

FOSTERING ENVIRONMENTAL SUSTAINABILITY IN NIGERIA VIA THE GREEN BUSINESS INITIATIVE

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ABSTRACT

The environment is a natural physical resource that is needed for effective and efficient functioning of life. It includes but is not limited to air, water, land, energy, minerals, plants and animals. On a daily basis, the interaction between humans and the environment is ineluctable in performing different kinds of economic and business activities. This in most cases, leads to changes in the chemistry and quality of an environment that could result in environmental degradation as well as depletion of natural resources. In order to address this phenomenon, concerted efforts of various stakeholders on environmental sustainability across the globe led to the Green Business Initiative (GBI). This initiative involves greening of existing business enterprises and the creation of new green start-ups, which are globally acknowledged and embraced for environmental sustainability. However, its implementation in developing countries, especially Nigeria, is not as noticeable and popular as in developed nations. To this end, it is imperative to understand the rudiments of green businesses as a pathway to environmental sustainability in Nigeria. Thus, this study provides in-depth information on the essential elements of green businesses that could be explored to foster environmental sustainability in Nigeria. This is a qualitative research that involves the review of extant literature on environmental sustainability and the green business initiative. The factors identified in this study to promote GBI in the country include eco-innovation and the green business model. The study recommends mechanisms that could be adopted in policy formulation to promote GBI in Nigeria.

Keywords: Environmental sustainability; Green business initiative, Ecopreneurship, Eco-innovation, Green business model

1.0. Introduction

The preservation of the natural environment is paramount to a healthy economy and societal survival (Arora, 2018). The natural environment encompasses resources like air, water, land, energy, minerals, plants and animals (Muralikrishna & Manickam, 2017). It represents an indispensable macro business environment, which all business owners and operators should have a serious plan for (Anekwe *et al.*, 2019). In addition to having a good environmental plan for business, its implementation and commitment strategies are also crucial because the success and existence of any business enterprise hinges on the manner the business is designed to handle its interactions with the environment (Long, 2019).

Over the years, business organisations with less stringent or no concern for the preservation of the natural environment have been recognised as major actors in business issues leading to environmental degradation. Some of the business activities that are well-known to be

responsible for environmental degradation include indiscriminating dumping or discharging of untreated wastes into the environment, over exploitation of natural resources and utilisation of traditional production technologies (Appannagari, 2017). The aforementioned activities do constantly perturb the chemistry and quality of the environment, resulting in environmental degradation and stress. The effects of environmental degradation are pollution, flooding, global warming, food insecurity and depletion of natural resources among others.

Awareness and policies on mitigation strategies to curb environmental degradation towards sustainable development exists in both developed and developing economies. The strategies; the 7Rs (Reduce, Reuse, Recycle, Recover, Rethink, Resilient and Regulate) of wastes management, which emphasise a change from linear to circular economies and transformation from brown to green businesses, are all embedded in the green business initiative (Xing *et al.*, 2017; Wautelet, 2018; Korhonen *et al.*, 2018; Fogarassy & Finger, 2020; Georgeson *et al.*, 2017; Bina, 2013). However, the rate of adoption of the strategies is still low in developing countries. This could make such nations more susceptible to environmental degradation nowadays than in developed countries.

In Nigeria as a developing country, it is imperative to improve on the adoption of the green business initiative, which would in turn facilitate the attainment of environmental sustainability in the country. Therefore, this research will address the question: what basic elements of green business would foster environmental sustainability in Nigeria?

2.0. Methodology

This is a qualitative research that involves the use of secondary data (printed text). The text was obtained from articles published in English Language in reputable academic journals and books. The articles were retrieved from Google Scholar search engine, using key words like environment, business environment, environmental degradation, sustainable development, environmental sustainability and theory, green business and green business model. The resulting text was critically reviewed and synthesised. The findings of this study were presented in three main sections: An overview on theories of environmental sustainability, green business initiative and basic elements of green business.

3. Findings and Discussion

3.1. Theories of environmental sustainability

This section presents the underpinning information that explains the concept of environmental sustainability.

3.1.1. Ecological theory of change and development

This theory states that as the population of a society increases in size, its dependence on the environment will also increase, which in turn adds more pressure and stress to the scarce available natural resources – land, water, air, biomass and other natural endowments. That is, the ecological theory of change and development ascribes environmental change (such as change in the consumption and quality of the constituents of environment) to population growth (Hunter, 2011; Costanza, 2014).

The theory makes it abundantly clear that individual members of a society always engage in socioeconomic activities for survival. The socio-economic activities, according to the theory include the commercial and industrial activities of people in urban industrialized societies. The

aforementioned activities have the potential to directly or indirectly pollute the environment and further cause harm (degradation) to the ecosystem. The implication of this theory is that the growing contemporary society needs to respond swiftly and resourcefully to the issue of population growth. For Marxist scholars, environmental problems are rooted in the unequal distribution of resources within society. There can be no lasting solution to such problems until the social system is structured more equally (Wang, 2012; DeBardeleben, 2019).

3.1.2. Schumpeter's theory of entrepreneurship

This theory shed light on the relevance of entrepreneurship as an innovative process of providing solutions to all kind of problems including environmental issues. The theory gave insight into ecopreneurship as a special category of entrepreneurship that focusses on resolving environmental challenges (Santini, 2017). Schumpeter (1942) described an entrepreneur as an innovator that provides innovative solutions (creative destruction) to changes in the needs of a society (Mishra & Zachary, 2011). This implies that an entrepreneur is the one that innovates a new solution that addresses a societal problem. The author also maintained that the environmental problem, is one of the major problems of a society, which inherently calls for innovation. Schumpeter (1942) noted that most of the environmental problems are caused by economic activities of mankind, which include application of out-dated, old, polluting and inefficient technology. This calls for a need for entrepreneurial action to develop new environmental solutions. The solutions could be a new production technique, technology, product/service, distribution system, or system of organizational (Tillery and Young, 2009; Lennox and York, 2011).

3.1.3. Ecological modernization theory

This theory also corroborates the rationale for ecopreneurship (Isaak, 2017). The theory affirms that it is feasible to promote economic growth by giving priority to the environment. This will lead to improvement in the environment (York *et al.*, 2010). With this theory, it is no longer necessary to trade off economic growth for environmental quality. The implication of ecological modernization theory is that the environmental problems facing the world today would be a driving force for future industrial activity and economic development. The theory then calls for progressive change, that is, modernization of the economic activities of contemporary society to avoid an ecological crisis. Furthermore, the theory explained that entrepreneurs are the central agents of change in that process of transformation. That is, the ecopreneur has the potential to be a major force in the overall transition towards a more sustainable business paradigm. Also, the new generation of ecopreneurs are seeking to combine environmental awareness and conventional entrepreneurial activity to achieve sustainable development (Solaja, 2017). Thus, entrepreneurial action is the best solution to global environmental problems.

This study adopted ecological modernization theory of environmental sustainability, as it considered holistically the tripod of sustainable development – economic, environment and society, which gave birth to green business initiative.

3.2. Green Business Initiative (GBI)

The concept 'Green' is used to describe the improved quality of business activities, which deliver products and/or services of better economic, environmental, and social value to a wider geographical area more equitably and sustainably (Čekanavičius *et al.*, 2014; Leonidou *et al.*, (2017). Like other entrepreneurs, green entrepreneurs also seek for business opportunities from

emerging phenomenon such as changing customer behaviours, new or changing regulations, and societal and environmental issues (Koester, 2017).

GBI forms a basis for the green economy, which is a strategic step towards achieving sustainable environment through initiatives that focus on converting environmental threats into opportunities (UNEP, 2012). GBI, also known as ecopreneurship, represents all business endeavours of an ecopreneur who is a unique category of entrepreneurs that focuses on environmental sustainability. An ecopreneur (ecological entrepreneur) also known as an environmental entrepreneur or green entrepreneur, is assumed to be passionate, motivated and willing to do business that would reduce environmental hitches or promote the quality of the natural environment (OECD, 2011). According to Chopra (2014), ecopreneurs do carry out economic activities that keep the environment clean, while meeting the objectives of his business. The author also noted that an ecopreneur operates a business enterprise that fulfil both social and environmental requirements. The GBI of green entrepreneurs are of two folds (OECD, 2011; Solaja, 2017):

- i) Establishing a green business, which could involve provision of green products or services; and
- ii) Introducing greener production techniques and technology, boosting demand for green products and services, and creating green jobs.

It could be deduced from the above that a green entrepreneur could either be the one starting a new green business or making his existing business green (OECD, 2011). Furthermore, it is evident from the work of Kainrath (2009), who examined several case studies on ecopreneurs, that the success of ecopreneurs in any society is determined by three key elements as described below:

- i) Eco-innovation: This depicts the provision of innovative solutions to solve environmental problems.
- ii) Eco-commitment: This implies the creation and implementation of policies that would help to create a commitment towards green activities.
- iii) Eco-opportunity: It means the identification of environmental opportunities for innovation that would help to solve environmental problems as well as achieve sustainability in business operations.

However, McEwen, (2013) observed that the critical factor at the core of ecopreneurship is eco-innovation. This was corroborated by Singh & Panackal (2014), who stated that the success of any business depends on new and innovative environmental technologies, services and processes, which would be more important sources of competitive advantage in the current green economy.

3.3. Elucidation of basic elements/factors of GBI to foster environmental sustainability in Nigeria

3.3.1. Eco-innovation

In the extant literature, it was well-established that innovation stands out to be an essential ingredient for a sustainable long-term growth path for any country. Also, it has become widely accepted that resource scarcity, environmental and climate issues could be resolved via innovation (Bossle *et al.*, 2016; Díaz-García *et al.*, 2015; Triguero *et al.*, 2013).

Eco-innovation (ecological/environmental innovation) is a subtype of sustainability-oriented innovation that directly addresses issues on environmental sustainability (Adams *et al.*, 2016; Hansen & Grosse-Dunker, 2012). Eco-innovation can be described according to Beltramello *et al.* (2013) as follows:

- i) Eco-innovation represents innovation which explicitly emphasises the reduction of environmental impacts, whether intended or not. Besides, eco-innovation exhibits some characteristics of general innovation, which include the implementation of new, or significantly improved, products (goods and services), processes, marketing methods, organisational structures and institutional arrangements. On the other hand, eco-innovation differs from general innovation in that it lowers specific negative externalities (for example, reducing the environmental costs of production), while generating positive spillovers from innovation.
- ii) Eco-innovation always includes innovation in social and institutional structures. Also, a growing body of literature explains that changes to social norms, cultural values and institutional structures could be considered as integral parts of eco-innovation.
- iii) Eco-innovation depicts an indispensable means of achieving a successful transition to a greener economy. It involves a larger degree of radical or disruptive innovation, relative to other areas where incremental innovation might be sufficient.

Knowledge on eco-innovation has the potential of making a business or its value chain to increasingly become green, that is, environmentally friendly. Also, it could lead to drastic improvement on resource efficiency and productivity. Ultimately, eco-innovation might increase both short-term and long-term competitiveness of a business, as well as facilitate the creation of new green market. Eco-innovation that yields or maintains a green business involves, but is not limited to the use of greener inputs, production techniques, technology, and selling greener products and services (Henriksen *et al.*, 2012). Moreover, eco-innovation in business has many applications. For instance, it may be explored to address societal challenges by developing radical new technologies (for example, clean technology and renewable energy). Also, it could target the reduction of negative impacts of conventional products (for example, eco-friendlier materials in products) (Beltramello *et al.*, 2013).

The benefits of eco-innovation might take many forms. For example, it may reduce consumption of materials (including natural resources) or energy per unit of output; lower the businesses CO₂ (carbon-dioxide) footprint; minimise water or air pollution; or grow new markets, among others (Beltramello *et al.*, 2013). In the same vein, examples of innovations in the context of clean and efficient technologies include light-emitting diode (LED) technology, solar home systems, and new water filtering technology. The aforementioned use fewer resources and are therefore environmentally friendly. At the same time, they are more inclusive in that they replace expensive energy sources like kerosene, or labour-intensive activities such as fetching water or collecting firewood which burden the poor (Krämer & Herrndorf, 2012).

3.3.2. Business model (BM)

For eco-innovation to get to market and diffuse, an appropriate business model should be put in place (Beltramello *et al.*, 2013). Therefore, in this section, an overview on the concept of business models was presented for in-depth understanding of the Green Business Model (GBM) that will be discussed in the next section.

According to Osterwalder & Pigneur (2010), a business model describes the rationale of how an organisation (for example, business enterprise) captures, creates and delivers values for itself, its customers, clients, and society at large. In this context, value can be described as the collection of products and services that a business offers so as to meet the needs of its customers/clients, the environment and society. Also, BM demonstrates the logic of how an organisation intends to develop a new business strategy or improve on an existing strategy to better meet market needs (Van Beers *et al.*, 2015).

Moreover, BM is regarded as a mediator between technology and economic value creation. In this scenario, it is seen as the link between technological change, ensuing innovation and the ability to perform in the market (Amit & Zott, 2001; Chesbrough & Rosenbloom 2002; Zott & Amit 2007). Although different BM frameworks exist, they all originate from the same building block in the context of value proposition (for example: product and service offered, identification of a market segment and revenue model); operation model (for example: definition of structure of the value chain and the position of the business in this), cost model and organizational change. These elements mixed together to formulate the competitive strategy for business enterprise to deliver on its given green value proposition (Teece, 2010; Andersen & Faria, 2015).

3.3.3. Green Business Model (GBM)

GBM is a business model that has a greener orientation and recently has been adopted in the discourse on sustainable development (Bisgaard *et al.*, 2012). Andersen & Faria (2015) noted that the literature on GBM is quite small but is rapidly growing. Nevertheless, there are many terms and definitions emanating from various stakeholders such as the public and academia. They argued on how companies or businesses apply GBM to their entrepreneurial activities to achieve sustainable environmental goals. Sequel to this, there is no generally and internationally acceptable definition on GBM.

FORA (2010) described GBM as a business model that supports the development of economically viable products and services (systems) with environmental benefits, such as reduction in the use of resources (resource efficiency) and generation of wastes. Besides, GBM has a lower environmental impact than traditional BM with the aim of creating economic and environmental win-win benefits for the society and all stakeholders.

Furthermore, Sommer (2012) used seven case studies to discuss GBM from theoretical and empirical perspectives. According to the author, GBM is defined as a business model that depicts a significant improvement (discontinuous leap) in overall environmental performance with respect to its entire value chain system vis-à-vis that of conventional business models (i.e. the reference case). In their study, Henriksen *et al.* (2012) defined GBM as an innovation during which a business enterprise changes elements of its BM to capture economic value and reduce ecological footprint (Abuzeinab *et al.*, 2016).

Based on sustainable development, OECD (2009) described GBM as a new model that is radically different from the conventional model of providing products and services, with the potential to significantly improve on environmental sustainability. According to Van Beers *et al.* (2015), GBM is a model that is capable of delivering products and services with economic, environmental and social benefits to society and businesses along the supply chain, and thereby increase competitiveness, inclusiveness, and innovation.

By taking the above definitions and descriptions of GBM holistically, this study then defines GBM as a green business blueprint that delivers simultaneously resource efficiency, efficient and resourceful management of wastes, little or no pollution, clean technology and green product or service, to the principal trio of business environment – economy (profit), society (people) and ecology (planet).

3.3.3.1. Major differences between conventional and green business models

The table below presents some general illustrative differences between conventional and green business models as each BM is unique.

3.3.3.2. Classification of green entrepreneurs using GBM

Green entrepreneurs can be classified based on the focus of their GBM. That is, how they intend to serve the market through their business models. Thus, the green entrepreneurs are categorised by output and process. Green entrepreneurs with GBM target green and environmentally friendly products and services (for example, waste management, renewable energy, green technology, green business development services and so on). On the other hand, green entrepreneurs with process driven GBM deliver products or services through environmentally friendly processes

Table 1: Conventional BM versus GBM

	Building Block	Conventional Business Model	Green Business Model
1	Key activities	Focus more on short-term management	Long-term strategic decision making
2	Key resources	Use of non-renewable and non-recyclable materials and fossil fuels	Use of recycled, renewable and sustainable materials
3	Customer segments	Focus on traditional and mass consumer markets	Servicing existing consumer markets and developing new markets through innovative products and services and thereby increasing competitiveness
4	Costs	Missed cost saving opportunities through resource efficiency measures	Cost saving opportunities through energy and resource efficiency in the production and all stages of the value chain
5	Value proposition	Focus on maximising product outputs and economic returns	Focus on value creation through delivery of innovative and green products and services
6	Revenue streams	Key focus on delivering economic value to business and clients	Deliver economic, environmental, and social value to customers, companies and society
7	Key partnerships	Partnership focus on stakeholders directly linked to manufacturing and sales of products ('first tier partnerships')	Strategic partnerships along the value chain, including private and public sectors and communities
8	Customer relationships	Relationships with core and traditional customers based on economic values	Long-term customer relationships based on environmental and societal values
9	Channels	Build on 'open-loop systems' (extract, produce, use, and discard) with significant waste along the supply chain	Build on circular models facilitating the reuse of resources throughout the value chain

Source: Van Beers *et al.* (2015)

(for example, eco-tourism and resource efficient production) (Van Beers *et al.*, 2015).

3.3.3.3. Benefits of GBM

In order to achieve environmental sustainability, it is pertinent to replace the old business practices or models with GBM. The latter model could enable businesses to restructure their value chains and generate new types of producer-consumer relationships and to alter the consumption culture and patterns of use (Beltramello *et al.*, 2013).

Also, GBM has the potential to deliver the desired sectorial transformation by changing the way the business and its value chain creates, delivers, and captures value (Bocken *et al.*, 2014; Abuzeinab *et al.*, 2016). In addition, GBM offers economic, social and environmental benefits to business enterprises as highlighted below according to Van Beers *et al.* (2015).

- i) Economic benefits of GBM include reduction in production costs, opening of access to new markets, increase in competitive market advantage, enhancement in compliance with environmental standards and improvement in stakeholders' relationship.
- ii) Social benefits of GBM are improvement in corporate reputation, creation of new and better local jobs (especially for marginalised groups) contribution towards formalizing local informal economies, and improvement in living standards of surrounding communities.
- iii) Environmental benefits of GBM are enormous and not limited to reduction in resource usage and associated costs, reduction in usage of hazardous substances, reduction in waste generation, valorisation of production residuals, higher recycling and reuse rates, reduction in energy use and greenhouse gas emissions and increase in energy security through renewable energy.

3.4. Suggested Guidelines on Policy to Boost Green Business Practices (GBPs) in Nigeria

As discussed in this study, GBI is a proven engine that could drive environmental sustainability. Therefore, for GBI to gain full attention and practice in Nigeria, the Nation's government, at different levels, has a leadership role to play in formulating relevant policies that would promote GBPs in the country. This section provides guidelines on key areas where such policies should be formulated in Nigeria.

- i) Market development: To bring eco-innovative products into market, market demand for such green products and services should be strengthened by providing long-term and stable incentives for green businesses (GBs) to internalise the environment into their business models (BMs). The incentive could be in form of tax reduction or subsidy privilege on GBs. Also, there could be a reduction in the costs of intellectual property rights.
- ii) Financing: Revolving loan facility should be set aside to care exclusively for GBs development and promotion. Such loan should attract special interest rate. In addition, policy makers can also endeavour to attract investors to fund or invest in GBs.
- iii) Education and training (including research and development): Conducive environment should be created to build capacity of all stakeholders (existing and would be entrepreneurs, academics, youth and government workers) towards acquisition of green skills to be competent at doing green businesses and jobs. Policy makers should ensure that the education and training system is well equipped to provide such new skills, or upgrade the skills of employees.

- iv) Networking and collaboration: This strategy would ensure productive interaction and cooperation between different kinds of green entrepreneurs. Also, it would assist to effectively overcome any challenges in the business line. Besides, it can make fostering of cross-fertilisation of ideas and technologies and economies of scale feasible. Networking and collaboration as a strategy could be achieved through regular meeting events and online platforms such as social media like Telegram, Facebook and WhatsApp platforms.
- v) Competitions and award programmes: This can boost awareness on green business. It also promotes matchmaking, where a green business finds a relevant support institution. In addition, it could help the business to find business partners with significant resources to help them promote their businesses beyond their imaginations.

4.0. Conclusion

GBI as a means of achieving environmental sustainability in Nigeria was examined in this study, using qualitative research methodology. The GBI involves greening of existing business and opening of green start-up through resource efficiency, conservation of natural resources, green management of wastes and green technology among others. Green entrepreneur or ecopreneur was identified as a unique entrepreneur that does green business. Green in this context was used to describe environmentally friendly and resourceful quality of business activities in the face of economic, environmental, and social values of such business enterprises. Eco-innovation and GBM were pinpointed as major elements or factors that determine the success of GBI. The later part of this study provided suggested guidelines that could be adopted in formulating policy on GBI in Nigeria.

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