ENVIRONMENTAL SUSTAINABILITY AND AGRICULTURAL BUSINESS GROWTH OF SELECTED AGRO-ALLIED BUSINESSES IN NIGERIA

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Abstract

The study assessed the effect of environmental sustainability on agricultural business growth of the selected agro-allied businesses in Nigeria. The researcher adopted survey design. Data were collected by structured questionnaire in Five-Point Likert Scale format. The source of data was through primary source. The target population of the study comprised of owners/managers of all agro-allied businesses in North-central, Nigeria. Sample size was derived from the population with the application of Taro Yemane's formula for finite population while Bowley's proportional allocation method was adopted to determine the allocation of questionnaire to each organization. A Cronbach Alpha method was used to determine the reliability of questionnaire. The hypothesis was formulated and tested using Ordinary Least Square Regression and Z-test at .05 level of significance. The findings revealed that environmental sustainability positively affects the agricultural business growth of agro-allied businesses in north central Nigeria. The study concluded that despite the changes in legislation and regulations to protect the environment, Nigeria and various other countries are still facing many environmental problems of climate change, population growth, overflowing landfills, water scarcity, fuel shortages, and water and air pollution.. The study recommended that the Nigeria government should strengthen external forces, especially with respect to establishing national standards for the quality of environment and the implementation of these regulations, while the hands of the ecopreneurs, government and society at large should be on deck to tap international standard in order to support the phasing-out of products and processes that are known to contribute to global warming and ozone depletion.

keywords: Environmental sustainability , business growth , agro-allied businesses

Introduction

In a market system, sustainable development requires sustainable innovations and entrepreneurs are those who can achieve environmental goals with superior innovations that are successful in the marketplace. Market innovations that drive sustainable development do not occur by accident; they have to be created by leaders who put them into the core of their business activities. Actors

and companies making environmental progress in their core business may be called ‘ecopreneurs’. They generate new products, services, techniques and organizational modes that substantially reduce environmental impacts quality of life. Companies contribute most to the overall environmental progress of an economy and society if their core business deals with environmental solutions and environmentally superior .products and if their innovations substantially influence the mass market. Traditionally, efforts to address this problem have focused on how and why existing firms can become greener (Cohen & Winn, 2007). These efforts have not led to solving our environmental problems. Schaper (2012) suggested that it is now time to pay attention to the role that entrepreneurs can play in solving environmental problems. Entrepreneurs can contribute to solving environmental problems by , creating new, more environmentally sustainable products and services (Cohen & Winn, 2007; Dean & McMullen, 2007; York &Venkataraman, 2010). Entrepreneurship may be the solution to many of our social and environmental problems and could be the action needed to put us on the path to a more sustainable future (Brown, 2006; Brugmann & Prahalad, 2007). Cohen and Winn (2007) supported the need for entrepreneurial action to solve our environmental problems and ' agreed that “the real gains will only be made by harnessing the innovative potential of entrepreneurs who will develop the innovative business solutions to deal with the environmental challenges.

For a company to have a positive environmental influence it must make a real and substantial contribution to environmental progress. A real improvement can be created only if the production processes, products and services are environmentally superior. A substantial contribution requires that the company exert significant market influence by gaining a large market share or by influencing competitors and other market actors (such as suppliers) to 1 adopt superior environmental solutions. (Ecopreneurs run companies that fulfill both requirement

Ideally, ecopreneurship pulls the whole market towards more environmental progress. Ecopreneurs strive for business success through environmental solutions for the mass market. To measure how well a company has •done, the dimensions of ecopreneurship can be further subdivided. The priority of ^environmental goal range from low priority (environmental protection is regarded as a v trustee duty), to medium priority (environmental issues are seen as supplemental to conventional business issues) and high priority (environmental issues are regarded as an integral part of core business activities). The market effect of the company and its businesses can be small (i.e. the alternative scene), medium (i.e. the successful occupation of an eco- ipiche) or large (i.e. through a strong influence on the mass market).

Much of the work that has been done to date on ecopreneurship and environmental issues has largely taken the form of anecdotal reports and case study analysis. Large sample studies are needed to demonstrate how ecopreneurship may or may not enhance the innovative ability and performance of organizations. The present study aims to bridge the gap by examining the implications of ecopreneurship activities in sustaining innovative performance in a sample of ;selected agro-allied businesses in Nigeria.

The business activities of agro-allied businesses in Nigeria are not without some inhibiting problems emanating from their various environmental factors such as land degradation, soil (erosion, deforestation, industrial toxins, ozone depletion, climate change, nuclear radiation, | and the destruction of biodiversity. Today, these problems are posing serious challenges to their operational capabilities, survival and "performances. A cursory analysis of some of these problems prompted the crucial need for embarking on this proposed study. The environment factors in the agro-allied industry' in Nigeria tend to be harsh on indigenous firms and their operational activities nowadays. This has brought such consequences as low productivity,

increasing risks, low profitability, and tensed competition, heavy investment on equipment, increased operational cost and high rate of business failures with many other threats.

In Nigeria, many local agric-businesses and small and medium scale enterprises have failed to fully imbibe the spirit of ecopreneurship in order to shun out those products that will be environmentally friendly and socially responsible. Only multinational enterprises have put this issue into concern in their want satisfying operations. Most agriculture related organizations complaint on lack of realistic estimates on how to successfully implement eco Market systems particularly in the area of agricultural related business have adversely affected the environment by failing to deal with negative environmental externalities and undervaluing natural resources, leading to their over-exploitation and depletion. Governments have sought to deal with the problem through a mix of command-and-control and market- based instruments, with limited success. One of the most potent alternatives for dealing with such market failures is ecopreneurship, which refers to a process by which entrepreneurs introduce eco-friendly (or relatively eco-friendlier) products and process into the market place.

It is in the light of these problems that this work seeks to examine ecopreneurship practices as a determinant of innovative performance of agric-allied businesses in Nigeria. The following research questions guided the study: What influence will environmental sustainability have on agricultural business growth?

Conceptual Framework

There are several definitions of the term" Sustainability". While some have defined sustainability in relation to the ability of man to preserve the available natural resources and not over use the resources in a way that will be deficient in the future, others have defined it in relation to policy

making. But the definition given by the UN commission in Economics Development in its 1987 Brudt land report seems to be generally acceptable. In its report titled *our common future*, Sustainability is defined as that which "meets the needs of the present without compromising the ability of the future generation to meet their own goals."

Although, some writers have found this definition to be problematic yet, most believed that it meets most aspects of sustainability in its wild applications. In his critique of the UN definition, Taylor (2002), argued that it is often difficult to determine the future needs of people in the next generation which may be the needs of people today. He further added that the way the developed countries view the concepts of needs is completely different from the views of that of the developing countries. However, even though the UN definition of sustainability may have raised some controversies, it still covers the two fundamental issues, the pressing problem of environmental degradation that result from economic growth, and the need for such growth to lighten poverty in the society.

Human activities which can also be referred to as marketing activities are inter-related. This is because any activity of man is done on the environment and the resultant effect is either if positive or negative to man. Human activities are diverse. Negative effects of man arise from economic and domestic activities. For instance, agriculture requires pesticides that pollute the atmosphere and enter drainage system via run off and sewers. Other activities which lead to pollution include thermal power stations, burning of fossil fuels, exhaust fumes. All this emit harmful pollutants like sulphur dioxide, carbon fe monoxide, etc, that cause acid rain, global warming, and the malfunctioning of the human haemoglobin, etc. Human activities capable of causing environmental nuisance and the degradation can be categorized as: Destructive logging of the forests; Over grazing and over-cropping of arable lands . All these human activities have

combined deplete the ear - resources, degrade the environment and cause loss of biodiversity The environment in which these human activities take place is the outer physical and biological systems in which man and the outer organisms live. Although complicated, there are many interacting components .Environment is the complex of physical, chemical and biotic factors that act upon organisms or an ecological community: and ultimately determines its fonn and survival. The environment is categorized into air, water, noise, biological, cultural and socio-economic environment. These views are all embracing. However, in a physical sense, the physical environment is made of air, water and land. From all indications, human activities I impinge on the environment, which is noted earlier, may have either positive or negative on man. However, the positive effects may be well taken by man, but what are of concern are the negative effects especially as it concerns degradation.

Growth is an important phenomenon in small enterprises. In fact, their survival essentially depends on their power to participate in the market with other big companies. Growth decreases the possibility of closing small businesses. Strengthening is important not merely for the enterprises and their owners but for all stakeholders since *these companies* thrust forward the economy by underscoring diversity of products and *services.* The growth phenomenon of small enterprises had beer, widely analyzed within entrepreneurship. One motive is that most fail to expand during their life span and small businesses retrain from growing. Some enterprises do not desire growth and others desire slow growth. Growth is the product of an internal process in the development of an enterprise and an increase in quality and/or expansion. “Growth is defined as a change in size during a determined time span” A company's growth is essentially the result of expansion of demands for products or services. “It first results in a growth in sales and consequently in investments in additional production factors to adapt itself to new demands”.

Entrepreneurs' ideas on growth are listed as: increase in sales, increase in the number of employees, increase in profit, increase in assets, increase in the firm's value and internal development. Internal development: comprises development of competences, organizational practices in efficiency and the establishment of professional sales process. This was the most important index for entrepreneurs that participated in the research. However, increase in the number of employees was not necessarily considered a sign of growth.

Growth may be related to new markets, especially in the case of technology firms, with reference to diversification. Another type of growth may be related to the combination of market-product .Growth is geographical expansion, increase in the number of branches, inclusion of new markets and clients, increase in the number of products and services, fusions and acquisitions". According to these authors, growth is above all a consequence of certain dynamics built by the entrepreneurs to construct and reconstruct constantly, based on the assessment made on their firms and on the market. Entrepreneurs are not the sole vectors since there are many other agents involved, such as clients, kin, suppliers and others. In fact, growth is a "socially constructed factor" .Frontier progress in the milieu or expansion is the product of a constant dynamism since growth intentions change as a result of constant evaluations and re- evaluations that entrepreneurs make as agents. It may result in the displacement of the firm to another place and in fixing itself in the same place. It is the "growth dilemma" full of risks. It is easier to investigate the antecedent factors that affect growth and the consequences of growth (Leitch, 2010) and more difficult to investigate growth dynamics or the manner firms grow (Mckelvie&Wiklund, 2010).

Four theories are best suited for this study. They are discussed in Schumpeterian Theory**.** This provides the theoretical basis for environmental entrepreneurship. According to Schumpter

(1942), entrepreneurs are the innovators and as society's needs evolve the | entrepreneur provides the innovation or "creative destruction" that gives society a new way of addressing problems. He argued that "environmental problems are inherently calls for' innovation, as most of them are caused by the outdated applications of old, polluting and inefficient technology". Given that the current solutions to our environmental problems are inadequate for sustainability, there is need for entrepreneurial action to develop something new, whether it is a production method, technological development, product/service distribution system, or even a new organizational form (Lennox & York, 2011; Tillery& Young, 2009).

Empirical Review

On our review of the work done by Oskamp (2000), he agreed that environmental demands do represent entrepreneurial opportunities. Despite the changes in legislation and regulations to protect the environment, the United States and various other countries are still facing many environmental problems, e.g., climate change, population growth, over flooding, water scarcity, fuel shortages, and water and air pollution). The study found out that if we are to solve these problems, entrepreneurship is a major part of the answer.

Deyan and Omolekan (2015) conducted a study on the relevance of green marketing on environmental degradation. The study empirically examined the effect of green marketing on environmental degradation. The study employed the non-experimental research method and the data gathered for the study were analyzed. The study revealed that 80% of the consumers of products prefer products which are recyclable, reusable, and biodegradable, produce with

Zainab and Shafaat (2015) carried out a study on "Green activities: Environmental concern and customer satisfaction". The study empirically examined the level of awareness of green issues

and whether green products are fulfilling their needs apart from benefiting their living environment and to create awareness about green products and green marketing. The imitative research technique was employed in the study and the questionnaire method adopted. The study revealed that green marketing is helping to save the environment. That product with green features plays a significant role in helping to save the environment. The Study also showed that using green products can help to reduce environmental problems. The study recommends that; companies should be transparent in describing what they are actually doing for green marketing and their policy should be consistent with their work about environmental friendliness. Furthermore, government should develop policies to take strict f actions against those companies that produce products that are harmful to the environment. A work titled 'Impact of Innovation and Managing Technology Based Business for entrepreneurs' conducted by Hamsa (2010), explains that technological innovation and entrepreneurship embraces mainly two areas: the organization, development, and commercialization of technology-based innovation in existing firms; and the formation, development, and growth of technology-based new enterprises. Technology and innovation"businesses also cover a wide range of industries. These businesses may focus on activities such as researching and developing new products or providing innovative solutions to existing processes. This paper highlights problems faced by the entrepreneurs globally with regard to businesses to stimulate technological innovation and strengthen the role of small business in meeting research and development needs and increase business participation in this role. This is a qualitative paper and its study is based on the Secondary Data collected torn different sources. A work conducted by Mutura, Nyairo, Mwangi and Wambugu (2016), titled 'Analysis of Determinants of eco-systems among Firms in Lower Central Kenya', The study analyzed the determinants of eco-practices among small holder of dairy farmers in Lower

Central Kenya and discover that such practices lead to high gross margins, influences choice of marketing channel and improves market participation, encouraging commercialization of dairy smallholder farming. A logit regression model was used to determine the likelihood of a household to introduce eco-practices in its dairy enterprise. A multistage sampling technique was used, and data was collected from 288 small holder dairy farmers in Kiambu County. Processing and analysis of the survey data were carried out using SPSS version 20 and STATA version 12. Fixed investment cost, storage type, milk cost share, the percentage of milk sold and dairy enterprise turnover were hypothesized to be key factors in explaining a household's likelihood to eco-practices into its dairy enterprise. An increase in total fixed investments, turnover and volume of output contribute to the probability of a household integrating vertically. The paper recommends that farmers should establish and strengthen existing associations and practices ecological activities more than before.

Significant premiums were found for a food processor and restaurant vertical integration or diversification strategies. Significant discounts were found for food wholesaler and retail supermarket integration or diversification strategies. Food processors were found to be involved toward retail supermarkets during this time period.

Methodology: Model Specification

Model specification, the general formula for the Regression Analysis is:

$Y= a+ \beta X + e$

where;

Y = Dependent Variable , X=Independent Variable

a = constant

β = coefficient of X

e = error margin

Model to be estimated is functionally stated as

ABG = f(EST)

This can be stated in econometric form as

ABG=a+βEST+e

where,

ABG = agricultural business growth

EST= environmental sustainability

Results and discussions

One-sample statistic

Model	R	R square	Adjusted R square	Standard error of estimate
1	0.813a	0.724	0.823	30.11122

A Predictors constant), Environmental sustainability

ANOVA[b]

Model	Sum of square	DF	Mean square	F	Sig
Regression	22122.051	1	22122,051	16.122	0.001a
Residual	2533.149	339	1372.335		
Total	24655.200	340			

a. Predictors (constant), Environmental sustainability

b. Dependent variable: agricultural business growth

The above table revealed a F-value of 16.122. This interprets that the F-value is higher than the F -critical value of 1.698. This is because the decision rule says reject Ho if the calculated value of F is higher than the critical value and vice versa. Hence, we reject null hypothesis (Ho) to accept the alternative hypothesis that environmental sustainability affects agricultural business growth in Nigeria.The F value is significant at 0.001 because the value is more than 0.05. The R square at 0.724 shows that agricultural business growth accounted for 72.4% increase in the environmental sustainability of agro-allied businesses in Nigeria. Ho: The Z-value is significant .in line with the data analysis, the following are the major summary of findings: The environmental sustainability positively affect the agricultural business growth.

This finding shows that by being environmentally-friendly,agro-allied business have the chances of enjoying continued growth. This supports the work of Jone and Miskell(2007), who postulated that there is a considerable evidence for pursuing sustainability suppoet in business activities. Although, many sometimes may not be welcome by the publics, because of lack of adequate orientation, this nevertheless does not jeorpadise the benefits associated with it. The study of

Mutura, nyairo , Nwangi and Wambugu (2016) in support of the work of Mamman,Aminu and Adah(2013)also showed that business organization can lean on sustainability to enjoy favourable word of mouth from people. The findings also supported Zainab and Shafaat (2015) results which revealed that environmental friendly activities are best tactics to maximizing and building a business in a highly competitive industry.

On the other hand, Roller and Stahl (2012) argued that environmental sustainability may not necessarily have effect on performance and firms may end up presenting a production cost schedule in negative light, considering the conceived potential uncertainties associated with negative societal perception on ecoactivity. Further, our result diverges from the outcome of Dorsey and boland (2009) who explained that environmental sustainability has nothing to do with the firm's growth.

Conclusion and recommendation

After a critical consideration of the finding: and discussions so far, the following recommendations were offered: The Nigeria government could do much to strengthen external forces, especially with respect to establishing national standards for the quality of environment and the implementation of these regulations. It could also take more proactive measures through the state-level cleaner production centre. This will encourage the ecopreneurs to develop more environmentally friendly goods and as well enhance their level of involvement in green product.

Ecopreneurs, government and society at large could tap into international standard in order to support the phasing-out of products and processes that are known to contribute to global warming and ozone depletion. They could also strengthen the consumer movement in the country. Since environmental sustainability promote business growth, it is recommended that

agro-allied business needs to build more on their sustainability concerns as it affect agricultural goods

During the next decade, the agro allied business in Nigeria will most certainly be marked by further disaggregation and reaggregation due to the described shifts in the sector's value chain. In order to keep their status quo, agro-allied business must consider continued invention, innovation and creativity as the most viable method to get instant access to industry- or operations-specific knowledge and keep abreast with the pace of technological change. Non-innovative in nature may provide benefits to such firms only in the short term. Therefore, in the long-term an articulated developed ecological friendly innovation will control rival and give firms a sustainable and non-imitable competitive advantage.

Ecopractices must not just be a back-runner in agro-allied organizations anymore. It is the critical aspect of organizational turnaround and must be given its rightful place during policy making and through this process that ecopreneurs can enjoy the long-run benefits without undue pressures and inconsistencies in Nigerian. Agro firms must therefore engage their managerial team, through training and development to know, understand, and apply, the principles of ecopreneurship practices and ecological management in their daily decision making, especially as it concerns agro-allied operations.

In the final analysis, it is the education of producers, consumers and regulators that will pave the way for a major transformation of agricultural industry. This will stimulate the ecopreneurs to develop more ecoprenerial practices that would not only give them competitive advantage but will also go a long way in developing the sector.

References

Brown L.(2006). Plan B 2.0 rescuing a planet under a stress and a civilization in trouble. New York: W. W. Norton.

Brugmann, J AND Prahalad, C. (2007). Co-creating business new social compact, Harvard Business review, 85(2), 80-90.

Cohen, B. and Winn, M, I. (2007). Market imperfections, opportunity and sustainable entrepreneurship. Journal of business venturing, 22(1), 29-49.

Dean, T. J. and McMullen, J. S. (2007). Towards a theory of sustainable entrepreneurship: reducing environmental degradation through entrepreneurial action. Journal of business venturing. 22(1), 50-76

Dorsey Mand Boland G (2009), ecopreneurship: pre-emplinemarging, the Journal of industrial economics 43(3) 323-333.

Haal, J, Deneke G, and Lennox, M. (2010), sustainable development and entrepreneurship: past contributions and future directions.

Hamsa, S. (2014) impact of innovation and managing technology based business for entrepreneurs. *Issues in general managemenet.*12(2), 51-55.

Hermann, R. R. (2011). *cleaner shipping drivers as eco-preneurial opportunities (*masters thesis), environmental studies, Aaborg University , Denmark. Retrieved from http://projekter.aau.dk/projekter/files/52822263/

Lennox, M, and York J. G. (2011) environmental entrepreneurship. In A. J. Hoffman and T. Bansal (EDS), Oxford handbook of business and the environment, Oxford, UK: Oxford University Press.

Miskel, J. (2007). *Ecological approaches to the issues of the business and the firms life cycle.* Cambridge, MA: National Bureau of Economic Research.

Mutura SAC, Nyairo T.C and mwangi J.V and Wambugu KJL (2016), impact of ecosystem mgt of manufacting firms in Nigeria, an international multi-industries, journaetheories 9(2) 115-167.

Oskamp, S. (2000). Psychological contributions to achieve an ecological sustainable future for humanity. Journal of social issues, 56(3), 373-390.

Schumpeter , J, (1942) *capitalism, socialism and democracy. New York: Harper*

Tillery, F, and young F(2009) sustainability entrepreneurs: can they be the true wealth generators of the future. Greener mangement international. 55, 79-92

Tillery, F (1999). The gap between the environmental attitude and the behavior of small firms. Business strategy and the environment. 8(4), 238-248.

Wiklund, J. (2009) the sustainability of the entrepreneurial orientation-performance relationship, *entrepreneurship: theory and practices* 53(7), 122-148.

York J. G. and Venkataraman S. (2010). The entrepreneur-environment nexus: uncertainty, innovation and allocation, *journal of business venturing.* 25(5), 449-463.

Zainab H. and Sgafaat I. (2015) Entrepreneurship and ecopreneurship on firms reputation. *A paper delievered at Brown University, Stanford University, UC Berkeley*