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TRIPLE BOTTOM-LINE (TBL) ACCOUNTING AND SUSTAINABLE DEVELOPMENT IN NIGERIA

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Abstract

This study investigates the relationship between triple bottom-line (TBL) accounting and sustainable development (SD) in Nigeria. To achieve this purpose, hypothesis was formulated and a review of related literature was made. The data for the study were collected from the Central Bank of Nigeria statistical bulletin of various years and the Bertelsmann's transformation index of the World Bank Group, and they were analysed using the linear regression model. The findings generated from this study revealed that TBL accounting has a positive significant impact on sustainable development in Nigeria. This implies that increase in the adoption of TBL accounting leads to increase in sustainable development. Based on the results of this study, it was recommended that TBL accounting as a matter of necessity should be adopted by business firms, government should institute regulatory measures to enforce its adoption, and accounting boards should develop standards to guide the measurement and recognition of social and environmental performance in the financial statements of firms if sustainable development must be a reality.

Keywords: Triple Bottom-line Accounting, Sustainable Development, Financial Performance, Social Performance and Environmental Performance.

Background to the study

Globalization has brought with it a wide realization that companies do not operate in isolation, but can have marked impacts on the environment and people at local, national and global levels (International Forum on Globalization, 2008). For the purpose of measuring the impact of business activities on the environment and the society, Hamilton (2001) noted that the conventional system of business and national accounts is inadequate, because it does not deal with the priceless environmental and social externalities, which are important in a sustainable development thus requires an extension of the standard framework. This has led to an increasing awareness of the "triple bottom-line" of business success – measuring the business not only in its financial performance, but by its social and environmental impact as well (Henri & Journeault, 2006). Triple bottom line (TBL) accounting expands the traditional reporting framework to take into account social and environmental performance in addition to financial performance. It incorporates the notion of sustainability into the accounting information system. TBL accounting is an accounting framework with three dimensions: social, environmental (or ecological) and financial (Brown, Dillard, & Marshall, 2006). Interest in triple bottom line accounting has been

growing in both for-profit, nonprofit and government sectors. Many organizations have adopted the TBL framework to evaluate their performance in a broader context as it is a key instrument for achieving sustainable development (Kaufman, 2011).

Purpose of the Study

In view of the problem statement above, this study investigates the relationship between triple bottom-line (TBL) accounting and sustainable development in Nigeria.

Research Question

What is the relationship between triple bottom-line accounting and sustainable development in Nigeria?

Research Hypothesis

Triple bottom – line accounting has no significant relationship with sustainable development in Nigeria.

Literature Review

Sustainability is related to the quality of life in a community -- whether the economic, social and environmental systems that make up the community are providing a healthy, productive, meaningful life for all community residents, present and future. The United Nations Conference on Environment & Development (2008) states that sustainability focused on how has the quality of life in the community changed over the last years in relation to economic, social, and environmental factors? Has the community changed economically?- are people working more and earning less or are most people living well; is there more or less poverty and homelessness; is it easier or harder for people to find homes that they can afford. Has the community changed socially?- is there less or more crime; are people less or more willing to volunteer; are fewer or more people running for public office or working on community boards? Has the community changed environmentally?- has air quality in the urban areas gotten better or worse; are there more or fewer warnings about eating fish caught in local streams; has the water quality gotten better or worse?

According to Bernardez (2005), sustainable development is a concept, which underscores that the rate of consumption or use of natural resources should approximate the rate at which these resources can be sustained or replaced. It is a development process that aimed at achieving the needs of the present generation without depriving the future generation the ability to achieve their own needs. There are several approaches to achieving sustainable development. This paper is however concerned with the application of accounting framework in sustainable development effort.

Spreckley (1981) argued that considering the impacts of business activities on the environment and society, enterprises should measure and report on social, environmental and financial performance to evaluate their contributions to sustainable development. He therefore articulated the triple bottom line in a publication called Social Audit - A Management Tool for Co-operative Working. The phrase "triple bottom line" was coined by John Elkington in his 1997 book Cannibals with Forks: the Triple Bottom Line of 21st Century Business (Brown, et al, 2006). A Triple Bottom Line Investing group advocating and publicizing these principles was founded in 1998 by Robert J. Rubinstein.

In traditional business accounting and common usage, the "bottom line" refers to either the "profit" or "loss", which is usually recorded at the very "bottom line" on the income statement (Slaper & Hall, 2011). Over the last decades, environmentalists and social justice advocates have struggled to bring a broader definition of "bottom line" into public consciousness, by introducing full cost accounting. For example, if a corporation shows a monetary profit, but their asbestos mine causes thousands of deaths from asbestosis, and their copper mine pollutes a river, and the government ends up spending taxpayer money on health care and river clean-up, how do we perform a full societal cost benefit analysis? The triple bottom line adds two more "bottom lines": social and environmental (ecological) concerns (Magee & Scerri, 2012).

For reporting their efforts companies may demonstrate their commitment to CSR through the following: top-level involvement- CEO, Board of Directors, policy investments, programmed, signatories to voluntary standards, principles - UN Global Compact-Ceres Principles, and reporting - Global Reporting Initiative (Bernardez, 2005; Kaunfman, 2011).

Dixon (1994) identified the following functions of triple bottom-line accounting: it assists corporate managers in targeting costs reduction, improving quality in reinforcing quality' principles; reveals the firm's financial, social and environmental assets and liabilities, hence employees are motivated to search for creative ways of reducing the liabilities; encourages changes in processes to reduce waste, resources used, recycle waste or identify markets for waste; allocates costs to the appropriate product, process, system or facility and thus reveals costs to responsible manager; provides better estimates of the true cost to the firm of producing a product and this improves pricing, thereby increasing sales and consequently profit; reassures shareholders and investors about the operations and performance of the company and this enables managers reduce the information gap between them and investors, thus gaining investors' confidence. This requires the firm to lower its cost of capital, raise its stock valuation multiples, increase stock liquidity and enhance interest by institutional investors; and indicates the level of business dependences on environmental resources thereby serving as a premonition to the business on its use of natural resources and the impact on the society (Matthews, 1993).

The literature has identified two major approaches of accounting for sustainable development, these are:
(i) Economic - Environmental — Social Relationship Approach
(ii) Wealth — Based Approach (Dixon, 1994).

With the first approach, sustainable development can be accounted for by measuring the relationship between economic growth, environmental protection and social equity. If the measurement of these three variables is high, hence sustainable development is said to have been achieved. Using the wealth-based approach, sustainability is measured on the basis of national accounts. In this case, a number of important environmental assets and social investments are included in the system of national account. Matthews (1993) however noted that assets over which ownership rights cannot be established or that are not capable of bringing economic benefits to their owners are excluded. The environmental assets are natural resources (land/associated surface water, and ecosystems). These assets can be measured in different physical units and can be monitored statistically on an asset by asset basis. Strong sustainability requires that all separate asset types do not decline. But it is very clear that the use of non-renewable resource inputs such as mineral deposits implies that the goal of strong sustainability requires that all separate asset types do not decline. But it is very clear that the use of non- renewable resource inputs such as mineral deposits implies that the goal of strong sustainability becomes out of reach. Dixon (1994) and Henri and Journeault (2007) are of the opinion that sustainable development is best accounted for through wealth-based approach. The wealth of a nation determines the level of sustainable development.

An enterprise dedicated to the triple bottom line seeks to benefit many constituencies and not to exploit or endanger any group of them. According to Scerri and James (2009), the concept of TBL demands that a company's responsibility lies with stakeholders rather than shareholders. In this case, "stakeholders" refers to anyone who is influenced, either directly or indirectly, by the actions of the firm. According to the stakeholder theory, the business entity should be used as a vehicle for coordinating stakeholder interests, instead of maximizing shareholder (owner) profit (Bernardez, 2005). The "up streaming" of a portion of profit from the marketing of finished goods back to the original producer of raw materials, for example, a farmer in fair trade agricultural practice, is a common feature. In concrete terms, a TBL business would not use child labour and monitor all contracted companies for child labour exploitation, would pay fair salaries to its workers, would maintain a safe work environment and tolerable working hours, and would not otherwise exploit a community or its labour force. A TBL business also typically seeks to "give back" by contributing to the strength and growth of its community with such things as health care and education. Quantifying this bottom line is relatively new, problematic and often subjective (Magee & Scerri, 2012).

The TBL dimensions are also commonly called the three Ps: people, planet and profits and are referred to as the "three pillars of sustainability (James & Scerri, 2010). Planet (natural capital) refers to sustainable environmental practices. A TBL company endeavors to benefit the natural order as much as possible or at the least do no harm and minimize environmental impact. A TBL endeavor reduces its ecological footprint by, among other things, carefully managing its consumption of energy and non-renewables and reducing manufacturing waste as well as rendering waste less toxic before disposing of it in a safe and legal manner (Uberoi, 2003).Currently, the cost of disposing of non-degradable or toxic products is borne financially by governments and environmentally by the residents near the disposal site and elsewhere. In TBL thinking, an enterprise which produces and markets a product which will create a waste problem should not be given a free ride by society. It would be more equitable for the business which manufactures and sells a problematic product to bear part of the cost of its ultimate disposal. Profit is the economic value created by the organization after deducting the cost of all inputs, including the cost of the capital tied down (Quarter & Mond, 2007). In the original concept, within a sustainability framework, the "profit" aspect needs to be seen as the real economic benefit enjoyed by the host society. It is the real economic impact the organization has on its economic environment. This is often different from the internal profit made by a company or organization (which nevertheless remains an essential starting point for the computation). Therefore, an original TBL approach cannot be interpreted as simply traditional corporate accounting profit plus social and environmental impacts unless the "profits" of other entities are included as a social benefit (Henri & Journeault, 2006).

Ecologically destructive practices, such as overfishing or other endangering depletions of resources are avoided by TBL companies. Often environmental sustainability is the more profitable course for a business in the long run. Arguments that it costs more to be environmentally sound are often specious when the course of the business is analyzed over a period of time. Generally, sustainability reporting metrics are better quantified and standardized for environmental issues than for social ones (Slaper & Hall, 2011).

It has been favorably argued that TBL companies can find financially profitable niches which were missed when money alone was the driving factor. Such as adding ecotourism or geotourism to an already rich tourism market; developing profitable methods to assist existing NGOs with their missions such as fundraising, reaching clients, or creating networking opportunities with multiple NGOs; providing products or services which benefit underserved populations and/or the environment which are also financially profitable (Brown et al, 2006). Since many business opportunities are developing in the realm of social entrepreneurialism, businesses hoping to reach the expanding market must design themselves to be financially profitable, socially beneficial and ecologically sustainable or fail to compete with those companies who do design themselves as

such. For example, Fair Trade and Ethical Trade companies require ethical and sustainable practices from all of their suppliers and service providers. A business which is planning to work with Fair Trade or Ethical Trade companies must design their business model to be TBL (Scerri, 2012).

In spite of the relevance of TBL accounting, the major weakness is the inability of business firms to apply it in a monetary-based economic system. Because there is no single way in monetary terms to measure the benefits to the society and environment as there is with profit, it does not allow for businesses to sum across all three bottom lines. In this regard, it makes it difficult for businesses to recognize the benefits of using TBL for the company, itself (Slaper & Hall, 2011; International Forum on Globalization, 2008). According to Slaper and Hall (2011) the challenges of putting the TBL into practice relate to the measurement and recognition of social and ecological categories: Finding applicable data and determining how a project or policy contributes to sustainability. It is equally argued that the concept of a triple bottom line, while initially attractive, seems to ignore the reality that if one is not adding value to society it is subtracting value. So creating a third bottom line for the environment often can lead organizations to fragment the societal (or "Mega") bottom line (Henri & Journeault, 2006). Scerri (2012) also noted that TBL is viewed as an attempt by otherwise exploitative corporations to avoid legislation and taxation and generate a fictitious people-friendly & eco-friendly image for PR purposes. Despite these criticisms, the TBL accounting framework enables organizations to take a longer-term perspective and thus evaluate the future consequences of decisions for safe environment and society (Kaunfman, 2011).

Methodology

In this study, we measured sustainable development on the basis of natural assets, financial performance by the Gross Domestic Product (GDP) of the Industrial sector, social performance by the human development index (percentage of education expenditure to GDP), and environmental performance by population health (percentage of health expenditure to GDP). These measurements are as recommended by Dixon (1994) and Henri & Journeault (2007).

The model specification for this study is as designed thus:
SUD = f[alogo + ß1logFIP + ß2logSOP + ß3logENP]
Where:
SUD = Sustainable Development
FIP = Financial Performance
SOP = Social Performance
ENP = Environmental Performance
â1- â3 = Regression Co-efficient
áo = Regression Constant
Log = Logarithm Transformation of Variables

To generate the necessary data for this study, the longitudinal survey research design was adopted, which covers the period of 1999-2012. The data were collected from the Central Bank of Nigeria (CBN) Statistical Bulletin of various years and the Bertelsmann's Transformation Index of the World Bank Group. The data were analyzed using the linear regression, which was computed with the aid of the Statistical Package for Social Sciences (SPSS) Version 17.

Empirical Analysis

This section of the study focused attention on the analysis of data generated for this study using the linear regression analysis as presented in Tables 1 and 2 below.

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.768[a]	.590	.532	.251
Source: SPSS Version 17 Window Output				

Table 2: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.614	.249		3.069	.001
	FIP	.269	1.124	.672	4.180	.000
	SOP	.071	.167	.590	2.352	.008
	ENP	.135	.271	.431	2.007	.012
Source: SPSS Version 17 Window Output						

Table 1 shows a multiple correlation co-efficient (R) of 0.768, which is close to 1 from the positive side. This suggests a high positive relationship between triple bottom-line accounting and sustainable development. The multiple co-efficient of determination (R2) of 0.590, indicates that about 59% variation in sustainable development is attributable to changes in financial performance, social performance, and environmental performance.

The data presented in Table 2 show that a percentage increase in FIP leads to about 26.9% increase in SUD; a percentage increase in SOP leads to about 7.1% increase in SUD; and a percentage

increase in ENP leads to about 13.5% increase in SUD. The significance tests indicate that triple bottom-line accounting has a significant relationship with sustainable development in Nigeria.

Having estimated the regression model and computed the co-efficient, the model is restated thus;
SUD = f[3.614 + 0.672FIP + 0.590SOP + 0.431ENP]
The model implies that at a given level of the adoption of triple bottom-line accounting, sustainable development can reasonably be predicted.

Conclusion

Pareto principle posits that a development process that makes one better off and another worse off, is not desirable. In light of this, a business firm that achieves its financial performance and causes environmental degradation and social imbalance in the society where it operates needs to be called to order for sustainable development to strive. In this study, it was observed that triple bottom-line accounting operationalized as financial performance, social performance, and environmental performance, has a significant relationship with sustainable development. These findings agree with the works of Kaufman (2011), and Dixon (1994). This study confirmed that increase in the adoption of triple bottom-line accounting will result in about 59% increase in sustainable development in Nigeria.

Recommendations

Based on the findings of this study, it is recommended that:

1· Business firms in Nigeria should adopt the TBL accounting, and organize training and workshop programmed for accounting staff to adequately equip them on the measurement and recognition of social and ecological categories;

2· The government should institute regulatory measures to enforce the adoption of TBL accounting;

3· They accounting standards boards should develop standards to guide the measurement and recognition of social and environmental performance of business firms in Nigeria.

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Appendix

Data Set

Year	NAS N,000000	GDP N,000000	HUCA	POH
1999	100.7	3194.0	3.96	5.4
2000	614.0	4582.0	14.75	4.6
2001	942.7	4725.0	12.64	5.2
2002	934.3	4912.0	1.58	3.9
2003	996.3	8487.0	9.36	6.5
2004	998.4	11411.0	8.23	7.0
2005	148.4	14572.0	0.82	6.6
2006	2074.2	18565.0	0.89	5.9
2007	1851.0	20657.0	0.88	7.0
2008	1807.9	24296.0	0.83	6.3
2009	1911.0	24794.0	0.70	6.8
2010	1856.6	33985.0	0.58	5.4
2011	1858.5	37330.0	0.53	5.3
2012	1875.4	40544.0	0.47	5.8

Source:CBN Statistical Bulletin and Bertelsmann's Transformation Index of World Bank Group