

CLIMATE CHANGE ACCOUNTING AND REPORTING

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ABSTRACT : *This research study analysis concentrates on the discipline decision theory, as mentioned in terms of decision analysis. Apparently, decision analytic methods are used in a wide variety of fields such as environmental and climate change, and this has brought to the change in the accounting sphere as well. Thus, the preparers of financial statement have to keep abreast with this change and present to the need of various kind of users in the corporate entities. This study presents as a theoretical approach by reviewing previous literatures, and therefore, discovering a few changes in the selected objectives. Besides effect of the change, a method of thinking about something that caused by some reasons are found, of which the decision is more significant in adopting the change in the prevailing circumstances. In this connection, the term decision analysis which was coined by Ronald A. Howard in 1964, is reviewed in the consideration of the proposed research analysis and methodology. The study also discusses about climate change in a business environment and change in accounting as observed in the reporting of financial information produced by the commercial entities for the diverse user group and stakeholders.*

Keywords: Decision Analysis, Applied Decision Theory, Accounting, Accountant, Sustainability, Environment and Climate Change

1.0 INTRODUCTION

Nowadays, accountants play an important role in addressing the climate change in business environment. Despite of just being a professional accountant with imperative role in navigating business success, addressing climate change in the business environment is another great concern for the accountants to deal with. Accordingly, obligations of accountants have been expanded from indirect participation to a more direct involvement in moving towards environmental friendly business practice. In this paper, specific roles of accountants will be discussed in order to provide a better understanding on the importance of environmental issues towards an assurance of long term sustainability of business prosperity.

In order to uphold an environmental friendly business practice and probe a better solution towards the concerns of climate change, accountants have been viewed as supportive tool in providing professional skills for an organization. In view of this, corporate water and carbon accounting are used interchangeably as sustainability management measures in the 'profit organizations' for comparing and managing the impacts towards climate change as well as aligning the expectation of stakeholders with the society group at large [1]. With the collaboration of accountants and resource centre, therefore, the development of alternative pathways towards a common goal and information gathering can be achieved.

2.0 Literature Review

Bombarded with new measurement and reporting challenges, commercial entities and particularly, their accountants, have been engulfed and confronted with the climate change [2]. Due to this, reliable performance metrics and reporting are highly sought matters by the boards of directors and management of the companies to combat with such change. On the other hand, investors increasingly seek reliable disclosures about climate change risks and material bottom-line impacts. Similarly, [3], found that that there is

significant uncertainty or lack of precision in the measurement and reporting of the commercial entities. Arising from these challenges, it is essential that independent verification be carried out so as to provide reasonable assurance to the companies.

Concurrently, accountants are shouldered with the responsibility to manage the climate change risk which can be divided into four categories, namely: physical, regulatory, reputational and litigation [2]. Physical risk arises and affects the operations and style of businesses; While, operating risk increases operating complexity and compliance costs; Likewise, reputational risk refers to the positive and negative impacts of businesses' perception to address climate change issue; Lastly, litigation risk is the risk of businesses' negligence, disclosure or other lawsuit or challenges [3].

For instance, types of insurance in the form of physical risks, physical upgrades, disaster planning, public policy engagement, development of action plans to respond to organizations' campaigns, acceptance of risks, etc. can be adopted by the accountants for mitigation measures [2]. Being important players in the company, accountants are duty-bound to ensure that the financial information reported to the stakeholders is of a 'true and fair view' of the company with full disclosure of its activities and current financial health position [7, 4].

To facilitate the financial data management of the company which will later can be portrayed into a form of financial report, the advance in technology invented computerized accounting system is of paramount important. Through the invention of IT infrastructure armed with accounting software, the recording process of accounting transaction which was previously done in a manual way seems to be easy and systematic. Simply, the evolution of IT in the domain of accounting fraternity, has resulted in a more simplified and accurate financial data which eventually, could gain the trust of financial report users. Nevertheless,

by putting too much reliance on the computerized accounting system, it leads to further criticisms and debates about the accountants' professionalism which has made the entry requirements in the fraternity becomes stricter than in the past. Therefore, one of the measurement taken to uphold the professionalism of a firm's accountants is through the membership of accounting professional body, such as Association of Chartered Certified Accountants (ACCA) and certified Public Accountant (CPA)[5].

3.0 METHODOLOGY AND OBJECTIVES OF THE STUDY

The proposed research analysis and methodology of this study is based on decision analysis (DA) theory of discipline consists of philosophy and professional practice as given in "Decision Analysis: Applied Decision Theory", proceedings of the 4th International Conference on Operational Research by Ronald Howard in 1966. This consideration is taken after reviewing the term *decision analysis* which was coined by Ronald A. Howard, who since then, become a professor at Stanford University and instrumental in developing the practice and professional applications of decision analysis (DA).

Therefore, the following objectives are addressed by this paper:

- (i) The accountants have to be able to apply professional skills judgment for reporting of information; and
- (ii) The accountants have to be able to adapt with the change in business environmental climate for reporting of information.

4.0 Sustainability Reporting

Legal system which reflects the philosophy and direction of the financial reporting, plays a massive role in accounting nature. Due to different legal system and economic growth, the disclosure reporting of every country varies from each other which triggered for the high demand in the standardisation of practices among countries [6]. In this case, the role of accounting professional bodies through regular updating of rules and regulation will assist the accountants to buffer with these changes as well as achieving the harmonisation of disclosure reporting practices with a professional integrity [7,8].

The development of emissions trading scheme (ETS) which refers to a tool designed to control emissions by allowing participants to trade excess emissions permits is believed to be able to reduce the impacts of climate change. Comparatively, Npower is an alternative of the energy saving tool that can be deployed for efficient energy usage in the businesses sector [9]. At the same time, investment appraisal; cost-benefit analysis; value based management; and financial cash flows planning are another mechanisms

that can assist accountants in giving advice on those measurement tools and reporting emissions [10].

Together with the increasing regulation, inevitable legislation and environmental issues becoming far more measurable, the accounting professionals ought to be well-equipped with vast knowledgeable about the risks and opportunities that exist in the climate change as well as acting as the agents for change in raising the profile of their organisations agenda. Apart from improving the sustainability performance and drive, the presence of accountants with accurate reporting tools and systems could also bring substantial savings to the organisation. This change is illustrated in the following Figure 1:

5.0 Reporting of Information

Nowadays, significant microeconomics and societal challenges are leading organizations to pursue for more sustainable value creation, by taking into account both the need for compliance and remain competitiveness within an increasingly global economy. These challenges have prompted the work scope of accountants by not only dealing with the production of typical financial report but also diverging into the preparation of non-financial report such as Corporate Social Responsibility. According to [11], in order to meet the demands of the organizations, the mind-set of accountants needs to be embraced with the five key areas as summarised below: *Professionalism and ethical behaviours*- They have an important role in driving and supporting a high standard of ethics across the business and fostering a values-based organization.

- (i) *Professionalism and ethical behaviours*- They have an important role in driving and supporting a high standard of ethics across the business and fostering a values-based organization.
- (ii) *Professional judgement*- This is a differentiating factor for high-performing professional accountants which includes balancing organizational nimbleness and quick, and intuitive decision-making with a need for evidence-based decisions.
- (iii) *Organizational and environmental awareness*- The accountants are expected to perform as integrators and navigators by linking functional disciplines and organizational units, as well as facilitating a common and unifying perspective on an organization's business model and key success factors.
- (iv) *Investor and stakeholder focus*- Professional accountants, especially those in CFO/FD roles, can be expected to lead in managing relationships with investors, funders and regulators. They can bring a wide stakeholder perspective into the organization to challenge managers to ensure risk and performance is managed in the long-term interest of various stakeholders.

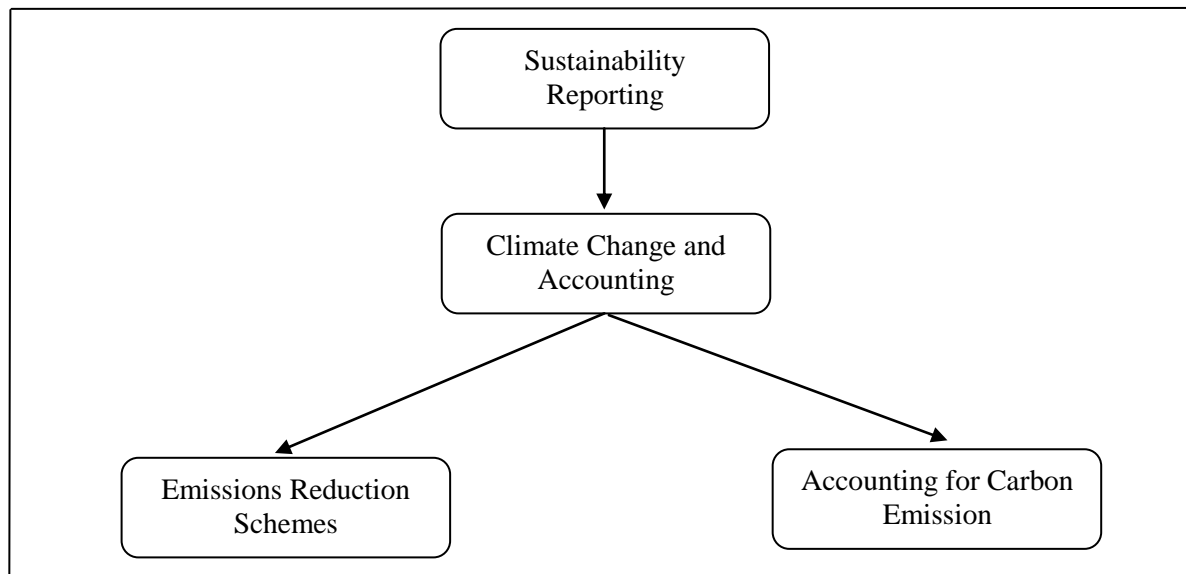


Figure 1: Sustainability Reporting and the Change

Change, uncertainty and complexity- The accountants have to be able to adapt to changing circumstances and apply professional skills judgment to often ambiguous and imperfect information.

In short, accountants will have to become the drivers of change and the innovators for accounting discipline, business organization and broader business environment in order to meet the climate changes that have been impacted their organizations respectively [12].

6.0 Change in Accounting

The nature of change in the business environment has influenced on business organization and the role of accountants towards addressing to these changes. In today’s world, accountants are not only be held accountable for reporting task but also on the company financial data analysis and business decision making. They have broad responsibilities to ensure the accounting functions are carried out to the highest possible standards for the decision making in order to accelerate company’s growth. Thus, they work as strategic partners in an organization to address issues or mitigate problems in a creative and flexible manner. Besides, accountants need to fulfill the society’s expectation as accounting information is deemed to be the oxygen provider for financial decision making. If this information is not presented in inconsistent ways, any decisions taken might be inappropriate, thus leading to the severe criticisms on the company’s reputation and accountants’ professionalism.

7.0 DISCUSSION AND RESULT ANALYSIS

According to Ronald A. Howard [13], such decision analytic methods are used in a wide variety of fields, including businesses for variety of reasons such as management and environmental remediating. Based on the Applied Discipline Decision Theory, therefore, the outcome and result of two

variables as stated below are derived for achieving the two objectives of the study. The two variables are:

- (i) Climate change in a business environment.
 - (ii) Change in Accounting
- (i) *Variable 1: Climate change in a business environment*

Accountants have a vital role to play in providing attempts to reduce or control emissions contributing to the climate change. They need to capture corporate environmental impacts, and concurrently report environmental accounting to the stakeholders. Accountants should also encourage private and public sector organizations to measure and analyze emissions, as well as to provide an opportunity to identify managerial strategies with the aim of reducing emissions and climate change impacts [14]. In this connection, the development of climate change disclosure practices can assist in a climate-related decision making, such as public policy development, internal management decisions and capital allocation decisions [13].

With faithful, true, and fair account of reporting climate-related information, it is imperative to understand the economic and social costs of various policies as well as the projected environmental benefits, both in the duration of short to long term, in order to achieve stakeholders’ agreement on the solutions that are perceived to be equitable, balanced and effective. In addition, accounting professions should use its expertise to positively contribute towards the formulation of credible policy frameworks and agreement. Thus, it is essential for the professions to develop new knowledge and mechanisms; and to provide the utmost confidence and trust in the profession’s capabilities and integrity, by way of reshaping its educational curriculum and skills requirements such as Kyoto and Cop [15].

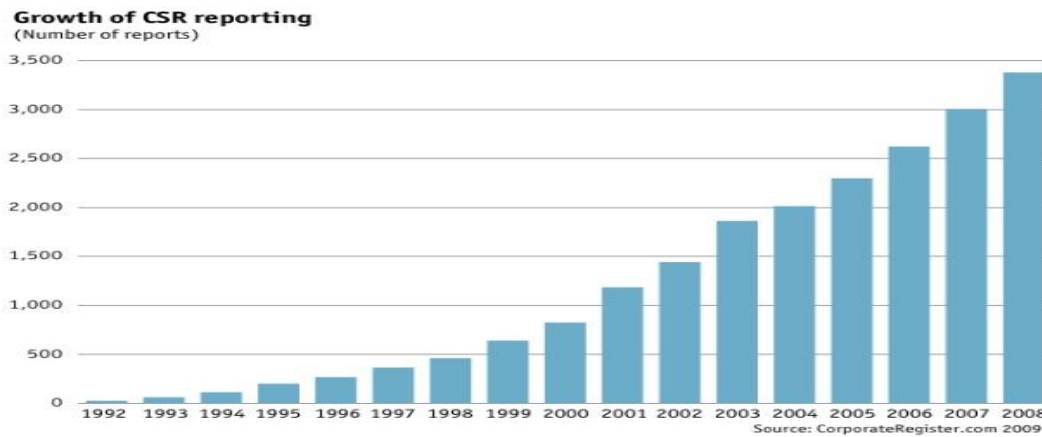


Figure 2: Growth of CSR reporting (Source: Climate Change 2013)

Generally, the role of accountants in the globalizing issue of climate change is underestimated and this has brought to the arguments on the importance of accountants in shaping up the organization. However, questions remain unanswered as to what extent exactly the accountants are executing their responsibilities for each company they are trusted to be a part of, but at least there is little hope for a growing economy to reduce and stop the harmful climate change in business environment [16]. The diagram as depicted below shows the growing trend among companies worldwide to issue CSR reports.

(ii) *Variable 2: Accounting Change:*

Being in the professional fraternity, accountants serve very important role to impart their experience and expertise to the climate change mitigation process. Likewise, the accountants have been claimed as competence at measuring, reporting and making credible actions on business climate change, apart from contributing to the important role in reducing or controlling emissions from the climate change [4,16]. Irrespective of this, they need to comprehend that climate change information is going to become a critical success factor for the company to move forward, as well as positioning at the forefront on the understanding of climate change implications and its role in attaining business success [17].

Due to the environmental changes and effort taken by the companies in turning the earth as a greener and livable place through environmental conservation, the role of accountants have become greater by giving the best solutions in adapting to the climate change in the business environment [18]. In return, these companies are obliged to manage their spending accordingly in fulfilling the new restrictions that may be enforced by certain governments in the world. For instance, the United Nations have made such rulings to ensure that multinational companies adhere to the proper procedures in keeping their companies up to the prescribed code of rulings, which ultimately will address the changing climate [18].

On the other hand, climate change will increasingly affect business operations with different factors or reasons [19,25]. Arising from these factors, business sectors are difficult to obtain bank loan as a result of an increase in the climate change risks towards their loan portfolios [20].

Correspondingly, with the climate change, it increases the global operating challenges and also new capital expenditure considerations [20,23].

In this connection, ACCA recommends that the business environmental regulators should work closely with the international accounting standard-setters in order to develop a universally applicable climate change reporting standard that fit for all sizes of organizations [7]. The challenges of climate and world economy have led to a unique opportunity for rebuilding the global markets with systems sympathetic to business climate change. Therefore, accountants have to play an important roles in various areas, such as evaluating the returns on low-carbon investment proposals, advising employers and clients on emissions-trading regimes, developing organization-relevant carbon and greenhouse gas key performance indicators, and also providing disclosure of information through annual reports on sustainability and corporate responsibility [7]. It is hoped that the role of accountants will be further strengthened through presenting carbon-related actions in financial accounting terms in the annual reporting process.

Similarly, in the planning and forecasting processes, accountants need to possess deeper insight and accurate forecast in mitigating or preventing the uncertainty such as providing scenario planning and modelling of uncertainty [21]. Consistent with the corporate reporting principles, accountants must have a strong leadership role to analyze and interpret information on environmental and social performance [22]. Environmental governance is another aspects of business's sustainability of which accountants are required to analyze any climate change implications to the business sector. Lastly, is the role to formulate strategies in addressing climate changes that can be undertaken by the accountants which are performance measurement, preparing business cases and utilisation of cost and benefit analysis [21]

8.0 CONCLUSION

In conclusion, we have observed that climate change and environmental business issues are likely to affect value creation, not only in the near future but also in the longer term. Therefore, the accountants are required to keep abreast with the change in the business environment climate of

environmental change by being able to apply their professional skills judgement so as to arrive at the soundly accounting decisions for the purpose of reporting of information in the annual reports. Equally important, the non-financial disclosures are considered to be beneficial for the companies to be green because it can enhance the public confidence towards the good reputation of the companies. So, the accountants are obliged to obey the ethical rules of professions by not only be transparent in ensuring the financial statement of the true and fair representation, but also willing to faithfully disclose the climate change cost to be incorporated in the reporting of information for the diverse user group and stakeholders.

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