

## **Guest Editorial**

# **Environmental and Sustainability Management Accounting (EMA) for The Development of Sustainability Management and Accountability**

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## **Introduction**

Sustainability accounting provides decision-makers with tools and approaches that help improve sustainability performance of companies and organisations; whether 'for profit' or 'not-for-profit'. Such performance contributes to a more sustainable corporate bottom line and sustainable value of 'for profit' companies while allowing for maximum and efficient use of resources by 'not-for-profit' organisations. Consequently, there needs to be two research foci. First, a holistic view needs to adopt of sustainability accounting and investigated in both developing and developed countries. That is, we need to consider how sustainability and environmental management accounting contributes, locally and globally, to creation of a more sustainable business organisation as well as environmental sustainability. Second, research is needed into the role of social and environmental accounting and environmental management reporting guidelines contribute to businesses become less un-sustainable.

Environmental and Sustainability Management Accounting (EMA) supports companies and organisations to assess and manage their sustainability performance in five ways. First, EMA provides support to companies and organisations by quantifying environmental impacts and loads on the workers, community, and other stakeholders. Second, EMA supplies sustainable performance measures for operational processes and reporting guidance. Third, EMA offers businesses the opportunity to gather information that identifies costs and savings that will result in improved financial performance. Four, EMA gives business a chance to recognise risks and opportunities related to their operations. Finally, EMA produces physical and monetary measurements that are vital in all efficient and effective sustainability management practices.

### **The contributions to the special issue**

This special issue contains five articles. The authors of the first paper have developed a model that may be used to investigate, in developing and developed countries, the influence of an organisation's external and internal factors on environmental waste practices and processes, policies and finally financial performance. The remaining four papers have investigated how sustainability-CSR information is used in different ways to advance sustainability management within organisations in different countries. Also, the findings reported in these four articles have employed different research methods. The range of research methods demonstrates the breadth of studies that are investigating different aspects of this important issue.

First, the article "Proposed Model For Industrial Waste Management Practices and its Impact on Organisational Performance", by Suzy Noviyanti, Lanita Winata, Yefta Andi Kus Noegroho and Jony Oktavian Haryanto, introduced the research model which has six (6) components. The authors have posited that there are direct sequential associations between components but earlier components of the model have only an indirect association with later components of the model. The components may be grouped into three segments. First, the institutional environment includes cognitive, strategy orientation, or regulatory influences, which for this introduction are labelled, segment 'A'. Second, managers' and workers' awareness and compliance (labelled, segment 'B' in this introduction) are influenced by segment 'A' as well as managers' attitude influence workers' attitudes within segment 'B'. Managers' and workers' awareness and compliance influence, respectively, environmental policy and practices, with these practices influencing financial performance; all three components form, segment 'C' (as labelled for this introduction).

This detail has been provided in this introduction because the components of this model are similar to some of the components investigated in the other four studies because these components in the model have similar characteristics to specific components of the learning and growth, the internal process, sustainability-CSR, and the financial perspectives of the sustainability balanced scorecard (SBSC). That is, each study has included some aspects similar to either one or two segments of the components of the model or SBSC perspectives and examine these associations in different settings; developing or developed countries.

Second, as the title suggests "Environmental Management Systems (EMS) ISO 14001 Implementation in Construction Industry: A Malaysian Case Study", the authors (Sumiani Yusoff, Ridwan Nordin and Haslinda Yusoff) investigate the influence of EMS implementation so that an ISO 14001 certification may be achieved on levels of understanding and awareness among employees of an organisation. These authors used an inductive reasoning approach to their case study research method of an organisation in the construction industry in Malaysia. The factors considered are similar to the external and internal environmental components of segment 'A' and the workers' awareness of segment 'B' mentioned in the first study's model. The descriptive statistics reports have led the authors to the conclusion that it is essential for employees' awareness and understanding to be present for successful implementation of EMS in the construction

industry. Future research may consider this conclusion to a larger number of construction industry companies; possibly in developing and developed countries.

Kirsten Rae, John Sands and David Gadenne in the third article “The association between organisational commitment and corporate social responsibility-environmental performance within an integrated sustainability balanced scorecard framework” have investigated specific components of a SBSC’s perspectives that are in keeping with components of the model in the first article. These authors have studied Australian workers attitudes (cognitive in segment ‘A’/the learning and growth perspective) which captures their attitudinal awareness of segment ‘B’, and the impact of this attitudinal awareness on the environmental-CSR performance within the internal processes of an organisation (practices of Segment ‘C’/the internal process perspective). This study has included both manufacturing and service sector companies in a study and uses a quantitative analysis using data gathered using a survey research method. An interesting finding of this study is that only one type of specific commitment cognitive has a significant positive impact on employees’ attitude. This result may be useful for researchers using cognitive variable in future studies that follow the model in the first study. Another key point about this study is its use of an integrated approach to SBSC model where the internal process incorporated not only conventional components in Kalpan and Norton’s 2001<sup>1</sup> design but also environmental and other CSR components, which is consistent with Kaplan and Norton’s 2004<sup>2</sup> strategy mapping, where environmental and social components are integrated into the internal process perspective.

In contrast to the third study, the fourth article “Associations between organisations’ motivated workforce and environmental performance”, by Riana Sitawati, Lanita Winata, and Lokman Mia, uses the alternative school of thought about a SBSC where the framework has the sustainability perspective as a fifth perspective. These authors examine the five separate direct associations between strategy orientation adopted by hotels within Indonesia and each of the five SBSC perspectives. The separate associations are similar to the independent variable strategy orientation (labelled segment ‘A’ in the first study discussion earlier) and the five dependent variables [learning and growth performance (similar to components in segment ‘B’ above), internal process performance and social and environmental performance and financial performance (similar to components in segment ‘C’ above)]. This study provides a contrast to both first study and third study because the authors examine the direct association between the strategy orientation of the organisations and not a sequence of direct associations. It also follows the school of thought where sustainability-CSR are viewed as a fifth dimension, which provides readers with a diversity of frameworks.

The final article “The Influence of Talent Factors on Business Performance” (authored by Fanny Soewignyo and Tonny Irianto Soewignyo) is similar in its approach to the fourth study because it examines only direct associations between a number of independent organisational environmental component variables (labelled segment ‘A’ in the first study discussion earlier) related to corporate governance matters and a single dependent variable business performance (similar to components in segment ‘C’ above). This study of Indonesian companies uses quantitative analysis of data gathered

from a secondary source. The findings reveal that employees, board composition and remuneration as well as audit committee size have a significant impact on financial performance. Consequently, it may be viewed that adoption of CSR components will not only ensure compliance with good corporate governance practice but also provide organisations with added value through financial performance and market capitalisation. The findings provide evidence to managers about the dual benefits to stakeholders and shareholders as well as some guidelines for future research into the other benefits of CSR compliance that may be considered for future studies.

### Conclusion

The papers in this special issue have explored various types and approaches of EMA and EMS to support corporate decision makers to develop and advance sustainability management. The introduction has used the model in study 1 and labelled its components to provide a common theme in each paper. EMA and EMS applications and practices to manage sustainability challenges and issues may be used differently in different countries. The papers have shed some new light on the areas of EMA and Sustainability Management by providing new theoretical lenses, different methodological approaches, empirical evidence using different frameworks from different schools of thought. We believe that the findings from the papers in this special issue provide new insights into EMA and sustainability management in developing and developed countries as well as raising new issues that warrant future research.

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<sup>1</sup> Robert S Kaplan; David P Norton, Transforming the balanced scorecard from performance measurement to strategic management: Part 1, *Accounting Horizons*; Mar 2001; 15, 1; pg. 87-104

<sup>2</sup> Robert S Kaplan; David P Norton, The strategy map: guide to aligning intangible assets, *Strategy & Leadership*; 2004; 32, 5; pg. 10-17.