ORGANIZATION DYNAMICS AND ENVIRONMENTAL MANAGEMENT ACCOUNTING PRACTICES AMONG THE LISTED MANUFACTURING COMPANIES IN NIGERIA

By

Mustapha Abdulrasaq

Department of Accounting and Finance, Kwara State University, Malete

08035976174

mustabdullah4@gmail.com

Abdullahi Adio Babatunde

Department of Accounting and Finance, Kwara State University, Malete

08038950868

m.adio1409@gmail.com

Abstract

Environmental management accounting practices have increased in importance in the last two decades as a field of study and also the amount of literature has increase enormously. However, the focus of many researchers on environmental management accounting (EMA) practices has been on sustainability reporting and regulation. Hence, the purpose of the study. This study adopts a survey research design. This study purposely focuses on the listed manufacturing companies in Lagos State, Nigeria. The population of the study consists of all seventy six (68) quoted manufacturing firms listed on the Nigeria exchange group in Lagos state as at 31st December, 2022 as an ideal research population. The data was analyzed with the aid of multiple regressions. The study reported a significant relationship positive relationship between competitive strategy and environmental management accounting practice (β=0.253, t=2.699, <=0.05), organization interdependence and environmental management accounting practice (β=0.223, t=2.957<=0.05) and resource strength and environmental management accounting practice (β=0.709, t=3.879 <=0.05). Additionally, extant literature also revealed that there exist a significant positive relationship between organization dynamics and environmental management accounting practice. The study therefore recommends that competitive strategy, organizational interdependence and resource strength of the listed manufacturing firms should be motivational enough to encourage a sound environmental management accounting practice.

Keywords: Competitive strategy, organization interdependence, resource strength, EMA

Introduction

In an ideal world, organizations would reflect environmental factors in their accounting processes through the identification of the environmental costs attached to products, processes, and services. Nevertheless, many existing conventional accounting systems were unable to adequately deal with environmental costs and, as a result, simply attributed them to general overhead accounts. Consequently, managers are unaware of these costs, have no information with which to manage them, and have no incentive to reduce them. Therefore, it must be recognized that most management accounting techniques significantly underestimate the cost of poor environmental behavior, and many overestimate the cost and underestimate the benefits of improving environmental practices (Burritt, Hahn, and Schaltegger, 2020).

Management accounting techniques can distort and misrepresent environmental issues because they can cause managers to make bad decisions for businesses and the environment. The most suitable example relates to energy usage. Recently, a Nigerian government publicity campaign reported that companies are spending, on average, 35% on energy through inefficient practices. With sound environmental management accounting practice, companies could reduce the environmental impact of energy production by 40% and slash 40% of their energy expenditure. Frost and Wilmhurst (2021) suggest that by failing to reform management accounting practices to incorporate environmental concerns, organizations are unaware of the impact of environment-related activities on their performance.

Environmental accounting practices have increased in importance in the last two decades as a field of study, and the amount of literature has also increased enormously. However, the focus of many researchers on environmental management accounting (EMA) practices has been on sustainability reporting and regulation. Hence, this is one of the reasons why environmental management accounting practices have yet to be adequately studied. In order to develop the theoretical basis for this study, institutional theory was adopted to explain the design and implementation of environmental management accounting practices. Moreover, the literature is still in a nascent stage for this study area because the extant literature is dominated by sustainability reporting and regulation (Parker, 2020). Extant literature also claims that EMA lacks theoretical foundation as many studies focus on single factors that have a quantifiable effect on environmental management accounting practices but lack theoretical base and credence (Christ and Burritt, 2019). In order to overcome this problem, this study examines the effect of organization dynamics on environmental management accounting practices among listed manufacturing companies in Nigeria.

This study is gamine as most of the previous studies to date focused on sustainability reports as an aspect of environmental management accounting practice among the listed

manufacturing companies, such as Hatem & Mohamed (2017), El-Shishini & Sudhashini (2018), Nair & Filipa (2018), Abdulrasaq (2009), Lima & Santo (2009), Campos (2000), Vongson & Salwa (2021), Ahamad & Jayabalan (2021), and Ilangovan & Perumal (2022), and little attention was given to the effect of environmental management accounting practice and organization dynamics among the listed manufacturing firms in Lagos State, Nigeria. Firstly, the study measures for the first time the effect of environmental management accounting practice on organizational dynamics among the listed manufacturing companies in Lagos State, Nigeria. This is because environmental management accounting practice is more sophisticated than management accounting practice. Secondly, the study extends indicators of environmental management accounting practice to cover variables such as competitive strategy, organization interdependence, and resource strength. Thus, this study attempted to fill these identified gaps.

The study will be of benefit to the manufacturing firms in Nigeria at large. The study will also be of benefit to scholars and academicians interested in pursuing a study in the field of accounting, especially environmental management accounting practices, as it will form a foundation for further studies. Policy makers and the government can use the study findings to build and widen awareness of environmental management accounting practices, especially in manufacturing settings. The study also helps manufacturing companies make the right decision, and the study also helps management accountants provide environmental management accounting information for planning, controlling, and decision-making. Finally, a robust and comprehensive measure of environmental management accounting practice is of relevance to the research community, which can investigate other interesting hypotheses relating to environmental management accounting literature. This study also increases the frontier of knowledge in this area.

LITERATURE REVIEW

Competitive strategy

Vander (2021) defined competitive strategy from the perspectives of cost and differentiation strategy. Cost leadership strategy: A cost leadership strategy means that companies using a cost leadership strategy are the lowest-price sellers in the market. Hence, the cost of a product should be very low compared to other competitors in order to make a profit. Differentiation leadership is a killer strategy that allows brands to stand out among competitors. Hibbitt (2021) defined differentiation strategy as the process of identifying a unique quality that makes a company different. With this strategy, businesses become superior to their rivals in the market, which allows them to charge more for their products. This study conceptualized competitive strategies in line with this definition.

Organization interdependence

Windermere (2019) conceptualized organization interdependence as the way in which employees interact and relate with each other in an organization, drawing from each person`s contribution in order to achieve goal congruence. Bebbington (2020) also defined organization interdependence as a situation whereby individual employees either work dependently or independently in order to accomplish the goals of the organization. Gray (2023) also defined organization interdependence as a situation whereby two or more entities mutually depend on each other for the purpose of business.

Resource strength

Reilly (2021) defined resource strength as the critical resources and capabilities that underpin an organization`s competitive advantages. Paul (2022) also conceptualized resource strength as a unique asset or an attribute that enhances its competitiveness, such as specialized skills, valuable physical assets, and human and intellectual capital.

Organization dynamics

Fredrick (2020) defined organization dynamics as the ways in which various types of people interact within a company. This interaction may include the relationships between customers, employees, suppliers, and management within the organization. Organizational dynamics create a high-performance culture that prioritizes the well-being of individuals so that they can positively contribute to a company`s objectives. Kate (2021) reported that organization dynamics is the process of continuously strengthening resources in order to enhance employees' performance. It also described how an organization manages and promotes organizational learning, better business practices, and strategic management.

Environmental management accounting practice

Johnson (2018) defined environmental management accounting (EMA) as the management of environmental and economic performance through the development and implementation of appropriate environmental-related accounting systems and practices. Bartolomeo (2020) also defined environmental management accounting (EMA) as the generation, analysis, and use of environmental-related financial information to support business decision-making. Thus, EMA gives explicit economic consideration to a company's environmental-related activities. Through EMA, management accountants would be able to track and treat environmental costs and revenues to enable a link between environmental-related activities and the company's past, present, and future financial information (Burritt, 2022).

Theoretical framework

The theoretical framework of this study is woven around institutional theory. The institutional theory of environmental management accounting practice, propounded by John Meyer and Brian Rowan (1970), predicts that the adoption and retention of many organizational practices are often more dependent on social pressures for conformity and legitimacy than on technical pressures for economic performance. The prediction of the institutional theory is, however, subject to the understanding of organizations and management practices as the product of social rather than economic pressures. Specifically, institutional theory focuses on the social, political, and economic systems in which companies operate and gain legitimacy. This also justifies the adoption of institutional theory as the theoretical framework for this study.

Empirical Review

Saeed (2023) assessed the challenges affecting the implementation of environmental management accounting practices among the selected manufacturing enterprises in Bangladesh. The study used primary data and analyzed it using correlation and regression. The findings reported that cost involvement, lack of skilled manpower, lack of set rules about environmental accounting, inadequate environmental accounting standards, low adoption of environmental accounting, and lack of specific principles for environmental management accounting systems were the main factors affecting the implementation of environmental management accounting practices among manufacturing enterprises in Bangladesh.

Olaoye and Adekanmbi (2023) investigate the impact of environmental management accounting practices and report on organizational performance in Nigeria. The study made use of a descriptive survey research design through a structured questionnaire, and it employed stratified random and purposive sampling as sampling techniques. The findings of the study reported that there is a low prevalence of environmental management accounting practice among the south-west Nigerian universities. Zuriana, Jamil, Rapiah, Mohamed, Faidzulaini, and Amin (2023) examined the impact of environmental management accounting practices among small and medium manufacturing firms in Malaysia. The study adopted a cross-sectional research design and was analyzed through a T-test and multiple regression analysis. The results indicate that most firms have a budget allocation for environmental activities and practices. The study further argues that coercion is a dominant factor in practicing EMA, and therefore, barriers to EMA development should be resolved by the Malaysian government and other authorities.

Dayana, Jalaludin, Maliah, Suleiman, and Ahmad (2017) assessed the effect of institutional pressure and environmental management accounting (EMA) adoption in

Malaysia. Semi-structured interviews were employed with four survey participants to gain further insights into the survey results. The data was analyzed via multiple regressions. The findings of this study reported some influence of institutional pressure on EMA adoption. Additionally, normative pressure in terms of training and accounting body membership was found to be the most forceful. Parker's (2020) review of social and environmental accountability research published between 2016 and 2018 in six leading interdisciplinary accounting journals found that out of 233 published articles, only ten focused on environmental management accounting practice. It has also been noted that there is even less research in environmental management accounting practice in the public sector, except for a few studies such as Gibson and Guthrie (2016), Burritt and Welch (2017), Frost (2016), and Ball 2019.

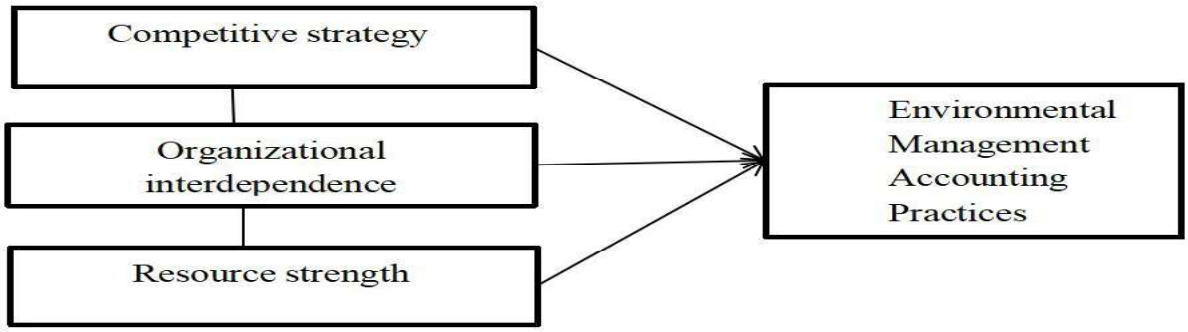
Bouma and van der Veen (2020) examined the influence of competitive strategy on environmental management accounting practice in Malaysia. The study adopted a cross-sectional research design, and the data was analyzed via multiple regressions. The findings reported that competitive strategy does not have a significant positive effect on environmental management accounting practice. Burritt (2022) highlights the need for more research into environmental management accounting, especially the theories underpinning the current literature. Burritt and Parker (2019) examined the effect of social and environmental management accounting practices on the performance of manufacturing firms in England. The study adopted a cross-sectional research design and analyzed it using multiple regression and correlation analysis. The result reported that there is no significant relationship between social and environmental impacts on the performance of manufacturing firms in England.

Parker's (2020) study examined the effect of social and environmental accountability on the performance of manufacturing firms. The study collected data from primary sources and analyzed it with the aid of multiple regression. The study reported that environmental accountability does not have a significant effect on the performance of manufacturing firms. Mauricio and Martina (2021) examined the trends in environmental accounting research within and outside of the accounting discipline. The study adopts a survey research design and analyzes it using multiple regressions. Findings reported indicate that previous studies in the fields of accounting and finance have addressed sustainability concerns in a general fashion. Irwansyah, Anisa, and Muhammad (2022) investigate the implementation of green accounting among the hospitality firms in Malaysia from social and environmental perspectives. The study used survey data and analyzed it using correlation and ANOVA. The findings of this study reported that the use of green accounting has a significant positive influence on the performance of hospitality firms in Malaysia.

Muammard (2022) assessed the effects of budgetary participation and budget adequacy on individual performance, with job satisfaction as an intervening variable. Primary data

was analyzed with the aid of multiple regressions. The findings reported that budgetary participation has a significant effect on individual performance, budgetary participation has a significant effect on job satisfaction, and budget adequacy has a significant effect on budget satisfaction. Budget adequacy also has a significant effect on individual performance. Budgetary participation and budget adequacy have significant effects on performance through job satisfaction. Jonhson (2023) investigates the impact of environmental management accounting practices on organizational performance among the listed companies in Ghana. The study used primary data and analyzed it using an independent sample T-test. The findings reported that environmental management accounting practices have a significant positive effect on organizational performance among the listed firms in Ghana. Hence, very little interest has been placed on the influence of environmental impact, especially on organizational dynamics.

Conceptual Framework



Source: Author`s Conceptualization (2023)

METHODOLOGY

Research Design

The study adopted a cross-sectional research design as a method of data collection. The population of the study consists of all sixty-eight (68) quoted manufacturing firms listed in the Nigeria Exchange Group operating in Lagos State as of December 31, 2022, as an ideal research population. Lagos State was chosen as the study area because it is a beehive of industrial activities with a considerable number of listed manufacturing firms.

Table 1

S/N	Sectors	Number of Firms from each Sector
1	Consumer goods	28
2	Conglomerates	6
3	Industrial goods	21
4	Natural resources	4
5	Healthcare	9
	Total	**68**

Source: Nigerian Exchange Group (2022)

Population of the study

The population of the study consists of the staff of the 68 listed manufacturing firms that constitute the sampling frame. These management staff, based on the information extracted from their annual reports, include the managing director, general managers, principal manager, and senior managers responsible for environmental management accounting issues. They comprised the study's sampling frame of 1,972 management staff. This is comprehensively presented in Table 2 below.

Table 2
Population of the study

S/N	MD/Department	MD	GM	PM	SM	Total	No. of Company	Grand Total	Proportion of questionnaires to be randomly distributed
1.	Managing Director	1				1	68	**68**	68/1,972 × 322= **11.10**
2	Production		1	2	4	7	68	**476**	476/1,972 ×322= **77.72**
3	Accounting		1	2	4	7	68	**476**	476/1,972 ×322 = **77.72**
4	Human		1	2	4	7			76/1,972 × 327 =

	Resource						68	**476**	**77.72** 1,972
5	Sales & Marketing		1	2	4	7	68	**476**	76 × 327 = **77.72** 1,972
								1,972	**322**

Source: Authors Compilation (2023)

Sampling Techniques and Sample Size

Since the sampling frame for this study has been established in Table 2 as 1,972, Krejcie and Morgan (1970) were used to determine the sample size. The resulting sample size was 322. With the aid of the random sampling technique, 11 questionnaires were distributed to managing directors, and 78 questionnaires were distributed to production, accounting, human resources, and marketing departments. Senior management staffs such as managing directors, general managers, management accountants, production managers, and sales and marketing managers were selected for the purpose of the study. A questionnaire was distributed to those management staffs of the quoted manufacturing firms selected, and their phone numbers were collected for follow-up. At the end, 85% of the total distributed instruments were returned.

The study used both descriptive and inferential statistics for the analysis of the data gathered through the questionnaire. The descriptive statistics, such as frequency tables and percentages, were used to assess the demographic profile of the respondents to make the analysis more meaningful, clear, and easily interpretable. Multiple regressions were used with the aid of SPSS (Statistical Package for Social Science) for inferential statistical analysis to simultaneously analyze multiple independent variables (organization dynamics) and dependent variables (environmental management accounting practice), as well as to statistically show the effect of organization dynamics on environmental management accounting among the listed manufacturing companies in Lagos State, Nigeria.

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

Test of Normality

The extent to which the scores on the study variables are normally distributed was measured using the tests of skewness and kurtosis as presented in Table 4. Based on the threshold of -3 to +3 for skewness and kurtosis, all the scores on the study variables were to a greater extent normally distributed, as reflected in Table 4, in which the skewness and kurtosis figures are within the range of the threshold.

Table 3 Normality Test

S/N	Constructs	Mean	S.D	Skewness	Kurtosis
1.	Competitive strategy	4.5774	.32685	-1.271	1.746
2.	Organization interdependence	4.6462	.34698	-1.392	1.603
3.	Resource strength	4.7022	.26717	-1.497	1.535

Source: Author`s Computation, 2023.

Reliability Test using Cronbrach's Alpha

Table 5 shows that the Cronbach's alpha coefficient for each of the above variables is relatively high at 0.713%, 0.763%, and 0.721% for competitive strategy, organization interdependence, and resource strength, respectively. The overall Cronbach`s alpha coefficient is 0.732. This value is above 0.70, which implies that the items are not measuring something different from the scale. Hence, the scale can be considered reliable with the sample (Pallant, 2007).

Table 4 Reliability Test using Cronbrach's Alpha

Variable	Cronbach's alpha	N
Competitive strategy	0.713	6
Organization interdependence	0.763	6
Resource strength	0.721	6
Overall	**0.732**	**18**

Source: Author`s Survey, 2023.

Table 5
Regression Analysis
Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T-Value	Sig.
		Coefficients	Std. Error	Beta		
1	(Constant)	.807	.314		2.887	.001
	Competitive strategy	.253	.094	.108	2.699	.002
	Organization interdependence	.223	.075	.187	2.957	.003
	Resource strength	.709	.065	.188	3.879	.000

a. Dependent Variable: Environmental management accounting practice.

The above table shows the effect of organization dynamics (competitive strategy, organization interdependence, and resource strength) among the manufacturing firms in Lagos State, Nigeria. The coefficient of competitive strategy is 0.253, implying that for every percentage change in competitive strategy, environmental management accounting practice will increase by over 25%, significant at 5%. The coefficient of organization interdependence is 0.223, indicating that a percentage change in organization interdependence will influence environmental management accounting practice by over 22%, which is significant at 5%. The coefficient of resource strength is 0.709, implying that a percentage increase in resource strength will lead to an increase in environmental management accounting practice by over 70%, significant at 5%. The variables in the model are jointly significant in explaining the dependent variables at a 5% level of significance.

Table 6 **Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
`1	.857[a]	.815	.814	.36524

a. Predictors: (Constant) competitive strategy, organization interdependence and resource strength

The model summary shows the effect of the independent variables on the dependent variables; the implication of R-squared at 0.815 is that the independent variables (competitive strategy, organization interdependence, and resource strength) explain more than 80% of the changes in the dependent variable. While the remaining 19% can be explained by other factors not incorporated in the model.

DISCUSSION OF FINDINGS

The first research question is used to investigate the first research objective, which examines the effect of competitive strategy on environmental management accounting practice. The result shows that competitive strategy has a significant positive effect on environmental management accounting practice (= 0.253, t = 2.699, p 0.05). Interestingly, this study suggested that competitive strategy has a linear relationship with environmental management accounting practices. This result is similar to the argument put forth by some authors such as Muhammad (2022), Muammard, Hendr (2016), and Steinberg & VanDeveer (2017), who reported that competitive strategy has a significant positive effect on environmental management accounting practice. This contrasted with the findings of Parker (2019), Bouma and van der Veen (2020), and Burritt (2019), who opined that competitive strategy has no significant effect on environmental management accounting practice. The difference in the results may perhaps be due to the different proxy of environmental management accounting practice.

The second research question, which is used to investigate the second objective, sought to determine the effect of organization interdependence on environmental management accounting practice. It is adduced from the findings that the level of interaction between the various stakeholders within the organization has a significant effect on the environmental management accounting practice (= 0.223, t = 2.957, p 0.05). This study provides evidence that organizational interdependence is an important variable in the environmental management accounting literature. The significant effects of this variable match the findings of Damrongsukniwat and Kunpanitchakit (2017), Kohlmeyer and James (2016), and Rayun and Nengzih (2020). However, this is against the undermining effect put forth by literature, for instance Burritt (2018) and Parker (2019), who confirmed an insignificant relationship between organization interdependence and environmental management accounting practice.

The third research question is used to investigate the third research objective. This objective examines the effect of resource strength on environmental management accounting practice. The study reported that resource strength has a significant positive relationship with environmental management accounting practice (= 0.709, t = 3.879, p 0.05). The results suggest that valuable physical assets and human and intellectual capital used by the business organization play an important role in environmental management accounting practice. The finding is in consonance with prior studies such as Covaleski and Dirsmith (2022), Shawn (2019), and Mara, Susana, and David (2022), who reported a significant positive relationship between resource strength and environmental management accounting practice. This finding is also validated by the evidence put forth by Retno (2020), who reported a significant positive relationship between resource strength and environmental management accounting practice.

The findings are dissimilar to those of Chinwub and James (2022), who studied the relationship between resource strength and environmental management accounting practice among the listed manufacturing firms in Lagos State. The finding revealed that there is no significant relationship between resource strength and environmental management accounting practice.

Theoretical Implications

The summary and gap identified in the literature serve as the basis for this study's conceptual framework. In an attempt to address the numerous identified gaps, the current study adds to significant theoretical literatures. It was also supported and justified by institutional theory in order to provide new insights and understand the effect of organization dynamics on the environmental management accounting practices especially among the manufacturing firms in Nigeria. Hence, the current study has established significant theoretical contributions to the existing literatures and discussions.

Practical Implications

Recognizing the role of managing environmental issues in organization dynamics among the listed manufacturing firms, this study highlights the effect of competitive strategy, organization interdependence, and resource strength on the environmental management accounting practice among the manufacturing firms in Nigeria.

RECOMMENDATIONS FOR FUTURE RESEARCH

Future studies may be conducted on environmental financial accounting and environmental management accounting. Future studies may also integrate national culture as institutional theory allows for more robust generalization across countries and continents. Finally, future research may also integrate the size of the organization, the age of the organization, and national culture as contingency factors to allow for a more robust study across the countries.

CONCLUSION

The study therefore concludes that there exists a significant positive relationship between organization dynamics and environmental management accounting practice among the listed manufacturing firms in Lagos State, Nigeria.

REFERENCES

Abdulrasaq, S. (2019), ‘‘Employee morale, non-financial performance measures, deployment of innovative managerial practices and shop-floor involvement in Italian manufacturing firms, The British Accounting Review, 1(2), 36-55.

Ahmad, O. & Jayabalan, K. (2021). ‘‘Environmental management accounting within universities: current state and future potential’’, unpublished PhD thesis, RMIT University, Melbourne.

Ball, N. (2019). “Accounting and Environmentalism: An Exploration of the Challenge of Gently Accounting for Accountability, Transparency and Sustainability.” *Accounting, Organizations and Society*, 2(5), 399–425.

Bartolomeo, A. (2020). Analysing the Role of Sustainable Development Indicators in Accounting for and Constructing a Sustainable Scotland.” *Journal of Financial Management,* 3(3), 225–244.

Bebbington, U. (2020). ‘‘Environmental management accounting practice: a management tool for enhancing corporate environmental and economic performance’’, Ecological Economics, 2(3), 548-560.

Bennett, M. & Welch, Q. (2017), ‘‘an institutional perspective on the transfer of accounting knowledge: a case study’’, Accounting Education, 1(3), 329-46.

Bouma, M., Vander Veen, O. (2020). “Environmental Management Control Systems: A Conceptualization and a Review of the Empirical Evidence.”*Journal of Banking and Finance*, 3(2), 147–171.

Buritt, M., Hahn, Z . & Schaltegger, S. (2020), ‘‘adopting environmental management accounting: EMA as a value adding activity’’, *Journal of Environmental Management*, 2(5), 31-52.

Burntt, P. & Packer, M. (2019), the Green Bottom Line: Environmental Accounting for Management: Current Practice and Future Trends, 2nd ed., Greenleaf Publishing, Sheffield.

Christ, I. & Burritt, M. (2019), ‘‘A note on market competition, advanced manufacturing technology and management accounting and control systems change’’, *International Review of Business Research*, 3(1), 301-420.

Campos, R. (2020), ‘‘Environmental costs at a Canadian paper mill: a case study of environmental management accounting (EMA)’’, Journal of Cleaner Production, 1(4), 1237-1251.

Chinwub, T. & John, U. (2018), ‘‘Applying a typology of management accounting change: a research note’’, *Management Accounting Research Journal*, 1(3), 278-295.

Covaleski, H. & Dirsmith, K. (2022). “Accounting and Environmentalism: An Exploration of the Challenge of Gently Accounting for Accountability, Transparency and Sustainability.” *Journal of Accounting, Organizations and Society*, 4(5), 399–425

Dayana, M., Jalaludin, U., Maliah, J., Suleiman, G. & Ahmed (2017),‘Environmental management accounting in Europe: current practice and future potential’ ’*The European Accounting Review*, 1(1), 31-52.

Dammongsukuniwat, G. & Kunpanitchakit, O. (2017). ‘Wanted: a theory for environmental management accounting’’, Environmental Management Accounting:

Informational and Institutional Developments, Kluwer Academic, Dordrecht, pp. 279-90.

El-shishin, O. & Sudhashini, P. (2018). ‘‘An institutional perspective on performance measurement and management in the ‘new public sector’’, *Journal of Management Accounting Research*, 1(1), 281-306.

Fredrick, O. (2020). “The contingency theory of management accounting practice in Nigeria”, *Journal of Business Management,* 2(5), 222-239.

Frost, A. & Wilmhurst, O. (2021). “Recent environmental disclosures in annual reports of Australian public and private sector organizations”, *Journal of Accounting and Finance*, 2(3), 111-127.

Gibson, E. & Guthrie, U. (2016). “Theorising and Modelling Social Control in Environmental Management Accounting.” *Social and Environmental Accountability Journal*, 4(5), 621- 638.

Gladyyns, O. & Wicliffe, G. (2017), “Environmental disclosure in the annual report: extending the applicability and predictive power of legitimacy theory”, *Accounting, Auditing & Accountability Journal,* 1(3), 344-371.

Gray, A. (2023). ‘‘An institutional perspective on performance measurement and management in the ‘new public sector’’, *Journal of Management Accounting Research*, 2(3), 281-306.

Hatem, T. & Muhammed, M. (2017). Determinants of management accounting practices among the SMEs Hotels in Ghana. *Journal of Operations Management*, 4(2), 303-316.

Herwanti, O. & Santoso, D. (2018). “Characteristics of organizational environments and perceived environmental uncertainty”, Administrative Science Quarterly, 2(3), 313-327.

Hibitt, H. (2021). Determinants of management accounting practice in Nigeria. *Journal of Business Studies*, 4(5), 512-527.

Hussain, O. & Gunasekaran, S. (2020). Accountants’ Attitudes and Environmentally-sensitive Accounting.” *Accounting and Business Research*, 2(4), 109–120.

Ilangovan, O. & Perumal, U. (2022). “Australian public business enterprises: analysis of changing accounting, auditing and accountability regimes”, Financial *Accountability & Management Journal,* 2(9), 101-114.

Irwansyah, O., Arisa, G. & Muhammad, A. (2022). "Integrating environmental and stakeholder management", *Journal of Business Strategy and the Environment*, 1(2), 77-88.

James, O. (2019). ''Environmental management accounting (EMA) as the next step in the evolution of management accounting'', *Journal of Business Administration*, 1(4), 1190- 1125.

Johnson, H. (2023). "The contingency theory of environmental management accounting practices", *The Journal of Accounting and Finance*, 2(3), 135-159.

John, K., Meyer, O., Brian, H. & Rowan, R. (1970). "Environmental Management Control. An Empirical Study on the Use of Environmental Performance Measures in Management Control Systems". *Journal of Financial Studies*, 1(4), 109-136.

Jonathan, A. (2015). Environmental and Social Accounting and Reporting: Financial Reporting Today: Current and Emerging Issues, ICAEW, London.

Kate, U. (2021). *Resource management in Nigeria*, New York: Mac Graw- Hill/Irvin.

Kohlmeyer, A. & James, D. (2016). "Environmental audits in local government: a useful means to progress in sustainable development", *Journal of Accounting Management*, 2(4), 296- 318.

Krejcie, N., & Morgan, D. (1970). *Basic Statistics in Management*, New York: Mac Graw- Hill/Irvin.

Lima, G. & Santo, Y. (2019). "Improving environmental management with full environmental cost accounting", Environmental Quality Management, 1(6), 211-222.

Lapsley, J. (2021). "Institutionalized organizations: formal structure as myth and ceremony", *American Journal of Sociology*, 2(3), 340-363.

Nasir, K. & Filipa, O. (2018). Effect of management accounting practices on the performance of SMEs in Tunisia. *Journal of Management Science*, 1(4), 93-108.

Maria, J., Susana, O. & David, U. (2022). "Managing legitimacy through increased corporate environmental reporting: an exploratory study", *Journal of Interdisciplinary Environment,* 2(5), 163-199.

Mauricio, H. & Martina, U. (2021). Determinants of environmental management accounting practice among the manufacturing firms in Nigeria. *International Journal of Business Management*, 4(6), 3122-3154.

Muammard, T. (2022). ‘‘A note on market competition, advanced manufacturing technology and management accounting and control systems change’’, *International Journal of Business Research*, 1(3), 301-320.

Muammard, J. & Hendr, O. (2016). “Local Agenda 21 and barriers to sustainability at the local government level in Victoria, Australia”, *Australian Geographer*, 3(2), 163-181.

Olaoye, N. & Adekanmbi, H. (2023).‘‘Environmental accounting: a management tool for enhancing corporate environmental and economic performance’’, *Journal of Ecological Economics*, 2(4), 548-560.

Packer, H. (2020). “Reduction in environmental costs in local government: a useful means to progress in sustainable development”, Accounting Forum, 2(3), 296-318.

Paul, K. (2022). “Engagement, Education and Sustainability.” *Accounting, Auditing and Accountability Journal*, 10 (3): 365–381.

Rajah, S. (2023). The Evolution of Local Governments, in the Australian Local Government Handbook, Australian Government Public Service, Canberra, pp. 77-87.

Retno, D. (2020). “A study of environmental accounting within the New South Wales public sector”, *Accounting Research Journal,* 1(2), 400-418.

Reilly, O. (2021). “The impact of environmental hazard on corporate social performance and disclosure”, *Journal of Business Management*, 2(3), 123-135.

Saeed, T. (2023). ‘‘A note on market competition, advanced manufacturing technology and management accounting and control systems change’’, *International Review of Business Research Papers*, 1(3), pp. 301-320.

Setthasakko, O. (2019). “Environmental Management Control Systems: A Conceptualization and a Review of the Empirical Evidence. “Journal of *Economic development Studies*, 2(2), 147–171.

Steiberg, S., Vandeveer, P. (2017), “Assessing the true cost of landfills”, Waste Management & Research, Vol. 10 No. 6, pp. 471-84.

Shuang, O. (2017). "Organizational legitimacy: social values and organizational behaviour", Pacific Sociological Review, 1(1), 122-136.

Skordas, W. (2019). "The contingency theory of management accounting", The Accounting Review, Vol. 52 No. 1, pp. 22-39.

Vander, J. (2021). . "Management Control Systems as a Package – Opportunities, Challenges and Research Directions." *Management Accounting Research* 1(2), 287–300.

Vongson, O. & Salwa, M. (2021). A theory for environmental management accounting'', *Journal of Management Accounting Information*, 3(4), 279-290.

Windermere, D.(2019). Effect of environmental management accounting practice on bank performance in Gambia. *Journal of Management Studies*, 6(7), 715–737.

Wolters, E. (2021). "Theorizing and Modeling Social Control in Environmental Management Accounting." *Social and Environmental Accountability Journal*, 3(6), 781-811.

Yusoff. A. & Norzina, T. (2018). "Engaging with Organisations in Pursuit of Improved Sustainability Accounting and Performance." *Accounting, Auditing and Accountability Journal,* 2(3), 333–355.

Zuriana, A., Jamil, O., Rapiah, K., Muhammad, R., Faidzulaini, W. & Amin, R. (2023). ''Environmental management accounting (EMA) as the next step in the evolution of management accounting'', *Journal of Management Accounting*, 8(9), 1190-1133.