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APPRAISING INTERNATIONAL FINANCIAL REPORTING STANDARDS ADOPTION IN
SUB-SAHARA AFRICA

By
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Abstract
The study focused on the adoption process of International Financial Reporting Standards (IFRS) on a developing economy, with particular reference to Nigeria. The paper is based on the data obtained from literature survey and archival sources in the context of the globalization of International Financial Reporting and the adoption of International Financial Reporting Standards (IFRS). Nigeria has embraced IFRS in order to participate in the benefits it offers, including attracting foreign direct investment, reduction of the cost of doing business, and cross border listing. In implementing IFRS Nigeria will face challenges including the development of a legal and regulatory framework, awareness campaign, and training of personnel. Recommendations were made to forestall such challenges which include strengthening education and training, establishment of an independent body to monitor and enforce accounting and auditing standards.

Keywords: Adoption, Accounting standard, financial reporting

Introduction
Globalization of capital markets is an irreversible process, and there are many potential benefits to be gained from mutually recognized and respected international accounting standards. The adoption of uniform standards cut the costs of doing business across borders by reducing the need for supplementary information. They make information more comparable, thereby enhancing evaluation and analysis by users of financial statements (Adekoya, 2011). Users become more confident of the information they are provided with and presumably, this reduces uncertainty, promotes an efficient allocation of resources and reduces capital costs (Ahmed, 2011). To bridge the gap between accounting standards among countries, the International Accounting Standards Committee (IASC) was founded in 1973 by a group of professional accounting practitioners. The IASC was to formulate uniform and global accounting standards aimed at reducing the discrepancies in international accounting principles and reporting practices. In this light, the International Accounting Standards Committee (IASC) was established. Since its establishment the IASC has actively been championing the uniformity and standardization of accounting principles for over two decades (Carlson, 1997). In April 2001, the International Accounting Standards Board (IASB) took over the setting of International Accounting Standards from the International Accounting Standards Committee (IASC). Thenceforth, the IASB updated the already existing International Accounting Standards and referred to them as International Financial Reporting Standards (IFRS).
In Nigeria, adoption of IFRS was launched in September 2010, by the Honorable Minister, Federal Ministry of Commerce and Industry, Senator Jubril Martins-kuye (OFR). The adoption was organized such that all stakeholders use the IFRS by January 2014. The adoption was scheduled to start with Public Listed Entities and Significant Public Interest Entities who are expected to adopt the IFRS by January 2012. All Other Public Interest Entities are expected to mandatorily adopt the IFRS for statutory purposes by January 2013, and Small and Medium-sized Entities shall mandatorily adopt IFRS by January 2014. In the light of this therefore, this study focused on the process of adopting the IFRS in Nigeria as a developing economy. Specifically, the study examined the development of the accounting profession in Nigeria, the legal and regulatory framework of accounting, IFRS adoption process, benefits and challenges of IFRS adoption. Finally, conclusions are drawn and recommendation made.

**Literature Review**

As companies compete globally for scarce resources, investors and creditors as well as multinational companies are required to bear the cost of reconciling financial statements that are prepared using national standards. It was argued that a common set of practices will provide a “level playing field” for all companies worldwide (Murphy, 2000). The expansion of International Trade and the accessibility to foreign stock and debt market has given impetus to increasing the debate on whether or not there is need to be a global set of accounting standards. IFRS are standards and interpretations adopted by the International Accounting Standards Board (IASB). They include: International Financial Reporting Standards (IFRS), International Accounting Standards (IAS) and interpretations (IFRIC) originated by the International Reporting Standards Interpretation Committee (IFRSIC) (Oyedele, 2011). IFRS represent a single set of high quality, globally accepted accounting standards that can enhance comparability of financial reporting across the globe. This increased comparability of financial information could result in better investment decisions and ensure a more optimal allocation of resources across the global economy (Jacob and Madu, 2009). Cai and Wong (2010) posited that having a single set of internationally acceptable financial reporting standards will eliminate the need for restatement of financial statements, yet ensure accounting diversity among countries, thus facilitating cross-border movement of capital and greater integration of the global financial markets.

Espein (2009), emphasized the fact that universal financial reporting standards will increase market liquidity, decrease transaction costs for investors, lower cost of capital and facilitate international capital formation and flows, various studies conducted on the adoption of IFRS at country level indicated that countries that adopted IFRS experienced huge increases in direct foreign investment (DFI) flows across countries (Irvine and Lucas, 2006). Cai & Wong (2010), in a study of global capital markets demonstrated that capital markets of countries that had adopted IFRS recorded high degree of integration among them after their IFRS adoption compared with the period before adoption. In a study on financial data of public listed companies in 15 member states of the European Union (EU) before and after full adoption of IFRS in 2005, Chai et al (2010), found that majority of accounting quality indicators improved
after IFRS adoption in the EU.

In a study on the question of usefulness of IAS/IFRS for developing countries using a case study of Zimbabwe, Chamisa (2000), analyzed the impact of the adoption of IASB standards on the accounting practices of listed companies. Results of the study revealed that these standards have particular importance for developing countries with emerging financial markets. In an analysis of the IAS/IFRS implementation process in developing countries using Armenia as the analytical framework McGee (1999), showed that this process poses difficulties, which can be overcome by concerted efforts in training and information dissemination about the new standards. Alp and Ustundag (2009) studied the development process of financial reporting standards around the world and its practical results in developing countries found that Turkey had encountered several complications in the adoption of IFRS. Such complications include the complex structure of the international standards, potential knowledge shortfall and other difficulties in the application and enforcement issues.

Similarly, in a study on adoption of IFRS at firm level, Meeks and Swann (2009), demonstrated that firms adopting IFRS had exhibited higher accounting quality in the post-adoption period than they did in the pre-adoption period. In a study of financial data of firms covering 21 countries, Barth (2008), confirmed that firms applying IAS/IFRS experienced an improvement in accounting quality between the pre-adoption and post-adoption periods. Latridis (2010), concluded on the basis of data collected from firms listed on the London Stock Exchange that IFRS implementation has favorably affected the financial performance (measured by profitability and growth potentials).

There are also growing numbers of studies that question the relevance of IFRS in developing and emerging economies. Irvine and Lucas (2006) also reported that the development of globalized set of accounting standards provides other benefits that are not so relevant to developing and emerging nations. The adoption of IFRS will save Multinational Corporations the expense of preparing more than one set of accounts for different national jurisdictions, the professional status of accounting bodies will be enhanced and the big accounting firms will benefit in their efforts to expand the global market for their services. Perera (1989) posited that accounting information produced according to developed countries accounting system is not relevant to the decision models of less developed countries. As evident from the foregoing, a good number of studies carried out in different countries have highlighted the benefits of having single set of financial reporting standards across the globe. Few of the studies have given contradictory views questioning the relevance of IFRS adoption in developing and emerging economies.

Development of Accounting Profession in Nigeria: Brief Overview

The accounting profession in Nigeria received a formal reckoning in the mid-1960’s (Chibuike; 2008). During that period, Nigerian accountants, mostly trained by professional accounting bodies in the United Kingdom came together and formed a professional accounting body that is responsible for the training of accountants in Nigeria and fostering the development of the profession in the country. Presently, however, a number of professional accounting bodies carry out such functions concurrently. These bodies pay much
attention to the teaching of technical and practical aspects of accounting.

The two accounting bodies in Nigeria are the Institute of Chartered Accountants of Nigeria (ICAN) and the Association of National Accountants of Nigeria (ANAN). They are in essence self-regulating, and both membership elect governing council members. There is no separate statutory body for the audit profession. ICAN acts as an examining body for awarding Chartered Accountant Certification and as the licensing authority for members engaged in public auditing practices. Members of ICAN are recognized under the Companies and Allied Matters Act (CAMA) as the sole auditors of company accounts. ICAN is a member of the International Federation of Accountants (IFAC) and has strong International foundation and relationship. ICAN members dominate accounting and auditing services in the private sector while ANAN members are mostly employed in the public sector. ANAN is now an Associate member of International Federation of Accountants (IFAC).

Methodology

To address the emergence of IFRS in the context of the transformation of financial reporting the article adopted a pre-dominantly review approach. The research presented here builds on an analysis of discourses within the range of archival evidence and is based upon an examination the major publications, and documentary materials emanating from the professional accounting bodies (in particular relating reporting regulation, conferences, training and education).

Key Differences between Nigerian-GAAP and IFRS

Nigerian public listed entities are required to present their financial statement reports in accordance with IFRS beginning January 2012. Until then, all Nigeria firms prepared their financial statements in accordance with local standards issued by the Nigeria Accounting Standard Board. The principal differences between Nigerian Accounting Standards (Nigerian-GAAP) and IFRS are detailed in the table below:

Table 1: Key Differences between Nigerian-GAAP and IFRS

<table>
<thead>
<tr>
<th>TOPIC</th>
<th>Nigerian-GAAP</th>
<th>IFRS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial statement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presentation</td>
<td>Income statement</td>
<td>Statement of comprehensive income (including income statement).</td>
</tr>
<tr>
<td></td>
<td>Balance sheet</td>
<td>Statement of financial position (balance sheet)</td>
</tr>
<tr>
<td></td>
<td>Cash flow statement</td>
<td>Statement of changes in equity</td>
</tr>
<tr>
<td></td>
<td>Value added statement</td>
<td>Statement of cash flows</td>
</tr>
<tr>
<td></td>
<td>Accounting policies</td>
<td></td>
</tr>
<tr>
<td>Property plant and</td>
<td>Measured using cost model</td>
<td>Measured using cost model with detailed guidance regarding:</td>
</tr>
<tr>
<td>Equipment</td>
<td></td>
<td>- Componentization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Useful lives</td>
</tr>
<tr>
<td>Related parties</td>
<td>Limited disclosure but expected</td>
<td>Detailed guidance on identification of related parties and detailed disclosure of related parties and</td>
</tr>
</tbody>
</table>
As may be observed, the differences appearing in financial statement presentation such as change in equity, income statement and significant management estimates and judgments are concepts that are not addressed in the local standards. There are also significant differences in property, plant and equipment, related parties, segment reporting, leases, impairment and risk management disclosure. Finally significant differences are also found in other areas such as financial guarantees, scope of consolidation and employee benefits.

**IFRS Adoption Process in Nigeria**

The adoption of IFRS in many countries requires standards setters to understand the different regulatory and commercial environments in various countries. A roadmap on the adoption of IFRS (Issued by the International Accounting Standards Board) was used as a guideline for the preparation of statutory financial statements in Nigeria. The roadmap also outlines specific milestones that if realized, could lead to the adoption of IFRS in three phases as follows: (i) Public Listed Entities and Significant Public
Interest Entities in Nigeria by 2012, (ii) Other public Interest Entities by 2013, and (iii) Small and Medium-sized Entities by 2014. The Roadmap discusses various areas for consideration by stakeholders in order to ensure effective adoption of IFRS in Nigeria. The Roadmap for the adoption is as specified in figure 1.

Source: http://www.maakinlade.com/news_one.php?article=16

Adoption Statement

It is in the best interest of the nation to adopt the IFRS. The transition should be phased so that the objectives are achieved within the time-frame as outlined in the roadmap (figure 1). The phases are explained as follows:

Phase 1: Publicly Listed Entities and Significant Public Interest Entities.

This means government business entities, all entities that have their equities or debt instruments listed and traded in the public markets (a domestic or foreign Stock Exchange or an over-the- counter markets). Examples of entities meeting these criteria include: Nigerian National Petroleum Corporation (NNPC), banks and insurance companies.

Transition date for SPEs begins 2010, with a reporting date of 2012. Transition begins by raising awareness to educate both the users and preparers of IFRS financial statements, followed by planning,
training and analyzing the impact of IFRS adoption on people, systems and processes and on business of firms. By the year 2011, SPEs will then identify the key reporting data and prepare IFRS opening Statement of Financial Position (SFP). By the year 2012 SPEs are required prepares quarterly report using IFRS rules, follow audit procedures and investor relations to educate analysts, investors and manage external stakeholders. By the year 2013, SPEs would identify the loopholes in the existing system and processes by ensuring compliance and monitoring.

**Phase 2: Other Public Interest Entities.**

This refers to those entities, other than listed entities (unquoted, private companies) which are of significant public interest because of their nature of business, size, number of employees or their corporate status which requires wide range of stakeholders. Examples of entities meeting these criteria are large not-for-profit entities such as Charities and Pension funds. Transition date for PIEs begins by the year 2011 with a reporting date of 2013. By which period opening SFP and comparative figures are expected to be prepared. By 2013, PIEs are required to prepare quarterly reports using IFRS, audit procedures, and investor communications.

**Phase 3: Small and Medium-sized Entities (SMEs).**

Small and Medium-sized Entities (SMEs) refers to entities that may not have public accountability and their debt or equity instruments are not traded in a public market:

- they are not in the process of issuing such instruments for trading in a public market
- they do not hold assets in fiduciary capacity for a broad group of outsiders as one of their primary businesses
- the amount of their annual turnover is not more than N500 million or such amount as may be fixed by the Corporate Affairs Commission
- their total assets value is not more than N200 million or such amount as may be fixed by the Corporate Affairs Commission
- no Board members are foreigners
- no members are a government or a government corporation or agency or its nominee
- the directors among them hold not less than 51 percent of its equity share capital

Entities that do not meet the IFRS for SME’s criteria shall report using Small and Medium-sized Entities Guidelines on Accounting (SMEGA) Level 3 issued by the United Nations Conference on Trade and Development (UNCTAD).

Transition date for SMEs begins by 2012 with a reporting date of 2014. SMEs commence transition to IFRS by 2012, preparing opening SFP and comparative figures and investor communications by 2013, and adopting IFRS reporting standards, and ensuring compliance and monitoring by 2014.
Benefits of Adopting IFRS in Nigeria

The adoption of IFRS has several benefits as evidenced by previous studies carried out by several scholars some of which include the following: (Leuz and Verrecchia, 2000): decreased cost of capital, (Bushman and Piotroski, 2006): efficiency of capital allocation, (Young and Guenther, 2008): international capital mobility, (Ahmed, 2011): capital market development (Adekoya,2011): increased market liquidity and value (Okere,2009): enhanced comparability (Bhattacharjee and Hossain 2010): cross-border movement of capital, (Mike,2009): improved transparency of results. The potential benefits that Nigeria stands to gain after IFRS adoption are seen in the light of:

i. Promotion of the compilation of meaningful data on the performance of various reporting entities at both public and private levels in Nigeria thereby encouraging comparability, transparency, efficiency and reliability of financial reporting in Nigeria.

ii. Assurance of useful and meaningful decisions on investment portfolio in Nigeria. Investors can easily compare financial results of corporation and make investment decisions.

iii. Attraction of direct foreign investment. Countries attract investment through greater transparency and a lower cost of capital for potential investors. For example, cross-border listing is greatly facilitated by the use of IFRS.

iv. Assurance of easier access to external capital for local companies.

v. Reduction of the cost of doing business across borders by eliminating the need for supplementary information from Nigerian companies.

vi. Facilitation or easy consolidation of financial information of the same company with offices in different countries. Multinationals companies avoid the hassle of restating their accounts in local GAAPs to meet the requirements of national stock exchange and regulators, making the consolidation of accounts of foreign subsidiaries easier and lowering overall cost of financial reporting.

vii. Easier regulation of financial information of entities in Nigeria.

viii. Enhanced knowledge of global financial reporting standards by tertiary institutions in Nigeria.

ix. Additional and better quality financial information for shareholders and supervisory authorities.

x. Government to be able to better access the tax liabilities of multinational companies.

Challenges to IFRS Adoption in Nigeria

The practical challenges that may be faced in Nigeria as a result of implementing the IFRS need to be identified and addressed in order to benefit fully from the introduction of IFRS.

These challenges have been evidenced by previous studies conducted by scholars such as: (Alp and Ustundag, 2009): potential knowledge shortfall, (Li and Meeks, 2006): legal system effect, (Shleifer and
Vishny, 2003): tax system effect, (Irvine and Lucas, 2006): education and training, (Martins, 2011): enforcement and compliance mechanism. The challenges are discussed as follows:

**Level of Awareness**

The transition plan to IFRS and its implications for preparers and users of financial statements, regulators, educators and other stakeholders have to be effectively coordinated and communicated. This should include raising awareness on the potential impact of the conversion, identifying regulatory synergies to be derived and communicating the temporary impact of the transition on business performance and financial position. The implementation of IFRS requires considerable preparation both at the country and entity levels to ensure coherence and provide clarity on the authority that IFRS will have in relation to other existing national laws.

**Accounting Education and Training**

Practical implementation of IFRS requires adequate technical capacity among preparers and users of financial statements, auditors and regulatory authorities. Countries that implemented IFRS faced a variety of capacity-related issues, depending on the approach they took. One of the principal challenges Nigeria may encounter in the practical implementation process, shall be the shortage of accountants and auditors who are technically competent in implementing IFRS. Usually, the time lag between decision date and the actual implementation date is not sufficiently long to train a good number of professionals who could competently apply international standards.

**Training Resources**

Professional accountants are looked upon to ensure successful implementation of IFRS. Along with these accountants, government officials, financial analysts, auditors, tax practitioners, regulators, accounting lecturers, stock-brokers, preparers of financial statements and information officers are all responsible for smooth adoption process. Training materials on IFRS are not readily available at affordable costs in Nigeria to train such a large group which poses a great challenge to IFRS adoption.

**Tax Reporting**

The tax considerations associated with the conversion to IFRS, like other aspects of a conversion, are complex. IFRS conversion calls for a detailed review of tax laws and tax administration. Specific taxation rules would have to be redefined to accommodate these adjustments. For instance, tax laws which limit relief of tax losses to four years should be reviewed. This is because transition adjustments may result in huge losses that may not be recoverable in four years. Accounting issues that may present significant tax burden on adoption of IFRS, include determination of Impairment, Loan loss provisioning and Investment in Securities/Financial Instruments.

**Amendment to Existing Laws**

In Nigeria, accounting practices are governed by the Companies and Allied Matters Act (CAMA) 1990,
and the Statement of Accounting Standards (SAS) issued by the Nigerian Accounting Standards Board (NASB) and other existing laws such as Nigerian Stock Exchange Act 1961, Nigerian Deposit Insurance Act 2006, Banks and Other Financial Institution Act 1991, Investment and Securities Act 2007, Companies Income Tax Act 2004, Federal Inland Revenue Services Act 2007. All these provide some guidelines on preparation of financial statements in Nigeria. IFRS does not recognize the presence of these laws and the accountants have to follow the IFRS fully with no overriding provisions from these laws. Nigerian law makers have to make necessary amendments to ensure a smooth transition to IFRS.

Conclusions and Recommendations

IFRS is driving the revolutionary world of accounting with over 120 countries either requiring or permitting its use. There is no doubt that conversion to IFRS in Nigeria is a huge task and a big challenge; its revolutionary impact requiring a great deal of decisiveness and commitment. It is in the best interest of Nigeria to adopt IFRS. Countrywide intensive capacity building program to facilitate and sustain the process of adoption should be intensified.

Based on the study undertaken on IFRS adoption in Nigeria the following recommendations are hereby advanced. These recommendations may serve as useful inputs for adopting and implementing a country action plan for accounting reforms in Nigeria.

i. Improve on the awareness creation for professionals, regulators and preparers to improve the knowledge gap. Issues to be addressed include the importance of financial statements prepared under IFRS framework and importance of compliance with accounting and auditing requirements.

ii. Improve the statutory framework of accounting and auditing to protect the public interest. This recommendation might necessitate amending the Nigerian Accounting Standards Board Act (2003) into Financial Reporting Act. Various laws and regulations should be revised to conform to the proposed act.

iii. Establish an independent body to set monitor and enforce accounting and auditing standards and codes. The proposed body should be empowered to monitor and enforce accounting and auditing requirements with respect to general purpose financial statements.

iv. Strengthen professional education and training. The professional accountancy bodies should align their continuing professional education requirements with IFAC guidelines. Business ethics should be taught as a separate subject in undergraduate accounting and business programs and revision to university accounting curricula should enable students to gain exposure to practical IFRS application.

v. Strengthen capacity of the regulatory bodies and review adequacy of statutory enforcement provisions. Take necessary steps to strengthen capacity of regulators including Corporate Affairs Commission, Securities and Exchange Commission, National Insurance Commission, Central Bank of Nigeria that enable them to effectively deal with accounting and financial reporting practices of the regulated entities.
vi. NASB should set up a committee charged with the responsibility to ensure that this project is not derailed.

References


STRATEGIC PLANNING AND ORGANIZATIONAL PRODUCTIVITY

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Abstract
Poor productivity is a global problem that besets organizations. As a result, the research was set out to ascertain the effects of strategic planning through the effective use of manpower in the strategic planning development and the right choice of technology for strategic planning implementation on organizational productivity. To solve the problem of the study, three hypotheses were formulated. The statistical tools applied for testing the hypotheses are mean, standard deviation and T-test. The major findings are the need for adopting a systematic strategic planning process, choosing the appropriate technologies for strategic planning implementation and engaging professionals / experts in the strategic planning development. The major recommendations employed the organizational management to scan the environment and evolve a systematic strategic plan that would checkmate the effects of the business environment, equip the organization with appropriate technologies for strategic planning implementation and assign professionals / experts in their respective area of specialization during strategic planning development. This would increase productivity and effectiveness in the organization.

Keywords: Strategic, Planning, Organization, Productivity

Introduction
Strategies and Strategic planning in the context of business organization refer to major programmes used by organizations to achieve their missions and goals. Strategic planning is a systematic process which influences the choice of the long term goals that define the corporate strategy of every firm. The corporate strategy, if adequately implemented, through projects, policies and budgets, helps to determine whether an enterprise achieves its objectives even if it survives (Onwuchekwa, 2000:66). Since strategic planning is
perceived as a mediating force between the organization and its environment, it has become highly imperative for business organizations to adopt it so as to enhance their productivity.

For any business organization to operate in the present turbulent environment as well as survive the swift competition therein, adequate strategic planning is necessary. This will define fundamental goals and objectives in specific terms and determine the means to achieve them. Strategic planning can therefore be said to have a strong influence on the survival and growth of an organization, most especially in a volatile environment.

Since strategic planning aims at finding how a company or organization competes successfully within its turbulent environment, strategic planning is based on effective use of manpower in the strategic planning development and choosing appropriate technologies for effective implementation of the strategic plans. This is necessary for the survival and growth of organizations under competitive condition.

Considering the numerous challenges faced by business organizations, strategic planning is designed to increase productivity as well as ensure survival and growth.

It is against this background that this study is being carried out.

Poor productivity in most industries, after the euphoria of the Nation’s Independence, could be seen from the indices of denial of strategic planning, technology and effective use of manpower most basic to an organization’s performance.

The non-systematic strategic planning process, the inability to acquire the necessary technology due to inadequate fund and the non-effective use of manpower in the strategic planning development can be seen to have serious militating hurdles to contend with. The formulation of the strategy of an organization involves elaborate analysis of technological, environmental and organizational human resources in particular.

Therefore, output per unit of a factor of production should be planned in such a way that it follows the systematic process, identifies the opportunities and threats in the environment, evaluates the strengths and weaknesses of the organization, acquires the necessary technologies, hires appropriate people and develops appropriate incentives that will motivate the employees to higher performance.

**Strategic Management Conceptualized**

Kevair (2009:1) defines strategic management as the art and sciences of formulating, implementing and evaluating cross-functional decisions that will enable an organization to achieve its objectives. It involves the systematic identification of the firm’s objectives, nurturing policies, acquiring strategies and making available the resources to implement the policies and strategies to achieve the firm’s objectives. Strategic management integrates the activities of the various functional sectors of a business e.g. marketing and sales etc. to achieve the firm’s goals.
Kazmi (2008:19) defines strategic management as the dynamic process of formulation, implementation, evaluation and control of strategies to realize the organization’s strategic intent. By being dynamic, strategic management is a continual, evolving and iterative process. It is a continually evolving mosaic of relevant activities which managers perform in a sequential order upon the situation they face at a particular time. By being iterative, an activity may not be required to be performed only once but repeated over time as the situation demands.

Alkhafaji (2004:18) stated that strategic management is the process of assessing the corporation and its environment in order to meet the long term objectives of the organization. It involves series of decisions taken by management to determine the long term objectives of the organization and the means to achieve these objectives. Once a mission has been established, strategies are developed to pursue it. An organization must develop a form of strategic management to control these strategies.

Onwuchekwa (2000:25) defines strategic management as a positioning system which aims at matching structural systems, flows and processes during strategic change. Strategic management emerged because of the deficiency in the strategic planning system in matching a new strategy which an organization has implemented with appropriate structures and processes to improve organization productivity. Strategic management focuses interest on how the general management relates an organization to the changes in the environment so that the organization will not be taken by surprise thereby incurring losses due to inability to anticipate and to take necessary actions to contain the impact or ultimate consequences of the environmental change.

**Concept of Planning and Strategic Planning**

Planning is the most basic managerial function. When done properly, it sets the direction for the organizing, leading and controlling functions of the managers.

Slocum Jr. (1999:218) states that planning involves defining organizational goals and proposing ways to reach them. It determines the formal process of choosing the organization’s vision, mission and overall goals for both the short run and long run; devising divisional, departmental and even individual goals based on organization goals; choosing strategies and tactics to achieve those goals and allocating resources (people, money, equipment and facilities) to achieve the various goals.

Ewurum and Unamaka (1995:75) state that a business planning is a managerial function of setting company’s objectives, determining strategy and selecting alternative course of action. Planning is an umbrella word or idea containing the following elements:

i. Objectives

ii. Policies

iii. Rules

iv. Programmes
All managers plan. Planning as a concept has been around for a long time. Consequently, there are varieties of definitions of planning. However for the purpose of this study, the researcher is specifically interested in only one type of planning – Strategic Planning

Kazmi (2008:299) defines strategic plan as a document which provides information regarding the different elements of strategic management and the manner in which an organization and its strategists propose to put the strategies into action. A comprehensive strategic plan document could contain the following information: A clear statement of strategic intent covering the vision, mission and objectives, results of environmental and organizational appraisals, strategies chosen, contingent strategies to be used under different conditions, strategic budget, proposed organizational structure and system for strategy implementation, functional strategies and the mode of their implementation and the measures for evaluating performance.

Alkhafaji (2004:11) states that strategic planning is a management tool to look at the future and see tomorrow’s opportunities or challenges to gain competitive position. Strategic planning requires strategic thinking which is a continuous process that deals with corporate events in a comprehensive manner. By strategic thinking, we mean the matching of opportunities with corporate resources in order to envision the future direction that leads to improved corporate productivity and enhanced competitive advantage.

**Strategic Planning Process**

1. **Mission and Objective**
   The mission statement describes the company’s vision, including the unchanging values and the purpose of the firm and forward-look visionary goals that guide the pursuit of the future opportunities. Hellriegel (1990:232) states that organizational mission and goals are developed by answering questions such as: what business are we in? What are we committed to? And what results do we want to achieve?

2. **Environmental Scan**
   Environmental Scan includes the analysis of both the internal and external environments. Onwuchekwa (2000:74) states that the environment in which an organization exists can therefore be described in terms of the strengths and weaknesses existing in the internal environment and the opportunities and threats operating in the external environment. Hellriegel (1990:235) defines internal environment as all factors within the organization that impacts strengths or cause weaknesses of a strategic nature. The external environment includes all the factors outside the organization which provide opportunities or pose threats to the organization.

Kazmi (2008:71) states that organization performs a SWOT analysis to understand their internal and external environments. SWOT, is the acronym for strengths, weaknesses, opportunities and threats.
Strength is an inherent capacity which an organization can use to gain strategic advantage e.g. resources, people and experience. Weakness is an inherent limitation which creates disadvantages e.g. financial deadline and over dependence etc.

Opportunity is a favourable condition in the organization’s environment which enables the organization to consolidate and strengthen its position e.g. economic boom, loosening of regulation and arrival of new technologies etc. Threats is an unfavourable condition in the organization’s environment which creates a risk for, or causes damage to, the organization e.g. demanding new regulations, economic downturn and new competitors etc.

3. Strategy Formulation
Given the information from the environmental scan, the firm should match its strengths to the opportunities that it has identified while addressing its weaknesses and external threats (QuickMBA 2009:3) in www.google.com. Hellriegel (1990:237) states three basic growth strategies. A market penetration strategy involves seeking growth in current markets with current products. It can be achieved by buying a competitor and attracting competitors’ customers etc. A market development strategy involves seeking new markets for current products. It can be by entering new geographic market. A product development strategy which is the third strategy according to Onwuchekwa (2000:35), consists of the company’s seeking increased sales by developing improved products for its present market. It can be achieved by improving the features, quality of the products and introducing new models etc.

4. Strategic Implementation
The selected strategy is implemented by means of programs, budgets and procedures. Implementation involves organizing of the firm’s resources and motivating of staff to achieve objectives (QuickMBA 2009:4) in (www.google.com). Strategy implementation according to Onwuchekwa (2000:201) is the process of searching out appropriate organizational structure and technology which will match the level of turbulence in the environment of an organization. The ultimate result of strategy implementation is the effectiveness of organization’s capability which is appropriate for attainment of organizational objectives. Kazmi (2008:315) suggested two main means of overcoming the barriers of strategy implementation which are adopting a clear model of strategy implementation that is implementation activities take place according to the abilities and initiatives of the managers involves in them and effective management of change in complex situation. Areas of change are in the behavioural style and leadership style inherent in the organization.

5. Evaluation and Control
The purpose of strategic evaluation is to evaluate the effectiveness of a strategy in achieving organizational objectives. Kazmi (2008:489) defines strategic evaluation and control as the process of determining the effectiveness of a given strategy in achieving the organization objectives and taking corrective action wherever require. The implementation must be monitored and adjustments made as needed. QuickMBA
(2009:5) in [www.google.com](www.google.com) states that evaluation and control requires the following steps:

i. Define parameters to be measured.

ii. Define target value for the parameters.

iii. Perform measurements.

iv. Compare measured results to the pre-defined standards.

v. Make necessary changes.

**Empirical Literature**

**Cycles of Corporate Strategic Planning**

From the discussion above on strategic planning process in multi-divisional organizations we can identify three cycles of strategic planning process. In the first cycle which takes place at top management level to corporate executives, divisional heads and planning staff meet to formulate the overall corporate goals. Sometimes lower level managers can make informal input on invitation.

During the second cycle of strategic planning process, the divisional managers of the various divisions formulate their objectives, decide the accumulated resources required and they relate their divisional objectives to the entire corporate objectives and targets. During this second cycle, lower level department managers formulate their objectives and program actions in consideration of the constraints of divisional strategic plan.

The third cycle of strategic planning process involves allocation of resources of the entire organization for the purpose of achieving the objectives of the strategic plan. Both the divisions and the functional departments are allocated financial resources and they are expected or required to draw up their own respective budgets to utilize the allocated resources. Both divisional and departmental managers may use persuasion and political means to secure more financial resources for their various division and departments.

**Organizations and Strategy Requirements**

Strategy requirements may differ among organizations. The three types of firms and their differences in strategy requirement are:

A. A fully integrated functional operating firms

B. A holding company

C. An investment company

A. **A Fully Integrating Firm**

According to Ansoff (1984), a fully integrated firm needs the most comprehensive strategy. This is because its product-market decision has long lead times, so it needs guidance for research and
development, and it must be able to anticipate change. Much of its investment irreversible, since it goes into Research and Development which cannot be recovered, and physical assets, which are difficult to sell, it must therefore minimize the chances of making bad decisions.

B. A Holding Company and Strategy Requirement

A holding company is decentralized diversified firm. According to Ansoff (1984), a holding company has its stringent strategy requirements. It does not seek energy among its subsidiaries, nor does it use internal research and development as a primary source for diversification. Each subsidiary operates independently and the common-thread among them is primarily financial. The holding company does not need objectives with threshold-goals type of provisions for partial ignorance. Its strategy would have no synergy component or growth vector component. It would include a component of competitive advantage, since it naturally, prefers good, rather than average acquisitions. Such a firm may or may not have a well-defined product market scope to help focus search and develop local expert knowledge of some industries. If present, the scope will reduce the chance of making bad acquisitions.

However some holding firms prefer to take the chance in favour of fully flexible choice. Although, potentially costly, investment form undesirable subsidiaries is feasible and widely practiced.

C. An Investment Company and Strategy Requirement

An investment company is a company which primarily buys and sells. This may be investment trust, a pension fund, or real estate syndicate.

According to Ansoff (1984), the position of an investment company differs from that of a holding company in that the portfolio of holding is widely diversified and is highly negotiable, and the transfer costs are relatively low (Sales tax, commission fees etc.). Because portfolios are widely diversified, such firms seldom have the dept. of knowledge of individual industries to enable them to seek a specific competitive advantage. Their strategy formulation requirements are usually confined to objectives which are established on the basis of generally available industry data. For example investment funds choose between the role of a “growth fund” and that of “a current” earnings fund.

Strategic Planning in Small Business Organization

Strategic planning is more formalized in large business organization than in small business organization. Many small business organizations may not have a formalized planning department with responsibility for strategic planning. Top management of some small business organizations may be an entrepreneur who will be highly judgemental in his strategy formulation.

Stoner (1982) has identified some differences between small and large business organizations which may hinder formularization of strategic planning in small business organizations. These differences are that:

i. Small business organizations create relatively few products or services.
ii. Their resources and capabilities are comparatively limited.

iii. They generally do not have formal procedures to monitor the environment, forecast or evaluate and control strategies in progress. As a result, information necessary for implementation of revision of strategic plans is unavailable or unreliable.

iv. Most management and staff personnel have been trained on the job. They tend to rely on experience as a guide rather than on systematic specialized procedures.

v. Management positions and large blocks of shares are often held by relatives of the founders.

Because of the above characteristics of small business organizations, it may be difficult to formalize strategic planning as an aspect of organizational behaviour. However it must be mentioned that small business organizations require strategic planning irrespective of the fact that its formal procedures may not be formally implanted in a small business organization. A small business organization requires direction, guided action and self-containment in responding to changes in the business environment.

According to Gilmore (1970), strategy should be formulated by top management team at conference table in small business organizations. Judgment, experience, intuition, and well-guided discussion are keys to success, not staff work and mathematical model.

Strategic planning is a learning process. Overtime, the organizations members will learn progressively more about the organizations capabilities and limitations, about the threat and opportunities, its environment, and about the process of strategic planning itself. As skills in strategic planning developed, the process and the resulting plans can become more formal and more sophisticated.

Steiner (1976) has noted that one of the biggest obstacles to strategic planning in smaller organizations is often the top managers’ doubt that it is useful at all. This doubt may well arise in path from lack of understanding of the points that small business organizations should formulate strategies and acquire the skills of strategic planning through practice and learning. Finally, although strategic planning may not be systematized or formally implemented, small business organizations need strategic planning for effective performance.

**Theoretical Framework**

**Models of Business Level Strategy**

Jackson (1990:240) presents two models of business level strategy: product life cycle model and the generic strategy model.

1) **Product life cycle model** according to Jackson identifies the market phases that products may go through during their lifetimes. Product life cycle has five phases: introduction, growth, maturing, decline and termination phases.
At the introduction phase, Slocum (1999:300) states that the dominant strategies are with product development (R and D), finding customers (marketing), paying for start-up, expansion and marketing programmes. Marketing is often aimed at educating potential customers about the products rather than pointing out product differences or building identity for the firm’s product. Risk and possibility of failure are great in the initial phase.

Nnabuko (1998:103) proposes four strategies at the introduction phase of a product; Rapid skinning strategy which consist of launching a new product at a high price and a high promotion level. The assumption here is that the firm faces potential competition and the large part of the market is unaware of the product. Slow skinning strategy consists of launching a new product at a high price and low promotion level. The purpose of high price is to recover as much gross profit per unit as possible and low promotion keeps marketing expenses down.

Rapid penetration strategy consists of launching the products at a low price and spending heavily on promotion. This strategy according to Nnabuko brings about the fastest productivity and the largest market share. The assumption is that most buyers are price sensitive, strong potential customers and the market is large. Low penetration strategy which is the last strategy consists of launching the product at a low price and promotion. The low price will encourage rapid product acceptance and low promotion to realize more net profit.

At the Growth Phase of a product, Hellriegel (1990:260) states that new distribution channel are sought and marketing activity tends to remain at a high level. The nature of marketing changes from educating customers to an emphasis on product differences and brand identity. The strategies are the firm improves product quality and add new features and model. During the maturity stage, Hellriegel states that a major strategic plan is the need to reduce per unit cost. Cost cutting involves closing plants, eliminating unprofitable locations, laying off employees and reducing level of management. Another strategy is to maintain or even try to increase the market share at the expenses of competitors.

Jackson (1990:242) states that at the decline phase, the strategy emphasis on efficiency (reduced cost per unit). Product options and variations are standardized. Mergers or acquisitions and many failures among competing firms occur because of over capacity. In the termination phase, product availability is reduced sharply and the product may even be eliminated altogether.

2) **Generic Strategic Model** according to Jackson (1990:244) comprises a framework of three basic strategies.

a) Differentiation strategies emphasize competing with all other firms in the industry by offering a product that customers perceive to be unique. The long term effectiveness of the differentiation strategy depends on how easily competitors can imitate the unique benefits provided by the firm. Approaches of differentiation strategies are innovative product design, high quality and unique
brand image etc.

b) The second strategy of the generic strategic model according to Jackson (1990:245) is the cost leadership strategies which emphasize competing in the industry by providing a product at a price as low as or lower than the competitors’. Several essential actions are associated with type of strategy. These include; utilizing facilities or equipment that yield high economies of scale, constantly striving to reduce per unit overhead and minimizing labour intensive personal services etc. High productivity or rapid growth is needed for profitability with cost leadership strategy.

c) The third strategy of the generic strategic model according to Jackson emphasizes competing in a specific industry niche by serving the unique needs of certain customers or a specific geographic market. A niche is a specialized group of customers e.g. teenagers or narrowly defined market segment that competitor may overlook, ignore or have difficult serving e.g. (a specific geographic area). Strategic actions associated with this type of strategy are adaptation of those associated with differentiation and cost leadership strategies but are applied to a specific market niche.

Research Design
Research design, which entails the acquisition and analysis of necessary data through the application of approved standard techniques, contains in details, the methods and procedures employed. The type of research design used was survey. The survey research design does not require laboratory experimentation. The design served as a plan, which helped the researcher to conduct an in-depth and thorough study.

Test of Hypothesis 1: There is no significant relationship between strategic planning and the enhancement of the level of productivity.

The responses to question item 9 were used to test this hypothesis. The table below shows the summary of the result.

**Table 1: Summary of T-test results for hypothesis one**

<table>
<thead>
<tr>
<th>Question</th>
<th>N</th>
<th>Mean</th>
<th>S</th>
<th>Cut off</th>
<th>t-value</th>
<th>P-value</th>
<th>Remark</th>
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<td>9</td>
<td>129</td>
<td>4.271</td>
<td>1.1371</td>
<td>3.0</td>
<td>12.698</td>
<td>0.000</td>
<td>Reject H₀</td>
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</tbody>
</table>

Source: Field Survey, 2010

The result shown in the above table leads to the rejection of the null hypothesis at 5% level of significance. This is as a result of the fact that a T-value of 12.698 and a P-value of 0.000 were obtained.

Thus, the alternative hypothesis was accepted and a conclusion reached that there is a significant relationship between strategic planning and the enhancement of the level of organization’s productivity.
Test of Hypothesis 2

H$_1$: Appropriate technology does significantly guarantee the implementation of strategic plans.

H$_0$: Appropriate technology does not significantly guarantee the implementation of strategic plans.

The responses to question 10 of the questionnaire were used to test the hypothesis. The summary of the results are shown below in the table 2.

<table>
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<th>Question</th>
<th>N</th>
<th>Mean</th>
<th>S</th>
<th>Cut off</th>
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<th>P-value</th>
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<td>3.8295</td>
<td>1.31769</td>
<td>3.00</td>
<td>7.149</td>
<td>0.000</td>
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</tr>
</tbody>
</table>

Source: Field Survey, 2014

The null hypothesis was rejected at 5% level of significance and the alternative hypothesis was accepted because a T-value of 7.149 and a corresponding P-value of 0.000 were obtained.

Conclusively, appropriate technology does significantly guarantee the implementation of strategic plans.

Test of Hypothesis 3

H$_1$: Sound strategic planning does significantly depend on effective use of manpower

H$_0$: Sound strategic planning does not significantly depend on effective use of manpower

Question 13 responses were used in testing this hypothesis. The summary of the results are shown in the table below.

<table>
<thead>
<tr>
<th>Question</th>
<th>N</th>
<th>Mean</th>
<th>S</th>
<th>Cut off</th>
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<td>0.987</td>
<td>3.00</td>
<td>14.89</td>
<td>0.000</td>
<td>Reject</td>
</tr>
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</table>

Source: Field Survey, 2014

The P-value of 0.000 which is less than 0.05 the chosen level of significance indicates that the null hypothesis was rejected and the alternative hypothesis was accepted thereby concluding that sound strategic planning does significantly depend on effective use of manpower.
Summary of Findings

Based on the research investigation through the data collected from the questionnaires, the following findings were observed:

a) The introduction of strategic planning that is long range planning is highly necessary in organization. Table 4.4 supported this view. It also conforms to existing literature according to Onwuchekwa (2000). Onwuchekwa (2000:84) asserted that strategic planning provides organizations, a sense of direction and deals with the basic problem of identifying the real business of the organization.

b) Strategic plans are not communicated to all staff of the organization.

c) Table 4.5 validates this view while Jackson (2000:200) aligning with the respondents’ view, opined that effective communication between management and employees is a vital tool for effective strategic plans.

d) Strategic planning enhances productivity in organization as shown in table 4.6. This view is in agreement with existing literature Robison (2003:204) which states that strategic planning, if implemented properly, increases organization’s effectiveness and productivity. Moreover it conforms to Hellriegel (2000:219) view which states that strategic plans improve effectiveness, profit and productivity.

e) Appropriate technologies guarantee the implementation of strategic planning. This view was made valid based on the responses of the respondents’ shown in table 4.7 and the existing literatures by Lee (2001) and Kazmi (2008) collaborated to the view. Lee (2001:750) states that with the rapid pace of technological change, the identification and acquisition of necessary technology is highly necessary to achieve increase productivity in the organization.

f) Effective use of manpower results in sound strategic planning process in the organization. Table 4.10 supports this view and the finding conforms to existing literatures Gibson (2004) and Foster (2001). According to Foster (2001:151), human resources commitment towards strategic planning makes strategic plans to be highly successful. Gibson (2004:30) also states that participative approach between management and employees in strategic planning process makes strategic plans to be sound.

Conclusion

This work has tried to describe strategic planning as essential for organization’s productivity in this era of technological sophistication and dynamic business environment. Since business organizations operate in dynamic environments occasioned by external sources and because of swift competition therein, only organizations that are capable of adopting the systematic strategic planning process through the effective use of manpower and the right choice of appropriate technologies for strategic planning implementation can hope to survive and enhance organizational productivity.
Recommendations

Based on the findings, some recommendations are hereby presented:

a) The management of Nigerian Bottling Company Plc., should constantly scan through the environment and evolve a systematic strategic plans process that would checkmate the effects of business environment. This would help to reduce the adverse effects of environmental changes thereby enhancing organizational productivity.

b) The management should make effort to intensify interactive communication about the strategic plans. This will give the employees a sense of belonging and put them in a position to appreciate the necessity of strategic planning in the organization.

c) The management of Nigeria Bottling Company Plc. should equip the organization with appropriate technologies for strategic planning implementation. This will correspond to attainment of organizational productivity that the strategic planning process was intended for.

d) The management should endeavour to involve experts/professionals that are within the organization in the strategic planning development. If the experts/professionals are assigned to the area of their specialization, the strategic plans will be more effective, thus very sound.

References


ENVIRONMENTAL ACCOUNTING

By
Mohammed Isiaku

Introduction
The term environmental accounting has many meanings and uses. Environmental accounting can support national environmental accounting, global environmental accounting, or Corporate environmental accounting. However, Environmental accounting can be considered a subset of accounting proper; because it aims to incorporate both economic and environmental information. It is a growing field that identifies, measures, and communicates costs from an organization’s actual or potential impact on the environment. Costs can include costs to clean up or remedy contaminated sites, environmental fines, penalties and taxes, purchase of pollution prevention technology and waste management costs.

Environmental accounting is an important tool for understanding the role played by the natural environment in the economy. Environmental accounts provide data which highlight both the contribution of natural resources to economic well-being and the costs imposed by pollution or resource degradation. Environmental accounting is on expansion path with increasing social focus on the environment; accounting fills an expectation role, to measure environmental performance.

An environmental accounting system is composed of environmentally differentiated conventional accounting and ecological accounting. Environmentally differentiated accounting measures impact of the natural environment on an organization in monetary terms. Ecological accounting measures the impact an organization has on the environment, but in physical units (e.g. kilograms of waste produced, kilojoules of energy consumed) rather than in monetary terms.

‘Green’ or environmental accounting systems seek to capture either the physical side of sustainability; that is, dematerialization or its monetary value; this is, capital maintenance. Besides physical and monetary accounting; and an intermediate, hybrid (physical monetary) approach has been adopted.

Physical accounts and hybrid accounts link physical environmental statistics to the national accounts. They are intermediate steps towards integrated environmental-economic accounting. To this end, Material Flow Accounts (MFA) calculates aggregate indicators of Total Material Requirement (TMR) of the economy as well as Total Material Output (TMO) of wastes and pollutants.

Environmental accounting is a set of aggregate national data linking the environment to the economy, which will have a long-run impact on both economic and environmental policy-making. It is not valuation of environmental goods or services, social cost-benefit analysis of projects affecting the environment or disaggregated local data about the environment.
There is however close links between environmental accounting and these activities, which is why they are frequently discussed together and occasionally confused. Valuation refers to the process of deriving a monetary value for things which are not sold in the market. Valuation is an essential input into both social cost-benefit analysis and approaches to environmental accounting. It is only one element in the construction of environmental accounts.

According to Environmental Agency, UK (2006), Environmental Accounting is defined as the collection, analysis and assessment of environmental and financial performance data obtained from business management information systems, for example, environmental management and financial accounting systems.

It added that the taking of corrective management action to reduce environmental impacts and costs, plus where appropriate the external reporting of the environment and financial benefits in verified corporate environmental reports or published annual reports or audited accounts can be referred to as Environmental Accounting.

Environmental accounting can be employed in every industry; no matter the size of the firm; small or large. However, top management support and cross-functional teams are essentials for its successful implementation.

Top management commitment can set a positive tone and incentive to adopt environmental accounting and because it is not solely an accounting issue, it is necessary to bring together professional experts to develop a common vision that will make environmental accounting a reality towards the attainment of the overall corporate objective.

The emphasis of this paper will be on corporate environmental accounting. Moreover, the term environmental cost has at least two major dimensions: (1) it can refer solely to costs that directly impact a company's bottom line (here termed "private costs"), or (2) it also can encompass the costs to individuals, society, and the environment for which a company is not accountable (here termed "societal costs"). Companies start the implementation of environmental accounting typically with private costs before moving to societal costs.

Related Literature on Environmental Accounting

a) Objectives and Role of Environmental Accounting

Environmental costs are one of the many different types of costs businesses incur as they provide goods and services to their customers. Environmental performance is one of the many important measures of business success. Environmental costs and performance deserve management attention for the following reasons:

i. Many environmental costs can be significantly reduced or eliminated as a result of business decisions, ranging from operational and housekeeping changes, to investment in “greener”
process technology, to redesign of processes/products. Many environmental costs (e.g., wasted raw materials) may provide no added value to a process, system, or product.

ii. Environmental costs (and, thus, potential cost savings) may be obscured in overhead accounts or otherwise overlooked.

iii. Many companies have discovered that environmental costs can be offset by generating revenues through sale of waste by-products or transferable pollution allowances, or licensing of clean technologies, for example.

iv. Better management of environmental costs can result in improved environmental performance and significant benefits to human health as well as business success.

v. Understanding the environmental costs and performance of processes and products can promote more accurate costing and pricing of products and can aid companies in the design of more environmentally preferable processes, products, and services for the future.

vi. Competitive advantage with customers can result from processes, products, and services that can be demonstrated to be environmentally preferable.

vii. Accounting for environmental costs and performance can support a company’s development and operation of an overall environmental management system. Such a system will soon be a necessity for companies engaged in international trade due to pending international consensus standard ISO 14001, developed by the International Organization for Standardization.

Apart from being a logical decision support tool, environmental accounting plays an effective part in new business approaches adopted by many companies. It is relevant in Activity Based Costing (ABC); Total Quality Management (TQM); Cost Reduction; Cost of Quality Model; Life-Cycle Design, and Life-Cycle Costing.

Accounting professionals appears to focus on the role of environmental accounting under consideration that environmental issues are fundamental to human survival. However, an environmental accounting framework is yet to be developed; such a framework when developed will contribute standards for reporting, and standards for accounting.

**b) Environmental Accounting and its Disciplines**

According to Environmental Agency, UK (2006), Environmental Accounting is defined as the collection, analysis and assessment of environmental and financial performance data obtained from business management information systems, for example, environmental management and financial accounting systems.

It added that the taking of corrective management action to reduce environmental impacts and costs, plus where appropriate the external reporting of the environment and financial benefits in verified corporate
environmental reports or published annual reports or audited accounts can be referred to as Environmental Accounting.

Environmental accounting involves the identification, compilation, analysis, use and reporting of environmental costs information. It refers to the estimation and reporting of environmental liabilities and financially material environmental cost.

Environmental accounting can be broken into three disciplines:

(i) National Environmental Accounting

(ii) Global Environmental Accounting

(iii) Corporate Environmental Accounting

(i) National Environmental Accounting

National Environmental Accounting is an accounting approach that deals with economics on a national level. It is a macroeconomic measure that looks at the use of natural resources and the impacts of national policies on the environment. (US EPA, 1995; Jasch, 2006) Environmental accounting sometimes referred to as green accounting or integrated economic and environmental accounting refers to modification of the System of National Accounts to incorporate the use of depletion of natural resources. The System of National Accounts (SNA) is the set of accounts which national governments compile routinely to track the activity of their economies. SNA data are used to determine Gross Domestic Product (GDP), Gross National Product (GDP) etc. These indicators are used for policy analysis and economic monitoring purposes. The economic accounts are calculated across countries using a standard format developed by the United Nations Statistical Division (UNSTAT) for easy of comparison. However, there have been calls for reform of SNA as they do not include the full economic value of environmental resources or the role they play in productive activity.

Some of the elements missing from the accounts include: environmental expenditures (expenditures to protect the environment from harm or to mitigate that harm); and, consumption of natural capital (treats the gradual depletion of physical capital –machine and other equipment as depletion rather than income in accordance with conventional business accounting principles).

(ii) Global Environmental Accounting

Global Environmental Accounting is an accounting methodology that deals with energetic, ecology and economics at a global scale. The earth is the system of interest with the input, sequestration and dissipation of solar energy, which constitutes the energy budget (Odum, 1996; Tennenbaum, 1988).

The SNA is a complex system which follows a number of widely-accepted accounting conventions. These conventions ensure logical consistency across the different components of the accounts, guaranteeing that a given type of entry has the same meaning in all contexts and in all countries. This standardization is
essential for the accounts to be a reliable source of comparable data about the economies of many different countries.

Unfortunately, this standardization has made it difficult to change the SNA in order to introduce a quite different issue like the goods and services provided by the environment. The difficulty arises primarily because most environmental goods and services are not traded in conventional markets; thus it is hard both to define discrete products and to put a monetary value on them.

Some of the most important debates concern issues like Physical versus monetary accounts, Integrated accounts versus satellite accounts, Inclusion of ‘maintenance costs’ and Valuation of non-marketed environmental services.

(iii) Corporate Environmental Accounting
Corporate environmental accounting can be further sub-divided into Environmental Management Accounting and Environmental Financial Accounting. In contrast to national environmental accounting, corporate environmental accounting focuses on the cost structure and environmental performance of a company (Odum, 1996).

(a) Environmental Management Accounting: Xiaomei (2004) defines Environmental Management Accounting (EMA) as the identification, collection, estimation, analysis, internal reporting, and use of materials and information relating to energy flow and environmental and other costs for both conventional and environmental decision making within an organization. On their part, Bartolomeo et al (2000) define EMA as the generation, analysis and use of financial and related nonfinancial information, to support management within a company or business.

Environmental management accounting integrates corporate environmental and business policies, and thereby provides guidance on building a sustainable business. It analyses environmentally related financial costs and benefits, contributing to recognition of the high and increasing levels of capital and operating expenses, for pollution control equipment and environmental taxes. Also, possible environmental initiatives, such as incentive-based regulation, are incorporated in analysis and reporting (Fryxell and Vryza, 1999).

Companies in making internal business strategy decisions use environmental management accounting. The information gathering in the process according to Tennenbaum (1988) may be physical information on the use, flows and fates of energy, water and materials including waste or monetary information on environmental related costs, earning and savings. The main problems of EMA relate to the specification of environmental accounting information, the allocation of environmental costs, legislation issues and the lack of environmental accounting standards.
(b) Environmental Financial Accounting

Environmental Financial Accounting is used to provide information needed by external stakeholders on a company financial status. This type of accounting allows companies to prepare financial reports for investors, lenders and other interested parties but focuses on environmental financial and non-financial data, such as, that given in environmental reports.

An inescapable feature of environmental accounting is the need for multiple disciplines. Inescapability is found in several dimensions of environmental accounting (Grinnell and Hunt, 2000). They state that first is the need to position environmental policy in the overall business policy and strategy; second are the disciplines involved in producing environmental accounts and their reporting; third is the audit requirement to assure compliance with environmental regulation and appropriate reporting by environmental accounting; fourth is education of students, future practitioners, to provide technical; and legal basis in academic preparation and to avoid ‘discipline insularity’.

Conclusively, accounting research; particularly environmental accounting needs to be interdisciplinary in nature. The contributions of other disciplines must be recognized.

c) Benefits of Environmental Accounting

Environmental accounts are critical for managers and policy makers at all level of governance. At the macroeconomic level, the Ministry of Finance needs to know whether the development strategy is laying the basis for long-term economic growth or not. A country like Nigeria which is dependent mainly on petroleum can only be economically sustainable if revenue from petroleum exploration is transformed into alternative assets. With environmental accounts, Nigeria can monitor this process, providing a sound basis for policy interventions consistent with sustainable development at each stage.

Environmental Agency, UK (2006) states several reasons why business may consider adopting environmental accounting as part of their accounting system. These include:

(i) Possible significant reduction or elimination of environmental costs.
(ii) Environmental costs and benefits may be overlooked or hidden in overhead accounts.
(iii) Possible revenue generation may offset environmental costs (e.g. transfer of pollution allowances).
(iv) Improved environmental performance which may have a positive impact on human health and business success.
(v) May result in more accurate costing or pricing of products and more environmentally desired processes.
(vi) Possible competitive advantages as customers may prefer environmentally friendly products and services.
Can support the development and running of an overall environmental management system, which may be required by regulation for some types of businesses.

US EPA (1995) highlights seven benefits from adopting environmental accounting by a company as follows:

(i) Provides better estimates of the true cost to the firm of producing a product. This improves pricing and hence profitability.
(ii) Allocates costs to the appropriate product, process, system or facility and thus reveals costs to the responsible managers.
(iii) Assists managers in targeting cost reduction, improving environmental quality and in reinforcing quality principles.
(iv) Motivates staff to search for creative ways to reduce environmental costs;
(v) Encourages changes in processes to reduce waste, reduce resources use, recycle waste or identify markets for waste;
(vi) Increase employee awareness of occupational health and safety issues; and
(vii) Increases the likelihood of the company having a competitive advantage and greater customer acceptance of the firm’s product or service.

In USA, EPA’s work with key stakeholders leads it to believe that as businesses more fully account for environmental costs and benefits, they will clearly see the financial advantages of pollution prevention (P2) practices. Environmental costs often can be reduced or avoided through P2 practices such as product design changes, input materials substitution, process re-design, and improved operation and maintenance (O&M) practices. For example, increased environmental costs may result from use of chemical A (e.g., a chlorinated solvent), but not from chemical B (e.g., an aqueous-based solvent). This is true even though chemical A and chemical B can be substitutable. Another example: some environmental compliance costs are required only when use of a substance or generation of a waste exceeds a defined threshold. A company that can reduce chemical use below such thresholds or employ substitutes for regulated chemicals can realize substantial cost savings from design, engineering, and operational decisions.

In two of the most thorough reports on the subject of pollution prevention in the industrial community, the not-for-profit group INFORM3 studied 29 companies in the organic chemical industry in 1985 and again in 1992. This research found that chemical "plants with some type of environmental cost accounting program" had "an average of three times as many" P2 projects "as plants with no cost accounting system."4 The study also showed that the average annual savings per P2 project in production facilities, where data were available, were just over $351,000, which equaled an average savings of $3.49 for every dollar spent. Not only were substantial savings and returns on investment documented for P2 projects, but an average of 1.6 million pounds of waste were reduced for each project.
Results like these have highlighted the potential benefits of environmental accounting to the business community. For example, responses to a questionnaire administered by George Nagle of the Bristol-Myers Squibb Company at the Spring 1994 Global Environmental Management Initiative (GEMI) Conference showed that corporate professionals are placing a high priority on environmental accounting. Of the 25 respondents to the informal survey, half stated that their company had some form of a tracking system for environmental costs. All but two reported that they believed environmental accounting issues would be more important to their companies in the near future. In addition, the Business Roundtable expects to turn its attention to environmental accounting issues in 1995, and companies of all sizes in the U.S. are beginning to consider implementing environmental accounting in their facilities.

d) Environmental Cost and its Identification

Uncovering and recognizing environmental costs associated with a product, process, system, or facility is important for good management decisions. Attaining such goals as reducing environmental expenses, increasing revenues, and improving environmental performance requires paying attention to current, future, and potential environmental costs. How a company defines an environmental cost depends on how it intends to use the information (e.g., cost allocation, capital budgeting, process/product design, other management decisions) and the scale and scope of the exercise. Moreover, it may not always be clear whether a cost is "environmental" or not; some costs fall into a gray zone or may be classified as partly environmental and partly not. Whether or not a cost is "environmental" is not critical; the goal is to ensure that relevant costs receive appropriate attention.

According to Marsh and Grossa (1996), the real and intangible costs associated with air and water pollution and land ecosystem degradation and destruction, is borne by the society. Environmental costs, as described by Graff et al (1998), are impacts incurred by society, an organization or individual resulting from entities that affect environmental quality.

Environmental costs are generally defined narrowly. Environmental costs are those costs incurred in compliance with, or prevention of breach of, environmental law regulation and company policy. However, White, Becker and Savage (1993) categorize environmental costs into two major dimensions. Those that directly impact on an organization’s bottom-line; they referred to as private costs. These they classified as Conventional costs, potentially Hidden costs; Contingent costs; and Image and Relationship costs.

The other dimension encompasses the cost to individuals, society and the environment for which the organization is not legally accountable; which they called societal costs. Societal costs also referred to externalities or external costs include environmental degradation for which organizations are not legally liable and also have adverse impacts on human beings, their property, and their welfare that cannot be compensated for through the legal system. They include damage caused to a river because of polluted wastewater discharges or to ecosystems from solid waste disposal or to asthmatics because of air pollutant emissions. Valuing these societal costs is both difficult and controversial.
Societal costs/External costs are the costs of a company’s impacts on the environment and society for which the business is not financially responsible. These costs do not directly affect a firm's bottom line. Societal costs may also be referred to as external costs or externalities. These costs may be expressed, qualitatively, in physical terms (e.g., tons of releases, exposed receptors), or in dollars and cents. Societal costs (or externalities) are sometimes subdivided according to whether the impacts are environmental, referred to as environmental costs or environmental externalities, or social, referred to as social costs or social externalities.

- **Identifying Environmental Costs**

Environmental accounting terminology uses such words as full, total, true, and life cycle to emphasize that traditional approaches were incomplete in scope because they overlooked important environmental costs (and potential cost savings and revenues). In looking for and uncovering relevant environmental costs, managers may want to use one or more organizing frameworks as tools.

e) **Scale and Scope for Environmental Accounting**

Environmental accounting is a flexible tool that can be applied at different scales of use and different scopes of coverage. This section describes some of the options for applying environmental accounting.

**Scale.** Depending on corporate needs, interests, goals, and resources, environmental accounting can be applied at different scales, which include: individual process or group of processes (e.g., production line), system (e.g., lighting, waste water treatment, packaging), product or product line facility, department, or all facilities at a single location, regional/geographical groups of departments or facilities corporate division, affiliate, or the entire company. Specific environmental accounting issues or challenges may vary depending on the scale of its application.

**Scope.** An initial scope question is whether environmental accounting extends beyond conventional costs to include potentially hidden, future, contingent, and image/relationship costs. Another scope issue is whether companies intend to consider only those costs that directly affect their bottom line financial profit or loss or whether companies also want to recognize the environmental costs that result from their activities but for which they are not accountable, referred to as societal or external costs.

Thus, the scope of environmental accounting refers to the types of costs included. As the scope becomes more expansive, firms may find it more difficult to assess and measure certain environmental costs.

f) **Environmental Theories and Ethics**

In this era of globalization and industrial development, there is strong interdependence between human development and the environment. Self-consciousness and intelligent management of the earth is one of the greatest challenges facing humanity. There is therefore the need for a new environmental ethic to meet these challenges.
Science and environmental policies are the most commonly accepted options for dealing with this crisis. The environmental crisis is primarily a consequence of human action. Therefore, there is the need to question the most fundamental values. This highlights the importance of ethical thinking in relations to the environmental crisis. The three main classes of ethical theory are teleological, utilitarian and deontological.

Environmental ethic is a topic in applied ethics which examines the moral basis of environmental responsibility. There are three primary theories of moral responsibility to the environment. These are anthropocentric, biocentric and ecocentric.

**Anthropocentrism**

The anthropocentric theory is human-centered and expressed the view that all environmental responsibilities are derived from human interest alone. The assumption is that only human beings are morally significant persons and have a direct moral standing.

Anthropocentrism or human-centeredness is believed by some to be the central problematic concept in environmental philosophy, where it is used to draw attention to a systematic bias in traditional western attitudes to the non-human world (Ness, 1973).

**Biocentrism**

The second theory of moral responsibility to the environment is biocentric. It is a life-centered theory, which states that all forms of life have an inherent right to exist. Biocentrism is most commonly defined as the belief that all forms of life are equally valuable and humanity is not the centre of existence.

Biocentric positions generally advocates a focus on the well-being of all life in the consideration of ecological, political and economic issues. Animal rights theorist contends that if the suffering of all beings is minimized, then the environmental destruction will be appeased. They segregate living organisms into a hierarchy based upon moral criterion such as sentience or a basal level intelligence (Singer, 1990).

**Ecocentrism**

The theory of ecocentricism is more holistic in its approach, typically building upon the interdependence of each organism, species, community and ecosystem. It often sees that acts of destruction against a species have a ripple effect; affecting other symbiotic species and thus the stability of the entire biological community and ecosystem.

The environment is considered to be in a moral par with humans. Many tasks of industry, such as procuring raw materials, manufacturing and marketing, and disposing of wastes, are in large part responsible for pollution. This is not because any industry or company has adopted pollution as a corporate policy.
When raw materials are processed, some waste is inevitable. It is usually not possible to completely control the dispersal of all by-products of a manufacturing process. The cost of controlling waste can be very important in determining a company’s profit margins.

Protecting the environment involves meeting the need of both current and future generations. Welford (1996) examines the various approaches to environmental policy to get businesses to improve their environmental performances, and how business itself influences that policy. These approaches according to him are: the free market approach and self-regulation; the reformist approach and financial incentives; and the interventionist approach and legislation.

g) Theoretical arguments on corporate environmental disclosure practices
Businesses in the form of corporations operate within the framework of a social systems (Gray, Owen and Adams, 1995); and thus despite the limited mandatory reporting requirements, literatures on corporate social disclosures suggests that an increasing number of companies in developed economies are now providing corporate social responsibility disclosures at varying levels. There are different theoretical frameworks used as a motivation to explain why companies may provide voluntary disclosure. In an influential review of the corporate environmental reporting literatures, Gray, Kouhy and Lavers (1995a) categorized much of the extant research literatures on corporation environmental reporting into three overlapping theoretical perspectives which includes the stakeholder theory, legitimacy theory and the political economy theory. These theories take a system perspective, recognizing that businesses interact with and affect entities beyond their artificial boundaries. Gray et al. (1995a:67) argued that these theories should be seen not as a competitive explanation but as a source of interpretation of different factors at different levels of resolution.

Legitimacy theory relates to the extent and types of corporate social disclosure in the annual report to be directly related to management’s perceptions about the concerns of the community. Gray, Kouhy & Lavers (1995) suggest that legitimacy theory is useful in analyzing corporate behaviour. This is because legitimacy is important to organizations, constraints imposed by social norms and values and reactions to such constraints provide a focus for analyzing organizational behaviours taken with respect to the environment. The legitimacy theory argues that organisations seek to ensure that they operate within the bounds and norms of society (Tilt, 1999). Society’s expectations have changed to expect businesses to make outlays to repair or prevent damage to the physical environment, to ensure the health and safety of consumers, employees, and those who reside in the communities where products are manufactured and wastes are dumped (Tinker & Niemark, 1987:84). Legitimacy can be considered as “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs and definitions” (Suchman, 1995:574). To this end, organisations attempt to establish congruence between “the social values associated with or implied by their activities and the norms of acceptable behaviour in the larger social system of which they are part”.

Another theory which provides a framework for corporate social disclosures is the stakeholder theory. This theory according to Watts & Zimmerman (1978) assumes that disclosure on social and environmental information by an organisation is as a result of the pressure from stakeholders such as communities, customers, employees, environment, shareholders and suppliers. The basic proposition of this stakeholder theory is that a firm’s success is dependent upon the successful management of all the relationships that a firm has with its stakeholders. The stakeholder theory asserts that corporation''s continued existence requires the support of the stakeholders and their approval must be sought and the activities of the corporation adjusted to gain that approval (Chan, 1996). The more powerful the stakeholders, the more the company must adapt. This theory concludes that CSR is a way to show a good image to these stakeholders to boost long-term profits because it would help to retain existing customers and attract new ones.

Next, is social contract theory, which was developed, based on concept that there exists contract between business and wider society, whereby business agrees to perform various society desired actions in return for approval of its objectives, other rewards and its ultimate survival (Guthrie & Parker, 1989).

However, while legitimacy theory has become the most widely used theory to explain corporate social environmental disclosure practices (Campbell et al, 2003: Deegan, 2002) as there is mounting evidence that managers adopt legitimizing strategies such as those outlined above, the same cannot be said of the stakeholder theory especially in developing countries like Nigeria where environmental crisis and civil unrest in the Niger-Delta has crippled industrial activities in the area. To this end therefore, this study adopts the stakeholder’s theory as a basis in explaining corporate environmental disclosures.

h) Applicability of Environmental Accounting

Environmental accounting can be employed by firms, large and small, in almost every industry in both the manufacturing and services sectors. It can be applied on a large scale or a small scale, systematically or on an as needed basis. The form it takes can reflect the goals and needs of the company using it. However, in any business, top management support and cross-functional teams are likely to be essential for the successful implementation of environmental accounting because:

- Environmental accounting may entail a new way of looking at a company's environmental costs, performance, and decisions. Top management commitment can set a positive tone and articulate incentives for the organization to adopt environmental accounting.
- Companies will likely want to assemble cross-functional teams to implement environmental accounting, bringing together designers, chemists, engineers, production managers, operators, financial staff, environmental managers, purchasing personnel, and accountants who may not have worked together before.
Because environmental accounting is not solely an accounting issue, and the information needed is split up among all of these groups, these people need to talk with each other to develop a common vision and language and make that vision a reality.

Companies with formal environmental management systems may want to institutionalize environmental accounting because it is a logical decision support tool for these systems. Similarly, many companies have begun or are exploring new business approaches in which environmental accounting can play a part:

- Activity-Based Costing/Activity-Based Management
- Total Quality Management/Total Quality Environmental Management
- Business Process Re-Engineering/Cost Reduction
- Cost of Quality Model/Cost of Environmental Quality Model
- Design for Environment/Life-Cycle Design
- Life-Cycle Assessment/Life-Cycle Costing

All of these approaches are compatible with environmental accounting and can provide platforms for integrating environmental information into business decisions. Companies using or evaluating these approaches may want to consider explicitly adopting environmental accounting as part of these efforts.

Small businesses that may not have formal environmental management systems, or are not using any of the above approaches, have also successfully applied environmental accounting. As with larger firms, management commitment and cross-functional involvement are necessary.

Environmental accounts include the value of all ecosystem goods and services, providing the information necessary to support:

1. better allocations from the current budget to support management of environment and natural resource sectors;
2. better guidance to business about most efficient private sector investments; and
3. Better infrastructure investment decisions that reflect all the potential gains from sustainable management of environment and natural resource sectors.

Environmental accounts are also used to assess ways of addressing problems arising from other kinds of pollution, energy and material use, taxes, emission trading schemes, vehicle emission standards etc. Environment and natural resources sectors can build more effective cross-ministerial alliances by demonstrating the contribution of, for example, forests to other sectors such as agriculture, fisheries, and tourism. This can be a basis for improved forest management. It will be easy to determine how logging concessions will affect water supply, opportunities for agriculture and tourism.

Maximization of a firm, environmental accounting should be applied in its operations - cost allocation, capital budgeting and process/product design. Numerous observers have recognized the complexity,
consequences and necessity of rationalizing accounting systems to ensure proper allocation of costs to the sources within the firms that are responsible for such costs (Cooper et al, 1992; Johnson and Kaplan, 1991; Ness and Cucuzza, 1995; Todd, 1994).

Through the application of environmental accounting; management in particular, and other concerned stakeholders can identify environmental cost. Hence, they are motivated to find ways of reducing or avoiding those costs while at the same time improving environmental quality. This is the conceptual cornerstone of Activity Based Costing, (Schaltegger and Muller, 1997).

It may be easier to include environmental cost in capital budgeting, if existing processes; system and products are already being assigned environmental costs in cost accounting systems. Integrating environmental accounting into capital budgeting involves:

i. Quantifying environmental costs
ii. Allocating and projecting environmental costs and benefits
iii. Using appropriate financial indicators
iv. Setting reasonable time horizon that captures environmental benefits.

The design of a process or product would certainly have significant impact on environmental costs and performance. Hence, companies should adopt ‘Life cycle design’ programmes to take environmental considerations into account at an early stage.

i) Challenges of Environmental Accounting

The hitherto discipline of environmental accounting which is an emerging and contemporary field has not been without challenges. Some of these challenges are highlighted below:

The costing of environmental impacts in terms of national capital consumption requires putting a money value on the physical changes of natural capital, that is, changes in the availability of its resources, sink and possibly other ecological functions. This is a prerequisite for maintaining the accounting concepts and equations and compiling the adjusted economic aggregates. However, the imputation of monetary values on non-market transactions and processes has been challenged, not only by environmentalists but also by accountants.

In environmental accounts, market prices can be estimated by different valuation techniques or could be modeled for the achievement of environmental targets and shadows prices. Three commonly proposed valuation techniques of assessing environmental impacts and repercussions are:

i. Market valuation – uses prices for natural assets which are observed in the market. Where market prices for natural resources stocks are not available, the economic value of these assets can be derived from the – discounted sum of net returns, obtained from their potential use in production. Market valuation also applied to changes in asset values caused by depletion. Depletion cost
allowances call for the re-investment of environmental cost in any income-generating activity such as capital formation or financial investment.

ii. Another problem is the difficulties of measuring capital depreciation that made GDP the standard for measuring overall economic performance and growth. Environmental protection expenditures though identified in separate classifications, are not deducted from GDP as a ‘defense’ against welfare losses. The reasons are difficulties of distinguishing between welfare improving and maintaining outlays, the objective of measuring income, consumption and production rather than welfare, and the need for maintaining accounting balances and equations.

- The answer to this problem is maintenance valuation – it permits the costing of losses of environmental functions that are typically not traded in markets. Environmental externalities of pollution can indeed be of far greater importance than natural resources depletion. Maintenance costs are therefore those that would have been incurred if the environment had been used in such a way as not to have affected its future use.

Maintenance costs are the missed-opportunity costs of avoiding the environmental impacts caused during the accounting period. They refer to best-available technologies or production processes with which to avoid, mitigate or reduce environmental impacts. As with depreciation allowances for productive capital; such costing can be seen as estimating the funds required for re-investing in capital maintenance.

- The other technique is contingent and related damage valuation – it refers to the ultimate welfare effects (damages) of environmental impacts, which are quite impossible to trace back to causing agents.

The UN System for Integrated Environmental and Economic Accounting (SEEA) frowns at the aggregative use of indicators for assessment of ecological sustainability. The reason is the problem of assessing the significance of diverse environmental impacts by weight of materials and substances.

The use of Environmental Condition Indicators (ECIs) which measure the quality of the environment and are used to assess the impact of emission on air or water quality should be a way out. The indicators can be separately presented as:

i. absolute figures, like tonnes of waste per year

ii. relative figures compared to other parameters such as production volume, production hours, sales (turnover) and number of employees

iii. percentages in relation to a baseline like hazardous waste as a percentage of total waste, or hazardous waste as a percentage of the previous year.
iv. Jasch and Rauberger (1997) suggest principles to be adopted in installing an indicator system as: relevance, understanding, target, orientation, consistency and comparability.

j) The Need for Environmental Reporting

From the first world environment conference, UN Conference on Human Development held in Stockholm in 1972, through the 1988 Intergovernmental Panel on Climate Change (IPCC) by UN to collect scientific evidence and the Rio de Janeiro Conference of 1992 to Copenhagen Conference of 2009, there have been timeline of main events in relation to climate change and international politics on environmental problems.

Many well-publicized environmental disasters occurred in the late 1980s that led to the creation of awareness for the need for environmental reporting. Bagley (1995) reported some of those disasters as:

- The Union Carbide disaster at a pesticide factory outside of Bhopal, India when some 40 tonnes of methyl isocyanine gas was emitted from the plant on 3 December, 1984. As at 1991, more than 3,800 persons had died as a result of the accident, and 20,000 were left seriously disabled.
- The explosion at the Chambly nuclear power plant in the former Soviet Union in 1986, which released a radioactive cloud that spread over the Soviet Union and across Europe.
- The oil spill from the tanker Exxon Valdez into the water of Prince William Sound in Alaska on 24 March, 1989. More than 36,000 migrating birds were killed, an estimated 1,000 miles of shoreline was affected, and one of the world’s richest Salmon fisheries was greatly impaired.

Environmental reporting according to US EPA (1995) is the disclosure of information relating to an organization’s environmental effects and its contribution to sustainable development. Environmental reporting is the disclosure of information of the effect that the operations of an entity has on the natural environment. This disclosure could be in the entity’s published annual report or in separate environmental report. Environmental reporting has since evolved into sustainability reporting which incorporates the triple bottom line of environmental, social and economic information and it focuses on continue improvement.

There has been a growing recognition of the importance of transparency for economic growth and social development. Also, there have been calls from civil society and a broader range of stakeholders for greater transparency and accountability to aid decision-making (PR News Wire Association LLC, 1996-2007).

A recent initiative encouraging transparency which can help strengthen reporting in the extractive industry sectors is Nigeria Extractive Industries Transparency Initiative (NEITI) launched in February, 2004. While substantial efforts have already been undertaken in the reporting area, continued action is necessary to strengthen transparency.
It is essential that environmental accounting reporting should be given a pride of place, as it is relevant to: Risk Management, Government, Legal Needs, Accounting Requirements, Competition, Communities, Certification Need, Investors’ interest, Contractors and Environmental Groups.

Accountants have the potential to play a crucial role in environmental management and reporting through their managerial; performance measurement and evaluation; auditing and reporting skills. If environmental accounting is the enabling vehicle to form a common basis for users of the environment; both internal and external; the effective vehicle is environmental reporting (Dorweiler and Yakhou, 2002).

Reporting portrays accountability to outside interests. These interests may require openness and transparency regarding the environment, and require change in the organization, changes in business products and processes and changes in organization structure. The projection is for change to occur in other business areas (Bebbington, 1997; Reynolds and Reynolds, 2001).

k) Examining Regulatory and Reporting Framework

In Nigeria the periods before 1988 was characterized by a near total lack of public awareness concerning environmental protection and development. Issues as biodiversity, conservation, effluent limitations, pollution abatement and sustainable development of natural resources did not form part of the general public discourse.

At the official level, there was a slow realization of the interdependence of environment and development. This was evidenced by the absence of a deliberate national policy aimed at protecting the environment while ensuring the conservation and sustainable use of natural resources. The absence of such policy meant the non-existence of an agency entrusted with the responsibility for the protection and the development of the environment.

Real environmental legislation in Nigeria was a product of National emergency. The development of environmental regulation was greatly aided in the late 1980s by the Koko toxic and hazardous waste dump of 1987. The Koko episode propelled the Federal Government to reassess the general state of its environmental regulation, thus revealing the inadequacy of the legal framework for environmental protection in Nigeria. This gave rise to the first decree in that respect.

Some main environmental laws in Nigeria include:

(a) The National Effluent Limitation Regulation S.1.8 of 1991, which makes it mandatory for industrial facilities to install anti-pollution equipment.

(b) The Pollution Abatement in Industries and Facilities Generating Wastes- Regulations S.1.9 of 1999, which among other things impose restriction on the release of toxic substances and stipulates requirements for monitoring of pollution; to ensure that permissible limits are not exceeded as well as spelling out generator’s liability.
The Solid and Hazardous Waste Management Regulation S.1.15 of 1991, which regulates the collection, treatment and disposal of solid and hazardous waste from municipal and industrial sources. The regulation also provides a list of over 1000 hazardous chemicals to be controlled by FEPA by toxicity category.

(d) The Harmful Wastes (Criminal Provisions) Act 42 of 1988, which sentences individuals who trade, dispose, or transport toxic waste in Nigeria or its Exclusive Economic Zone to life imprisonment. Koko toxic dump in Delta State in 1988 gave rise to this Act.

(e) The Environmental Impact Assessment (EIA) Act 86 of 1992, which provides the procedure for conducting an EIA of any major development. The sectoral guidelines for the EIA Act have now being developed for oil and gas, mining, agricultural, manufacturing and infrastructure sectors.

(f) The Sea Fisheries and Inland Fisheries Act, 1992, which controls access to fisheries resources. The Act includes wide provisions for the regulation of catch species, sizes and fishing zones. The regulation sets minimum net size for both finfish and shrimp.


In 2007, the National Environmental Standards and Regulations Enforcement Agency (NESREA) Act repealed the FEPA Act. NESREA has amongst other functions the power to enforce compliance with laws, guidelines, policies and standards on environmental matters. The issue is how effective has the Agency been in the enforcement of compliance and also of note is its lack of jurisdiction over environmental matters emanating from the oil and gas sector.

Conclusion

In Nigeria, environmental problems are of concern to government and a reasonable amount is claimed to be spent periodically to tackle environmental degradation problem. Organizations, especially industries causing these harms have shown very little commitment to the menace; this is not be unconnected with lack of appropriate standards on environmental accounting and reporting and weak or enforcement problems of existing regulations (Asaolu and Daferighe, forthcoming).

According to Osae-Addo (1992), over 80% of industries in Nigeria discharge solid, liquid and gaseous effluent directly into the environment without any treatment. Furthermore, he added that only 18% of industries perform even rudimentary recycling before disposing off wastes. Expanding urban populations exacerbate the impact of industrial pollutions, as people are forced to live in crowded, unsanitary communities near industries.
A successful environmental management system should have a method for accounting for full environmental costs and should integrate private environmental costs into capital budgeting, cost allocation, process/product design and other forward-looking decisions.

Companies can make progress in environmental accounting incrementally, beginning with limited scale, scope, and applications. Companies can start with those costs that they know the most about and work toward the more difficult to estimate costs and revenues. The best approach is to go as far as you can in integrating environmental costs, including hidden, future, and contingent costs, into management decisions.

Efforts to integrate societal costs into business decisions will continue and expand. Most corporate information and decision systems do not currently support such proactive and prospective decision making. The capital markets do not yet have adequate ways to evaluate the financial performance of progressive companies who do so.

A successful environmental management system should have an environmental cost accounting system and a capital budgeting process that considers a full array of private environmental cost and revenue information, process/product design, and general business decisions. However, there is a growing body of information documenting a variety of businesses engaged in advancing the state of the art to bring societal costs into their decision-making.

There is the need for environmental sustainability. Environmental sustainability is ensuring the needs of the present generation without compromising environmental carrying capacity for the future generation. Maintaining environmental sustainability needs not only to limit pollution and degradation but also to ensure eco-efficiency in meeting the needs of the present generation.

Green accounting especially in developing countries like Nigeria is mostly needed owing to the fact that the country is a resource-dependent economy where faulty economic treatment of environmental changes is likely to be associated with large-scale misallocation of national resources. One particular strength of green or environmental accounting is the measurement of environmental depletion and degradation costs caused by economic agents. The policy concern is to hold the responsible agents accountable for these costs.

This development places impetus on the need to have standards in environmental accounting; these are reliable measures of environmental impacts, assets and liabilities. The failure to value ecosystem services is a major contributing cause to environmental problems. As part of the solution, the economic background to decision-making should be changed so that policy making and planning take into account the full value of ecosystem services; market and non-market. What is needed to achieve this is a framework that is
quantitative and comprehensive with respect to the environment and can be reliably integrated with economic accounts used for decision-making.

A concise way to view environmental accounting discipline in producing environmental accounts is to consider the goals of the users. According to Bebbington (1997), these include to: assure compliance with regulations; increase efficiency of resource use, energy and material, and to decrease waste; reduce or minimize damage to the environment over the life-cycle of products and processes; and, continually improve environmental performance in the above areas.

**The Way Forward: Policy Recommendations**

The issues of environmental degradation which is a serious environmental problem should be of concern to government and organizations as well. To this end the following recommendations are advanced here as the way forward:

(i) The environmental accounting discipline need to develop a framework that would contribute standards for accounting and reporting. The emphasis here is on framework as it will: raise awareness of environmental issues; develop guidelines to assist identification of environmental issues and evaluation and reporting of those issues; develop practices of environmental accounting, with recommendations on best practices; and, provide direction to link teaching with developments and practices in business.

(ii) Accounting professional need to be trained in environmental accounting methods and have appropriate guidelines to follow. Hence, the Nigerian Accounting Standards Board (NASB) should think of having an accounting standard that will have a framework to extend practices to include costing and methods of pollution control; comparing alternative materials to be used, investigating possible recycling alternatives etc.

(iii) Government should step-up its enlightenment programme on policies and laws on environmental protection in order to increase awareness amongst organizations operating in the country. Also, the relevant agencies such as NESREA should review some of the existing regulations where necessary and ensure enforcement and compliance with these policies and laws.

(iv) At the corporate level, investment should be on cleaner or ‘green’ technology to ensure the design of environmentally preferable processes and products. Hence, Daferighe and Aje (2005) recommend that companies in Nigeria should seek, understand and apply environmental accounting techniques to their cost allocation, pricing/product design and capital budgeting processes with a view to achieving a better corporate performance.

(v) Government should support implementation of environmental accounts, and the indicators and policy analyses based on environmental accounts. It should build sufficient awareness and support for environmental accounting to ensure a more thorough way to compile national accounts. A major focus should be also to influence Multinational and national agencies to mainstream environmental accounting in their programmes.
(vi) An interdisciplinary policy research programme/group should be set up to address critical issues related to asset valuation and particularly accounting for ecosystem goods and services.

(vii) Government in the implementation of its Poverty Reduction Strategy Programme (PRSP) and Millennium Development Goals (MDG) should ensure a better understanding of the linkages between environment and the economy. The problem of environmental degradation affecting well-being and imposing excessive costs should be tackled through adoption of environmental accounting.

(viii) Nigeria as a developing and resource-dependent economy should quickly establish a system of environmental accounting for treatment of economic changes to avoid misallocation of natural resources. The example of Indonesia, Namibia, The Netherlands, Costa Rica and The Philippines should be understudied.

In conclusion, a major step is to support implementation of environmental accounting and to advance environmental accounting in several critical areas such as accounting for ecosystems, if Nigeria is to develop sustainably.

Appropriate legislations and standards should be used to provide a regulatory framework for environmental accounting. When done rightly, environmental accounting could help us shape the fate of the country.

References


FRAUD AND ITS CONTROL IN A TECHNOLOGICALLY-DRIVEN FINANCIAL SYSTEM

By
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Abstract
This study aimed at examining fraud and its control in a Technologically-driven Financial System. Fraud as we know has been a major and re-occurring phenomenon in the banking industry in spite of the introduction of Technology in the Banking System. This situation has led to loss of investors’ fund, properties and dismissal of innocent staff from their work. It is on this premise that fraud and its control in a Technologically-driven Financial System was evaluated in this study. The aim of this study is to show how effective and efficient technology is in the prevention and detection of fraud in banks. It evaluated the aspect of data processing in the day-to-day running of the bank operational activities that are susceptible to fraud as well as the class of staff and outsider that are involved in bank fraud. This study examined the problems of fraud and suggested possible solution to these problems. The research design used for this research work is survey and analytical. Hypothesis was formulated and it was tested with the gathered data by the use of One Sample Kolmogorov-Smirnov. The study revealed that conversion to Technologically-driven Financial System in Banks is an open invitation to privilege or opportunity, because quite often the operation is left in the hand of those who are not skilful in modern technology operation. Conclusions were made by the study based on the findings; recommendations were made thereafter.

Key words: Fraud, Control, technology, financial system.

Introduction
Traditionally, the role of Banks whether in a developed or developing economy, consists of financial intermediation, provision of an efficient payments system and serving as conduit for the implementation of monetary policies. It has been postulated that if these functions are efficiently carried out, the economy would be able to mobilize meaningful level of savings and channel these funds in an efficient and effective manner to ensure that no viable project is frustrated due to lack of funds.

Valentine and Mason (1997:1), in a bid to throw more light on how the financial sector exhibits or justifies their strength of necessity and importance, said that “it is an established fact that banking consists of three basic functions; the acceptance of deposits from customers, the transfer of these deposits from one account to another (or their withdrawal in the form of notes and coins) and the lending of money by way of loan or overdraft to customers”. In so doing deposit accepted are credited and money withdrawn are debited.
Before the use of modern technology became common in Nigeria’s financial system, an efficient manual banking system had been evolved. Customers who deposit money with the banks; either use cheques or passbooks (for those who operate current account or savings account respectively) for their transaction with the bank. Account operators issue cheques to people, instructing the bank to pay a named person on their behalf. When the branch of each bank receives the cheques they had to authorize payment of the amount and also debit the customer’s account. This arrangement was satisfactory when the daily number of cheques was relatively small and people using chequebook were comparatively small. But this system began to breakdown when more people began to make use of the banking services. This large number of people made it difficult to remember faces. People took cash from branches where they were not known and the volume of cheques increasing by the day. This made the manual way of doing banking business increasingly difficult and an expensive task.

The above development prompted the use of technology in banking system to overcome the above stated problems.

The use of technology in banking is still very new in our society. The computer technology emerged in the late 1940’s in the advanced countries of America and Europe. It was introduced into Nigeria in the 1970’s by the multinational corporations like UAC, NCR etc. while the banking sector embraced it in the early 80’s.

Banking industry has in the past suffered great number of losses through fraud such that lots of them faced serious financial hardship and eventually were forced to fold up. A good example of early banks that failed as a result of fraud is Industrial and Commercial Bank (1947–1952). Most people are at present preoccupied with the moving trend called computer technology and software development, thereby losing sight of sensitive issues like fraudulent practices among its usage.

Fraud as the word implies could mean different things to different people depending on the angle from which it is looked at. According to the Chartered Institute of Public Finance and Accounting, United Kingdom, fraud are “those intentional distortion of financial statement or otherwise for gain”. While the International Auditing Guidelines (IAG) defines fraud as “a particular type of irregularity, involving the use of deceits to obtain an illegal or unjust advantage” and may involve the following:

a) Manipulation, falsification or alteration of records or document.
b) Misappropriation of assets
c) Suppressing or omitting transactions from records or documents
d) Recording transactions without substance.
e) Misapplication of accounting policies, if this is intentional and deceitful.

The Objective of the study is to find possible ways of detecting and preventing these frauds associated with the use of technology in banks.
Development of Technology in Banking Industry

The ability of an organization to prosper and survive requires that its competitive position should not be significantly less than those of other firms operating within the same market sector. Hence modern technology has come to be accepted as an indispensable innovation in the banking industry as in most other fields of human endeavour like science, manufacturing, process control, research, education, artificial intelligence etc. The reason for the ever-widening scope of acceptance and utilization is because this digital equipment is an all-purpose machine that can be selectively programmed to carry out a wide range of tasks. Accordingly, the growth of the computer industry has been monumental, phenomenal and it has become the fastest growing industry to-date.

The use of computer is still very new in our society. The emergence of computer technology dates back to late 1940’s in the advanced countries of America and Europe and introduced into Nigeria in the 1970’s by the Multinational corporations like UAC, NCR etc. While the banks embraced it in the early 80’s (Awenlimobor A. E. 1991)

In the 1980s, the processing of information in Nigeria was based on the centralized, architecture with a mainframe computer running a multi-user operating system and various users connected to it via terminals. This type of processing later changes to a more decentralized approach with Local Area Networks (LAN) within bank branches. Recently, the application of modern technology has affected all aspects of the nation’s banking industry, from the standard retail operating, such as cash withdrawal and cheques processing to the creation and delivery of sophisticated products such as foreign exchange swaps.

The technology revolution in Nigeria banking sector started sometimes in the early 1990s. However the first visible form of electronic innovation in the nation’s banking industry was the introduction of ATMs in the early 1980 by a commercial bank in the country. Some other banks followed the bank’s experience but the product was not well received by the banking community and this no doubt curtailed its spread in the early 80s (Oluyemi: 2001)

However, it is interesting to note that PC-banking or desktop banking was mainly popular among bank’s corporate customers rather than their retail customers. The electronic money product was later introduced. This was mainly in form of stored value cards operated by bank via Valuecard and Gemcard companies. Both have been in market place for some time now (Zarma 2001:72). The above overwhelming development made automation no longer a plaything or luxury but an indispensable part of every right, reasonable and forward thinking bank management.

The beauty of the advance technological growth in the banking industry is also deterred with the paralleled growth in its abuses. In Britain the “plastic fraud” in 1990 cost the British bank (£100m) one hundred million pounds (Business Time Oct. 19, 1992). In the USA alone in 1985 estimate put ATM fraud losses at ($200 million) two hundred million dollars (the bankers’ magazine Oct. 1985). First bank business and
economic report (1985) holds that computer fraud is not only rising in value but is becoming more sophisticated. As computers grow in number; incidence of computer fraud has started to move away from a technological variety of bookkeeping fraud to more sophisticated scam. But as criminals become more adept at penetrating computer networks, and as more and more non-bank participants join in money transmission networks. There is a real danger that fraud could rock both the local and international monetary system in this 21st century if the trend goes like this unchecked.

Definitions of Fraud

Fraud is wide in its connotation and because of its diverse nature; it has been difficult to proffer a comprehensive and all-embracing definition of the term, (Aikhorin 1994:1). However, the lexicon Webster’s dictionary of English language (1988:45) defines fraud as the use of deception for unlawful gain and unjust advantage; something that constitutes a crime deception, someone who is not what he pretends he is.

According to Chartered Institute of Public Finance and Accountancy, United Kingdom frauds are those intentional distortion of financial statement or other records which are carried out to conceal the misappropriation of assets or otherwise for gain Ande (1997:50).

The International Auditing Guidelines (IAG) defines fraud as a particular type of irregularity involving the use of deceits to obtain on illegal or unjust advantage and may involve the following:

a) Manipulation, falsification or alteration of records or document.

b) Misappropriation of assets.

c) Suppressing or omitting transactions from records or documents.

d) Recording transaction without substance and

e) Misapplication of accounting policies if this is intentional and deceitful. Some Nigeria authors have also flexed their academic muscles in this area.

Adekanya and Ojie-gbede agreed that fraud is an action which involves the use of deceit and tricks to alter truth so as to deprive a person of something which is his or something to which he might be entitle Aikhorin (1991:1) Okolie (2004:67) defines fraud as an irregularity or impropriety involving the use of deception to obtain an unjust or illegal financial advantage. Fraud to him is just one form of irregularity. He classified fraud into two broad groups viz:

1. Fraud involving misappropriations either of money or goods or other items, and

2. Fraudulent manipulation of accounts not involving defalcation.

Nwankwo (1991), described fraud as a complex universal phenomenon. He said it is rampant both in developed and developing countries and varies across time and place in its magnitude, its sources, the way it manifests its effect on administrative performance and development political, economic, social, cultural and attitudinal factors combine in contributing to its incidence. Their effects are cumulative and circular,
and they extend beyond the boundaries of the nation and states.

Okafor (2003) opined that fraud involves deception for personal financial gains, which centres on some form of trading and business organization between groups of people. Following this definition and the propensity of the average human being to cheat, it is substantial and favourable an argument, to say that fraud dates back to the beginning of commercial trading. One can easily infer from this that fraud is as old as trade and is considerably older than money. With the advent of money, a whole new area for fraud was opened up. Fraud was grown in sophistication and form over its existence coupled with the exposition of technology, the internationalization of business and a perception by criminals of the high rewards and low detection risk; a whole new dimension of fraud was introduced. Today, it is reality that fraud is notoriously difficult to investigate and prosecute. In the corporate context, fraud can be categorized as inter-committed by insiders (e.g. officers, directors, employees and agents); and external – committed by outsiders (e.g. vendors, contractor and suppliers). Corporate fraud also can be classified as crimes committed by insiders against the company (e.g. theft, corruption and embezzlement); and crime committed by insiders for the company (e.g. violation of government regulations-tax, securities, safety and environment laws). Fraud is indeed, broad and complex.

In a causative context, fraud is both personal and environmental. For example, economic need or greed generally motivates fraud perpetrators. Environmental need that breed internal fraud and create opportunities for embezzlement and theft include tax accounting controls. Against this background, fraudulent practices in any organization should not be handled with levity. Fraud as a phenomenon is neither new nor is it peculiar to some industries, what is new about fraud is the increasing uncontrollable wave since the mid-1980s when most Nigerians desired to get rich quickly without working; a development that undermined the concept of “dignity in labour”. And any organization that desires long-term survival and growth must articulate and manage its resources adequately to avoid corporate failure. What is central here is that the definition of fraud varies widely in nature but it can be summarized as the misappropriation and misrepresentation of firms or persons, facts and figures for personal gain.

**Nature of Technology Fraud**

Input operations, data processing, output operations, and communications have all been utilized for illicit purposes. The common types of technology related crimes are categorized here. Frauds by technology manipulation of intangible assets that are represented in data format, such as money-on-deposit are most common targets of technology related frauds in banks.

Improved remote access to databases also allows the criminal the opportunity to commit various types of fraud without ever physically entering the premises of the victim. Examples of technology fraud are as follow:-

**DATA DIDDLING:** - According to Joseph (2003), is input manipulation computer fraud. It is easily perpetrated and difficult to detect. It involves the deliberate entry of false information. It does not require
TROJAN HORSE: - Joseph (2003) States that Trojan horse is an example of a common method of programme manipulation used by persons with specialized knowledge of computer programming. It is a processing stage fraud, which is very difficult to discover and is frequently not recognised. It involves changing existing programs in the computer system or inserting new programs or routines.

SALAMI TECHNIQUE: - This is a particular specie of fraud conducted by computer manipulation that takes advantages of the automatic repetition of computer processes. It involves the nearly unnoticeable “thin slices” of financial transactions; they are repeatedly removed and transferred to another account. According to Adamu Osumah et al (1997:19) Account which has been dormant for quite some time (i.e. account which have not been serviced) are normally used as the account through which such slice amount are gathered and subsequently withdrawn by the fraudster.

COMPUTER FORGERY: - This is a type of computer fraud, which occurs when a perpetrator alters documents stored in computerized forms. In this instance computer systems are the target of criminal activity.

DESKTOP COUNTERFEITING: A new generation of fraudulent alteration or counterfeiting emerged when computerized colour laser copiers became available. According to Joseph T. Wells (2003), chairman and founder of the Association of Certified Fraud Examiners (ACFE) Texas; these copiers are capable of high resolution copying, modification of documents, and even creation of false documents without benefit of an original. And they produce documents whose quality is undistinguishable from that of authentic document except by an expert. These schemes take very little computer knowledge to perpetrate. Counterfeit cheques, invoices and stationary can be produced using scanners, colour printers, and graphic software.

Empirical Literature
The fear is now rife that the increasing wave of fraud and forgeries in our banks in recent years, if not arrested, might pose certain threats to the stability and survival of individual banks and the performance of the industry as a whole. This has led to people feeling that fraud is only associated with banks. For one thing, frauds result in huge financial losses to banks and their customers, the depletion of shareholders fund and banks capital base as well as loss of confidence in banks. And sometime it leads to the closure of affected banks. Fraud is a complex universal phenomenon. However there is nowhere fraud is more common than the banking industry. It has also been proved to be the biggest single course of bank failure. In the past, banking was almost a religion with bank employees so dedicated that the watchword in the banking industry was transparent honesty. With the current wave of bank fraud, and forgeries, one may not be too wrong to say that it seem that those good old days are gone. Then what are the types of frauds
peculiar to banks.

**Computer Fraud in Banks**

Bank have always been exposed to risks such as error and fraud but the scale of those risks and the speed with which they can arise have been accentuated in geometric proportion to the speed of technological innovation in computers telecommunications system. More and more, the integration of automated operations is increasing the dependence of banks on the reliability and of their Electronic Data Processing (ED) system. Today, the need to protect computer systems has been strongly advocated, in view of their strategic importance. The reasons are five-fold.

The first is the ease with which information can be lost in a computer. This may be caused by unintentional error by the operator.

Secondly, malicious damage to data is becoming rampant and easy to perpetrate. So also is the problem of unauthorized access to the system.

Thirdly the intended and unintended consequences of security breaches can be enormous. This is costly in time and money and may result in loss of goodwill to the organization.

Fourthly, computers and telecommunications enabled with large amount of personal and confidential information to be available on-line to diverse users with various intentions. This has posed some ethical and social problems concerning privacy of individual information.

Fifthly, computers complicate the problem of accountability of staff responsible for handling sensitive information. This is more so under a computerized system since information can be compromised from remote places without the active connivance of staff.

It is in view of these considerations that issues pertaining to various aspects of a computer –based system must be addressed –hardware, software, communication, operation and personnel. These are considered under the following types of risks which characterize an EDP environment. Improper disclosure of information, error, fraud, interruption of business due to hardware or software failure, ineffective planning and risks associated with end-user computing operations.

**Fraud as Computer Abuse**

Awenlimobor (1991:24) opines that data flows in banking represent assets or instructions, which ultimately move asset. The speed with which assets can be transferred using electronic payment and message switching systems complicates the task of internal control. Successful frauds will not only result in a direct financial loss for the institution but when reported in the medial will detract from confidence in the institution and in the banking system in general.

However, going through the corridor of history you find out that some smart head have been fraudulently
manipulating the use of computer in banks all over the world.

Adamu O. et.al. (1997:23) disclosed in their work the biggest bank fraud in Los Angeles on November, 3. 1978. Someone tapped the bank system for transferring fund to other banks to the tune of 10 million dollars. This is the way FBI (Federal Bureau of Information) put it “Rifkin parlayed his sophisticated knowledge of electronic and computer into one of the biggest bank theft in the history of all by himself”. The fraud happened in Security Pacific Bank the 10th largest bank in United States of America. Rifkin, on the pretext of heckling out the bank computers, gained access to all the important transfers. He was known to the bank personnel and so, no one questioned his right to be in computer room. But they did not know that he apparently had the identification number of a bank official. This, coupled with his knowledge of the daily code number and using the fake name of “Mike Hamsen” made it possible for him to order $10.2 million dollars been transferred to Hamsen’s account in the Living Trust Corporation of New York. From there money was transferred to the Swiss account of the Russian Diamond Fire RUSSEIMAX in Zurich.

Adamu O. et.al (1997:24) also observed that for the transfer to be possible it requires three secret codes, which the fraudster was equipped with. One for the account being looted another for the personal identification of an authorized bank official and finally the special security code, which is changed once a day, at times on hourly basis.

It is important to note that the transfer was made at the close of the working day. Thus the fraudster caught the staff at a low level of security alertness. In other words they were clock-watching instead of money watching.

According to Adamu O. et.al (1997:24) confessional statement “I took $1.5 million dollars from Union Dine Saving Bank in New York and the bank never seemed to miss a penny file.” Only for the original to be destroyed accidentally.

In spite of the computerized accounting system in Nigeria banks since 90’s, there seems to be an increase in reported cases of fraud in Nigeria banking institution. According to the NDIC Annual Report and financial statement 2008 reported cases of fraud increase significantly from 1,553 cases in 2007 to 2,007 cases in 2008 there was a significant increase in the total amount involved, from about #10,005.81 million in 2007 to #53,522.86 million in 2008 On the other hand, the expected loss was estimated at #2,870.85 million as at December 2007 compared to #17,543.09 million in 2008.

**Theoretical Framework**

**Control of Computer Fraud**

Information available to us shows that fraud has been a major problem in Nigeria banking sector and management had been in the forefront of controlling fraud in a computerized system. Okoh et.al (2003:122) states that statistics of frauds and forgeries in our banks today perpetrated primarily by bank workers. Nwankwo (1991:181) disclosed that insiders usually in collusion with outside third parties
commit most frauds. The NDIC Annual Report and financial statement (2001:33) reveal a total of 152 staffs of banks involve in frauds and forgeries in 2001, core operations staff such as supervisors, officers, accountants, managers, executive assistants, clerks and cashiers accounted for about 95.4 percent, an increase of 20.3 percentage points relative to the previous year’s level.

**Policies Control**

From the above discussion of the anatomy of frauds, management should evolve positive policies towards safeguarding the banks’ assets, and ensuring that staffs do not exploit weaknesses in internal control policies as follow:

1. The policy should stress the cardinal principles of separation of duties to ensure that one person does not originate and complete an assignment or entry.
2. It should also emphasize dual control of sensitive areas such as strong rooms and locks to security documents.
3. Other preventive measures to be enshrined and emphasized in the policy include the separation of life and dormant accounts.
4. The treatment of overdrawn and dormant accounts.
5. The need for daily balancing and periodic reconciliation of accounts including clearing and correspondent account.
6. There should be precautions and procedures, including necessary references, for opening accounts. There should be need for full compliance with established policies rules and procedures with exceptional deviations duly and appropriately authorized.
7. The banking industry should insist on honesty and dedication. That is to say employment should be based on integrity and merit and not be dumping ground for morally debased unemployed fraudsters in the society.
8. The Central Bank of Nigeria (CBN) and the National Deposit Insurance Corporation (NDIC) should hence with publish the names of banks and the officers involved in frauds and forgeries in our National dailies
9. Finally the policy should incorporate and emphasize expeditious reporting, investigation and possible prosecution of suspected frauds.

**Tactical Control**

These are form of control that helps in preventing computer fraud, it is as follows: Design of system and the paraphernalia of protecting it, including a back-up system to allow for machine failure, cryptographic facilities to protect the computers data network and terminals from illicit access or tempering, or protection services to prevents process, key management, recovery and contingency arrangement, software and data integrity and security responsibilities. Each message must be authenticated end-to-end with the relevant keys, which must be appropriately secured. Power failures must be guarded against by providing uninterrupted power supplies through standby generator. Nwankwo (1991:182).
Methodology

The research design used for this research work is survey and analytical. The data collected from the respondents were analysed by the use of Independent Samples T-Test.

Test of Hypothesis - $H_0$: The use of Technology does not help to detect and prevent the occurrence of fraud.

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<tr>
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<th>Levine’s Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
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<td>95% Confidence Interval of the Difference</td>
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<td>F</td>
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<td>X</td>
<td>variances assumed</td>
<td>2.173</td>
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<tr>
<td>Equal variances not assumed</td>
<td>.319</td>
<td>8.284</td>
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<tr>
<td>Z</td>
<td>Equal variances assumed</td>
<td>4.213</td>
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<tr>
<td>Equal variances not assumed</td>
<td>.758</td>
<td>6.946</td>
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For the independent sample test, the SPSS result of the Levine’s test of equality of variances shows that at 5% level of significance. The value of $t$ is also given to be 0.331, with degree of freedom of 11 and significance of 0.747.
We therefore reject the Null hypothesis and thus conclude that the use of technology help to prevent fraud.

**Discussion of Findings**

It was discovered that, conversion to technology-driven financial in banks was an open invitation to privilege. And quite often, the operations are left in the hands of people who are not skilful or have an in-depth knowledge in technology usage and management. Considering its multifarious usage, its sophisticated nature and shortfall, hence they became victims of incessant mistakes and busying themselves with verifying mistakes instead of new developments.

**Conclusion**

Actually, the study revealed that fraud could be perpetrated in a technologically-driven financial system. Besides, it was equally revealed that, the use of technology helps to prevent occurrence of fraud in bank, using methods ranging from physical system security and some administrative/procedural manoeuvre.

In the course of the study, it was discovered that out of the three basic processes of computer operation, it is only in the input stage that fraud can actually be committed and this is done when the data is being entered into the computer. The other two stages were found to be fraud free to a very large extent.

As regards the processing stage, it is not easily possible to commit fraud there because the in-built system cannot be easily manipulated. But for the output stage, a “biro” or pen could be used to alter the information contained in the output sheet, though this can easily be detected. On the whole, the researcher found Technology useful in the processing of banking information.

**Recommendations**

Technology frauds in banks should be manageable risk, like any other pure risk that threatens an organization. It has to be identified, measured and controlled. The practical approach begins with a technology security system and audit conducted by a competent professional. Some suggested recommendations are as follows:

1. Extensive training and orientation of the effective use of on-line system is a sine-qua non for both technology users and staff of banks. Technology consultants have a role to play in the organization of high quality seminal on all aspect of this subject. A solid base is most essential before we embark on the on-line systems. Banks will have to ensure that the quality of their staff is adequate for this change.

2. Policies and procedures must be enforced, which means a set of rules for the use of on-line (or Batch) system must be established and enforced.

3. On-line operations security must be provided within system.
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HUMAN ASSETS MEASUREMENTS: LITERATURE SURVEY

By

Haliru Yusuf

Abstract

Human asset and knowledge can be thought of as joint-products, but conceptually, they are distinct and in the ideal would be separately measured. One of the main concerns in the field of research on human asset is uniform reporting and measurement tool. Measuring human asset is subject of controversy, but attempts were made by many researchers to add value in the literature which viewed that human asset can be estimated with reference to future earnings, streams of past investments and individual characteristics. This paper reviewed various measurements of human assets and recommended that reporting human assets should be done in line with current developments of International Financial Reporting Standards (IFRSs) provisions.

Key Words: Human Assets, Knowledge, Reporting, Measurement.

INTRODUCTION

In Economics, labor is one among the four factors of production that contribute significantly to the production of goods and services and foster economic development and growth of a country. A country with strong and active population may grow and develop faster if adequately planed for its work force. Adequate planning of a country’s workforce has to do with how much was budgeted in human education, employment generation, health care, securities, agriculture etc. Adequate planning and implementation of budget on in investment in human beings (refers interchangeably in this study as human assets, intellectual capital or human capital) produce better results to that economy. To achieve these, there would be sound financial reporting standard to account for human asset.

Human assets are the knowledge, skills competencies and attribute embodied in individuals that facilitate the creation of personal, social and economic well-being (Organization for Economic Co-operation and Development (OECD), 2001). While Human Asset Accounting according to Flamholtz (1974) is concerned with identifying, measuring and reporting (to management and investors) data relating to human resources in an organization. It involves measuring and accounting for economic value of people as organizational resources. As usually defined, human capital is embodied in the individual, and the national stock of human capital can therefore be thought of as the sum total of the human capital of all those normally resident in its territory.

However, the creation of knowledge is clearly a social activity so it is necessary to ask whether a simple aggregation of the human asset possessed by individuals is sufficient. The answer to this is a qualified, yes,
provided one accepts the boundaries commonly drawn between human capital, knowledge and social capital. This can be supported by quoting Aghion & Howitt (1998, 267) as follows:

“The main measurement problem that we wish to emphasize here is the problem of measuring the output from innovative activity. That is, knowledge, like physical capital, is produced at an opportunity cost of current consumption, and like physical capital it will allow society to produce more in the future than otherwise, given the same inputs of all other factors of production. So when resources are diverted from producing consumption goods into producing knowledge, there is no more reason to think that the overall level of output or income has fallen than when they are diverted to producing physical capital. Nevertheless, under standard national income accounting procedures, measures GDP will fall in the first case and not in the second.”

The development of individual human asset is therefore intertwined with the social and collective development of knowledge. Human asset and knowledge can be thought of as joint-products, but conceptually, they are distinct and in the ideal would be separately measured. One of the main concerns in the field of research on human asset is uniform reporting and measurement tool. Measuring human asset is subject of controversy, but attempts were made by many researchers to add value in the literature including Adolf, Dennis and Genesh (2002) which viewed that human asset can be estimated with reference to future earnings, streams of past investments and individual characteristics.

This study aimed at reviewing and identifying various literature in the area of human asset measurement.

The rest of the paper is organized as follows. In section 2, we present conceptual framework on human asset and literature review. Section 3 presents research methodology and section 4 conclusion and recommendation.

CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

1. CONCEPTS OF HUMAN ASSET

A wide range of definitions for human asset have been suggested in the literature. Such definitions vary in focus, from personal attributes, to organizational attributes (Mouritsen, 1998), to knowledge that can be used to create value (Stewart, 1997). Stewart (1997) also views human asset as the sum of everything residing in a company giving rise to competitive edge in the marketplace. CIMA (2001) and Marr and Schiuma (2001) probably provide the most comprehensive definitions when they define human asset as:

...the possession of knowledge and experience, professional knowledge and skill, goodwill relationships, and technological capacities, which when applied will give organizations competitive advantage. (CIMA, 2001, p. 2).
...the group of knowledge assets that are attributed to an organization and most significantly contribute to an improved competitive position of this organization by adding value to defined key stakeholders. (Marr and Schiuma, 2001.)

David (2001) further defined human asset as (1) the capacity of interpreting flows of sensory data and structured information required for purposive individual actions and inter-personal transactions among economic agents; (2) the capacity for providing a variety of physical labour service-inputs in ordinary production processes; (3) the cognitive basis of entrepreneurial market activities; (4) the key resource utilized for managing market and non-market production, as well as household consumption activities; (5) the creative agency in the generation of new knowledge underlying technological and organizational innovations.

A key feature of the definitions of intellectual capital is that they recognise the link between intellectual capital and the structure and performance of an organization. They reflect the uniqueness of intellectual capital to individual firms in enhancing their competitive advantage.

Whilst there is a wide range of definitions, there seems to be broad consensus that intellectual capital comprises three major categories: human capital, structural capital and relational capital (Guthrie and Petty, 2000; Lev and Zambon, 2003; Boedker et al., 2005). Human capital is recognised as an important firm resource and is viewed as including training, experience, judgement, intelligence, relationships and insights of individual managers and workers in the firm (Marr and Schiuma, 2001; Marr et al., 2004; Sonnier, 2008). It therefore captures the knowledge, professional skills, experience and innovativeness of employees within an organisation. Wright et al. (1998) argue that human capital is important because it provides the means by which firms enhance their competitive advantage in the market place. Structural capital consists of the structures and processes employees develop and deploy in order to be productive, effective and innovative (Boedker et al., 2005). This includes, for example, patents, organisational culture, management philosophy, new product development, information systems and processes. Relational capital captures the knowledge of market channels, customer and supplier relationships, and governmental or industry networks. Hence, it relates to the organisation’s relationships with external stakeholders be they suppliers, customers or others (Guthrie et al., 2007; Marr et al., 2004).

2. **HUMAN ASSET REPORTING AND THE CAPITAL MARKETS**

According to Lev and Zambon (2003), economic development in recent years has been characterised by continuous innovation, the spread of digital and communication technologies, the relevance of network forms of organisation, and the prevalence of soft, intangible and human factors. Firms operating in competitive, global markets recognise that the traditional reliance on tangible assets as value drivers, has been supplemented - or even superseded - by softer, intangible asset forms. Hence, for most organisations, intellectual capital is now recognized as an integral part of the firm’s value-creating processes (Bukh, 2003; Holland, 2003).
However, whilst intellectual capital is considered a major contributor in the value-creating processes in the firm (Beattie and Thomson, 2007), the costs involved with these intangible assets are either immediately expensed in the financial statements or arbitrarily amortised, and therefore are not adequately reflected in the financial statements. For example, the ‘new’ intangibles such as employee competencies, customer relationships and computer and administrative systems are not recognised in the traditional financial reporting model. Although regulatory reporting requirements require traditional intangibles such as brand equity, patents and trademarks to be incorporated in the financial accounts, they are only recognised if they meet some stringent criteria (Holland, 2006; Guthrie et al., 2007). Consequently, the book values of firms are poorly related to the market values (Holland, 2003; Beattie and Thomson, 2004). For example, Lev (2001) documents an increase in the mean market-to-book ratio from 1.0 in 1977 to 6.0 in 2000 for the S&P500 firms. Gu and Lev (2004) also show an average market-to-book ratio of 4.5 for the S&P500 firms in the year 2003. Similarly, Beattie and Thomson (2004) reveal that the mean market-to-book value for FTSE 100 firms to be 2.52 for the year 2002/2003. These results indicate a substantial gap between book and market values of firms.

In the light of the evidence on the growing gap between market and book values of firms, it has been argued that the traditional financial reporting model has become of limited relevance to investors because it fails to reflect information about a wide range of value-creating intangible assets (Francis and Schipper, 1999; Lev and Zarowin, 1999; Barsky et al., 2003). The Jenkins Report (AICPA, 1994, p. 80) also suggests that:

...a large part of the immediate problem... is the limited usefulness of today’s financial statements. They do not, for example, reflect information-age assets, such as information, capacity for innovation, and human resources. As a consequence, they have been a declining proportion of the information inputs to investors’ decision making...

Bukh (2003) argues that the traditional reporting model is not able to cope adequately with the reporting requirements of the new economy firms which rely heavily on investment in intangible assets. This failure by the financial reporting model to reflect investments in intangibles (intellectual capital) has given rise to increasing information asymmetry between firms and users (Rylander et al., 2000; Barth et al., 2001; Holland, 2003) which has increased opportunities for moral hazard, adverse selection and other opportunistic behaviour by managers (Aboody and Lev, 2000; Holland, 2006). Consequently, this has caused concerns within the capital market on the ability and relevance of the accounting numbers reported in the financial reports for making economic decisions (Barth et al., 2001). This has further been exacerbated by post-Enron concerns about the veracity of financial statements and the general downturn in the global economy (Barsky et al., 2003; Guthrie et al., 2007). Eccles and Mavrinac (1995) and Lev (2001) contend that reporting of investments in intellectual capital in the firm is an important way of bridging this information asymmetry gap between managers and outside investors.
3. **SOME STATISTICAL MEASURES OF HUMAN ASSET**

Adolf, Dennis and Ganesh (2002) classified human asset into three: as future earnings, streams of past investments and individual characteristics. Algebraically, they measure *Human asset as a function of earnings*:

\[
H_e = \sum_{t=p}^{n} \frac{E + B_t}{(1+i)^{t-p}} 
\]

(1)

Where: \( H_e \) = human asset defined from earnings and other benefits, \( E \)=earnings (often expresses as the difference between actual earnings and a basic unskilled, wage rate), \( B \)=other (non-market) benefits derived from increased human capital, \( i \)=interest rate, \( p \)=the present value and \( t \)=time.

*Human asset as the summation of investment*:

\[
H_c = \sum_{t=0}^{p} C \left(1 + i - d\right)^{p-t}
\]

(2)

Where: \( H_c \) = human asset defined from investment cost, \( C \)=investment costs, including direct and opportunity costs, \( i \)=interest rate, \( d \)=depreciation rate and \( p \)=the present.

*Human asset as a summation of attributes and capabilities*:

\[
H_a = \sum_{i=1}^{p} m_i w_i + \sum_{j=i}^{q} o_j v_j
\]

(3)

Where: \( m_i \)=market related attributes and capabilities, \( w_i \)=market returns for attribute or capability \( m_i \), \( o_j \)=other valued individual attributes and capabilities, \( v_j \)= unit return for other (non-market) individual attributes or capability \( o_j \).

Wossman (2001) presents a method, “the elaborate discounting method”, which calculates the discount rate \( r \) which equates the stream of cost of education to the stream of benefits from education. The formula is:

\[
\sum_{t=1}^{s} \left( C_{h,t} + W_{l,t} \right) (1+r)^{t} = \sum_{t=a+1}^{h} \left( W_{h,t} - W_{l,t} \right) (1+r)^{t}
\]

(4)

Where: \( C_{h,t} \)=the resource cost of schooling incurred to achieve higher level \( h \) from a lower level \( l \), \( W_{l,t} \)=the foregone earnings of the student while studying, \( (w_h-w_l) \)=the earnings differential between a person with a higher level of education and a person with a lower level of education, \( s \)= years of schooling and \( A_h \)= the higher possible working age.
Under macroeconomic perspectives on human asset, Aghion and Howitt (1998) noted that the role of human asset in endogenous growth model can be divided into two main categories:

- Models such as that proposed by Lucas (1988), where the concept of capital is broadened to include human asset. In such models sustained growth is due to the accumulation of capital over time. Lucas assumes a production function of the form:

$$y = Bk^{\alpha} (uh)^{\gamma - \alpha} (h_a)^{\gamma}$$

Where: $B$, $\gamma$, $\alpha$ = parameters, $y$ = output, $k$ = physical capital = the proportion of time devoted to work (as opposed to accumulating human capital), $h$ = the human capital of the representative agent, and $h_a$ = the average human capital in the economy.

- The second category comprises models that attribute growth to the existing stock of human asset, which generates innovations or improves a country's ability to imitate and adapt new technology. Krueger and Lindahl cite Romer (1990) as an example:

$$Y = H_y L^\beta \int_0^A X(i)^{1-\alpha-\beta} \, di$$

Where: $\alpha, \beta$ = parameters, $Y$ = output, $H_y$ = human capital employed in the non-R&D sector, $L$ = labour, $X(i)$ = physical capital discharged into separate inputs characterized by their technological level and $A$ = the highest technological level embodied within the nation’s stock of physical capital.

Adolf, Dennis and Ganesh (2002) concluded that the five out of six equations (excluding equation 4) implicitly contain no less than six measures of human assets. Each usage could be accommodated under the general umbrella of the OECD definition quoted earlier. The precise meaning of each has to be consistent with what might be inferred from the algebraic construction of the equation in question. Also, they concluded that in the absence of well-defined measures of human capital researchers have had to appeal to proxy measures, such as years of schooling. This has led to an extensive literature on relationship between educational outputs and attainments, on the one hand, and outcomes such as earnings and the rate of economic growth. With respect to national macroeconomic growth measures of human capital, they further concluded that there is need for alternative measures including the present value of expected returns, the accumulated cost of past investments and cross sectional studies on the human capital embodied in the population at a point in time.
4. **EMPICAL STUDIES ON HUMAN ASSET MEASUREMENTS**

Le et al (2003) identifies three major approaches to measuring human capital: the cost-based approach, the income-based approach, and the educational-stock-based or indicators approach. This distinction has sufficient currency that it also appears in Liu and Greaker (2009), Gu and Wong (2010a), Li et al (2010), and Jones and Chiripanjura (2010). The indicators approach is the simplest; it uses an indicator or combination of indicators, such as years of schooling or the rate of literacy, to measure a country's human capital. The cost-based approach values the human capital stock at the cost of producing it. A frequently cited text on the cost-based method is Kendrick (1976), which measures human investment using the cost of rearing children, educating people, and other human-capital-related activities. A recent application of the cost-based approach is Kokkinen (2008), which estimates human capital in Finland.

The income-based approach values the human capital stock using the earnings of the persons in that stock. Jorgenson and Fraumeni (1989, 1992), which measure human capital using lifetime incomes in present discounted value, are seminal applications of the income-based approach. The income-based approach has been the most popular approach in recent applications, having recently been employed to create human capital measures for China (Li et al, 2010), the United States (Christian, 2010), the United Kingdom (Jones and Chiripanjura, 2010), Canada (Gu and Wong, 2010a), Australia (Wei, 2004, 2008), New Zealand (Le et al, 2006), Sweden (Ahlroth et al, 1997), and Norway (Liu and Greaker, 2009). The income-based approach is also being used for the human capital project at OECD, which aims to produce human capital accounts across eighteen countries for international comparisons (Mira and Liu, 2010). Abraham (2010) identifies the cost-based approach and the income-based approach as analogous to the income and production sides of a national income and product account but notes that, unlike the two sides of a national income and product account, cost-based and income-based human capital accounts should not necessarily lead to identical results.

Many implementations of the income-based approach limit the data set to the working-age population, to persons in the labor force, or to employed persons only. This limitation is described in Jones and Chiripanjura (2010) as "consistent with the OECD's guidance on the measurement of physical capital which states that, 'be counted as part of the capital stock all that is required is that assets are present at production sites and capable of being used in production or that they are available for renting by their owners to producers.'" A human capital measure that is limited to the working-age population is denoted in Li et al's (2010) paper on China as "active human capital", since it is the human capital of people who are active in the labor force. Active human capital is measured in Gu and Wong's (2010a) study of Canada (working-age population), Le et al's (2006) study of New Zealand (employed persons), Jones and Chiripanjura's (2010) study of the United Kingdom (employed persons), and Liu and Greaker's (2009) study of Norway (persons in the labor force). Wei's (2004) account for Australia presents results for both the working-age population as a whole and for people in the labor force only, and finds that the human capital stock for people in the labor force is about 80 percent the size of the human capital stock for the

Most recent work focuses on the market component of human capital, which, under the income approach, is the component of human capital that is attributable to the value of a population's market work. The other component of human capital in Jorgenson and Fraumeni (1989, 1992), the nonmarket component, is attributable to the value of a population's nonmarket time. In some applications, the non-market component is excluded, sometimes purposefully under the premise that the market component alone is the preferable measure of human capital. For example, Le et al's (2006) paper about New Zealand states that "assuming equal value between a full-time worker and a non-participant is not justifiable, from an economic point of view." (See also Ervik et al, 2003; and Gu and Wong, 2010a.) Non-market human capital is included in Christian's (2010) paper about the United States and Ahlroth et al's (1997) paper about Sweden.

Education is measured in the Jorgenson-Fraumeni approach using the number of years of education received. In the original Jorgenson and Fraumeni (1989, 1992) papers, people were classified as having between 0 and 18 years of education. This approach was particularly well-suited for the demographic data available in U.S. Census data at the time, which measured education levels in the U.S. population in the same way. Most of the more recent work in human capital outside of the United States, however, has used data that measures education levels using qualifications earned (perhaps in part because of the existence of multiple educational tracks), and it is typically the case that these qualifications require more than a year to complete. As a result, many researchers outside the United States have adapted the Jorgenson-Fraumeni method to accommodate the circumstances in the country in which human capital is being measured. For example, Wei's (2004, 2008) account for Australia classifies people into four educational qualification groups: unqualified, skilled labor, bachelor degree, and higher degree. In the United States, the Census education variables changed in 1992 from individual years to degrees earned, although it is possible to recover individual years from the basic Current Population Survey starting in 1997 (see Jaeger, 1997, 2003). Christian's (2010) study of human capital in the United States using imputed individual years of education.

One interesting difference that appears among studies is in approaches to deflating the stock of human capital over time to make comparisons across time possible. In some cases, the human capital stock is deflated using a consumer or labor price index (Wei, 2004, 2008). Under this approach, changes in lifetime incomes relative to changes in prices remain after deflation. If human capital accounts purport to measure human capital stocks and investments as quantities, this approach implies that changes in real lifetime incomes reflect changes in the quality of human capital within age, sex, and education levels. In other cases, the human capital stock is deflated using prices for human capital itself, eliminating changes in
lifetime incomes and leaving a quantity index based entirely on the number and distribution of persons by age, sex, and education (Gu & Wong, 2010a; Christian, 2010). The quality of human capital within age, sex, and education level is implicitly presumed to be constant over time.

Several different approaches to disaggregating changes in the quantity of human capital from one year to the next into investment and depreciation are employed. Wei's (2008) disaggregation for Australia is especially novel, identifying (among several other things) human capital formation from post-school education and on-the-job investment, as well as depreciation of human capital formed by post-school education and on-the-job investment. Many human capital studies focus entirely on the stock of human capital and do not attempt to measure investment or depreciation.

Human capital accounting has particularly interesting applications for the measurement of the education sector. This application is specifically mentioned in the Atkinson (2005) report, which sets an agenda for measurement in the United Kingdom. Ervik et al (2003) is an interesting application of human capital in that it focuses on the output of the education sector, to the extent that it does not present a measure the stock of human capital. The authors find that the higher education sector in Norway is more than seven times larger when measured using the Jorgenson-Fraumeni methodology for human capital investment than when measured as it was in the Norwegian national accounts. Christian (2010) similarly finds very large values for investment in education in the United States. In contrast, Ahrloth et al (1997) find measures of investment in education in Sweden that are often smaller than those measured in the Swedish national accounts.

Several applications of the income-based approach to human capital use measures of income other than lifetime income to value human capital. Haveman et al (2003) uses a measure of human capital denoted "earnings capacity", which measures the value of the human capital stock as the expected income in a single year of all working-age persons in an economy if all persons worked full-year full-time. Earnings capacity is a measure of the potential annual rental value of human capital, in contrast to the asset value measured by the Jorgenson-Fraumeni approach. Since earnings capacity is based on current income (or, more accurately, potential current income, were persons working full-time full-year) rather than lifetime income, it does not require assumptions about the discount rate or income growth rate to produce. O'Mahony and Stevens (2009) present a measure of the output of the education sector that aggregates enrollments across multiple levels of education using a weight based on the effects on earnings from completing each level of education.

METHODOLOGY
The study adopted exploratory research design in form of contents analysis. Data utilized for the study was purely secondary and sourced from text books, journal articles, periodicals, proceedings from conferences and internet websites.
CONCLUSION AND RECOMMENDATIONS

Since there is no ideal way of valuing, measuring and reporting human asset as found in the literature, it is imperative to use a measurement or valuation method that is unique to the applying environment. It is therefore, relevant to incorporate suggestions in the International Financial Reporting Standards specifically on disclosure and reporting of human resources. Further review and application of the measurements statistics should be carried out by other researchers.

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ISSUES IN ISLAMIC FINANCE AND AUDITING: A LITERATURE REVIEW

By

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Abstract

Islamic banking came as a result of Islamic belief which prevents dealing in interests. It is carried out on a sharing of profit and loss basis. Islamic banking operates on two principles called Mudarabah and Musharak. Several literatures were reviewed to assess different authors view on Islamic banking impact in a country’s banking sector. The study, also examines the perspective of practitioners who are involved directly and/or indirectly with the process of shariah compliance/auditing from Islamic financial institutions (IFIs) on the issues of standards for shariah auditing, auditors qualifications and independence. The paper recommends adequate supervision and normal prudential guidelines to streamline its operation. The paper concludes that Islamic financing as a part of a financial sector development strategy should be encouraged by regulations and supervision authorities, that accommodate its forms while ensuring that their unfamiliarity is not exploited to defraud clients.

Introduction

Modern banking system was introduced into the Muslim countries at a time when they were politically and economically at a low ebb, in the late 19th century. The main banks in the home countries of the imperial powers established local branches in the capitals of the subject countries and they catered mainly for the import and export requirements of the foreign business. The banks were generally confined to the capital cities and the local population remained largely introduced by the banking system. Borrowing from the banks and depositing their savings with the bank were strictly avoided in order to keep away from dealing in interest which is prohibited by Islamic religion. According to the Institute of Islamic Banking and Insurance (1990), “Islamic Banking refers to a system of banking or banking activity that is consistent with the principles of the Shariah (Islamic rulings) and its practical application through the development of Islamic economies”. Nigeria’s quest for a virile banking reform had led to the adoption of several strategies that would truly give the nation’s economy an edge towards growing sustainability. No doubt, the bail out of “failed banks” and the acquisition of assets from bad banks’ did save the economy and Nigeria to a large extent from such kind of economic blows suffered in the Scandinavian banking crises. It is true that the CBN had emphasized on its readiness to establish or give licence to banks wishing to operate interest free banking system which is popularly known by 38 many as Islamic banking because is in tandem with Islamic jurisdictions and beliefs that prevent dealings in interest (Riba or usury) it is also true that the Bank has the jurisdictions, as provided in its Act to allow such financial or banking practice, but what should not be true is the believe that the CBN’s policy was meant to enforce Islam or Shariah on
Nigerians. For the avoidance of doubts, as it were with conventional commercial banks, interest-free banking system has its inherent pros and cons which affect the Muslim and non-Muslims alike. A first glance of how interest free banking system operates could set a pace of reasonable understanding to its fault. The bank has both Muslims and non-Muslim customers. Its lending principle is based on the belief that providers of capital and the users of capital should equally share the risk of business ventures. Translated into banking, the depositor, the bank and the borrower should all share the risks and the rewards of financing business ventures. Interestingly, the flexible nature of Islamic finance provides enormous opportunities. It has positive and far-reaching implications for the Nigerian economy. The interest – free banking principle in Islam allows only one kind of loan and that is guard-el (literally good loan) whereby the lender (the bank) also shares in the profits or losses arising out of the enterprise which the money was lent. Islam encourages the economy of wealth redistribution; customers are encouraged to invest their money and to become partners in order to share profits and risks in the business. This is unlike the interest – based commercial banking system, where all the pressure is on the borrower. He must pay back his loan, with the agreed interest, regardless of the success or failure of his venture. Ahmad et al (2007) defined an Islamic Bank as “a financial institution whose status, rules and procedures expressly state its commitment to the principle of Islamic Shariah and to the banning of the receipt and payment of interest on any of its operations. Thomas (1995) is of the view that Riba, Gharar and Maysir manifested in the conventional system can wreak havoc in an economy as advanced as USA, as depicted by the massive failures of US savings and loans institutions of the 1980s.

Islamic Banking aims to promote economic growth through risk-sharing instruments whose payoffs fluctuate with economic output and do not structurally impair the economy in the manner that excessive fixed-interest debt does in a poor economic environment such as a recession (Asquith et al., 1994; Andrade and Kaplan, 1998). The present day multi – rich Nigerians can hoard money, thereby limiting or eliminating the purchasing power of money. This practice have negatively marred the efforts at keeping inflation at bay, as this idle money are not utilized in economic activities that could improve the country’s Gross Domestic Product (GDP) over time.

Under the Islamic Banking system, human initiative and risk involved in a productive venture are more important than the money used to finance it. The true nature of wealth in Islam requires social preferences and market exchange mechanisms that are ethicized by human consciousness. Islam gives precise moral injunctions as to what are, and are not acceptable kinds of wealth. While Islam employs various practices that do not involve charging or paying interest, the Islamic financial system promotes the concept of participation in a transaction backed by real aspects, utilizing the funds at risk on a profit and loss sharing basis which is important for the Nigerian economy. Such participatory modes used by Islamic banks are known as Musharakah and Mudarabah. This by no means implies that investments with financial institutions are necessarily superlative. This can be excluded by carefree investment policy, diversification of risk are prudent management by Islamic financial institutions. The concept of profit – and – loss sharing
in an enterprise, as a basis for financial transactions is a progressive one as it distinguishes good performance from the bad and the mediocre. These concepts therefore encourage better resource allocation and management. Finally, Islamic finance is not a product to be offered to a niche market, it is a system. Therefore, it is fair to promote the system as did by United Kingdom government. Nigerian could buy from the West, especially with the United States strategy in understanding the system and how US Deputy secretary of the Treasury Robert M. Wimmit showed the world that U.S. was interested in learning more about Islamic finance through holding on “Islamic finance 101 course in Washington to educate government officials on its nitty-gritty. Whatever the system that the CBN (Apex Bank) deems fit to aid in strengthening the banking industry, it is left for the customers and Nigerians to decide on which financial product to explore. As it stands today with many conventional banks increasing minimum cash balance in savings (deposit) accounts to N25, 000.00 and thereabout. Islamic banking could be a succour towards sustaining competition in Banking performs for a surviving economy which average citizens earns far less than 18,000.00 per month. The goods the saver wants will cost more in the future, so he is justified in charging a rent for the use of his loan. Keynes (1936), argued that money is the most liquid of assets, that is to say it is the asset most readily exchangeable for other forms of assets and that interest is the price paid for loss of liquidity. The theory that interest protects savings from inflation neither explains why the rate of interest is, nevertheless, always above the rate of inflation, nor does it question the proposition that inflation is the cause of interest. Nor do these theories answer the question as to why interest should be the market regulator; the supply and demand for money. Why should interest be paid for one’s postponement of enjoyment of present goods, or paid for abstain from diminishing one’s present capital, which would otherwise be diminished by the ranges of time and consumption? Asked by advocates of Islamic (non-interest) banking. Another Islamic principle is that there should be no reward without risk bearing. This principle is applicable to both labour and capital. As no payment is allowed to labour unless it is applied to risk, so no reward for capital should be allowed unless it is exposed to business risks. Consider two persons, one of whom has capital but no special skills in business while the other has managerial skills but possesses no capital. They can co-operate in either of two ways.

1. **Debt – financing** (the western loan system): The businessman borrows capital from the capital owner and invests it in his trade. The capital owner is to get back his principal an additional amount on the basis of a fixed rate, called the interest rate, as his compensation for parting with liquidity for a fixed period. This payment is due irrespective of whether the businessman has made a profit using the borrowed money. In the event of a loss, the borrower has to repay the principal amount of the loan, as well as the accounted interest from his own resources, while the capital – owner loses nothing. Islamic views this as an unjust transaction.

2. **Mudarabah** (the Islamic way). The two persons co-operate with each other on the basis of partnership, where the capital – owner provides the capital and the other party puts his management skills into the business. The capital – owner is not involved in the actual day – to – day running of the business, but is
free to stipulate certain conditions that he may deem necessary to ensure the best use of his funds. After the expired period, which may be the termination of the contract or such time that returns are obtained from the business, the capital owner gets back his principal amount together with a pre-agreed share of the profit. The ration in which the capital – owner and the manager of the enterprise is determined and mutually agreed at the time of entering the contract, before carrying out the project. In the event of loss, the capital owner bears all the loss and the principal is reduced by the amount of the loss. It is the risk of loss that entitles the capital 40 – owner to share in the profit. The manager bears no financial loss, because he has cost time and his work has been wasted. This is in essence, the principle of Mudarabah. Islamic banking has a unique dispensation on the theme of wealth, its ownership, distribution, and social relationship. Although the system encouraged customer to purchase, it also prohibits or discourage investment in practices and products that are considered forbidden. The Apex bank can make policies for the financial system and operators, as much as it is provided by enabling laws. Interest – free banking is a product of CBN, to take effect if the listed legal provisions and other careful indices are put in place to meet the economic objective for which it is meant for. All that is needed is a careful and extensive capacity building in collaboration among various stakeholders to develop cognate expertise in non – interest banking, development of a regulatory and supervisory framework for the effective operation of non – interest banking in Nigeria. As it stands, interest – free banking system and Islamic banking system refers to the same policy as they operates in line with the provisions and jurisdictions of the Islamic Shariah system; nevertheless, it does not connotes a means of enthroning Islam over the sovereignty of Nigeria but a mere banking policy aimed at salvaging the country’s financial system as seen practiced in the United Kingdom, America and parts of Europe.

Theoretical Background

Islamic banking refers to a system of banking or banking activity that is consistent with the principles of the Shariah (Islamic rulings) and its practical application through the development of Islamic economics. The principles which emphasize moral and ethical values in all dealings have wide universal appeal. Shariah prohibits the payment or acceptance of interest charges (riba) for the leading and accepting of money, as well as carrying out trade and other activities that provide goods and services considered contrary to its principles while these principle were used as the basis for a flourishing economy in earlier times, it is only in the late 20th century that a member of Islamic banks were formed to provide an alternative basis to Muslims although, Islamic banking is not restricted to Muslims. Islamic banking has the same purpose as conventional banking except that it operates in accordance with the rules of Shariah, known as fight al-Muamalat (Islamic rules on transactions). Many of these principle upon which Islamic banking is based are commonly accepted all over the world, for centuries rather than decades. These principles are not new but arguably, their original state has been altered over the centuries. A popular belief persists that Islamic banking is simply an interest – free financial structure. But in fact, Islamic economics is a complete system of social and economic justice. It deals with property rights, the incentive
system, the allocation of resources, economic freedom and decision–making and the paper role of government. Western bankers’ loan said that savings are investments would soon dry up if interest were not paid. But this is due to identifying “rate of interest” and ‘rate of return” as posited by the Islam world. To them “God has permitted trade, but forbidden riba (interest)”. Therefore it is only the fixed, or predetermined, return on savings or transactions that is forbidden, not an uncertain rate of return, such as the making of profit. Modern economists have developed many arguments to justify interest. One argument is that interest is the reward for saving a compensation that the creditor pays the debtor for the latter’s temporary loss of the use of capital.

**Issues and Relevance of Islamic Banking**

The desire of enlightened Muslims to seek the moral equivalent of modern capitalism goes back to Egypt in the early 1960s. The processing effort in Egypt took the form of a savings bank based on profit–sharing in the form of Mit Ghaya. The Islamic Development Bank (IDB) was established in 1975 by the Organization of Islamic Conference (OIC), but it was primarily an intergovernmental body aimed at providing funds for development projects in member countries. Islamic banks came into existence in Saudi Arabia and the United Arab Emirates. Since then, Islamic financial institutions have emerged in large number of Muslim countries including Kuwait, Bahrain, Qatar, Turkey, Pakistan, Indonesia and a belt of other IDB member countries. These institutions have taken the form of commercial banks, investment banks, financial companies etc.

**Marketing Sizing**

Islamic banking today is an industry that is still evolving. The industry manages approximately $180 billion dollars today, growing at approximately 15% per annum. The growth of Islamic banking is a result of economic growth in Islamic world fuelled primarily by oil wealth. This growth created a growth middle–wealth segment and hence made banking a necessary service to larger segment of the population rather than a service for the few, as had to be the case some 10 to 15 years earlier.

**The Markets and the Players**

More than 2/3rd of Islamic finance business is currently originated in the Middle East. The GCC countries, with the exception of Oman are all major markets of Islamic finance. Bahrain is regarded as the hub for Islamic finance. Non–GCC markets for Islamic finance include Egypt, Malaysia, Turkey, Indonesia and Pakistan. Malaysia operates a dual banking system promoted by the government. It allows conventional financial institutions, investment banks, commercial Banks, and finance companies to launch separate Islamic banking divisions. Bank Negara Malaysia (the Central Bank) has its own Shariah Advisor Board which sets the rules for the entire Islamic banking sector, ensuring uniformity in products and services.

**The Products and Structures**

Islamic banks around the world have devised many financial products based on the risk–sharing, profit–sharing principles of Islamic banking. Banking activities requires a number of financial instruments that
have been developed to satisfy the Islamic doctrine and provide acceptable financial returns for investment. Broadly speaking, the areas in which Islamic banks are most active are in trade and commodity finance, property and leasing. Almost every Islamic bank has committee of religious advisers whose opinion is sought on the acceptability of new instruments and services and who have to provide a religious opinion of bank’s activities for year-end accounts.

**Community Banking**

Muslims in Britain and throughout the world aspire to carry out their financial matters in accordance with the principles of Islamic law. Muslims are forbidden from obtaining the various conventional banking and insurance products and services in the forms currently offered due to their incompatibility with the principle of Islamic law. It is estimated by various surveys that over 2 million Muslims are permanently residing in the UK. The community is predominantly composed of people from Indian sub-continent who have settled in Britain during the 1950s. Besides that, there are also Muslims of middle Eastern and North African Origins. Beside the market represented by Muslims living in Britain, there is potential overseas investor to be introduced by HSBC.

**Islamic Banking in Non–Muslim Countries**

The modern commercial banking system in nearly all countries of the world is mainly evolved from and modelled on the practices in Europe, especially that in the United Kingdom. The philosophical roots of this system resolved around the basic principles of capital certainty for depositors and certainty as to the rate of return on deposits. In order to enforce these principle for the sake of the depositors and to ensure the smooth functioning of the Banking System Central Banks have been vested with powers of supervision and control – all banks which wish to operate in non–Muslim countries have some difficulties in complying with these rules.

**Certainty of Capital and Return**

While the conventional banks guarantee the capital and rate of return. The Islamic banking system, working on the principle of profit and loss sharing, cannot, by definition, guarantee any fixed rate of return on deposits. Many Islamic banks do not guarantee the capital either, because if there is a loss it has to be deducted from the capital. Thus, the basic difference lies in the very roots of the two systems.

**Riba (Usury or Interest)**


**METHODOLGY**
The methodology adopted in this study is purely a library research, which relied extensively on secondary sources of data by examining journal articles on the topic under discussion.

**ANALYSIS AND DISCUSSION OF ISLAMIC FINANCE AND AUDITING**

Recent accounting scandals, where companies prepared fraudulent financial statements and auditors issued clean opinions on the fraudulent statements have eroded trust among participants in the financial markets. Barlup have questioned whether increased regulation is the only solution to fraudulent financial reporting and auditing. Audit failures have led stakeholders to question on the importance of the audit process. Stakeholders wonder about the independence of auditors when management fraud occurs and questioned whether auditors improve the value of information available to outsiders. People have started to re-evaluate the level of trust they put on audit to provide assurance for investment and financial information, and the trend of solely depending on audit as the best source of credibility for such information may have now become defunct. The profession’s problems started after high-flying Enron Corporation suddenly declared bankruptcy, followed by a few more giant conglomerates. Like it or not, auditors became regular features in front-page news stories and banner. It has also been argued that the role of financial reporting and auditing should not be confined to the needs of investor decision-making, but should also be viewed in relation to the more general concerns of corporate governance. These are comments which relate mainly to financial statements audits whereby the auditors only express their opinion on the accounts. The purpose of this type of audit is to determine whether the overall financial statements are stated in accordance with the specified criteria. Some stakeholders consider audited accounts guarantee their true and fair view, absence of fraud or even the going concern position of the entity. However, to them an audit is not an assurance of the future viability of an entity, nor it is an opinion on the economy, efficiency or effectiveness with which management has conducted its affairs. Despite all these tragedies and criticisms, the conventional auditing system arising from a Western capitalistic philosophy and values is the only procedure and system available being globally adopted. Unfortunately, Islamic financial institutions (IFIs) which are set up with different objectives and world view have not much choice but to depend on the system for audit purposes. In view of their early stage, Islamic banks for instance, have no mandatory regulated guideline on auditing practices and accounting standards. A standard setting body for IFIs called as The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) in their early process of setting accounting and auditing standards has adopted the ‘ihaba’l methodology which has come under criticisms by certain quarters. Shahul for instance called for an extensive overhaul for Islamic accounting if it were to endure for a long time. New regulations have been imposed to restore confidence in the corporate governance system and the oversight role in this system. The effect on the presence of a code of ethics for instance, appears to have an impact on the quality of auditors” judgments. Hence, the introduction of Islamic laws into Islamic financial institutions has resulted in great changes; especially in the way the institutions do their business. This has also affected the audit of these institutions.
Accordingly, the normal audit objective has been changed to agree with the Islamic law even though the normal conventional auditing is unable to cater for the values of shariah Islamiah. Conventional auditing is based on a system which is value-free and does not take into consideration the moral and ethical values laid down by Islam, despite the fact that standard setters believe that the ethical environment is an important factor in improving audit quality. The Western secular model of ethics (reflected in the conventional accounting or auditing) generally propose a system of ethics divorced from religion. Its capitalistic approach is unsuitable for the Islamic economic system, which, on the other hand, places high moral values, fairness and „Maslahah of the Ummah” (for the benefits of Muslim society) as among its principles. Thus, according to Haneef, due to differences in the Islamic economic vision to those of Western economics, coupled with the epistemological and methodological framework in Islamic scholarship, the development of Islamic economic thought (and consequently policy prescriptions) differs. He then suggested that Islamic economics (including finance, banking or accounting) should be evaluated within its own framework and using its own criteria.

AUDITING FROM THE PERSPECTIVE OF SHARIAH

Currently, the responsibility of carrying out the shariah audit function is impliedly imposed on the Shariah Supervisory Board (SSB). Even though the regulators realize the need to have shariah audits for IFIs, there is no mention of the appointment and responsibilities of a shariah auditor per se, nor a specific definition of a shariah audit, in any related Acts or regulations. Section 3 (5) (b) of the Islamic Banking Act (IBA) 1983 does mentioned indirectly on the responsibility of a shariah auditor, but this section is related to the requirement to establish a SSB which includes among others the responsibility of producing and endorsement of a shariah report. The latest Shariah Governance Framework (SGF) issued by the Central Bank discussed on the function of shariah audit as part of the governance structure, hence very limited in scope. Questions may then arise as to who is responsible to conduct the check and balance (in other words, doing the auditing) on shariah matters which is not covered by the external auditors, particularly in Malaysia. Research conducted by Hood and Bucheery showed that financial (external) auditors were reluctant to undertake the responsibility of ensuring shariah compliance. IBA 1983, BAFIA 1989, BNM/GPS 1, SGF and AAOIFI seem to put the responsibility of forming and expressing an opinion on the extent of an IFI’s compliance with shariah (in other words doing the shariah audit e.g. GSIFI 2) on the SSB. In addition, both the AAOIFI standards and the Central Bank’s guidelines also give the responsibility of advising, planning and monitoring of the activities of the IFIs (e.g. BNM/GPS 1 and SGF) on the SSB. This however leads to questions of „independence” which is a fundamental concept in auditing, as auditors cannot audit or examine their own work. Due to the faith-based nature of the business, it is evident that the SSB will reviewed most aspects of the business even though the involvement could vary and focused on approval of basic structure of products and other special activities rather than interfering in the day-to-day operations of business. Furthermore, SSB does not have a mandatory regulated professional code to follow; instead they follow the Islamic shariah principles. Whereas
investors of *shariah* approved companies depend on the SSB”s scholarship and expertise in making decisions on evaluating and selecting optimal investment portfolio. Although AAOIFI has come up with the code of ethics for auditors of IFIs, the framework/standards within which to formulate their task as *shariah* auditors has not so far been defined. The fact that they are guided by their moral beliefs and they are distinguished and knowledgeable *shariah* scholars makes it difficult to know whether they are competent to perform their duty or not as *shariah* auditors, even though their position is comparable to the auditors of the IFIs. It is eventually an empirical question as to who is qualified *shariah* auditing expert, and what are the boundaries of certified knowledge are. Should the auditor be the staff who is within the organization but independent of the areas being audited and reporting directly to management – the classic formulation of the duties of an internal auditor as suggested by Maltby for an environmental auditor. The current role of the SSB focuses on compliance with rules and procedures and completeness of paperwork. It is easy to show that an IFI can comply with all rules and regulations without adding any value or achieving the objective of the *shariah* for which its formation is based. The accountability of the *shariah* audit function carried out by the SSB is thus checked only to the extent of its adherence to rules and procedures. Thus, it may be assumed that the function makes no contribution to assessing the achievement of the objectives specifically on the socio-economic objectives. Different from the capitalist environment, in an Islamic society with a very heavy social and ethical agenda, the current practice may be considered inadequate. On the other hand, the role of the external auditor in an IFI is different and wider than his role in the traditional organizations. This is because it should be extended to cover the compliance with the *shariah* and auditing in Islam has been derived from the basic values of Islamic society; from traditional concept of “attest and authority” to meeting the socio-economic objectives of the Islamic law. Is the current profession qualified to undertake this extension of duty? By right the auditor auditing IFIs is religiously responsible and his duty is bound to acquire knowledge of *shariah* and his duty emanates from the principles of Islam and from the general standards of his profession. Therefore, it is the duty of the auditor to do his best in the capacity of a professional by acquiring related knowledge as the profession requires the auditor to certify that the transactions of the institution which they audit comply with the objective of the institution. Accordingly, if the objective of the IFI is to conduct business in accordance with *shariah* principles, the auditors of the institution have a responsibility to ensure *shariah* compliance by virtue of taking the audit assignment. However, as mentioned above, research conducted by Hood and Bucheery showed that external auditors were reluctant to undertake the responsibility of ensuring *shariah* compliance mainly due to the lack of expertise. Further, Simpson and Willing argued that the role of external auditors in the IFIs was seen to be complex due largely to the lack of experience of most external auditors on the *shariah* principles. Besar et.al suggested that in ensuring the success of *shariah* compliance review framework, IFIs need to promote the involvement of the external auditors in order to enhance the independence and transparency of the industry. In line with these issues, the present study seeks to examine whether there are sufficient standards for *shariah* auditing practices for IFIs in Malaysia. Besides that, this study also investigates whether the practitioners of *shariah* auditing practices in IFIs in Malaysia
qualified in both shariah and auditing/accounting related subjects. Finally, this study seeks to observe the issue of independence between the practitioners of shariah auditing practices in IFIs and the organizations they attached. This research offers several practical and theoretical imperative for regulators, IFIs and the public as a whole. The audit function in an Islamic state is important and mandatory as it reflects the accountability of the auditor not only to the users of the financial statements, but more important, to the Creator, Allah S.W.T. Muslims are believe that one’s actions and thoughts are always being watched and it is to be noted that one has the obligation to “account” to God on all matters pertaining to human endeavour for which every Muslim is “accountable”. The prohibition of interest (riba) in Islam and the aspiration of Muslims to make this prohibition a practical reality in their economies, has led to the establishment of a number of Islamic financial institutions around the world. Religious or shariah audit evolved in parallel to the development of Islamic institutions in the Muslim world. Over the past two decades, the development of Islamic banks has increased immensely and a large number of Islamic banks have been established around the world. As part of the Islamic business institutions, the Islamic banks are obliged to perform shariah compliance activities in their operations. Starting from the Islamic banking system, the shariah compliance activities later on were applied to other financial sectors such as insurance and capital market. With the drastic development of the Islamic financial system operating in the Islamic and non-Islamic countries, automatically the Islamic accounting and auditing will be important issues under discussion. In addition to the practical imperative, Muslim scholars and intellectuals are working towards incorporating modern knowledge to give it an Islamic mode which they term as Islamization of knowledge. This is seen as a first step to integrate and develop the Muslim personality and outlook, which had become schizophrenic due to the dichotomization of knowledge between secular and religious, as a result of the modern education received by Muslims, quoted by Shahul.

**IMPLICATIONS AND CONCLUSION**

Generally, there are still few unresolved issues in shariah audit in terms of standard for shariah auditing practices, shariah auditor’s qualification and their independence. If these remain unresolved, specifically in terms of lacking in a properly guided and comprehensive framework of shariah auditing and shortage of expertise, the smooth development of the Islamic banking and finance industry will be distorted. They should be resolved immediately as this may have an impact on the confidence of the stakeholders on the validity of the shariah compliance of the Islamic financial institution’s products and service on its operations and activities. This study also argues that shariah audit, as a social function, is a very important assurance tool to achieve the maqasid as shari’ah (objectives of the Islamic law).
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ASSESSMENT OF ACCOUNTING PROCEDURES IN THE OIL AND GAS SECTOR OF NIGERIAN ECONOMY

BY
Role Abdullahi

Abstract
The paper examined a critical assessment of accounting procedures in the oil and gas sector of Nigerian economy taking NNPC and some selected oil companies in Abuja metropolis of Nigeria. The paper also determined the effectiveness and efficiency of the accounting system of this industry which is assumed will reduce the incidence of tax avoidance by oil companies. The researcher employed ex-post facto design since the data collected were already available without any manipulation to test three hypotheses. Chi-square analysis was used to analyze the data collected for the study. Findings revealed that there is a significant relationship between the effectiveness of accounting procedure in enhancing performance, accuracy and reliability of accounting records in the industry. Also, the effectiveness of the accounting system will not reduce the incidence of tax avoidance by oil companies. It was also found that making the accounting procedures of this industry a major part of training curriculum will increase the standard and performance of accountants in the industry. Recommendation was therefore made that the NASB in conjunction with stakeholders in the oil and gas sector of the economy and accounting professional bodies should come together and come up with a uniform standard of accounting for this sector of the economy.

Keywords: assessment, accounting procedures, oil & Gas and Nigeria Economy

Introduction
There is no aspect of life that accounting cannot be applied, and oil and gas is not an exception. Apart from the petroleum product in itself, there are numerous by-products such as gasoline, diesel, kerosene, jet fuel, lubricants asphalt, bitumen, petrochemicals such as pesticide and others, which necessitate serious development of accounting techniques to cater for it accountability.

The Nigeria economy, up to the 21st century has remained and oil economy, as it forms well over 60% of our Gross Domestic Product (GDP). Until recently, when the Nigeria government, under sectors of the economy, such as agriculture (which had been the mainstay of the economy before the discovery of oil and gas), solid mineral and industries. It is the economy under which other economic activities revolve. The Nigeria economy, one could conclude without missing words, that it is an oil-push economy, at present (Labaran, 2011).
The Nigeria Oil and Gas industry has been described as the most dynamic sector of the Nigeria economy and the development of oil resources as the most significant sector of the economic in recent years. Similar remarks which dominate the press and literature have created certain euphoria of optimistic expectations around the oil and gas industry. It is most appropriate, thereof that a thorough assessment be made of the accounting procedures in this sector of the economy (Aderiye, 1991).

Petroleum is a compound word which in Latin language is called Petra (meaning ROCK) and Oleum (meaning Oil), by this, one will not be wrong if petroleum is referred to as Rock Oil. Petroleum could also be formed from debris of forest fossil and it is also not wrong to call this Oil formation as offshore oil, while the rock oil can be called on-shore oil. The petroleum is as old as man itself over 5000 years of discovery. The early use of petroleum and gas was in China. The first commercial drillings were undertaken by a retired soldiers Col. Edwin L. Dake and later Captian Anthony Lucas in Titusuvile and Texas in USA respectively.

The Oil and gas operation has two major activities, which encompasses the umbrella of major activities from searching of the oil final consuming. These are:
1. Upstream activities and
2. Downstream activities

Upstream activities involved the acquisition of mineral interest in properties, exploration (including prospecting), developing and production of crude oil and gas. The activities are:

a. **Exploration and Appraisal:** Exploration is the initial activities with a view to discovering oil place.

b. **Acquisition:** This is the entire process of obtaining the drilling right, which is made up of
   i. Drilling rights
   ii. Other activities imperative to oil and gas production

c. **Development:** This is the preparation of ground for the oil and gas production after discovery. It entails
   i. Drilling well and installing facilities necessary to obtain access to proven reserves and to efficiently and economically deplete the field. While explorations discover oil-in-place, development converts oil-in-place to recoverable reserves.

d. **Production:** This is the removal of oil from ground. This continues until it is uneconomical to continue production, then it will be abandoned.

A downstream activity involves transporting, refining and distribution and marketing of oil, gas and derivatives. The activities are:
(a) Transportation: This is the movement of oil and gas from production site to:
   i. Refinery
   ii. Point of Sale
   iii. From refinery to distribution point it is the link between upstream and downstream activities.

(b) Refining (Manufacturing): This is the treatment of crude oil in order to form finished products.

(c) Distribution and Marketing: This entails getting the refined petroleum product to the final users.

The cost incurred by the oil companies usually are classified as: minerals rights acquisition costs, exploration and drilling cost, development costs, production costs, support equipment and facilities costs and general costs.

The discovery of crude oil in commercial quantity is not always the result of all drilling and explorations. Therefore, the amortization of these costs will depend on the accounting system adopted by the company involved, two methods of accounting system prescribed by SAS 14 are:
   i. Full Cost Method
   ii. Successful Effort Method

Under the full cost method, costs incurred on mineral rights acquisition, exploration, appraisal and development activities should be capitalized. While, cost incurred on mineral rights acquisition, exploration, appraisal and development activities under the successful effort method should be capitalized on the basis of wells field or exploration cost centers, pending determination. Cost incurred prior to acquisition of mineral rights and other exploration activities not specifically directed to an identifiable structure should be expanded in the period they are incurred (Aderiye, 1991).

Using successful effort method, costs incurred prior to acquisition of mineral rights and other exploration activities not specifically directed to an identifiable structure should be written-off in the period they are incurred. All costs incurred on mineral rights acquisition, exploration, appraisal and development activities should be capitalized initially on the basis of wells field or exploration cost centers pending determination such costs should be written off when it is determined that the well is dry mineral right acquisition costs that have not been allocated should be amortized over the remaining life of the license, amortization of exploration and drilling costs, incurred costs, incurred on each well, field or property should be on a unit of production basis, using proven developed reserves, the use of ceiling test is not mandatory under this method.

According to Adekunle and Ola (2002), “both FC and SE are methods of accounting principles” the fundamental difference between FC and SE is the size of the cost center used in taking capital or expenses decision for exploration costs. Under FC all cost of finding oil and gas reserves would be capitalized regardless of whether a specific local effort is successful. While in SE, the smallest possible cost center is
the property, reservoir or field, all costs on any of this will be expended. Here, only the exploration cost that results in producing well are capitalized and those that resulted in dry holes extended immediately. A company may use either the full cost method or the successful efforts method. The method used should be consistently applied and disclosed. Companies in the downstream sector of the industry are also expected to state in their financial statement all significant accounting policies adopted in the preparation of those statements, these policies should be prominently disclosed under one caption rather than as note to individual items in the financial statements.

The Oil Industry is sensitive and complicated industry; enormous sums of money are incurred in exploration for which no revenue may be generated for quite a while. Multi-national companies are engaged in Oil production with the Federal Government participating under Joint Venture arrangement; all these had over years made accountancy witness a gathering momentum in the imposition of requirements and regulations concerning presentation, disclosure and measurement of accounting information. Ayo, (1990) in his introductory speech to Mark ICAN’s 25th Anniversary Lamented that “Oil companies solve their accounting problems in different ways which makes comparison and understanding considerably difficult. Therefore a statement of recommended accounting practice for the Oil industry should be developed.

The purpose of this section is to give a general and precise rules and regulations which currently govern the accounting profession and its practitioners. The work produces a result that will be in the interest of the users of accounting information and the firms in the oil and gas sector of the economy.

Objectives
The purpose of this is to determine if:

(i) To find out whether effective accounting procedures enhance performance, accuracy and reliability of accounting record in the industry.

(ii) To find out whether the effectiveness and efficiency of the accounting system of this industry will reduce the incidence of tax avoidance by oil companies.

(iii) To find out whether making the accounting procedures of this industry a major part of training institution’s curriculum will increase the standard and performance of accountants in the industry.

Research Questions
1. How does an effective accounting procedure enhance performance, accuracy and reliability of accounting record in this industry?

2. How does effectiveness and efficiency of the accounting system of this industry will reduce the incidence of tax avoidance by oil companies?
3. Is there any significant contribution in making the accounting procedures of this industry a major part of training institution’s curriculum to increase the standard and performance of accountants in the industry?

Hypotheses
2. The effectiveness and efficiency of the accounting system of this industry will not reduce the incidence of tax avoidance by oil companies.
3. Making the accounting procedures of the industry a major part of training curriculum will not increase the standard and performance of accountants in the industry.

Methodology
In writing this paper, the researcher used ex-post facto design and the data were results of the members of staff of NNPC and some selected oil Companies in Abuja metropolis. The respondents were basically managers and middle level accounting officers in the selected companies based on simple random sampling technique. The research used both primary and secondary instruments for the data collected because the topic involved the study population that spread over the companied in the oil and gas sector whatever information gathered from all the samples randomly selected is believed to be the same in all the companies in the sector. The null hypotheses were tested using Chi-square method to analysis and interpret the data collected, being a method that tests the frequency of a differed object to the expected theoretical assumptions. It is also used to draw inferences about the various distribution determined by the degree of freedom.

\[ X^2 = \sum \frac{(f_o - f_e)^2}{f_e} \]

Where \( f_o \) = observed frequency
\( f_e \) = Expected frequency
\( \sum \) = Summation

Results and Analysis of Data
Before data can be analyzed the researcher calculated the expected values.

The expected values are calculated in the following order:
C11, C12, - - - C14
C21, C22, - - - C24
C31, C32 , - - - C34
Where C11 = Expected valve of row, column 1 and so on.
Hypothesis 1

\[ C_{11} = 20 \times 48 = 9.6 \]
\[
\frac{9.6}{100} = 9.6
\]
\[ C_{12} = 20 \times 44 = 8.8 \]
\[
\frac{8.8}{100} = 8.8
\]
\[ C_{13} = 2 \times 8 = 1.6 \]
\[
\frac{1.6}{100} = 1.6
\]
\[ C_{14} = 20 \times 0 = 0 \]
\[
\frac{0}{100} = 0
\]

Hypothesis 2

\[ C_{11} = 20 \times 48 = 9.6 \]
\[
\frac{9.6}{100} = 9.6
\]
\[ C_{12} = 20 \times 36 = 7.2 \]
\[
\frac{7.2}{100} = 7.2
\]
\[ C_{13} = 20 \times 16 = 3.2 \]
\[
\frac{3.2}{100} = 3.2
\]
\[ C_{21} = 20 \times 48 = 9.6 \]
\[
\frac{9.6}{100} = 9.6
\]
\[ C_{22} = 20 \times 36 = 7.2 \]
\[
\frac{7.2}{100} = 7.2
\]
\[ C_{23} = 20 \times 16 = 3.2 \]
\[
\frac{3.2}{100} = 3.2
\]
\[ C_{24} = 20 \times 0 = 0 \]
\[
\frac{0}{100} = 0
\]

Hypothesis 3

\[ C_{11} = 20 \times 52 = 10.4 \]
\[
\frac{10.4}{100} = 10.4
\]
\[ C_{12} = 20 \times 40 = 8 \]
\[
\frac{8}{100} = 8
\]
\[ C_{13} = 20 \times 8 = 1.6 \]
\[
\frac{1.6}{100} = 1.6
\]
\[ C_{14} = 20 \times 0 = 0 \]
\[
\frac{0}{100} = 0
\]
\[ C_{21} = 20 \times 52 = 10.4 \]
\[
\frac{10.4}{100} = 10.4
\]
\[ C_{22} = 20 \times 40 = 8 \]
100
C23 = 20 \times 8 = 1.6
100
C24 = 20 \times 0 = 0
100
All expected values calculated are shown as a subscript to the observed value in the table below.

**Hypothesis 1**

Table 1: Effective accounting procedures do not enhance performance accuracy and reliability of accounting records in the industry

<table>
<thead>
<tr>
<th>QUESTIONS</th>
<th>HIGHLY RELIABLE</th>
<th>RELIABLE</th>
<th>JUST RELIABLE</th>
<th>NOT RELIABLE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8(9.6)</td>
<td>12(8.8)</td>
<td>0(1.6)</td>
<td>0(0)</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>8(9.6)</td>
<td>12(8.8)</td>
<td>0(1.6)</td>
<td>0(0)</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>8(9.6)</td>
<td>8(8.8)</td>
<td>4(1.6)</td>
<td>0(0)</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>12(9.6)</td>
<td>4(8.8)</td>
<td>4(1.6)</td>
<td>0(0)</td>
<td>20</td>
</tr>
<tr>
<td>5</td>
<td>12(9.6)</td>
<td>8(8.8)</td>
<td>0(1.6)</td>
<td>0(0)</td>
<td>20</td>
</tr>
<tr>
<td>TOTAL</td>
<td>48</td>
<td>44</td>
<td>8</td>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Researcher survey, 2014

**Hypothesis 2**

Table 2: The effective and efficiency of the accounting system of this industry will not reduce the incidence of tax avoidance by oil companies.

<table>
<thead>
<tr>
<th>QUESTIONS</th>
<th>YES</th>
<th>NO</th>
<th>I DON'T KNOW</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>16(9.6)</td>
<td>0(7.2)</td>
<td>4(3.2)</td>
<td>20</td>
</tr>
<tr>
<td>7</td>
<td>0(9.6)</td>
<td>16(7.2)</td>
<td>4(3.2)</td>
<td>20</td>
</tr>
<tr>
<td>8</td>
<td>16(9.6)</td>
<td>0(7.2)</td>
<td>4(3.2)</td>
<td>20</td>
</tr>
<tr>
<td>9</td>
<td>4(9.6)</td>
<td>12(7.2)</td>
<td>4(3.2)</td>
<td>20</td>
</tr>
<tr>
<td>10</td>
<td>12(9.6)</td>
<td>8(7.2)</td>
<td>-3(3.2)</td>
<td>20</td>
</tr>
<tr>
<td>TOTAL</td>
<td>48</td>
<td>44</td>
<td>8</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Researcher survey, 2014

**Hypothesis 3**

Table 3: Making the accounting procedures of this industry a major part of training curriculum will not increase the standard and performance of accountants in the industry.
To calculate $X^2$ Cal., we apply the formula.

$$X^2 = \sum (of - fe)^2 / fe$$

Where:-

fo = Observed Frequency
Fe = Expected Frequency and
$\sum$ = Summation.

**Hypothesis I**

$$X^2 \text{ Cal} = (8 - 9.6)^2 + (12 - 8.8)^2 + (0 - 1.6)^2 + (0 - 0)^2 + (8 - 9.6)^2$$

$$9.6 \quad 8.8 \quad 1.6 \quad 0 \quad 9.6$$

$$+ (12 - 8.8)^2 + (0 - 1.6)^2 + (0 - 0)^2 + (8 - 9.6)^2 + (8 - 8.8)^2$$

$$8.8 \quad 1.6 \quad 0 \quad 9.6 \quad 8.8$$

$$+ (0 - 0)^2 + (12 - 9.6)^2 + (8 - 8.8)^2 + (0 - 1.6)^2 + (0 - 0)^2$$

$$0 \quad 9.6 \quad 8.8 \quad 1.6 \quad 0$$

$$X^2 \text{ Cal} = 0.27 + 1.16 + 1.6 + 0 + 0.27 + 1.16 + 1.6 + 0 - 0.27 + 0.07 + 3.6 + 0 + 0.6 + 2.62 + 3.6 + 0 + 0.6$$

$$+ 0.07 + 1.6 + 0$$

$$X^2 \text{ Cal} = 19.09$$

To get $X^2$ tab., we compute the degree of freedom:

Degree of freedom (d.f) = (R - 1) (C - 1)

Where:-

R = Number of Rows
C = Number of Columns

$$(5 - 1) (4 - 1) = 4 \times 3 = 12$$

The significant level = 0.05

Since it is a two tailed test, the significant level will be divided into two.

0.052 = 0.025

$X^2$ tab = 23.34
Decision Rule:
If $X^2_{cal} < X^2_{tab}$, accept Ho and if $X^2_{cal} > X^2_{tab}$ reject Ho.

**Interpretation of Data**

According to chi-square decision rule if the $X^2_{cal}$ is less than the critical $X^2$, that is the $X^2_{tab}$. The null hypothesis is accepted, otherwise it is rejected. Going by this rule result of the data analyzed will be interpreted as follows:

**Hypothesis 1**

Effective accounting procedures do not enhance performance, accuracy and reliability of accounting records in this industry.

Since the $X^2_{cal} (19.09)$ is less than the $X^2_{tab} (23.34)$ and the decision rules states that if the $X^2_{cal}$ calculated is less that $X^2_{tab}$, we accept Ho and reject Hi.

Therefore, we concluded that “there is a significant relationship between the effectiveness of accounting procedure in enhancing performance, accuracy and reliability of accounting records in this industry”,

**Hypothesis 2**

The effectiveness and efficiency of the accounting system of this industry will not reduce the incidence of tax avoidance by oil companies.

Here, the $X^2_{cal} = (54.46)$ while the $X^2_{tab} = (17.54)$. Since the $X^2_{cal}$ calculated is greater than $X^2_{tab}$, we therefore concluded that “the effectiveness and efficiency of the accounting system of this industry will not reduce the incidence of tax avoidance by Oil companies

**Hypothesis 3**

Making the accounting procedures of the industry a major part of training curriculum will not increase the standard and performance of accountants in the industry.

In this case, the $X^2_{cal}$ Calculated is less than the $X^2_{tab}$, the null hypothesis will be accepted and the alternative hypothesis rejected. Therefore, it will be concluded that “Making the accounting procedures of the industry a major part of training curriculum will increase the standard and performance of accountants in the industry”.

**Conclusion**

This research work has practically highlighted the various accounting procedures as related to the oil and gas sector of the economy. This research was able to identify the role of effective accounting procedure as a means of enhancing performances, accuracy and reliability of accounting records in the sector, it also display the relationship between effective and efficient accounting procedures and tax avoidance, which was concluded as not to be having any relationship. The important of the introduction of oil and gas accounting systems into the training curriculum of training institution was also emphasized.
The research cannot however claim to have fully exhausted all the problems associated with the accounting procedures of oil and gas sector of the economy, but it can also be said that justice has been done to the prevailing problems, which are relevant to the areas focused. It is therefore stated that this research work will be of assistance to accounts, companies in the oil and gas sector of the economy, accounting training institutions and other researchers who may want to carry out further research on this topic. The ticking of the Nigerian economy today depends largely on the success of the oil industry, and the complexity and lack of uniformity in preparation of accounts currently exists in the industry, these makes comparison difficult and a call for urgent attention need to be made to find a lasting solution to these problems.

It will also be of immense benefit to the relevant tax authority, as some of the attention will be focused on what the adoption of a uniform and efficient accounting procedures will do in the reduction of incidence of tax avoidance. Training institutions, students and the research department of oil companies can also benefit from this study as attention is given to the effect of training in getting an effective accounting system.

**Recommendation**

Based on the above findings, the following recommendations were made:

1. The NASB in conjunction with stakeholders in the oil and gas sector of the economy and accounting professional bodies should come together and come up with a uniform standard of accounting for this sector of the economy.
2. The NASB and other professional bodies should also organize seminars and symposia of finance and accounting in the oil and gas sector of the economy and ensure that all methods of calculation are fair.
3. Accountants in the oil and gas sector also aspire to know more about the technical detail of the refinery and petroleum chemical operations.
4. Companies in the industry can also embark on the training and development of their manpower, since this is the greatest asset.
5. ICAN and other training institutions should design and introduce oil and gas accounting as a major part of their training curriculum of ensure the availability of qualified accountants in this sector of the economy.
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A COMPARATIVE ANALYSIS OF CASH AND ACCRUAL BASIS OF GOVERNMENT ACCOUNTING

BY
Oke Olubode Oladayo

Abstract
The need for accountability and better financial reporting on the part of the government is on the increase. This study examines the reporting requirements under cash and accrual basis of accounting. The study uses literature-content analysis and reaches the conclusion that the accrual basis of reporting is best suited for Nigeria. It is recommended that the government hasten the conversion to the accrual basis of accounting because it is more accountable and objective in financial reporting.

Introduction
Public sector Accounting has received a wide attention from scholars that the field scans to be neglected. However, there is general awareness all over the world of the need to pay greater attention to the development of government accounting and financial control.

In the modern era, the responsibility of government has gone amidst maintenance of law and order. The enormous activities of government, which include management of public funds, equally call for enlarge government accounting in order to accommodate the immense task. Government financial accounting has traditionally consisted of providing an out-turn reports comparing the actual payments and receipts with those which were authorised in the budget (cash basis). This approach still forms the basis for the practice of almost all governments across the world including Nigeria. It is a simple and robust approach which provides assurance, through the audit of such accounts, that government spending has been in line with the agreed budget and that fraud and other irregularities have been minimized. As a result of increase in size of government activities and finance, the traditional cash procedures of accounting can hardly meet the demands of reasonable accounting for modern government in providing necessary services or information.

In contrast, the accrual based accounting is part of the process of adopting private-sector-style financial statements for the public sector. This includes the production of the equivalent of a profit and loss account, a balance sheet and a cash flow statement. In the process, all major capital assets are valued and the costs of these assets are charged to the expenditure account over their useful lives through the application of some form of depreciation. Of resent, many countries have been moving away from the traditional public sector accounting system due to the need for better accountability on the part of the government, however, Nigeria still practices the cash basis of accounting. This study compares the cash basis and the accrual basis of government accounting.
Concept of Public Sector Accounting

According to Omenika (2008) the basis of accounting is a set of rules and principles that determine the recognition of expenses and revenues in exchange transactions. It could be cash basis or accrual basis. While cash basis recognizes transactions and events only when cash is received or paid, accrual basis recognizes all transactions and events irrespective of whether cash is received/paid or not.

According to Onyeke and Nebo (2005) the prime advantage of the cash basis accounting is that it can capture not only the flow of revenue, expenditures, but also the flows of capital expenditures for infrastructure construction and transfer expenditures such as social security allowances. Such system has been able to provide more useful information for public policy decision-making.

The cash basis of accounting, however, is not without disadvantages. Cash, a key measurement in the cash basis accounting, represents just one item of assets and liabilities. Lacking information on others, such as stock, fixed assets and long-term debts. It also does not provide hints as to the potential impact and burdens that the ongoing fiscal management might bring in the future.

Many of the advocates of accrual basis of government accounting are of the view that it leads to accountability on the part of the government. Some of its other advantages are:

i. It shows how a government has financed its activities and met its cash requirements

ii. It allows users to evaluate a government’s ongoing ability to finance its activities and to meet its liabilities and commitments

iii. It shows the financial position of a government and changes in its financial position

iv. It provides a government with the opportunity to demonstrate successful management of its resources and

v. It is useful in evaluating a government’s performance in terms of its service costs, efficiency and accomplishments.

However, there is a pitfall in introducing an accrual system. A corporate accounting uses “profits” on an income statement (revenue minus expenses) as a flow-based information measuring a company’s performance during one accounting term. But the government and other public-sector entities, by their nature, do not aim to pursue “profits.” And government activities provide goods and services in accordance with budget allocation and without getting paid by the recipients of the goods and services. For instance, capital expenditures such as those on infrastructure construction and transfer expenditures such as social security allowances are not “profit and loss transactions” in accounting terms. Instead, they are treated either as “capital transactions” which directly reduce capital or “exchange transactions.”

Meanwhile, most government activities fall into these categories.

Therefore, in public sector accounting, simply introducing accrual basis accounting and figuring out profits based on profit and loss transactions do not serve as a meaningful measurement to assess the performance
of government activities. Rather, as flow-based information to show performance in one accounting term, it is necessary to focus not only on profit and loss transactions but also on capital transactions (including exchange transactions related to capital formation) that covers capital and transfer expenditures, or changes in assets and liabilities, thereby linking the flow-based information and stock-based information on a balance sheet to clarify the government’s accountability for its fiscal management.

To provide a proper perspective of the two basis of accounting, a comparative analysis based on existing literature is made as follows;

**Recognition of Total Liabilities**

Liabilities are obligations owed. The basis of government accounting should provide relevant and accurate information about governments’ liabilities. Under the cash basis of accounting, no liabilities are recognized. Accordingly, neither liabilities due in the current period (short-term liabilities) nor liabilities which are owed beyond the current period (long-term liabilities) are recorded in the operating accounts of that period. As a result of not recognizing the long-term liabilities such as pensions and claims, their costs as well are not recognized and reported because the governments do not make plans to meet these liabilities when they fall due. Consequently, the deficit in one period may increase more than the other periods (Langendijik, 1990). For example, Zik (1997) reported that in the late 1980s, Canada’s federal and provincial governments had accumulated more than $30 billion unrecorded employee pension liabilities. In some provinces, the size of unrecorded liability equaled or exceeded their accumulated deficits. But the accrual basis shows hidden liabilities and forces the government entities to suddenly show huge deficits in governmental funds. More so, receivables and payables of the government are made known at the end of the fiscal year only with the adoption of the accrual accounting system.

**Revenue Recognition**

Under the cash basis of accounting the revenues will only be recognized in the financial statements in the period in which cash is received. However, the cash receipts do not make a distinction between current receipts and capital receipts. So an excess of receipts over payments cannot be called income because receipts might encompass capital receipts. This will result in that the revenues, which are earned in a given fiscal year, are not known. As such, it is difficult to evaluate the efficiency of revenue collection staff and to discover the losses during the collection process (Okoye & Oghoghomeh, 2011). In addition, under cash basis, receipts and revenues are identical since no difference exists between the time when they are recognized and when they are collected. But under accrual basis, the recognition of revenues is required at the time when they are earned, and the receipts occur when revenues are collected. This manner of revenue recognition presents a better financial information (Saleh, 2007).
Recognition of Total Cost of Goods and Services Provided

The use of cash-based accounting system would result in reporting of only those costs, which involved a cash flow during the period. However, the cash disbursements do not reflect what the organization cost to run during the year, because these disbursements may also include cash flows resulting from, for example, the acquisition of assets or the repayments of debt related to the previous years. This means that cash-based accounting system makes no difference between expenditures and disbursements, and generally no distinction between current and capital expenditure. Capital purchases are treated in the same manner as personnel expenses with no recognition that they are productive for years. As a result, there is little incentive to use current capital assets efficiently. Accordingly, under the cash basis of accounting, it is difficult to know how much resources have been consumed in carrying out the operations during the accounting period (operating costs). Also, as a result of not capitalizing the fixed assets and not recognizing the long-term debts, the depreciation and interest costs do not account for. This, in turn, means that the cost of producing the services in the government entities, and the total cost of the programs and activities, which take place in the given period, are also not known. Consequently, it is difficult to generate the right information about the total cost of services and goods produced during the year and such costs are important for performance evaluation, control, public contracts policy, and to measure the efficiency and effectiveness of the governmental entities (Saleh, 2007). However, the accrual accounting recognizes total costs of goods and services appropriately.

Disclosure of Stock Value

Cash-based accounting system does not present information regarding the value of stocks that are consumed during the fiscal year or the closing stocks. This is because the accounts are not concerned with recording the usage; they are rather concerned with the cash outflow, which has been paid for purchases. Consequently, there are no stock adjustments, stock valuation and stock measurement. This would result in that the real value of the stock is not known and this is turn gives rise to the appearance of several problems such as carrying cost problem; freezing the public money, opportunity costs of public capital. Furthermore. These stocks can be lost by a deliberate manipulation during the addition and deduction operations. On the other hand, accrual accounting takes such adjustments into consideration. This exercise will consume time, money, and effort, thereby increasing operational costs. The output of the accounting system with respect to the stocks is considered as one of the main and important information sources that the management relies on in the decision making process. So the absence of useful accounting information regarding stocks would result in finding it difficult to take the right decision (Zakiah, 2007).

Recognition of Total Assets

Assets are the economic benefits of an entity which have to be reported in financial statements. The elements, which are included in the financial statements under the cash-based accounting system, are cash receipts, cash disbursements and cash balances. Accordingly, there is no information provided on the total assets (financial and physical). For example, there is no information provided about the investment in
materials, supplies, equipment’s and other assets, which are available for future use in discharging government activities and programmes. Accrual accounting provides accounts to take care of all assets, including those that are still in use, those that have reached the end of their useful life and those that have been sold. Nevertheless, this information can be used in estimating how much is to be requested for the acquisition of assets in each year’s budget (Apollos, 2001).

**Manipulation of Accounting Records**

The balances of appropriations (the estimated expenditures) available for expenditure may not be accurately stated when determine only on the basis of cash payments. Part of the balances so determined are needed to pay for credit, goods and services received or ordered which makes accrual accounting basis more reliable. There is a strong potential for over-spending appropriated amounts when the cash basis is used (Hongs, 2004). More so, under the cash basis, most of the liabilities are hidden and this gives government officials and politicians the opportunity to manipulate the deficit amount. Similarly, with accrual basis of accounting, there is need to exercise judgment in determining the amount of cash flow for the period and thus, involves a subjective adjustment of financial statements which is prone to manipulation (Ozugbo, 2009).

**Accountability and Transparency**

As mentioned earlier, information on period revenues and expenses, long-term assets and liabilities, receivables and payables, value of stocks, total cost of series provided are essential for efficient financial reporting. For example, information on assets and liabilities is a measure for net worth. Since the net worth is the difference between total assets and total liabilities, the changes in the total assets and the total liabilities will affect the net worth. So if the government increased the liabilities either by borrowing to fund the deficit or obligation to make payments in the future, such as pension; or increased the assets which would provide economic benefits to the reporting entity, these actions would affect the net worth. Similarly, information on the total cost of services and goods enables the government to compare the total cost of services and goods produced in the previous years. Ozugbo (2009) asserts that accountability and transparency in the use of taxpayers’ money are assured in accrual, basis of accounting and it is difficult to be achieved in the cash accounting system.

**Financial Control Function**

Cash accounting is not a complete accounting system and its internal control is very weak. Inherent to this system is the lack of control in the usage of inventories during the year. On the other hand, the cash basis assists in fulfilling the budgetary control function. The budgetary controls concerned with ensuring that actual expenditures are in line with budgeted amounts and the objectives and levels of activity envisaged in the budget are achieved. Therefore it is required in the governmental entities, in order to achieve the control purposes, to prepare the budget (a budget is financial plan describing the estimated expenditures and the means of financing them) as a control means of the activity of the government entity besides the
financial regulations – restrictions. In a nutshell, while cash accounting system is prepared for budgetary control, the accounting system is suitable for internal control (Eagleton, 2009; Veneeva, 2003).

Comparability of Financial Reporting
As it is clear from the nature of cash-based accounting system that it is interested in cash flows and recognizes the events and transactions only on cash basis. Therefore, it always happens that one year can be charged by costs made in other years. Accordingly, the use of cash basis results in over-lapping of activities of different financial years, thereby hindering effective performance measurement (Zik, 1997). For example, if the government entity purchased some stationeries worth N50, 000 in 2010 and used them in the same year, but makes payments in 2011, the accounts in 2010 will not show the accrued costs of the stationeries and the accounts in 2011 will show only the payments which are included in the total expenditures of that year although the year has not benefited from the stationeries. Consequently, the adoption of an accrual accounting system by governmental entities often makes the comparison between the results of different financial years more useful and important (Zik, 1997). Ozugbo (2009) added that for international comparability of financial reporting of government entities, accrual accounting is the pathway to success.

Stewardship Function
The stewardship function of financial reporting demands that information that can assist in assessing whether resources were used in accordance with the legally adopted budgets must be furnished. Zaklah (2007), and De Volkzkrant (1994) state that the cash accounting system is more appropriate in meeting the stewardship function of public fanatical reporting because it is budget compliant.

Book-keeping and Accounts: Every financial reporting system requires that necessary books of account be kept and maintained to provide information on financial performance. Under the cash accounting system, account books are very simple to keep and maintain and easier to understand compared to the accrual basis of accounting. (Ozugbo, 2009). This is because cash accounting provides only necessary and essential information on receipts and disbursements made during the fiscal year.

Quick Decision Making: The ultimate goal of accounting information is for decision making. When decisions are not made at the right time, perhaps due to delay in providing the necessary information, a wrong decision could be made in the long-run and this adversely affects the overall performance of the entity (Adebayo, 2004) asserts that cash accounting provides useful information that permit analysis of the monetary impact of fiscal transactions, review and assessment of cash position thereby facilitating decision making.

Methodology
This study uses survey uses a content analysis design. Literature was surveyed both on a cash basis and accrual basis of government accounting to arrive at a conclusion. The use of this method is based on the
fact that the Nigerian government has to implement the accrual basis, therefore data do not exist on the accrual basis to warrant a comparison of cash and accrual basis of accounting. Also, another alternative is to use primary data through a survey of opinion, however, there is likeliness of a spurious result as those to address the such questions lack the practical knowledge of the issue.

**Discussion**

Under the cash basis of accounting, it is difficult to evaluate the efficiency of revenue collection staff and discover the losses during the collection process because the total revenues, which are earned in a given fiscal year are not known. The Cash basis of accounting is not comprehensive enough to give a true and fair view of government activities. Accountability and transparency is difficult to achieve with the cash accounting system because there is a lack of information on period revenues and expenses, long-term assets and liabilities, receivables and payables, value of stock and total cost of goods and services provided.

With the cash accounting system, it is difficult to generate the right information about the total cost of services and goods produced during the year and such costs are important for performance evaluation, control, public contract policy, and efficiency and effectiveness measurement of governmental entities.

There is strong potential for over-spending appropriated amounts when the cash basis is used. The use of cash basis results in over-lapping of activities of different financial years thereby hindering effective performance measurement. This is due to the fact that the cash basis of government accounting does not recognise liability and consequently the deficit in one fiscal period may increase more than other fiscal periods.

On the accrual basis of accounting, there is accountability and transparency in the use of taxpayers’ money since the system provides a more comprehensive information. The system makes a distinction between current receipts and capital receipts because revenues were recognized at the time when they are earned, and the receipts occur when revenues are collected and this presents a better financial information. Also, information on assets and liabilities are readily available, comparability of financial information becomes effective, costs are adequately matched with revenues, and compliance reporting becomes possible and effective. Again, information generated from accrual accounting can be used in estimating how much is to be required for acquisition of assets in each year as budget and this serves as an informed decision.

**Conclusion and Recommendation**

Public sector accounting system has been devoid of advancement in terms of the continuing existence of a rule-based accounting framework, but as the government mandate becomes increasingly growth-oriented, the realignment of the financial accounting system supporting the developmental role of the government has become imperative. Two bases of accounting – cash accounting system are currently in contentions achieving this purpose.
It is important to realize that whichever basis of accounting is adopted, either one only gives a partial picture of the financial status of the reporting entity. While the accrual basis shows the ebb and flow of income and debts more accurately, it may leave the reporting entity in the dark as to what cash reserves are available, which could result in serious cash flow problems. In trying to produce a cash flow statement, accrual accounting may involve subjective adjustments, which are prone to various forms of manipulations for personal gains.

Even though the Nigeria government currently practice the cash basis of accounting and has adopted the IPSAS for its reporting. It is recommended that the government hasten the conversion to the accrual basis of accounting because it is more accountable and objective in financial reporting.

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SOCIAL RESPONSIBILITY ACCOUNTING: ISSUES AND TRENDS

BY

Victor Chiedu Oba

Abstract
Over the last three decades organizations have been compelled to become accountable through statute law on areas of disclosure required, and recently on social and environmental endeavors. Stakeholders are becoming increasingly interested in the external perception and social activities of the firm, thus making social responsibility accounting a front burner discourse. This paper examines the concept of social responsibility accounting; themes, measures, standards and theoretical underpinnings surrounding the concept. The paper contributes to existing literature by conducting an exploratory review of what the subject entails as well as assessing the findings from previously conducted empirical studies.

Keywords: - Social responsibility accounting, stakeholders, cost benefit analysis, Nigeria.

INTRODUCTION
Corporate social responsibility (CSR) is a burning issue globally. It is an issue of growing interest, and the disclosure of socially responsible activity is becoming more prevalent as stakeholders are beginning to demand greater transparency about all aspects of business. There is fundamentally an increasing need for organizations to disclose in their annual reports the various activities that affect the society. This suggests that accountants have an important contribution to make to the debate surrounding CSR. Accountants have the ability to structure a mechanism for holding entities accountable. Such mechanisms for accountability are obviously not limited to financial and cost accountability but extends to every facet of organizational endeavor. This brings to fore the concept of social responsibility accounting.

Social responsibility is part of the knowledge of accounting and reporting that aims to measure the social effects (social costs and benefits) arising from the business unit’s activities (McNamara, 1999). According to Ghosh (2008), it is a branch of accounting that measures, analyses and records the society and the enterprise itself both in qualitative and quantitative terms. It is concerned with such information to be disclosed in the annual report such as statement on human resource accounting and accounting for various social objectives.

Social responsibility accounting is indeed that part of accounting concerned with the measurement and reporting of information on the impact of an entity and its activities an society (Mamman, 2013).

Ramanathan (1976) defines social responsibility accounting as the process of selecting firm level social performance variables, measures and measurement procedures systematically and developing information
useful for evaluating performance and communicating such information not concerned social groups both within and outside the organization.

Social responsibility accounting (also known as social accounting and auditing, social and environmental accounting, corporate social reporting, corporate social responsibility reporting, non-financial reporting or accounting) basically emphasizes the notion of accountability. It is an approach to reporting a firm’s activities which stresses the need for the identification of socially relevant behavior, the determination of those to whom the company is accountable for its social performance and the development of appropriate measures and reporting techniques. It is often used as an umbrella term to describe a broad field of research and practice.

Social accounting challenges conventional accounting for giving a parochial image of the interaction between society and organizations and thus indirectly constraining the subject of accounting. Social accounting broadens the scope of accounting and thus concerns itself with more than only economic events. It argues that accounting should not be exclusively expressed in financial terms and must be accountable to a broader group of stakeholders. As such, it emphasizes on the fact that stakeholders are not only concerned with the reporting of financial success but that companies report on the extent to which they have influenced their external environment both positively and negatively. Users of social accounting information need this data since it allows them to assess whether the entity is being socially, financially and environmentally responsible.

Mamman (2004) registers that the scope of social responsibility accounting has extended beyond the issues of the environment to include business decisions on human resources, customers and the general public. These decisions according to Ebimobowei (2011) are anchored on accounting information. Essentially, accounting responds to the needs of the society, social responsibility and its reporting are one of such emerging needs of the society.

The objective of this paper is to examine certain conceptualizations in social responsibility accounting, its measures and disclosure practices. This is timely, more so in a period when underlying concepts and basics of social accounting seem quite abstruse to stakeholders.

**SOCIAL RESPONSIBILITY ACCOUNTING THEMES, MEASURES AND STANDARDS.**

The term social responsibility embraces a host of issues which revolve around companies’ interactions with society. They include ethics, governance, philanthropy, human rights, product safety and environmental activities. An assessment of social responsibility from the accounting profession perspective leaves us with social and environmental reporting or accounting. According to Drucker (1965), social accounting is a product of the early social responsibility movement but also appeared around the same time the environmental movement emerged (Gray and Guthrie, 2007). A recent analysis of the extent of social accounting reveals the variety of reporting mechanism, including assurance statements,
environmental, social and economic performance reports (also called triple bottom line reports or triple P (people, planet, profit) and reporting within annual reports.

CSR themes are indicators of CSR disclosures and are based on what is perceived to be important areas of CSR that are of major concern to stakeholders. Ahmed et al (2012) used a five theme framework comprising values and transparency, workplace, corporate governance, environment and community. Ahmad et al. (2003) utilized a six theme framework which includes environment, energy, human resources, products and customers, community involvement and ‘others’. Ebimobowei (2011) employed a six theme framework consisting of human resources, fair business practice, community development, energy, environment and products. Masud and Hossain (2012) used a quite different framework consisting of five themes, education, health, environment and disaster, culture and sport and miscellaneous. According to Ponnu and Okoth (2009), generally accepted instrument categorizes CSR into four major themes namely; environment, community involvement, human resource and products.

According to Zaidi (2012), social responsibility accounting can be measured through several approaches which include:

a. Cost benefit analysis  
b. Preparation of separate schedule  
c. Expanded value added approach  
d. Others.

a. Social cost benefit analysis is an approach that weighs up the environmental and social benefits and costs of a business.

It helps to comprehend community expectations about the potential social and environmental impacts of a project to enable business address these. Under this approach, a social balance sheet and social income statement is prepared. The asset portion of the balance sheet displays social investment of capital nature e.g. schools, roads, etc. The liability column parades organizations equity in the form of contribution by employees. The social income statement on the other hand, comprises social benefit and cost of community, general public and staff. Where social benefit exceeds social cost, it results to social income.

b. Separate schedule:- Here, schedules representing employees’ benefits and services, social overhead, etc are prepared and shown in the annual report.

c. Expanded Value Added Approach:- This technique builds on traditional accounting principles and accounts for social, environmental and economic factors. It provides a better picture of social value creation. Under this approach, income accruing to the enterprise after external payments is taken into account representing the value added to goods and services acquired by the enterprise. Rao (2001) registers that expanded value approach combines financial and social data to give a fuller picture to the social and economic impact of an organization. It envelops both monetary and non financial inputs and outputs.
d. Others:- Other approaches include pictorial presentation in annual reports of social activities or an array of social activities undertaken by the organization in the director’s report, chairman’s report or auditor’s report.

A number of reporting standards have been developed to serve as frameworks for social responsibility accounting, auditing and reporting. The Accountability’s AA 1000 framework based on John Elkington’s Triple bottom line (3BL) reporting was created in 1999. It is basically a set of standards that focus on performance indicators, targets and reporting systems.

The Global Reporting Initiative’s sustainability reporting guidelines (GRI) was created to provide clear cut global guidelines for the reporting of social and environmental information and to ensure consistent reporting (Tilt, 2009). The initiative provides a sustainability reporting framework to be used as a basis for disclosure about their sustainability performance. According to Adams and Frost (2007), the GRI is the most successful attempt to date at standardizing the reporting of social and environmental information globally. Reporting under the initiative is at different levels of application, levels A, B and C. Level A is the most comprehensive, reporting on every core indicator. At level B, Companies report on at least 20 indicators while level C companies report on only 10 indicators. At level C, companies must not produce a balanced report, neither must the reporting principal include ‘accuracy’.

Other reporting standards include ‘the Prince’s Accounting for Sustainability projects’ connected reporting framework’, the ISO 14000 environmental management standard, the Social Accountability international’s SA 8000 standard, the Good Corporation Standard developed in association with the Institute of Business Ethics and the United National Global Compact. The United National Global Compact requires companies to communicate on their progress or produce a communication on progress (COP), and to describe the company’s implementation of the compact’s ten universal principles. If a company does not publish formal reports, a COP can be created as a stand – alone document.

EMPIRICAL STUDIES
Yeshmin (2012) explored CSR information in private commercial banks. Annual reports of 30 banks for 2009 and 2010 were observed to examine CSR information using content analysis. Findings reveal that banks placed more emphasis on community development that registered 36.7% of total CSR issues. It was further documented in this study that most of the CSR information is qualitative in nature.

Akinpelu et al. (2013) examine the various types of social responsibility information that were disclosed by Nigerian commercial banks and the factors that determine the level of disclosure in their annual reports and accounts. Data analyzed revealed that commercial banks in Nigeria disclosed more information on environmental, product parity, and consumer relation. Results of the regression analysis demonstrates that value of total asset have positive relationship and is statistically significant with the level of corporate social responsibility activities disclosure.
Mamman (2013) assess social responsibility disclosure pattern in accounting reports by banks in Nigeria. Data was extracted from the annual reports of five banks and it was observed that banks account for social responsibility activities in their reports but do not employ a systematic pattern. The formalization of accounting guidelines for social responsibility disclosures was recommended in this study.

In a study of 20 Nigerian companies from 10 sectors for five year period ended December 2010, Owolabi (2011) using content analysis observed that 83% of the annual accounts and reports reviewed provided some form of CSR disclosure in their annual reports. More so, information disclosed were brief, mostly descriptive in nature. It neither provided environmental mitigating cost nor liability assessment; CSR disclosure was skewed in favor of employee related matters and monetary donations.

Branco and Rodrigues (2006) examined social responsibility in annual reports and on the internet in Portuguese banks. They found that on the internet, only one bank discloses information in the four categories considered and only one bank did not disclose social responsibility information. The comparison of the details disclosed on the internet with similar information disclosed in the annual reports indicated that environmental and human resources information are more present in annual reports than on the internet, where as the reverse succeeds with products and consumers and community involvement information. The difference is however insignificant in the latter case.

The literature on disclosure indicates that levels of disclosure leads to a reduction in information asymmetry between managers and investors (Botosan, 1997), and thus help to inverse stock liquidity and eventually lower the firm’s cost of capital (Healy and Palepu, 2001). In another recent study, Dhaliwal et al. (2009) found that firms with a high cost of equity capital tend to release CSR reports, and that reporting firms with relatively superior social responsibility performance enjoy a reduction in the cost of equity capital.

**THEORETICAL UNDERPINNINGS**

Most theories on social responsibility accounting are derived from the broad theory called political economy theory (Tilt, 2009). The theory is defined as the ‘social, political and’ economic framework within which human life takes place’ (Gray et al; 1996). Both the legitimacy theory and the stakeholder theory are theories developed out of political economics. According to Ebimobowei (2011), they are overlapping perspectives of in a political–economic framework. Guthrie and Parker (1990) in theoretical terms analyse their empirical evidence in relation to a socio – political economy theory of social disclosure and suggest that “a political economy theory of social disclosure is both viable and may contribute toward the understanding of observed developments in national reporting practices corporate social disclosure have appeared to reflect public social priorities, respond to government pressures, accommodate environmental pressures and sectional interests, and protect corporate prerogatives and projected corporate image”.


Legitimacy theory suggests that reporting is used as a communication mechanism to inform or manipulate the perceptions of the firm’s actions. Majority of studies have found evidence to support the notion that firms use accounting to defend or maintain legitimacy in the eyes of society and stakeholders (Dowling and Pfeffer, 1975, Lindblom, 1994).

The stakeholder theory extends legitimacy arguments to consider not only society as a whole but particular stakeholder groups (Deegan, 2002). In this regard, the two theories are said to be overlapping perspectives of reporting behavior. Competing demands from stakeholders has led researchers to consider ‘stakeholder management’ as a driver of CSR activity and reporting (Gray et al; 1996). This is known as the positive branch of stakeholder theory, where more powerful stakeholders, that is, those with more control over resources, are more likely to receive attention form the firm (Ullmann, 1985). Essentially, the stakeholder theory presupposes the existence of a number of groups within and outside the organization with each having a stake and therefore they expect accountability from the organization (Lipunga, 2013). The theory explains the driving force for organizations to reflect social and environmental impact of the companies’ activities specifically on employee related issues, community involvement, environmental concerns and other ethical issues (Branco and Rodrigues, 2006).

Both the legitimacy and stakeholder theories are a united whole and are interacting within the framework of political economy assumptions.

CONCLUSION
Accounting ordinarily is far from being what comes to mind when discussing issues of social responsibility and sustainability. However, the accounting profession has been implicated more than ever before in issues bordering around creating a better environment for a sustainable future.

The business world is getting complex, and the accounting profession is standing tall to meet up with expectations from different issues as they emerge. As such, there is the emergence of new accounting skills and approaches in documenting social and environmental impacts of businesses as conventional accounting mechanisms have not been able to capture completely these impacts. In some countries, legal requirements for social responsibility accounting, auditing and reporting have been adopted.

However, in the absence of such legal requirements, integrated reports that encapsulate environmental, social and economic performance have been employed to provide users of annual reports with a more holistic overview of the firms. Empirical studies have shown beyond reasonable doubt that there are more benefits accruing to companies that undertake CSR activities and furthermore, disclose such in their annual reports. The improvement of company reputation and reduction of information asymmetry are amongst others, the gains of social responsibility accounting. It is thus very important that management of firms understand the scope and content of social responsibility, accounting so as to be able to offer value added contributions to building the firm’s reputation and eventually value.
References


