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Green Accounting: The Way to Economic Sustainability

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ABSTRACT

The emergence of green accounting began in 1992 in the United States of America. This was as a result of the concerns of the external stakeholders. They stakeholders understood that the prevention pollution would not be adopted as the primary choice of environmental management by firms and industries until the costs of non-preventive methods and the economic values of the prevention of pollution could be seen by managers and business decision making bodies. Green accounting considers environmental resources and vicissitudes in them, it integrates the result into the system of national account thus to provide quality information, which serves as a foundation for planning and making policy for integrated sustainable development and by extension, growth of the nation. Nations of the world mine and drill natural resources not regarding the impact it leaves on the environment.

Keywords: *Green Accounting; Sustainable Development; Economic Sustainability; Environmental Pollution*

1. Introduction

Green Accounting as a new term in the accounting practice has been receiving much welcome around the world as the once foretold plague of the effect of climate change has become more blatant. As sustainable development is being clamoured over the globe, more emphasis is being laid on nature and the environment that surrounds us. The damages on the surrounding environment by human activities has attracted lots of concerns among environmental scientists and organizations. However, acknowledging the importance of the environment in the survival of man and careful assessment of the imminent damages and consequences to the world, compelled more organizations, government agencies and associations to recognize beyond the need to protect the environment while creating awareness among individuals, corporations and government entities on the importance of sustaining the environment.

Green accounting is a growing field that identifies and measures the use of resources, communicates the financial implication of a company or the national economy and its impact (actual or potential) on the environment (Kumar, Jat, & Sharma, 2016). Green accounting considers environmental resources and vicissitudes in them, it integrates the result into the system of national account to provide quality information, which serves as a foundation for planning and making policy for integrated sustainable development and growth of the nation. Nations of the world mine and drill natural resources not regarding the impact it leaves on the environment.

In time past, there have been many advocates of Green Accounting with divergent opinions on the need for green accounting. Some questions stir up the need for green accounting as mentioned by Lisa (2012) that Botswana's diamond mining sector is responsible for about 31 per cent of the country's economic output. Though a glistening De Beers five-diamond bracelet sells online for $1,500, the question is, how much does dilapidated diamond mines cut into Botswana's cumulative economic health?; the Philippines' crude nickel and gold values at about $1 trillion, but the mines and refining process needed for extraction requires a large volume of water since climate change leads to change in annual rainfall in the country, how much would be lost by diverting water from agriculture if a reduction in annual rainfall occurs?; elsewhere, the Australian government has found that pesticides used in farming cause significant damage to the Great Barrier Reef. Though how much that damage affects the tourist economy that thrives around the World Heritage site remains to be determined. These questions in the minds of many economists and academics raise the need for green accounting reporting by nations.

Green accounting is a growing trend every economy and company should embrace because no matter how resourcefully poor a nation is, it must have a mineral resource it exploits and it would be proper to give credence to these mineral resources by at least accounting for the extent of the damage left on the environment in the company accounts and national accounts at large. This could be achieved by nations and companies making provision for calculated/expected environmental damages and actual environmental damages to ensure the sustainability of the environment. Nations, researchers, and economists talk about economic sustainability with little effort to enforcing its recognizability. Green accounting offers a solution to sustaining the environment.

2. The Concept of Green Accounting

The concept of green accounting is diverse and vague in perspective (Lako, 2019), but generally relates to the accountability of environmental costs and consequences. Green accounting is also popularly called environmental accounting and is the incorporation of environmental costs, its impacts and consequences in accounting. Green accounting is a new branch of science in accounting and is said to be wider than social accounting, environmental accounting, and sustainable accounting (Lako, 2018). The issues of green accounting encompass all phenomena, objects, reality, actions, or transactions that are intrinsic to nature and human environment (Lako, 2019). The causal relationship between human behaviour and the environment is the nature for green accounting and involves the record human social, financial/economic, and environmental activities that affect the universe. The practice of green accounting involves the total summation of statistics that have long term impact on the economic and environmental policy of an organization and specifically connects to financial aspects (Tarun. & Murugan., 2018). It is concerned with the expansion of knowledge about the cost of future pollution and addition to human capital stock (Haripriya, 2005). Essentially, green accounting according to Lako (2019) is a new accounting paradigm with focus on objects, transactions or social events and the environment events using the accounting process (recognition, measurement of value, recording, summarizing, presenting and reporting, and disclosing information). The essence of green accounting is the disclosure of data relating to the environment, in regards to the environmental risks, impacts, cost policies and liabilities (Tarun & Murugan, 2018). Green accounting is essential to solving the environmental crisis and mitigation of climate change and involves both the government and private firms.

Nonetheless, green accounting describes the environmental issues of business attaining the desired level of performance by integrating economic and environmental analysis to measure and compile data. Green accounting is essential for sustainable development especially in developing countries as it creates awareness about environmental damages, protection and development of environment through reports in the standards of a corporate firm and in regulatory purpose standards (Tarun. & Murugan., 2018). Also, the role of green accounting according to Mahmud, Ahmmad, and Islam (2013) is dealing with social and environmental problems and maybe impactful on attaining the sustainable development and environment in any country in the world. The authors posit that the role of green accounting is achieved through green investments which include, pollution abatement technologies, re-engineering of plants, products and processes to recycle waste. Invariably, green accounting measures available sustainable income level with decreasing effect on the stock of natural assets (Mondal, Puja, n.d). This entails adjustments of the System of National Accounts (SNA) regarding the stock of natural assets. However, the basis of green accounting is on its impact on sustainable development and mitigation of environmental crisis. The rationales, and process of green accounting is discussed below as follow;

3. Objectives of Green Accounting

The ideas behind the science of green accounting according to Rajshree and Sravani (2017) includes;

1. Segregation and Elaboration of all Environment-related Flows and Stocks of Traditional Accounts: The segregation of all asset flows and stocks connected to the environment gives way for the valuation of the total expenditure or cost for the protection of the environment (Rajshree & Sravani, 2017). An additional objective of this segregation is to ascertain the part of GDP (Gross Domestic Product) that reveals the costs required to requite for the negative impacts of economic growth, that is, the defensive expenditures.

2. Physical Resource and Monetary Environmental Accounts Linkage: Physical resource account entails the aggregate stockpile or reserves of natural resources and changes, including when those resources are not affected by the economic system (Kaneda, 2009). Thus natural resource account provides the physical equivalent of the monetary stock and flow accounts of System Environmental-Economic Accounting otherwise known as SEEA.

3. Environmental Implication Assessment: The SEEA compliments and expands the Systems of National Accounting (SNA) with costing in mind:

(a) The depletion (use) of natural resources in the production stage and consumer product demand;
(b) The difference in the quality of the environment, in terms of pollution and other negative impacts of production, consumption and natural events, on the one hand, and environmental protection, on the other (United Nations, 2014).

4. Accounting for the Conservation of Tangible Wealth: The concept of capital in the 21st Century does not include only the human-made, but also natural capital. Capital formation due to increasing need to sustain the environment has broadened the concept of capital accumulation – allowing for the discovery, use or consumption of environmental assets (Anderson, Huggins, & Power, 2008).

5. Elaboration and Measurement of key Indicators of Environmentally modified Products and Revenue: The consideration of the implication of the depletion of the natural resources and changes in the environment allows for the calculation of modified macroeconomic aggregates, importantly, an environmentally modified Net Domestic Product (EDP).

4. The Trend of Green Accounting in Nigeria

Nigeria is a nation with numerous natural resources (Oil and Gas products) and facing challenges in environmental degradation control. As a result of this, the Federal Government of Nigeria promulgated Decree No. 42 of 1988 by the former Federal Military Government of Nigeria. The decree incriminated anyone that dumps harmful materials on the entire landmass and water bodies of the Federal Republic of Nigeria (Ironkwe & Sucess, 2017). In 1988, Decree No. 58 gave rise to the formation of the Federal Protection Agency (FEPA) and its amendment in 1992 by Decree No. 59 granted FEPA the responsibilities for environmental protection, biological diversity, environmental technology, conservation and research. On May 29 1999, President Olusegun Obasanjo under the civilian government created the Ministry of Environment in June 1999. Since then, the ministry absorbed the former regulatory agency, FEPA and ensures protection of the environment, conservation of natural resources and sustainable development (Ironkwe & Sucess, 2017). According to the Federal Ministry of Environment (Nigeria), the ministry has contributed to educating the citizens on issues of environmental consciousness while engaging the environmental best practices in the world.

Regardless of the regulatory policies, mission and vision of the ministry, the study carried out by Eze, Nweze, and Enekwe (2016) attested that the oil-producing communities in Nigeria suffer environmental damages resulting from industrial pollution, oil spillage, and deforestation. The is as a result of oil-producing industries in the communities who engage in little or no cost records of the industrial activities to the environment and life of the people. The damages are in the form of dangerous hydrocarbons emitted into the air, oil spillage into surrounding water bodies that are of various effects to human health. The quest for profitability by the multinational oil companies, large scale fishing industries, lumbering companies and mineral extraction companies have made sustainability issue very difficult in Nigeria (Eze, Nweze, & Enekwe, 2016).

Recently, the world is concerned about the safety of the environment as it relates to health and quality of life. The same concern in Nigeria is rather slow (Eze, Nweze, & Enekwe, 2016) and much effort is needed to achieve sustainability in Nigeria (Ironkwe & Sucess, 2017). Studies showed that the companies, environmentalists, community leaders, and accountants in Nigeria accepted the direct influence of green accounting on sustainable development. However, very few companies imbibe the green account services. The causal factor according to Ironkwe and Success (2017) is the voluntary nature of green accounting disclosures and poor or non-existent of environmental legislation and defective enforcement mechanism where they are practised. Therefore, there is need for reinforcement in implementation of the existing environmental regulations and policies that oversee the operations the companies with dreadful impact to the environment and also efficient adoption of global environmental conservation strategies and management techniques.

5. Significance of Green Accounting to Economic, Social and Environmental Sustainability

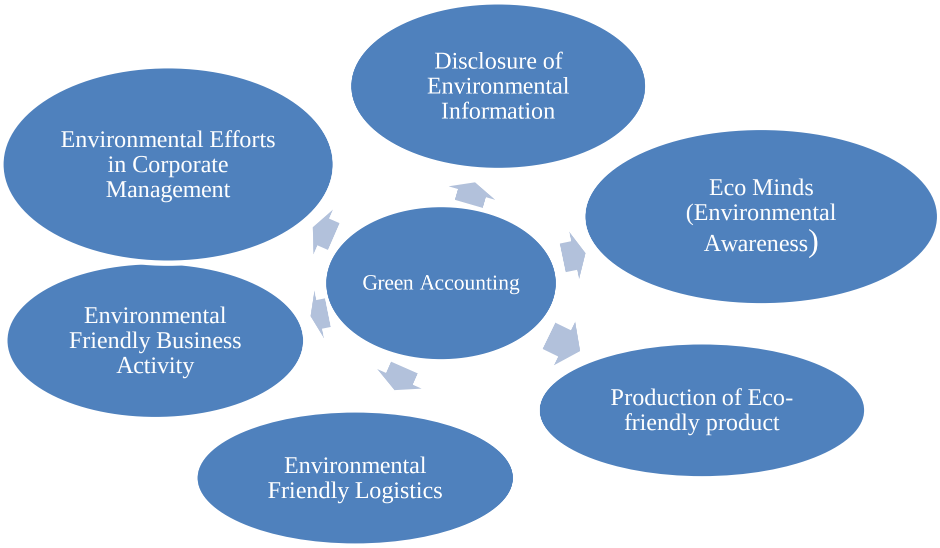
The excavation of natural assets and other human activities on the environment has been justified to harm both the environmental balance and economy as a whole. The environmental and climatic changes greatly affect the Gross domestic product of a nation. In the bid to curb this great effect, green accounting aids the potential of achieving the economic goals and the environmental goals by its superiority over conventional accounting system. The benefit of green accounting to economic sustainability is seen on the statistical summation of environmental costs into the financial results of operations thereby serving as a regulatory measure and legal jurisprudence in the prevention of environmental crisis (Mahmud, Ahmmad, & Islam, 2013). Green accounting is the present focus in the 21st century because it is essential for understanding the economic role of natural environments and provides proof on the contribution of natural resources to the economy.

The essentiality of green accounting to economic sustainability is evident in its superiority over conventional accounting system. According to Mondal, Puja (n.d), green accounting expands and complements the conventional system of national accounts concerning costing the depletion of natural resources in production and consumer level demand and the changes in quality of the environment emanating from pollution and other effects of natural, production and consumption events. More so, green accounting is of numerous benefits that account to economic growth and sustainability. Regarding this, several authors [Kumar, Jat, & Sharma, 2016; Lako, 2019; Tarun & Murugan, 2018; United Nations, 2014; Mahmud, Ahmmad, & Islam, 2013] noted the crucial role of green accounting to economic sustainability. Green accounting helps in assessing, testing and reporting performance of environmental activities and inculcates the environmental sources and assets into corporate accounts. It evaluates the environmental and socio-economic impact of business. Green Computing aides in the achievement of socio-economic and environmental sustainability through the value of goods and services that does not depreciate over time, achieve Sustainability and reduces the cost associated with raw material utilities and waste.

Inferentially, the major contribution of green accounting to the economy is to have sustainable development. Sustainability entails processes that are characterized to be maintained indefinitely at a certain level. Sustainability in its environmental usages refers to the potential longevity of vital human ecological support systems, such as the planet's climatic system, systems of agriculture, industry, forestry, and fisheries on the one hand and the increasing pressure by human communities, their consumption patterns (Joshi, 2014). Decision-makers who can see exactly where these natural resources are used across various projects can locate areas of synergy that allow them to reduce the number of wasted materials at the programme or enterprise level (Ramamurti, 2004). Green accounting creates an opportunity for corporate firms and businesses to reserve finances in controlling environmental pollution and ecosystem balance. Education about the role of environment in economic sustainability to individuals and corporate firms is achieved through green accounting and thus, prepare firms to spend an amount of money for resources used that may or may not damage the environment. Eventually, green accounting leads to more production as less input is wasted and the technological innovation uses available resources while increasing productivity and preventing pollution. The technological innovations involve treatment plans to control the bounds of pollution and designing environmentally friendly products. This invariably results in the production of a cleaner environment for the production of products, reduced production impact on the environment, improved environment by designing environmentally friendly products. Ideally, green accounting improves economic sustainability and sustainability of enterprises.

Also, Tarun and Murugan, (2018) in their study noted that the acceptance of green accounting as a Generally Accepted Accounting Principles (GAAP) is a path laid for sustainable development for the future generations. Also, Amer, Hamza, Emad, and Ali (2018) posited efficient practice of green accounting is essential for sustainability development, resulting from the focus on environment and environmental taxes, costs, appreciation of ecosystem services, the cost of carbon dioxide and the cost of water pollution which ensures the sustainability of the economy. Therefore, by taking few steps together, shown in the diagram below; Environmental efforts in corporate management, Production of eco-friendly products, Environmental friendly business activities and many more eco-driven steps can lead to an eco-balanced company and thus, sustainable economy.

Fig 5.1



Source: ***Computed by the Researcher as used by*** Kumar, Jat, & Sharma (2016)

Conclusion

Nigeria is still in the initial stages of development in regards to Green Accounting. Most of the world at large are still unfamiliar with the term Green Accounting or its relevance. Though Nigerian businesses comply with requirements such as Corporate Social Responsibility, there are no definite policies or stipulated guidelines put in place to protect the Environment. Hopefully, with more enlightenment on the subject, Green Accounting looks to become a practice and reality among all firms and economies one day.

Recommendation

1. Need for the implementation of compulsory environmental impact auditors in both public and private manufacturing firms to enable accurate recording of environmental damage. This will open a new phase and career in the accounting profession which will lead to the increased employment rate. This also will be the most forward step for the Nigerian Government to show concern for the environment it has been exploiting for years.
2. Need for Corporates (especially manufacturers) to incorporate green accounting into their accounting standards. This will aid the compilation of national accounts.

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