ENVIRONMENTAL REPORTING AND MANAGEMENT IN AFRICA

ADVANCES IN ENVIRONMENTAL ACCOUNTING & MANAGEMENT

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EDITED BY

VENANCIO TAURINGANA

Southampton Business School, University of Southampton, UK

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ABOUT THE CONTRIBUTORS

Gabriel Sam Ahinful is a Senior Accountant in the Finance Office of Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana. Previously he was a Lecturer at the School of Business, KNUST. He received his PhD in Accounting from Bournemouth University, UK. His research interests include the link between environmental management practices and financial performance, social and environmental reporting, and accounting education.

Theresa Askham is a Lecturer in the Department of Management Accounting at the University of South Africa (UNISA). She has worked in the corporate environment in various accounting and management accounting roles for large multinational companies. She obtained her MPhil degree from UNISA. She is a member of the Chartered Institute of Management Accountants (CIMA). Her research interests are in sustainability, environmental reporting, and management accounting.

Jeff Danquah Boakye is a Lecturer in Accounting and Taxation at Koforidua Technical University (KTU). Dr Danquah is also working in partnership with Millennium Promise Challenge, an international NGO on "Revenue Mobilisation through Online Tax Filing System." He has also held numerous managerial positions with some reputable organizations in the UK and as a visiting lecturer at some UK colleges and universities. His research interests include environmental accounting and sustainability, auditing and revenue mobilization through online tax systems.

Joy Nankyer Dabel-Moses is a Lecturer with the Department of Business Administration, Faculty of Management Sciences, University of Jos, Nigeria. Joy is currently undertaking her PhD in Accounting at Massey University, New Zealand. Joy has taught Cost and Management Accounting at the University of Jos, and is a professional accountant and a member of the Association of National Accountants of Nigeria. Joy's area of research interests are in public sector financial reporting

Geoffrey Ikavulu Injeni is pursuing his PhD in Accounting and Finance at Strathmore University on Integrated Reporting for Listed Companies in Kenya. He has a BSc in Applied Accounting, a Master of Commerce (Finance), Bachelor of Commerce (Accounting and Finance). He is also a member of the Chartered Financial Analyst (CFA), a fellow of ICPAK, and a fellow of Association of Certified Chartered Accountants (ACCA).

David Mutua Mathuva is a Senior Lecturer and Director, Undergraduate Programmes at Strathmore Business School, where he teaches Accounting and Finance. David worked at KPMG Kenya in the Risk Consulting department, Forensic Services. He is a member of the Institute of Certified Public Accountants of Kenya. His research interests are in corporate disclosure, corporate finance and audit including forensic audits and investigations.

Emmanuel Edache Michael is a Lecturer in Accounting in the Department of Accounting, Faculty of Management Sciences, University of Jos-Nigeria. He is a member of the Institute of Chartered Accountants of Nigeria. Emmanuel started his PhD in Accounting with the School of Accounting and Commercial Law, Victoria University of Wellington, New Zealand. His research interest includes environmental sustainability and reporting practices of listed firms.

Olayinka Moses is a Lecturer in Accounting at Victoria Business School, Victoria University of Wellington, New Zealand. Olayinka has several years of lecturing experience with the Department of Accounting, University of Jos, Nigeria and School of Accounting and Commercial Law, Victoria University of Wellington. He has published in reputable accounting and business journals and has also contributed to a number of book chapters. He is the conference Secretariat Manager of the African Accounting and Finance Association and a member of the Association of National Accountants of Nigeria (ANAN). Olayinka's research broadly covers the area of financial reporting and financial management with a focus around environmental disclosure and reporting.

Randolph Nsor-Ambala is Lecturer in Accounting and Finance at the Ghana Institute of Management and Public Administration (GIMPA). Dr Randolph Nsor-Ambala has previously worked in senior executive positions with renowned global companies. His research interests include financial strategy in emerging and developing economies, behavioral issues in accounting, managerial accounting, and corporate disclosure.

Venancio Tauringana is Head of Department of Accounting and Professor of Accounting at Southampton Business School, University of Southampton. He is also President of the African Accounting Association and Associate Editor of the Journal of Accounting in Emerging Economies. He holds a Masters' Degree (M.Acc) and PhD in Accounting. He is a Practitioner Member of the Institute of Environment Management and Assessment. Ven's research interests are in the areas of corporate governance environmental reporting. Ven is currently working with Uganda Manufacturing Association (UMA) to develop its member firms' sustainability reports in accordance with Global Reporting Initiative (GRI) Sustainability Reporting Standards.

Mumbi Maria Wachira is a Lecturer in Accounting at Strathmore University Business School based in Nairobi. She holds a Bachelor of Commerce and Master of Commerce (MCom) degrees from Strathmore University and a PhD from the University of St. Gallen in Switzerland. Her research focuses on the

intersections between accounting practice, society and the environment. Currently, she is involved in developing executive programs for businesses seeking to adopt Integrated and/or Sustainability Reporting.

David Wang'ombe is Professor of Accounting at Strathmore University and holds a BA (Hons) and an MBA degrees from University of Nairobi, and a PhD from Strathmore University, Kenya is a Certified Public Accountant of Kenya. Previously he was Dean, School of Management and Commerce, Strathmore University, Kenya. He has published several refereed articles and presented academic papers in several research conferences. He has authored several books and has also written several cases for teaching particularly business executives.

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LIST OF REVIEWERS

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INTRODUCTION

Venancio Tauringana

Environmental protection is a global concern. For example, Sustainable Develop Goal 13 on Climate Action commits the world to taking urgent action to combat climate change and its impacts. Despite developed economies generating a greater percentage of environmentally non-desirable effects, developing countries suffer most due to their inability to manage the environmental impact because of lack of basic infrastructure, human and financial resources (Hossain, Rowe, & Quaddus, 2012; United Nations Millennium Campaign, 2015). As developing countries grow their economies, this comes with increased emissions and natural resources usage (OECD, 2012). According to Ward and Mahowald (2014), 55% and 45% of greenhouse gas (GHG) emissions emanate from developed and developing countries, respectively. However, by 2030, developing countries emissions are projected to surpass those of developed countries.

This Special Issue seeks to advance current understanding on environmental reporting and management in Africa. Despite several articles on environmental reporting in general and GHG emissions disclosures in particular (e.g., Chithambo & Tauringana, 2014, 2017; Tauringana & Chithambo, 2015), similar evidence based on the African continent (excluding South Africa) is sparse. For example, while several studies have examined environmental reporting in South Africa (e.g., Antonites & De Villiers, 2003; De Villiers & Barnard, 2000; De Villiers & Lubbe, 2001; De Villiers & Van Staden, 2006; De Villiers, 2003; Mansoor & Maroun, 2016; Soobaroyen & Ntim, 2013), very little is known on such an issue in different parts of Africa. The notable exceptions are those by Uwuigbe (2012a, 2012b) in Nigeria, Ahmad and Gao (2005) in Libya, Mahadeoa, Oogarah-Hanumana, and Soobaroyen (2011) in Mauritius, Kabir and Akinnusi (2012) in Swaziland, and Rizk, Dixon, and Woodhead (2008) in Egypt. Regarding environmental management, there is also a dearth of literature (e.g., Hamann, Smith, Tashman, & Marshall, 2017; Mensah & Blankson, 2013).

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The African continent comprises 54 developing countries and contributes the least to global warming in both absolute and per capita terms, and also accounts for the smallest share of global GHG emissions – 3.8% (Sy, 2016). However, despite the low emissions, Africa is most vulnerable to climate change. For example, the Global Climate Risk Index, unveiled at the Conference of Parties (COP22) in Morocco in 2016, indicates that four of the world's top 10 countries worst hit by extreme climate events in 2015 were in Africa. The continent was hit hard by the El Niño of 2015–2016, while both Mozambique and Malawi in particular experienced heavy, prolonged flooding in late 2014 and early 2015, which saw the collapse of some significant infrastructure and many drownings. Nearly one million people were affected in both countries, with over 200,000 people required to leave their homes. In 2019, the countries of Mozambique, Malawi, and Zimbabwe were devastated by cyclone Idai, which left 1,000 people dead and thousands missing, with destruction caused estimated at more than one billion dollars.

Therefore, Africa needs to not only implement climate adaptation strategies to reduce its vulnerability to climate change but also adopt mitigating measures to achieve sustainable growth. Climate mitigation will help the continent avoid a high-carbon lock-in that other countries, such as China, have experienced in their economic trajectory. Rapid economic growth and demographic and urbanization trends will increase Africa's GHG emissions unless mitigating actions, such as the adoption of renewable energy in power generation technologies, are taken. At the 2015 Conference of Parties meetings in Paris (COP 21), 200 countries committed themselves to environmental management by limiting GHG emitted by human activity to the same levels that trees, soil, and oceans can absorb naturally, beginning between 2050 and 2100. COP 21 also agreed to review each country's contribution to cutting emissions every five years so they scale up to the challenge.

Advancing existing understanding of environmental reporting and management in Africa is important given that DEFRA (2009) suggests there is a link between environmental measurement, reporting, and management because "what gets measured gets managed." Consistent with this argument, DEFRA (2010) and Tauringana and Chithambo (2015) found evidence that GHG measurement and reporting are likely to lead to reduction in GHG emissions as companies manage their environmental impacts. Therefore, knowledge of environmental reporting or management could provide evidence of the seriousness by which African countries are taking their global responsibilities to tackle climate change reforms and standards agreed at the COP 21 conference.

OVERVIEW OF THE CHAPTERS IN THIS VOLUME

The first two chapters in this volume by Mathuva, Wachira, and Injeni and Nsor-Ambala, Ahinful, and Boakye are on the usefulness of environmental and social information. Mathuva, Wachira, and Injeni investigate whether corporate environmental reporting by listed firms on the Nairobi Stock Exchange, Kenya, improves stock liquidity. The chapter is motivated by growing interest by

investors in embracing the ecological protection of the environment. The study is significant as it adds to the dearth of literature on the economic consequences of environmental reporting in developing countries in general and specifically in Africa. Despite low levels of environmental disclosures, Mathuva et al. found that corporate environmental reporting is positively associated with stock liquidity. The finding suggests that investors view firms that disclose environmental information as less risky and therefore more attractive to investors. The authors conclude that their findings provide evidence of positive economic consequences of engaging in additional disclosures to traditional financial information.

The chapter by Nsor-Ambala, Ahinful, and Boakye also relates to the usefulness of both the environmental and the social information to various company stakeholder groups (regulators, financial institutions, corporate shareholders, and practitioners (auditors and finance managers)). The study's primary objective is to explore perceptual differences among these stakeholders regarding the relevance of social and environmental accounting, social environmental education, and social and environmental mandatory disclosure. The chapter's findings are based on questionnaire responses from 325 respondents supplemented by 18 face-to-face interviews. The findings suggest that there are differences in the perceived relevance of social and environmental accounting, with regulators mostly interested in the quality of work. In contrast, practitioners and shareholders were mostly interested in the ability of social and environmental accounting to influence decisions.

Wachira and Wang'ombe's chapter is one of the two chapters on environmental accounting and reporting. This chapter's objective is to summarize the extent of adoption of environmental management accounting (EMA) by manufacturing companies in Nairobi, Kenya. The data for the study were collected via mixed methods which combine the use of 30 questionnaire survey responses from management accountants and six semistructured interviews. Wachira and Wang'ombe found that compliance with environmental regulation and financial performance is positively associated with the level of environmental management accounting practices applied by manufacturing entities. However, company size, company age, and level of technology were found not to affect the level of adoption of EMA. The findings are original as they illustrate the complexities of applying EMA practices in an emerging economy context and provide evidence that EMA practices are still predominantly used by entities to meet local regulatory requirements. Wachira and Wang'ombe suggest that future research could investigate other determinants of EMA adoption, such as stakeholder pressure or institutional pressure.

Another chapter on the theme of environmental accounting and reporting is on water-related disclosures by food producer companies in South Africa by Askham. This chapter is motivated by the fact that water crisis is one of the 10 global risks, according to the World Economic Forum's (WEF) Global risks report 2018 (WEF, 2018); according to forecast by the United Nations High Level Panel on Water (HLPW, 2018), assuming the world continues on its existing path, there will be a global water shortage of 40% by 2030. Askham's focus on food producer companies is because the agriculture industry is the most

sensitive to water scarcity, and in recent years such as 2015, South Africa experienced the lowest rainfall since 1904. The objective of the chapter is to examine how food producers in South Africa report on water, with specific focus on measuring, managing, engagement with stakeholders, and disclosing water risks. The study uses annual reports for all Johannesburg Stock Exchange listed food producers for the years 2013 and 2017. The findings show that there were improvements in water disclosure between 2013 and 2017. However, disclosures relating to stakeholder engagement and supply chain water management were lacking.

Ahinful and Tauringana's is an empirical chapter that investigates the relationship between environmental management practices and financial performance of small- and medium-sized enterprises (SMEs) in Ghana. A unique feature about this study is that it investigates the relationship between six environmental practices (energy, water, waste, material, emissions, and biodiversity) and financial performance. The data for the study are based on responses from 187 owner-managers of the SMEs. Interestingly, the results indicate that there is a positive and significant relationship between EMPs (energy, water, and material), the aggregate measure of environmental practices (incorporating the six EMPS), and financial performance. However, Ahinful and Tauringana did not find the relationship between the other EMPs (waste, emissions, and biodiversity) and financial performance. The implication of Ahinful and Tauringana's findings is that there is a business case for SMEs engaging in some EMPs but not all. The study concludes that it contributes to existing literature by documenting evidence of the relationship between multiple measures of EMP and financial performance. By adopting such an approach, Ahinful and Tauringana suggest that this enabled them to report evidence of how each EMP measure affects financial performance differently and identify where win-win opportunities are for SMEs.

The final chapter in this volume is a conceptual one which covers both environmental reporting and management. The focus of the chapter by Moses, Michael, and Dabel-Moses is a review of environmental management and reporting regulations in Nigeria. Specifically, the chapter reviews the extent of environmental management and reporting regulations in Nigeria, highlighting areas of inadequacies in regulatory enforcement and companies' compliance. This objective is in the context of the UN 2030 Sustainable Development Agenda (SDA). The review begins with the identification of the major legislation and recommendations relating to environmental management and reporting. The chapter then discusses studies on environmental management and reporting based of Nigerian data. It also discusses the major reasons for weak environmental management and poor environmental reporting. Among the reasons identified are weak enforcement and low levels of punishment in terms of the fines for environmental violation.

CONCLUSION

The subjects covered by the six chapters in this volume can be classified into environmental and social information usefulness (Mathuva, Wachira and Injeni

and Nsor-Ambala, Ahinful and Boakye), environmental accounting and reporting (Wachira and Wang'ombe and Askham), environmental management and financial performance (Ahinful and Tauringana), and the enforcement of environmental management and reporting requirements (Moses, Michael and Dabel-Moses). Although, there are only four African countries covered by the six chapters, the countries covered are significant because they are among the 12 identified by the Economist (2018) as the worst environmental offenders in terms of carbon emissions. For example, out of the 12 countries South Africa and Nigeria ranked number one and two respectively are covered by two chapters in this volume (Askham and Moses, Michael and Dabel-Moses). Kenya ranked twelfth and is represented in this volume by two chapters by Mathuva, Wachira and Injeni, and Wachira and Wang'ombe.

Besides the subject coverage, it is noteworthy that a variety of data collection methods have been used, although questionnaire and interviews papers are slightly more. For example, two studies used data derived from annual reports, while three used questionnaires supplemented by personal interviews and the final chapter is literature review based, although this is also supplemented by some analysis of annual reports. Tauringana and Mangena (2012) suggest two possible reasons for the prevalence in using questionnaires in research in Africa. The first being that except for South Africa, there is a lack of databases that researchers can easily access and the second reason being that it is relatively easier to access organizations to respond to questionnaires.

Finally, I hope that the issues covered by this volume will encourage more research on environmental reporting and management in Africa. The adoption of the 17 UN sustainable development goals (SDG) in 2015 should encourage more researchers in Africa, especially on SDG 13 on Climate Action. The increase in fatal hurricanes affecting Africa means that climate-related research and action are urgently needed than any other time before.

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