Accounting*, 14(1&2): 122-148.
- Yusoff, H., Yatim, N., and Mohd Nasir, N. (2005). Analysis on the Development of Environmental Disclosure Practices by Selected Malaysian Companies From 1999 to 2002. *Malaysian Accounting Review*, 4(1): 49-73.
- Zulkifli, N. (2005). Realizing Corporate Social and Environmental Responsibility in Malaysia: Perceptions and Realities. Paper Presented at the 2nd One-day International Conference on Business Performance and Corporate Social Responsibility, UK.
- Zvezdov, D., Schalteggar, S. And Bennett, M. (2010). The Increasing Involvement of Accountants in Corporate Sustainability Management. Journal of the Asia-Pacific Centre for Environmental Accountability, 16(4): 20-31.