

SUCCESS

African Journal of Business Management

Volume 9 Number 16 28 August, 2015

ISSN 1993-8233



ABOUT AJBM

The **African Journal of Business Management (AJBM)** is published twice monthly (one volume per year) by Academic Journals.

African Journal of Business Management (AJBM) is an open access journal that publishes research analysis and inquiry into issues of importance to the business community. Articles in AJBM examine emerging trends and concerns in the areas of general management, business law, public responsibility and ethics, marketing theory and applications, business finance and investment, general business research, business and economics education, production/operations management, organizational behaviour and theory, strategic management policy, social issues and public policy, management organization, statistics and econometrics, personnel and industrial relations, technology and innovation, case studies, and management information systems. The goal of AJBM is to broaden the knowledge of business professionals and academicians by promoting free access and providing valuable insight to business-related information, research and ideas. AJBM is a weekly publication and all articles are peer-reviewed.

Contact Us

Editorial Office: ajbm@academicjournals.org

Help Desk: helpdesk@academicjournals.org

Website: <http://www.academicjournals.org/journal/AJBM>

Submit manuscript online <http://ms.academicjournals.me/>

Editor-in-Chief

Prof. Wilfred Isioma Ukpere

*Department of Industrial Psychology and People Management,
Faculty of Management,
University of Johannesburg,
South Africa.*

Editors

Dr. Amran Awang

*Faculty of Business Management,
02600 Arau, Perlis, Malaysia*

Prof. Giurca Vasilescu Laura

*University of Craiova, Romania
13, A.I. Cuza, 200585, Craiova, Dolj,
Romania.*

Associate Editors

Dr. Ilse Botha

*University of Johannesburg
APK Campus PO Box 524 Aucklandpark 2006
South Africa.*

Dr. Howard Qi

*Michigan Technological University
1400 Townsend Dr., Houghton, MI 49931,
U.S.A.*

Dr. Aktham AlMaghaireh

*United Arab Emirates University
Department of Economics & Finance
United Arab Emirates.*

Dr. Haretsebe Manwa

*University of Botswana
Faculty of Business
University of Botswana
P.O. Box UB 70478
Gaborone Botswana.*

Dr. Reza Gharoie Ahangar

*Islamic Azad University of Babol,
Iran.*

Dr. Sérgio Dominique Ferreira

*Polytechnic Institute of Cavado and Ave
Campus IPCA, Lugar does Aldão, 4750-810. Vila
Frescainha,
Portugal.*

Prof. Ravinder Rena

*Department of Economics
University of the Western Cape
Private Bag: X17
Modderdam Road
Bellville 7535
Cape town, South Africa*

Dr. Shun-Chung Lee

*Taiwan Institute of Economic Research
No. 16-8, Dehuei Street, Jhongshan District,
Taipei City 104,
Taiwan.*

Dr. Kuo-Chung Chu

*National Taipei University of Nursing and Health
Sciences No. 365, Min-Te Road, Taipei,
Taiwan.*

Dr. Gregory J. Davids

*University of the Western Cape
Private Bag x17, Bellville 7535,
South Africa.*

Prof. Victor Dragotă

*Bucharest Academy of Economic Studies, Department
of Finance
Bucharest, Sector 1, Piata Romana no. 6, Room 1104,
Romania*

Dr. Maurice Oscar Dassah

*School of Management, IT and Governance
University of KwaZulu-Natal
Post Office Box X54001
Durban
4000
South Africa.*

Prof. Joseph Offiong Udoayang

*University of Calabar
P.M.B 1115, Calabar. Cross River State, Nigeria.*

Prof. Robert Taylor

*University of KwaZulu-Natal
Varsity Drive, Westville
South Africa.*

Dr. Nazim Taskin

*Massey University - Albany
Quad Building A, Room 3.07
Gate 1, Dairy Flat Highway (State Highway 17)Albany,
New Zealand*

Prof. João J. M. Ferreira

*University of Beira Interior (UBI)
Estrada do Sineiro, Pólo IV 6200 Covilhã,
Portugal.*

Dr. Izah Mohd Tahir

*Universiti Sultan Zainal Abidin
Gong Badak Campus, 21300 Kuala Terengganu,
Terengganu, Malaysia.*

Dr. V. Mahalakshmi

*Panimalar Engineering College
7-A,CID Quarters, Mandaveli,Chennai-600028,
Tamilnadu,
India.*

Dr. Ata Allah Taleizadeh

*Iran University of Science and Technology
Faculty of Industrial Engineering,
Iran University of Science and Technology,
Narmak, Tehran, Iran.*

Dr. P.S. Vohra

*Chandigarh Group of Colleges, Landran, Mohali, India
#3075, Sector 40 D
Chandigarh, Pin code 160036*

Dr. José M. Merigó

*University of Barcelona
Department of Business Administration, Av. Diagonal
690, Spain.*

Prof. Mornay Roberts-Lombard

*Department of Marketing Management,
C-Ring 607, Kingsway campus, University of
Johannesburg, Auckland Park, Johannesburg, 2006,
South Africa*

Dr. Anton Sorin Gabriel

*Carol I Boulevard, No. 11, 700506, Iasi,
Alexandru Ioan Cuza University Iasi,
Romania.*

Dr. Aura Emanuela Domil

*31 Horia Creanga, zip code 300253, Timisoara,
West University from Timisoara,
Faculty of Economics and Business Administration, Romania.*

Dr. Guowei Hua

*NO. 3 Shangyuancun, Haidian District, Beijing 100044,
School of Economics and Management,
Beijing Jiaotong University, China.*

Dr. Mehdi Toloo

*Technical University of Ostrava,
Ostrava, Czech Republic*

Dr. Surendar Singh

*Department of Management Studies, Invertis University
Invertis village, Bareilly -
Lucknow Highway, N.H.-24, Bareilly
(U.P.) 243 123 India.*

Dr. Nebojsa Pavlovic

*High school "Djura Jaksic"
Trska bb, 34210 Raca, Serbia.*

Dr. Colin J. Butler

*University of Greenwich
Business School, University of Greenwich, Greenwich, SE10
9LS,
London, UK.*

Prof. Dev Tewari

*School of Economics and Finance
Westville Campus University of Kwa-Zulu
Natal (UKZN) Durban, 4001
South Africa.*

Dr. Paloma Bernal Turnes

*Universidad Rey Juan Carlos
Dpto. Economía de la Empresa
Pº de los Artilleros s/n
Edif. Departamental, Desp. 2101
28032 Madrid, España*

Dr. Jurandir Peinado

*Universidade Positivo
Rua Silveira Peixoto, 306
Zip 80240-120 Curitiba – PR – Brazil*

Prof. Fabrizio Rossi

*University of Cassino and Southern Lazio (Italy)
Via G. Di Biasio 43, Cassino (Italy)*

Editorial Team

Dr. T.S. Devaraja

*Department of Commerce,
Post Graduate Centre,
Hemagangotri Campus,
University of Mysore
India.*

Dr. Peide Liu

*Business Administration School,
Shandong Economic University, China*

Dr. Marwan Mustafa Shammot

*King Saud University, P.O.Box 28095 ,
Riyadh 11437 Kingdom of Saudi Arabia.*

Dr. Hela Miniaoui

*University of Wollongong in Dubai,
Knowledge Village, Block 15 PoBox 20183, Dubai
UAE*

Dr. Suhanya Aravamudhan

*6965 Cumberland Gap Pkwy, Harrogate, TN
USA*

Dr. Hooman Attar

*Amirkabir University of Technology
Iran*

Prof. Luis Antonio Fonseca Mendes

*University of Beira Interior –
Business and Economics Department -
Estrada do Sineiro – Polo IV – 6200-209 Covilhã
Portugal*

Wu, Hung-Yi

*Department of Business Administration
Graduate Institute of Business Administration
National Chiayi University No.580, Xinmin Rd., Chiayi City
60054, Taiwan (R.O.C.)*

Shu-Fang Luo

*No.28, Da-Ye S. Road, Lin-Hai Industrial Park,
Hsiao-Kang, 812, Kaohsiung City Taiwan*

Ahmad.M.A.Ahmad Zamil

*King Saud University, P.O.Box 28095 ,
Riyadh 11437
Kingdom of Saudi Arabia*

Olof Wahlberg

*Mid Sweden University,
851 70 Sundsvall Sweden*

Mario Javier Donate-Manzanares

*Facultad de Derecho y Ciencias Sociales Ronda de Toledo, s/n
13071 Ciudad Real Spain*

Mohamed Abd El Naby Mohamed Sallam

*Faculty of Commerce -
University of Kafr El-Sheikh
Egypt*

Dr. Bhaskar Bagchi

*Alipurduar College -
Helapurkur (Shibmandir); CHANDERNAGAR, Pin – 712136;
West Bengal
INDIA*

Dr. Pawel Tadeusz Kazibudzki

*Jan Dlugosz University in Czestochowa, The Faculty of Social
Sciences
Poland*

Dr. Cherukuri Jayasankaraprasad

*Department of Business Management
Krishna University (State Govt. of A.P.)
Machilipatnam, A.P., India-521001*

Dr. Aleksander Aristovnik

Faculty of Administration, University of Ljubljana, Slovenia

Dr. Bhavesh Parmar

*Department of Business Management, Sankalchand Patel
College of Engineering, Visnagar. (Affiliated to Gujarat
Technological University.) India.*

Prof. Paulo Alves

*Lisbon College of Accountancy and Administration and
Lusofona University Portugal*

Dr. Mathew Analogbei

*The Open University Business School UK.
Centre for Marketing & Strategy,
The Open University Business School,
Walton Hall, Milton Keynes, MK7 6AA,
United Kingdom*

ARTICLES

Research

The effect of board size and composition on the financial performance of banks in Nigeria	590
Aminu Bebeji, Aisha Mohammed and Muhammad Tanko	
The empirical analysis of oil revenue and industrial growth in Nigeria	599
Victor Ushahemba Ijirshar	
Comparison of REIT Dividend Performance in Nigeria and Malaysia	608
Olusegun Olaopin Olanrele, Rosli Said and Md Nasir Daud	

Full Length Research Paper

The effect of board size and composition on the financial performance of banks in Nigeria

Aminu Bebeji^{1*}, Aisha Mohammed² and Muhammad Tanko³

¹Department of Accounting, Kaduna Polytechnic, Kaduna, Nigeria.

²Department of Accounting, University of Abuja, Nigeria.

³Department of Accounting, Kaduna State University, Nigeria.

Received 19 April 2015; Accepted 6 August, 2015

This paper analyzed the effects of board size and board composition on the performance of Nigerian banks. The financial statements of five banks were used as a sample for the period of nine years and the data collected were analysed using the multivariate regression analysis. The paper found that board size has significant negative impact on the performance of banks in Nigeria. This signifies that an increase in Board size would lead to a decrease in ROE and ROA. On the other hand, board composition has a significant positive effect on the performance of banks in Nigeria. This signifies that an increase in Board composition would lead to a decrease in ROE and ROA. It is recommended that banks should have adequate board size to the scale and complexity of the organisation's operations and be composed in such a way as to ensure diversity of experience without compromising independence, compatibility, integrity and availability of members to attend meetings. The board size should not be too large and must be made up of qualified professionals who are conversant with oversight function. The Board should comprise of a mix of executive and non-executive directors, headed by a Chairman.

Key words: Board size, board composition, Nigerian banks and financial performance.

INTRODUCTION

The major challenge of world's economy today is not in the area of manufacturing modern equipments that will help fight governments rebellions or any such crises that may occur in the economy. However, solving the problem of governance can help to completely straitened an economy and improve the living standard of its citizenry. This is evident in the fact that many companies all over the world suffer from the impact of bad governance and which in effect results to costly impact on the performance

of organizations in the economy. Wolfgang (2003) observed that good corporate governance results to increased profitability of the firm, higher valuation and sales growth and it has the possibility of reducing capital expenditure. In general, it has been documented that good corporate governance increases confidence of stakeholders and promote goodwill of the organization (Gompers et al., 2003; Klapper and Love, 2004).

Jensen and Meckling (1987) are of the view that the

*Corresponding author. E-mail: abebeji@yahoo.com. Tel: 08028843824.

agency theory is mitigated by the existence of a good corporate governance practice; while Shleifer and Vishny (1997) concur with the argument and further proffers that effective corporate governance reduces “control right which shareholders and creditors has on managers thereby increasing the probability of investing in positive net present value projects i.e. investments that yields higher positive net present value or projects that adds value to the firm.

Corporate governance is therefore a tool to ensure the existence of transparency, accountability and fairness in corporate reporting. Mayer concluded that corporate governance is not only about improving corporate efficiency, it also encompasses two major issues that includes; the company's strategy and life cycle development. It therefore, ensures that operators of the firm or its management pursue those strategies that will safeguard the interest of the shareholders (Ahmadu and Tukur, 2005). Thus, good corporate governance is generally, identified as those governance mechanism that are based on a higher level corporate responsibility that a firm exhibits in relation to accountability, transparency and ethical values. That is why Mulbert, (2010) and Adams and Mehran (2003) concluded that good corporate governance represents a central issue for the operation of modern banking industry in the world today. It is against this background that this paper seeks to examine the efficacy of corporate governance with a view to determine the impact of board size and board composition on the financial performance of banks in Nigeria.

LITERATURE REVIEW

The review of literature on corporate governance as it affects the firm performance covers two major issues; first, the composition of the Board of directors of the firm and second, the size of the board. Board composition is a debated corporate governance issue as many researchers identified board composition as an issue that could influence deliberations of the board and further determine the capability of the board to control top management decisions and outcomes of deliberations.

Clifford and Evans (1997) defined board composition to be the number of independent non-executive directors on the board relative to the total number of directors. An independent non-executive director is defined as an independent director who has no affiliation with the firm except for their directorship. There is an apparent presumption that boards with significant outside directors will make different and perhaps better decisions than boards dominated by insiders. Although Vance (1978) opined that there is no optimal formula as to the composition of the board, Daily et al.(2003) and Dalton et al. (1998) described the non-executive and independent directors as the most important mechanisms for ensuring

corporate accountability. Furthermore, Fama and Jensen (1983) concluded that non-executive directors play an important role in the effective resolution of agency problems of a firm and therefore their presence can lead to straightened and more effective decision-making in the firm.

Dehaene et al. (2001) find that the percentage of outside directors is positively related to the financial performance of Belgian firms. Connelly and Limpaphayom (2004) find that board composition has a positive relation with profitability and a negative relation with the risk-taking behaviour of life insurance firms in Thailand. Rosenstein and Wyatt (1990) find a positive stock price reaction at the announcement of the appointment of an additional outside director, implying that the proportion of outside directors affects shareholders' wealth. Bhojraj and Sengupta (2003) and Ashbaugh-Skaife et al. (2006) also find that firms with greater proportion of independent outside directors on the board are assigned higher bond and credit ratings respectively. Furthermore, O' Sullivan (2000) examines a sample of 402 UK quoted companies and suggests that non-executive directors encourage more intensive audits as a complement to their own monitoring role while the reduction in agency costs is expected.

Fama and Jensen (1983) argue that outside directors have the incentive to act as monitors of management because they want to protect their reputations as effective, independent decision makers. An independent board of directors has fewer conflicts of interest in monitoring managers, even if the presence of outside directors entails additional costs to the firm (fees, travel expenses, etc); moreover, as De Andres and Vallelado (2008) highlight, an excessive proportion of nonexecutive directors could damage the advisory role of boards, since executive directors facilitate the transfer of information between directors and management and give information and knowledge that outside directors would find difficult to gather. After the recent corporate scandals, policymakers and regulators worldwide have called for greater independence of boards of directors from the top management of firms (Aguilera, 2005; Dalton and Dalton, 2005).

He et al. (2009) stated that board independence is the most effective deterrent of fraudulent financial reporting. As a matter of fact, many studies (Dechow et al., 1996; Beasley, 1996; Beasley et al., 2000; Song and Windram, 2004; Uzun et al., 2004; Farber, 2005) showed that firms committing financial reporting fraud are more likely to have a board of directors dominated by insiders. With reference to Italy, Romano and Guerrini (2012) find that the higher the percentage of independent directors on the board, the lower the likelihood of financial fraud, arguing that a higher relative weight of independent directors appears to ensure more effective control.

Many countries have strengthened recommendations on board composition and independence (Aguilera, 2005;

Huse, 2005). Even in Italy now both the regulatory framework and market best practices place emphasis on board independence from management (Bank of Italy, 2008). As a matter of fact, a recent study shows that nowadays the independence of non-executive directors is a commonly recommended governance practice (Zattoni and Cuomo, 2010). However, the majority of the existing studies about banks shows a significantly positive relationship between board composition and banks' profitability or efficiency, highlighting how banks with a higher presence of non-executives or independent members in their boards perform better than the others (Shelash Al-Hawary, 2011; Trabelsi, 2010; De Andres and Vallelado, 2008; Tanna et al., 2008; Bino and Tomar, 2007; Busta, 2007; Pathan et al., 2007; Staikouras et al., 2007; Sierra et al., 2006; Isik and Hassan, 2002). Moreover, Brewer et al. (2000) find that the premiums offered for target banks increase with the proportion of independent outside directors.

However, in banking researches, the results regarding the effectiveness of outside directors are mixed. Some empirical researches in the last decades show no significant relationship between board composition, considered as the proportion of outsiders or of independent board members on the board, and banks performance (Romano et al., 2012; Adams and Mehran, 2008; Love and Rachinsky, 2007; Zulkafli and Samad, 2007; Adams and Mehran, 2005; Simpson and Gleason, 1999; Pi and Timme, 1993).

De Andres and Vallelado (2008), analysing a sample of large commercial banks from six developed countries, find an inverted U-shaped relation between board size and bank performance: the inclusion of more directors in the board improves bank performance but with a limit of 19 directors. Similarly, recently Grove et al. (2011) report a concave relationship between financial performance and board size.

However, there is also a fair amount of studies that tend not to support this positive perspective. Some of them report a negative and statistically significant relationship with Tobin's Q (Agrawal and Knoeber, 1996; Yermack, 1996) while others find no significant relationship between accounting performance measures and the proportion of non-executive directors (Vafeas and Theodorou, 1998; Weir et al., 2002; Haniffa and Hudaib, 2006). Furthermore, based on a large survey of firms with non-executive directors in the Netherlands, Hooghiemstra and Van Manen (2004) conclude that stakeholders are not generally satisfied with the way non-executives operate. Haniffa et al. (2006) summarize a number of views expressed in the literature which may justify this non-positive relationship, such as that high proportion of non-executive directors may engulf the company in excessive monitoring, be harmful to companies as they may stifle strategic actions, lack real independence, and lack the business knowledge to be truly effective (Baysinger and Butler, 1985; Patton and

Baker, 1987; Demb and Neubauer, 1992; Goodstein et al., 1994).

Furthermore, the empirical evidences on the best board size in influencing firm performance are inconclusive. Some authors argue that when boards grow, they become less likely to function effectively (Jensen, 1993), may create a diminished sense of individual responsibility and might be more involved in bureaucratic problems: increasing board size might significantly inhibit board processes due to the potential group dynamics problems associated with large groups. Larger boards are more difficult to coordinate and may experience problems with communication, organization, participation, providing worst financial reporting oversight and lowering company performance (Judge and Zeithaml, 1992; Goodstein et al., 1994; Yermack, 1996; Amason and Sapienza, 1997; Eisenberg et al., 1998; Conyon and Peck, 1998; Forbes and Milliken, 1999; Golden and Zajac, 2001; Mak and Kusnadi, 2005); other authors, conversely, argue that larger boards are positively associated with higher corporate performance (Pearce and Zahra, 1992) and that a larger board might be more effective in monitoring financial reporting, because the company might be able to appoint directors with relevant and complementary expertise and skills and, thus, draw from a broader range of knowledge and experiences (Xie et al., 2003; Berghe and Levrau, 2004).

Theoretical framework

Literature on corporate governance mechanisms and firm financial performance has identified the stakeholder theory, the stewardship theory and agency theory, as the three prominent theories of corporate governance which are briefly discussed below.

Stakeholders' theory

The stakeholders' theory provides that the firm is a system of stakeholders operating within the larger system of the host society that provides the necessary legal and market infrastructure for the firm's activities. The purpose of the firm is to create wealth or value for its stakeholders by converting their stakes into goods and services. This view is supported by Blair (1995) who proposes that the goal of directors and management should be maximizing total wealth creation by the firm. The key to achieving this is to enhance the voice of and provide ownership-like incentives to those participants in the firm who contribute or control critical, specialized inputs (firm specific human capital) and to align the interests of these critical stakeholders with the interests of outside, passive shareholders. Sundaram and Inkpen (2004) also suggest that "stakeholder theory attempts to address the question of which groups of stakeholder

deserve and require management’s attention” .

Stewardship Theory

In the stewardship, managers are assumed to be good stewards of the corporations and diligently work to attain high levels of corporate profit and shareholders returns (Donaldson and Davis 1994, hereafter referred to as (D & D). Their arguments support the investment of business schools in the development of management skills and knowledge. It also reinforces the social and professional kudos of being a manager. Whereas agency theorists view executives and directors as self-serving and opportunistic, stewardship theorists, reject agency assumptions, suggesting that directors frequently have interests that are consistent with those of shareholders.

Agency theory

In its simplest form, agency theory explains the agency problems arising from the separation of ownership and control.

It “provides a useful way of explaining relationships where the parties’ interests are at odds and can be brought more into alignment through proper monitoring and a well-planned compensation system” (Davis et al., 1997:24). In her assessment and review of agency theory, Eisenhardt (1989) outlines two streams of agency theory that have developed over time: Principal-agent and positivist.

Principal-agent research is concerned with a general theory of the principal-agent relationship, a theory that can be applied to any agency relationship e.g. employer employee or lawyer-client. Eisenhardt describes such research as abstract and mathematical and therefore less accessible to organisational scholars. This stream has greater interest in general theoretical implications than the positivist stream.

On the other side positivist researchers have tended to focus on identifying circumstances in which the principal and agent are likely to have conflicting goals and then describe the governance mechanisms that limit the agent’s self-serving behaviour (Eisenhardt, 1989). This stream has focused almost exclusively on the principal-agent relationship existing at the level of the firm between shareholders and managers.

For example, Jensen and Meckling (1976), who fall under the positivist stream, propose agency theory to explain, inter alia, how a public corporation can exist given the assumption that managers are self-seeking individuals and a setting where those managers do not bear the full effects of their actions and decisions.

The agency relationship explains the association between providers of corporate finances and those entrusted to manage the affairs of the firm. Jensen and Meckling (1976:308) define the agency relationship in

terms of “a contract under which one or more persons (the principal(s) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent”. Agency theory supports the delegation and the concentration of control in the board of directors and use of compensation incentives.

METHODOLOGY

The population of the study comprises the twenty two banks listed at the Nigerian Stock Exchange (NSE) as at March (2015). A non-probability method in the form of judgmental sampling technique was employed in selecting banks into the sample. In nutshell, the sample size is based on the following criteria;

- i. Banks with missing values for the variable used were excluded.
- ii. The bank was not involved in any merger during the study period.
- iii. For the empirical part of this study, the data is limited to bank that is in existence throughout the period of the study.

After applying the above criteria, five banks were selected; Access Bank Plc, Eco Bank, Nigeria Plc, First Bank Nigeria Plc, Guarantee Trust Bank Plc, and Union bank of Nigeria Plc.

The study utilized only the secondary source of data. This is because the estimation of the models in the study requires the use of cross sectional/time series data in the form of financial information which are available through the financial statements of the sample banks. The data were sourced from the annual reports and accounts of the sampled banks for all the relevant years covered by the study. Data was analysed using the multivariate regression analysis. Banks’ performance linked to two explanatory variables (board size, and board composition). Correlation matrix was used to examine the nature and the degree of relationship among variables of consideration.

Empirical model specification

The model employed is an Ordinary Least Squares (OLS) regression to examine the separate and combined effect of board size, and board composition on the performance of banks in Nigeria. The models are in line with the models used in the works of Klapper and Love (2002), Sanda et al. (2004), Musa (2006), Tahir (2008), and Hassan (2011).

The models are stated below.

$$ROA = \beta + \lambda BS + \delta BC + \epsilon \dots\dots\dots (i)$$

$$ROE = \beta + \lambda BS + \delta BC + \epsilon \dots\dots\dots (ii)$$

Where: ROA = Return on asset; ROE = Return on equity; BS = Board Size; BC = Board Composition; β = Intercept; ϵ = Error term

Measurement of variables

The dependent variable is banks’ performance. Several variables have been used by previous studies as proxies for banks’ performance. For instance, Chou (2008) uses profitability measured by return on total assets and equity as proxies for performance of banks. Also, the same proxies were used in the studies of Romano and Rigolini (2012), Bino and Tomar (2007), Staikouras et al. (2007) and Dutta and Boss (2006). Because of the popularity of these variables, the performance of banks was measured using return on asset (ROA) and return on equity (ROE).

Table 1. Estimation of variable.

S/N	Variable	Estimation	Formula
1	Return on asset (ROA)	Ratio of profit after tax to total assets	$\frac{\text{Profit after tax}}{\text{Total asset}}$
2	Return on equity (ROE)	Ratio of profit after tax to total equity	$\frac{\text{Profit after tax}}{\text{Total no. of ord. Shares}}$
3	Board size	This is described as the number of directors on the board at the end of financial year.	Total number of directors
4	Board composition	This is referred to the mix of inside to outside directors in the board room.	$\frac{\text{Non-executive directors}}{\text{Total no. of directors}}$

Source: Authors' estimation.

Table 2. Sample descriptive statistics.

Variables*	ROE	ROA	BS	BC
Minimum	-0.31064	-42.3639	8	0.428571
Maximum	0.144407	17.47091	23	0.8
Mean	0.017356	1.670671	14.55556	0.623598
Std. Deviation	0.059969	7.751281	2.927577	0.081182
Observations	45	45	45	45

Source: Econometric–Views Output Result. *ROE =Return on Equity, ROA= Return on Asset, BS=Board Size, and BC=Board Composition.

The independent variable is corporate governance. There are several corporate governance attributes. This study only considered two of those attributes; board size, and board composition (Table 1).

Data presentation and analysis

Table 2 shows the minimum, maximum, mean, and standard deviation values of the variables used in the study.

The table indicates that, on average, returns on equity and asset have mean values of about 1.7 and 167% respectively which are proxies for bank performance. Board size, board composition, the range of the variables were given by the minimum and the maximum values. The variable with the highest standard deviation among the explanatory variables is board size with a value of about 2.928. The variable with the least standard deviation among the two measurement of bank performance employed in the study is return on equity with a value of about 6%. This suggests that return on equity is a more appropriate measure of bank performance over return on asset. The study used a total of 45 observations for each metric variable considered.

Augmented Dickey fuller (ADF) Stationarity Test

The Augmented Dickey Fuller (ADF) has been employed to test the unit roots of the concerned time series metric variables. Table 3 displays the estimates of the Augmented Dickey fuller (ADF) test in levels of the data with an intercept only, with an intercept and trend

and with no intercept and trend. The test has been performed using the McKinnon Critical Values.

The ADF test with an intercept implies that all variables are stationary at levels at 1% level of significance except board size which is stationary at 5% level. Similarly, the test with intercept and trend also shows that the variables are stationary within acceptable level of significance in levels. The variables are also stationary for ADF test with no intercept and trend. Collectively, all test results imply that all variables are stationary at levels and hence variables are integrated at levels. The economic implications of these results indicate that the time series metric variables employed in this study are suitable for econometric analysis.

Normality distribution test

Figure 1 shows the normal distribution of the univariate time series employed. The curves of all the diagrams indicate that the metric variables are normally distributed. The implication of this is that the univariate time series data employed are suitable for multivariate regression analysis.

Correlation Matrix

Table 4 shows the correlation matrix for the time series metric variables employed in the study. Precisely, the matrix did not only show the relationship between the variables but also indicates the direction of the relationship.

The above table indicates that there is a positive relationship

Table 3. Stationary Test a.

Variable b	Test with intercept levels	Test with intercept and trend levels	Test with no intercept and trend levels
ROE	-3.1259***	-3.2019**	-2.7221***
ROA	-3.1855***	-3.2221*	-2.8025***
BS	-3.7264**	-3.7636**	-2.9649***
BC	-3.3275***	-3.5921**	-0.6191***

Source: Econometric–Views Output Result. *ROE =Return on Equity, ROA= Return on Asset, BS=Board Size, BC=Board Composition.

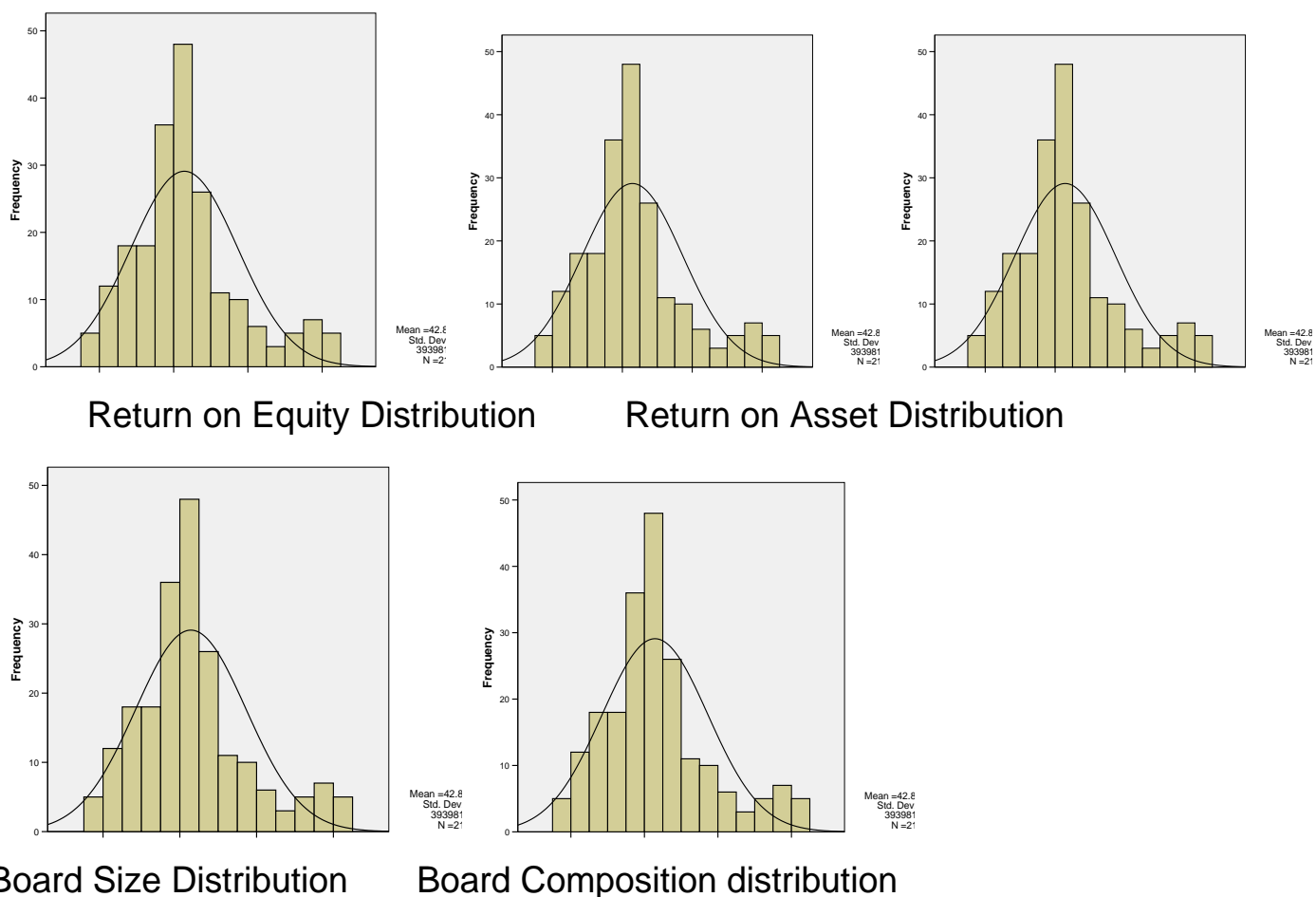


Figure 1. Normal distribution curves.

Table 4. Correlation matrix for the sample observations.

Variablea	ROE	BS	BC
ROE	1		
BS	0.004	1	
BC	0.101	0.257	1

Source: Econometric–Views Output Result. aROE =Return on Equity, ROA= Return on Asset, BS=Board Size, BC=Board Composition.

between board size, and board composition and the dependent variable. It further indicates that most cross-correlation terms for the independent variables are fairly small, thus, giving little cause for concern about the problem of multicollinearity among the independent variables.

EMPIRICAL RESULTS

This section presents and interprets the regression results in respect of the banks’ performance and corporate

Table 5. Regression results on model 1a.

Variable b	Coefficients	T-Statistics
Intercept	0.967*	20.646
BS	-0.101*	-2.663
BC	0.0271*	5.475
R-Squared		0.456
Adjusted R-Squared		0.449
F-Statistics		74.297*

Source: Econometric–views output result. aT-Statistics are in parentheses. * indicate that values are significant at 1%; b BS=Board Size, BC=Board Composition.

Table 6. Regression results on model 1a.

Variableb	Coefficients	T-Statistics
Intercept	0.568	6.747
BS	-0.131*	-3.977
BC	0.059*	5.997
R-Squared		0.758
Adjusted R-Squared		0.706
F-Statistics		14.681*

Source: Econometric–views output result. aT-Statistics are in parentheses. * indicate that values are significant at 1%; b BS=Board Size, BC=Board Composition.

governance equations formulated. The study used two models for the purpose of examining the effects of corporate governance on the performance of banks in Nigeria. Table 5 presents the regression result in line with the first model using return on asset as measurement of bank performance while Table 6 presents the regression result in line with the second model using return on equity as the performance measure. The study hypothesized a relationship between board size, board composition on one hand and bank performance on the other hand.

Table 5 shows the regression results on the relationship between board size, and board composition on one hand and bank performance on the other hand. The estimated regression relationship for the model is $ROA = 0.967 - 0.101(BS) + 0.0271(BC)$. The parameters of all the variables under consideration are statistically significant at 1% level.

Furthermore, the results also show the coefficient of determination for the model. This coefficient measures the proportion of the total variation in the performance of banks that is explained by the considered variables. Precisely, the adjusted R-squared for the model is approximately 45% which offers an explanation of the variations in ROA explained by variation in the independent variables. Also, the value of the F-statistics is 74.297 with a *p*-value of 0.001, indicates fitness of the model.

Table 6 also shows the regression results on the relationship between board size, board composition, audit composition, bank risk, and gender diversity on one hand and bank performance on the other hand using return on asset as the proxy for bank performance. The estimated regression relationship for the model is $ROA = 0.568 - 0.131(BS) + 0.050(BC)$.

The parameters of all the variables under consideration are statistically significant at 1% level.

The results also show the coefficient of determination for the model. This coefficient as mentioned earlier measures the proportion of the total variation in the performance of banks that is explained by the considered variables. The adjusted coefficient of determination (R²) of approximately 71% offers a better explanation of the variations in ROE occasioned by variation in the independent variables. Also, the value of the F-statistics is 74.297 with a *p*-value of 0.001, indicates fitness of the model.

The following five sub-sections present the discussion of findings on the effect of corporate governance characteristics and the performance of banks in Nigeria.

Relationship between board size and the performance of banks in Nigeria

The regression results indicate that board size has coefficients of -0.101 and -0.131 for the two models which are both statistically significant at 1%. These results provide evidence for the rejection of the first hypothesis which states that there is no significant relationship between board size and performance of banks in Nigeria. The implications of these results are in two fold. First, board size significantly engenders bank performance in Nigeria negatively. These results signify an inverse relationship between board size and bank performance. This finding suggests that a smaller board size can enhance banks' performance as the smaller size can take quick and adequate decision for the performance of the banks as large boardrooms tend to be slow in making decisions, and hence can be an obstacle to change. Second, the results also signify that both return on equity and asset are appropriate for the measurement of bank performance. This is an indication of absence of measurement error.

This result confirms the findings of Judge and Zeithaml (1992); Yermack (1996); Amason and Sapienza (1997); Mak and Kusnadi (2005). However, the results of other authors, conversely, argue that larger boards are positively associated with higher corporate performance (Pearce and Zahra, 1992) And that a larger board might be more effective in monitoring financial reporting, because the company might be able to appoint directors with relevant and complementary expertise and skills and, thus, draw from a broader range of knowledge and experiences (Xie et al., 2003; Berghe and Levrau, 2004).

Effect of board composition on the performance of banks in Nigeria

The regression results indicate that board composition has coefficients of 0.0271 and 0.050 for the two models which are both statistically significant at 1%. These results provide evidence for the rejection of the second hypothesis which states that there is no significant relationship between board composition and performance of banks in Nigeria. The results show that board composition significantly affects bank performance in Nigeria positively. These signify a direct relationship between board composition and banks' performance. This finding suggests that banks with higher presence of non-executives or independent members in their boards perform better than the others. This is correct because outside directors have the incentive to act as monitors of management because they want to protect their reputations as effective, independent decision makers.

This result is in line with the empirical findings of Shelash Al-Hawary (2011); Trabelsi (2010); De Andres and Vallelado (2008); Tanna et al. (2008); Bino and Tomar (2007); Busta (2007); Pathan et al. (2007); Staikouras et al. (2007); Sierra et al. (2006); Isik and Hassan (2002). However, the results of Romano et al. (2012); Adams and Mehran (2008); Love and Rachinsky (2007); Zulkafli and Samad (2007); Adams and Mehran (2005); Simpson and Gleason (1999) and Pi and Timme (1993) revealed otherwise. Their empirical results revealed that there is no significant relationship between board composition, considered as the proportion of outsiders or of independent board members on the board, and banks performance.

CONCLUSIONS AND RECOMMENDATIONS

Board size has significant negative impact on the performance of banks in Nigeria. This signifies that an increase in Board size would lead to a decrease in ROE and ROA. On the other hand, board composition has a significant positive effect on the performance of banks in Nigeria. This signifies that an increase in Board size would lead to a decrease in ROE and ROA. The overall conclusion of the study is that corporate governance has significant effect on the performance of banks in Nigeria. However, while some corporate governance characteristics such as board composition positively influenced the performance of banks in Nigeria, other characteristics such as board size negatively affect the performance of banks in Nigeria.

The recommendations of this study are directed at different parties that are involved in monitoring the institutionalization of an effective system of corporate governance in Nigeria. These parties include, shareholders, board of directors, and government/regulatory bodies. Shareholders of banks should seek to positively influence the standard of corporate governance in the

bank in which they invest by making sure there is strict compliance with the code of corporate governance. Further, it is the responsibility of the shareholders to ensure that the committee is constituted in the manner stipulated and is able to effectively discharge its statutory duties and responsibilities.

The paper indicated that corporate governance characteristics affect the performance of banks in Nigeria. On the basis of this revelation, the following recommendations are being made to banks' boards of directors. Banks should have adequate board size to the scale and complexity of the company's operations and be composed in such a way as to ensure diversity of experience without compromising independence, compatibility, integrity and availability of members to attend meetings. The board size should not be too large and must be made up of qualified professional who are conversant with oversight function. The Board should comprise a mix of executive and non-executive directors, headed by a Chairman. The majority of Board members should be non-executive directors whom should be independent directors. A bank should have a risk management function (including a chief risk officer (CRO) or equivalent, a compliance function and an internal audit function, each with sufficient authority, stature, independence, resources and access to the board; An internal controls system which is effective in design and operation should be in place; The sophistication of a bank's risk management, compliance and internal control infrastructures should keep pace with any changes to its risk profile (including its growth) and to the external risk landscape; and Effective risk management requires frank and timely internal communication within the bank about risk, both across the organization and through reporting to the board and senior management.

Conflict of Interests

The author has not declared any conflict of interest.

REFERENCES

- Adams RB, Mehran H (2008). Corporate performance, Board structure and its determinants in the Banking industry. Working Paper Presented at the EFA Moscow Meetings.
- Ahmad SA, Tukur G (2005). Corporate governance mechanism and firms' financial performance in Nigeria. Research paper 149. African Economic Consortium. Nairobi Kenya.
- Bank of Italy (2008). Supervisory Provisions Concerning Banks. Organization and Corporate Governance, March.
- Beasley M S(1996). An Empirical Analysis of the Relation between the Board of Director Composition and Financial Statement Fraud. Account. Rev. 71:443-465.
- Beasley M, Carcello J, Hermanson D, Lapides P (2000). Fraudulent financial reporting: Consideration of industry traits and corporate governance mechanisms. Account. Horizons14(4):441-454.
- Berghe LA, Levrau A (2004). Evaluating boards of directors: What constitutes a good corporate board? Blackwell-synergy. Retrieved from <http://www.blackwell-synergy.com/doi/abs/10.1111/j.1467-8683.2004.00387.x>.

- Bino A, Tomar S (2007). Corporate governance and bank performance: Evidence from Jordanian Banking Industry, Paper presented at Conference on Regulation and Competition Policy for development. Challenges and practice, 27-28 January, University of Jordan.
- Brewer E, Jackson WE, Jagtiani JA (2000). Impact of independent directors and the regulatory environment on bank merger prices: Evidence from takeover activity in the 1990s, Unpublished working paper. Federal Reserve Bank of Chicago, IL.
- Busta I (2007). Board effectiveness and the impact of the legal family in the European banking industry. FMA European Conference, Barcelona–Spain.
- Conyon M, Peck S (1998). Board size and corporate performance: Evidence from European countries. *Academy of Management Journal*, 41(2): 112-123.
- Clifford P, Evan R (1997). Non Executive Directors: A Question of Independence, *Corporate Governance*. *Int. Rev.* pp.224-231
- Daily CM, Dalton DR, Canella AA (2003). Corporate governance: Decades of dialogue and data. *Acad. Manag. Rev.* 28(3):371-382.
- Dalton DR, Daily CM, Ellstrand AE, Johnson JL (1998). Meta-analytic reviews of board composition, leadership structure and financial performance. *Strat. Manag. J.* 19:269–290.
- Dalton CM, Dalton DR (2005). Boards of directors: Utilizing empirical evidence in developing practical prescriptions. *Br. J. Manag.* 16:91-97.
- Davis J, Schoorman D, Donaldson L (1997). Toward a stewardship theory of management. *Acad. Manag. Rev.* 22(1).
- Dechow PM, Sloan RG, Sweeney AP (1996). Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC. *Contemp. Account. Res.* 13(1):1-36.
- Donaldson T, Preston LE (1994). The stakeholder theory of the corporation: Concepts, evidence, and implications. *Acad. Manag. Rev.* 20(1):65-91.
- Eisenhardt KM (1989). Agency theory: An assessment and review. *Int. J. Manag.* 5:341-353.
- Grove H, Patelli L, Victoravich L, Xu P (2011). Corporate governance and performance in the wake of the financial crisis: Evidence from US commercial banks, corporate governance. *Int. Rev.* 19(5):418-436.
- Hassan SU (2012). Corporate Governance, Earnings Management and Financial Performance: A Case of Nigerian Manufacturing Firm. *Am. Int. J. Contemp. Res.* 2(7).
- Jensen MC, Meckling WH (1976). A theory of the firm: Governance, residual claims, and organizational forms. *J. Financ. Econ.* 3(4):305-360.
- Jensen MC (1993). The modern industrial revolution, exit, and the failure of internal control systems. *J. Financ.* 48:831-880.
- Klapper LF, Love I (2002). Corporate Governance, Investor protection and Performance in Emerging Markets, World Bank Policy Research working Paper No. 2818. Available at <http://dx.doi.org/10.2139/ssrn.303979> retrieved on 19 July, 2015.
- Love I, Rachinsky A (2007). Corporate governance, ownership and bank performance in emerging markets: Evidence from Russia and Ukraine, Working paper.
- Mak Y, Kusnadi Y (2005). Size Really Matters: Further Evidence on the Negative Relationship Between Board Size and Firm Value. *Pacific Basin Finance J.* Vol. 13.
- Mulbert PO (2010). Corporate governance of banks after the financial crisis - Theory, evidence, reforms. ECGI – Law Working Paper No 130/2009.
- Musa FJ (2006). The impact of Corporate Governance on the performance and value of banks in Nigeria: An Agency Approach, *Nigerian J. Account. Res.* 1(4).
- Pathan S, Skully M, Wickramanayake J (2007). Board size, independence and performance: An analysis of Thai banks. *Asia-Pacific Financial Markets* 14 (2):211-227.
- Pearce JA, Zahra SA (1992). Board Composition from a Strategic Contingency Perspective. *J. Manag. Stud.* 29(4):414-438.
- Romano G, Guerrini A (2012). Corporate governance and accounting enforcement actions in Italy. *Manag. Audit. J.* 27(7):622-638.
- Sanda A, Minkailu AS, Garba T (2005). Corporate governance mechanisms and firm financial performance in Nigeria. AERC Research paper 149 Nairobi: <http://www.aercafrica.org/documents/Rp.149>.
- Shleifer A, Vishny RW (1997). A survey of corporate governance. *J. Financ.* 52:737-783.
- Shelash ASI (2011). The Effect of banks governance on banking performance of the Jordanian commercial banks: Tobin's Q Model "An Applied Study". *Int. Res. J. Financ. Econ.* 71:34-47.
- Sierra G, Talmor E, Wallace J (2006). An examination of multiple governance forces within Bank holding companies. *J. Financ. Services Res.* 29:105–1.
- Simpson WG, Gleason AE (1999). Board Structure, Ownership, and Financial Distress in Banking Firms, *Int. Rev. Econ. Financ.* 3:281-292.
- Song J, Windram B (2004). Benchmarking audit committee effectiveness in financial reporting. *Int. J. Audit.* 8:195-205.
- Staikouras P, Staikouras C, Agoraki ME (2007). The effect of board size and composition on European bank performance. *Euro. J. Law Econ.* 23(1):1-27.
- Tanna S, Pasiouras F, Nnadi M (2008). The effect of board size and composition on the efficiency of UK banks. Coventry University, Economics, Finance and Accounting Applied Research Working Paper, No. 2008-05.
- Vance SC (1978). Corporate governance: Assessing corporate performance by boardroom attributes, *J. Bus. Res.* 6(3):203–220.
- Xie B, Davidson WN, DaDalt PJ (2003). Earnings management and corporate governance: The role of the board and the audit committee. *J. Corporate Financ.* 9:295-316.
- Zattoni A, Cuomo F (2010). How independent, competent and incentivized should non – executive directors be? An empirical investigation of good governance codes, *Br. J. Manag.* 21:63-79.

Full Length Research Paper

The empirical analysis of oil revenue and industrial growth in Nigeria

Victor Ushahemba Ijirshar

Department of Economics, Benue State University, Makurdi-Nigeria.

Received 25 April 2015; Accepted 10 August, 2015

This study examined the impact of oil revenue on industrial growth in Nigeria. The data for this study were sourced from Organization of Petroleum Exporting Countries Bulletin, Central Bank of Nigeria (CBN), CIA World Fact Book, and National Bureau of Statistics (NBS), publications such as the CBN statistical Bulletin and CBN Economic and Financial Review Bulletin. ADF test was conducted for stationarity and variables were all integrated at first difference; Johansen co-integration test also revealed a long-run positive influence of oil revenue growth on the industrial growth in Nigeria; VEC estimates show that the coefficient of error correction term is insignificant though with the expected sign and low magnitude of 3.5%. The R^2 of 0.9328 and R^2 adjusted of 0.8717 collectively show that 87.17% of changes in industrial growth was explained by the movement in the explanatory variables incorporated in the model. The study recommended a sustained policy formulation and implementation in the industrial/petroleum sector of the economy through the involvement of stakeholders. The formulation and implementation of oil revenue should be judiciously used to facilitate infant industries through advanced industrial policies like import substitution, among others. Also, the government should be sensitive of company taxes and interest rates charged on loanable funds as it may scale many investors; it makes Nigeria economy more business friendly relative to other developing countries. Nigeria industrial sector should begin to focus on the production of capital goods while national security should be strengthened and tightened to curb the activities of Boko Haram, armed robbers, kidnappers and ethnic militants so as to protect and encourage investment in the country.

Key words: Industrialization, oil revenue, diversification and company income tax.

INTRODUCTION

The need to promote industrial sector has continued to be a major concern of most developing countries. The reason for this awakened interest in industrialization can be traced to the fact that a significant level of industrialization offers a place in a growing economy. Since Nigeria's independence in 1960 different administrations

have introduced policies targeted at not only diversifying the country's economy but making industry the engine of economic growth. Some of these policies include the import substitution approach and the indigenization programme. Import Substitution or Resource-based Strategy was adopted under the First National

*Corresponding author. E-mail: ijirsharvictor@gmail.com.hor

Author(s) agree that this article remain permanently open access under the terms of the [Creative Commons Attribution License 4.0 International License](https://creativecommons.org/licenses/by/4.0/)

Development Plan (1962–1968) essentially to enable the country import capital goods like machinery, tools and spare parts and by so doing, facilitate the assembly of these products within the country, while encouraging the manufacture of consumer goods. Though still largely dominated by low technology light industries (Dare-Ajayi, 2007), the introduction of the indigenization policy as contained in the Nigerian Enterprises Promotion Decree of 1972 reserved certain categories of industrial activity, mostly services and manufacturing, for Nigerians (Ikpeze et al., 2004) which Nigerian shareholders obtained majority shares in companies hardly changed the control of neither the companies nor the relationship with their parent companies. Several policies like Industrial Policy in 1988, Structural Adjustment Programme (SAP) in 1986 can be argued that it further worsened the already difficult situation of Nigeria's industries. For instance, the liberalization of the foreign exchange regime and the high interest rate associated with the period was to lead to inflation and low purchasing power of consumer. Further, a collapse of basic infrastructures and social services since early 1980s accompanied this trend (World Fact Book, 2013).

Though the GDP composition by sector revealed that industrial growth has a relatively higher sectoral contribution of 43% to the Nigeria economy with the Industrial production growth rate of 0.9% in 2013 (NBS, 2014). The Nigerian economy is heavily dependent on the oil sector, which, accounts for over 95 percent of export earnings and about 40 percent of government revenues according to the International Monetary Fund. According to the International Energy Agency, Nigeria produced about 2.53 million barrels per day, well below its oil production capacity of over 3 million barrels per day, in 2011 (Wikipedia, 2015). The average daily crude oil production in the Second Quarter of 2014 was recorded at 2.21 million barrels per day as against 2.11 million barrels per day in the corresponding quarter of 2013, an increase of 0.10 million barrels per day or 4.7%. In addition, the US dollar price of crude increased significantly from an average price of 104.31 in Q2 2013 to 112.25 in Q2 2014, an increase of 7.6 percent. Thus, oil revenue was valued at ₦2,633,328.61 million in nominal terms in the Second Quarter of 2014, compared to ₦2,633,328.61 million recorded in the corresponding quarter of 2013. Real growth in the Oil sector was recorded at 5.40% in Q2 2014 (-5.22% quarter-on-quarter), indicating better performance compared to -16.42% growth recorded in Q2 of 2013 (NBS, 2014). However, there is dearth of information about the impact of oil revenue on industrial growth in Nigeria, given rise to the basic question: To what extent does oil revenue impact industrial growth in Nigeria. This study therefore seeks to fill this gap in knowledge by examining the impact of oil revenue on industrial growth in Nigeria which has recently remained unclear. The objectives of the study are to:

- i. examine the trend of industrial growth in Nigeria
- ii. determine the causal relationship between oil revenue and industrial growth in Nigeria
- iii. analyze the impact of oil revenue on industrial growth of Nigeria economy

Hypotheses

H₀₁: There is no causal relationship between oil revenue and industrial growth in Nigeria

H₀₂: Oil revenue has no significant impact on the industrial growth of the Nigeria economy

CONCEPTUAL FRAMEWORK

Industrialization

According to Oxford Dictionary of Economics industrialization is the process of moving resources into the industrial sector. The total output of all the facilities producing goods within a country's manufacturing output; the output of all factories in a country is a subset of industrial output. Industrialization is about the introduction and expansion of industries in a particular place, region or country (Obioma and Ozughalu, 2005). Anyanwu et al. (1997) describe industrialization as the process of building up a nation's capacity to convert raw materials and other inputs to finished goods and to manufacture goods for other production or for final consumption. Industrialization enhances the utilization of productive inputs (labour, capital and raw materials), given the country's technology, to produce non-durable and durable consumer goods, intermediate goods and capital goods for domestic consumption, export or further production. Thus industrialization could be described as the process of transforming raw materials, with the aid of human resources and capital goods into (a) consumers goods, (b) new capital goods which allows more consumers goods (including food) to be produced with the same human resources, and (c) social overhead capital, which together with human resources provides new services to both individuals and business (Ekpo, 2005). Kirkpatrick et al. (1981) posited that industrialization involves a number of changes in economic structure of a country such as a rise in the relative importance of manufacturing industry; a change in the composition of industrial output; and changes in production techniques and sources of supply for individual commodities

Oil revenue

This is the total amount of income derived from the sale of crude oil in an economy. Nations where oil revenue is

generated, it is expected to contribute to the growth of other sectors and the entire economy in line with the Hirschman's unbalanced growth theory (Hirschman, 1953). In Nigeria, oil revenue is the major source of the economy upon which budgets and other fiscal policies are majorly estimated.

Theoretical framework

It is imperative and noteworthy to examine whether oil revenue can enhance industrial growth to help curtail economic growth and to definitely establish whether the theories reviewed has any linkage to the stated problem under study. Using the Dutch disease theory which states that, the discovery of a natural resource (primary) has negative consequences which results from any large increase in foreign currency, including foreign direct investment, foreign aid or a substantial increase in natural resource prices. The impediments of oil revenue to economic growth and development of oil-dependent states at the neglect of other sectors is what is cumulatively called Dutch Disease in the literature of development economics (Ottawa, 2001). The enormous influx of cash resulting from oil tends to foster, overzealous and imprudent expenditure. High oil revenue raises exchange rates, promotes adverse balance of payment as the cost of imports rises. In fact, it kills incentive to risk investment in non-oil sectors, the competitiveness of all non-oil sectors such as agriculture and manufacturing industries would be crowded out. If the employment of both labour and other resources has been exchanged for unemployment as the government and private expenditure multipliers have been exported abroad. Together, these forces constitute what Michael (2001) calls the rentier effect, oil states being "rentier states". The study also reviewed the unified growth theory that is consistent with the preceded Industrial Revolution through the gradual shift in the workplace to larger and more centralized production units leading the industrial growth.

Empirical review

Ekpo (2014) revealed that in a quest for industrialization in Nigeria, different industrial policies have been implemented. The study explores the industrial policies and the performance of industrial sector. The study showed that the policies, identified as ISI, EPI and FPII have not helped Nigeria to attain the required level of industrialization that can produce dynamic change in the economic structure of the country and the performance of industrial sector especially manufacturing had been below expectation. The study revealed that the policies have a common feature of foreign inputs reliance which makes their successful implementation in Nigeria very

costly and recommends proper conception and implementation of industrial policy, human capital development especially sciences and technical education for skill development, acquisition of relevant technology in the world, massive public investment in the provision of roads, rail system and electricity, and completion or rehabilitation of industrial core projects especially iron and steel projects.

Riman et al. (2013) had set forth in their study to explore the intertwining relationships that exist between oil revenue shock, non-oil export and industrial output in Nigeria. In achieving the objective the study utilized data spanning the period 1970-2010. This period captured the major era of regime shift (changes in governance) and policy administration in Nigeria. Vector Autoregressive (VAR) model and cointegration technique were used to examine the long run relationship, while the Vector Error Correction Model (VECM) was used to analyze the short-run behavior of the variables. The Johansen cointegration analysis suggests that a long run behavior exists between oil revenue shock, non-oil export, policy/regime shift and industrial output in Nigeria. The short-run result showed that the speed at which industrial output will converge towards long-run equilibrium after experiencing shock from oil revenue is very slow. It therefore would take a very slow process for industrial output to recover from shock arising from variation in oil revenue. The long run result shows that oil revenue shock and policy/regime shift had negative impact on industrial output and non-oil export. The impulse response function and variance decomposition analysis suggest that the major drivers of industrial development in Nigeria are non-oil export, regime shift and oil revenue. Thus innovations from these variables impact severely on industrial growth in Nigeria. The study therefore suggested among other things that the panacea to industrial growth in Nigeria rest on diversifying the economy away from crude oil export and ensuring a stable government in Nigeria that will endure long enough to sustain industrial and other economic policies.

RESEARCH METHODOLOGY

This research work is fundamentally analytical and descriptive as it embraces the use of secondary data in examining the oil revenue and industrial growth in Nigeria. The data for the study were obtained mainly from secondary sources, particularly from Organization of Petroleum Exporting Countries Bulletin, Central Bank of Nigeria (CBN), CIA World Fact Book, and National Bureau of Statistics (NBS), publications such as the CBN statistical Bulletin and CBN Economic and Financial Review Bulletin. Data were sourced from the internet and other related literature. Of course, the descriptive tool consists of graphs, descriptive test statistics while the analytical tools consist of the econometrical tests (e.g unit root test, causality test, co-integration test and error correction test). According to Sakellaris (2000), the production of gross output in an industry is described by the following equation:

$$Y_t = Z_t f(U_t, K_t, L_t, M_t) \quad (1)$$

Where,

Z_t is a factor that captures disembodied technological change, L_t is labor input, M_t is materials input, $K_t = K_t^s + K_t^e$ is the sum of the capital stock of structures and equipment respectively, and U_t is the rate of utilization of capital in production. The capital stocks are the outcome of past investment decisions by industry firms and of depreciation due to use according to the following equations:

$$K_t^s = \sum_{i=1}^{\infty} (1 - d_{t-i}^s) I_{t-i}^s \quad (2)$$

$$K_t^e = \sum_{i=1}^{\infty} (1 - d_{t-i}^e) I_{t-i}^e q_{t-i} \quad (3)$$

It is assumed that investment, I , becomes productive with a lag of one period, that is, there is "time to build". The index q measures the technical efficiency of different vintages of equipment. Note that in equation (1) the study gives the assumption that there is no embodied technological change in structures.

The production function given by (1) is essentially a description of how a mix of inputs, one of them being technology, leads to a certain amount of output being produced. It is generally used to describe operations in a production function. Firms do not usually operate at full capacity but find themselves utilizing only part of their capacity to produce output. This results to lack of information on the inputs; firms would choose if they were to operate at capacity and how much output they would produce as a result of the current levels of technology. Conceptually, the functional form in (1) should describe operations at capacity as well. Thus, the firms in the industry have the capacity to produce according to the following equation.

$$Y_t^c = Z_t f(U_t^c K_t, L_t^c, M_t^c) \quad (4)$$

Where

L_c and M_c are the levels of labor and material inputs when capital is utilized at capacity. Note that capital utilization at capacity, U_t^c , may not be equal to one.

Capacity utilization is then defined as,

$$cu_t = Y_t / Y_t^c \quad (5)$$

Assuming a linear production function by Cobb-Douglas,

$$Y_t^c = f(K, L, M) = K^\alpha L^\beta M^\gamma \quad (6)$$

then equation (6) becomes:

$$\ln Y_t^c = \alpha \ln U_t^c + \alpha \ln K_t + \beta \ln L_t + \gamma \ln M_t + \ln K_t + U_t \quad (7)$$

Thus, the model that was estimated in the course of this study is stated stochastically as:

$$\ln INGR = b_0 + b_1 \ln OILR + b_2 \ln CTAX + b_3 \ln INTR + b_4 \ln REXR + U_t \quad (8)$$

Where;

- INGR = Industrial Output (growth rate) in Nigeria
- OILR = Oil Revenue growth rate in Nigeria
- CTAX = Company Income Tax
- INTR = Real Interest rate
- REXR = Real exchange rate

- b_0 = Constant Intercept
- b_1, b_4 = Slope of Coefficients of the explanatory variables that are captured in the model.
- U_t = Stochastic disturbance term.
- \ln = Natural logarithm

The paper used both descriptive statistical tools and econometric tools. The study used the Augmented Dickey Fuller Test (ADF) to ascertain the stationary properties of the time series. The ADF formula was specified as:

$$\Delta P_{it} = \beta_1 + \beta_{2t} + \sigma P_{it-1} + \alpha \sum_{i=1}^m \Delta P_{it-1} + \varepsilon_{it} \quad (9)$$

Thus, Granger causality test was employed to determine the causal relationship between the variables under study. There are four possible outcomes regarding causal relationships: unidirectional causality, bidirectional causality and finally, lack of any causal relationship between variables. It is thus stated as:

$$y_t = a_0 + a_1 y_{t-1} + \dots + a_l y_{t-l} + b_1 x_{t-1} + \dots + b_l x_{t-l} + e_t \quad (10)$$

$$x_t = a_0 + a_1 x_{t-1} + \dots + a_l x_{t-l} + b_1 y_{t-1} + \dots + b_l y_{t-l} + u_t \quad (11)$$

for all possible pairs of series in the group.

The ECM incorporates both the short run and the long run effects. The purpose of the ECM is to indicate the speed of adjustment from the short-run equilibrium to the long-run equilibrium state. The greater the coefficient of the parameter, the higher the speed of adjustment of the model from the short-run to the long run state will be. Therefore, equation (8) can be represented to include ECM to reflect the short run dynamics as:

$$\Delta \ln INGR_t = b_0 + \sum_{i=1}^n b_{1t} \Delta \ln INGR_{t-1} + \sum_{i=1}^n b_{2t} \Delta \ln OILR_{t-1} + \sum_{i=1}^n b_{3t} \Delta \ln CTAX_{t-1} + \sum_{i=1}^n b_{4t} \Delta \ln INTR_{t-1} + \sum_{i=1}^n b_{5t} \Delta \ln REXR_{t-1} + U_t \quad (12)$$

Data presentation and analysis

The trend analysis of industrial growth in Nigeria (1970-2013)

It can be observed from the trend of industrial growth (Figure 1) that there has been a downward trend in the growth of industrial output from 1971 to 1974, 1983 to 1993 and 1996 to 2007. Although the trend indicated smooth ups and downs which clearly indicate that there are fluctuations in industrial growth, it is very uncertain whether it is a function of oil revenue until ascertained by its significant impact on the industrial output in Nigeria.

RESULT OF THE DESCRIPTIVE STATISTIC

A cursory look at the 44 observations in Table 1 has revealed that, between 1970 to 2013, the industrial growth, growth rate of oil revenue, company income tax, interest rate and real exchange rate averaged about 42.7, 42.2, 24.3, 11.2 and 41.6% and the maximum value of the industrial growth, growth rate of oil revenue, company income tax, interest rate and real exchange rate recorded in 1970, 1995, 1991, 1993 and 2013 are 80.2, 362.1, 99.4, 26, 164 respectively; with their corresponding

INGR

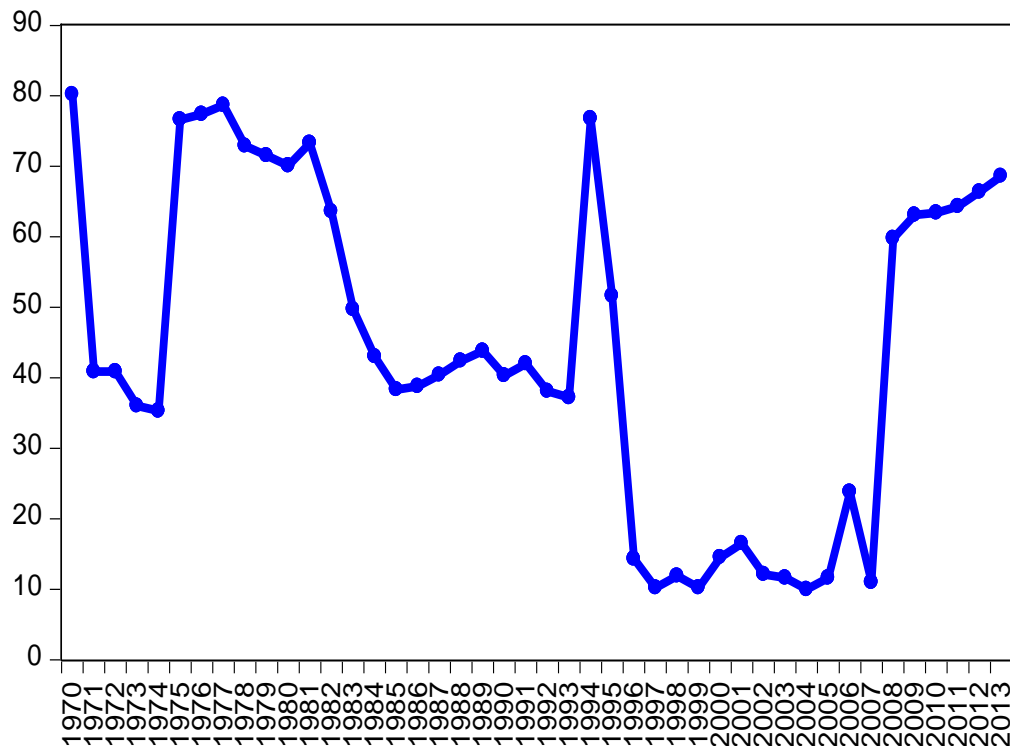


Figure 1. The trend of industrial growth in Nigeria (1970-2013).

Table 1. The summary of descriptive statistic.

	INGR	OILR	CTAX	INTR	REXR
Mean	42.65854	42.24299	24.25436	11.17000	41.55925
Median	40.90000	23.42078	18.20331	12.25000	8.037800
Maximum	80.20000	362.1416	99.40000	26.00000	164.0000
Minimum	10.00000	-40.80108	-16.40000	3.500000	0.500000
Std. Dev.	23.68960	75.39055	25.87570	5.462634	56.20138
Skewness	0.075284	2.390515	1.262820	0.376231	0.964069
Kurtosis	1.755471	9.937072	4.518767	2.593614	2.155992
Jarque-Bera	2.684684	121.2596	14.83774	1.249388	7.568036
Probability	0.261233	0.000000	0.000600	0.535425	0.022731
Sum	1749.000	1731.963	994.4286	457.9700	1703.929
Sum Sq. Dev.	22447.88	227349.4	26782.07	1193.615	126343.8
Observations	44	44	44	44	44

minimum values of 10%, -40.8%, -16.4%, 3.5%, and 0.5 been captured in 2004, 1998, 1983, 1976 and 1980 respectively. The deviation of industrial growth, growth rate of oil revenue, company income tax, interest rate and real exchange rate showed 23.7, 75.4, 25.9, 5.5 and 56.2 respectively. However, the variables that would have been considered ideal for economic growth were estimated at 40.9, 23.4, 18.2, 12.3 and 8%. It is worthy to note that the total unit of industrial growth, growth rate of

oil revenue, company income tax, interest rate and real exchange rate was computed at 1749, 1731.963, 994.4286, 457.97 and 1703.929% respectively. The Jarque Bera test of normality for the variables revealed biasness (for INGR and INTR) and no bias (for OILR, CTAX and REXR) as reported by the high (INGR and INTR) and low (OILR, CTAX and REXR) probability value, as well as high and low skewness and kurtosis statistics respectively.

Table 2. Result of unit root test for order of integration of the variables (ADF).

Variables	ADF with Constant and Trend			ADF with Constant		
	At level	First difference	Order of integration	At level	First difference	Order of integration
INGR	-2.418043	-7.09072	I(1)	-2.123479	-7.007778	I(1)
Prob*	0.1429	0.0000		0.5185	0.0000	
OILR	-2.263735	-8.22682	I(1)	-2.247352	-8.08732	I(1)
Prob*	0.2262	0.0000		0.2306	0.0000	
CTAX	-2.783945	-8.49374	I(1)	-4.808800	-8.38674	I(1)
Prob*	0.1063	0.0000		0.0819	0.0000	
INTR	-2.088569	-6.703771	I(1)	-2.170906	-8.177113	I(1)
Prob*	0.2502	0.0000		0.2452	0.0000	
REXR	-0.544813	-6.067506	I(1)	-1.666936	-6.308147	I(1)
Prob*	0.9864	0.0000		0.7486	0.0000	

INGR= Industrial Growth, OILR = Oil revenue (rate), CTAX = company income tax, INTR = Interest rate and REXR = Real Exchange rate. Source: Computed from the Unit Root Test (ADF). Note: These critical values are computed from Mackinnon (1996) and if the probability value of a particular variable is less than the 5% critical value, we reject the null hypothesis of the variable having a unit root. The asterisk (*) denotes rejection of the unit root hypothesis at 5% critical level

Result of unit root tests

The test result of the Augmented Dickey-fuller statistic for the time series variables used in the estimation are presented in Table 2. From the results of unit root (with constant and trend), all the variables (INGR, OILR, CTAX, INTR and REXR) were integrated at the first difference i.e I(1). This is because their probability values were less than 5% critical value at first difference.

Results of pairwise Granger causality

The results of pairwise granger causality spanning 1970-2013 in Table 3 revealed that there is unidirectional relationship between interest rate and oil revenue in Nigeria running from Interest Rate (INTR) to the growth of oil revenue (OILR) and between Company Income Tax (CTAX) and OILR running from CTAX to OILR all at 5% critical level. Pairwise granger causality reported no causal relationship between oil revenue growth and industrial growth in Nigeria.

Johansen hypothesized co-integration result

The Johansen hypothesized co- integration was carried out to determine the number of stationary long-run relationship among the variables included in the study. It offers two tests, the trace test and the Eigen value test, with a view to identify the number of co-integrating relationships.

From Table 4 it is revealed that there is co-integration among the variables. This is because the trace statistic of

71.61853 is greater than the critical value of 69.81889 at 5% level of significance. We reject the null hypothesis of none * of the hypothesized number of co-integrating equations. Accordingly, Trace statistic test indicates 1 co-integrating equations at 5 percent level of significance. For the remaining number of hypothesized co-integrating Equations (at most 1, 2, 3 and 4), we do not reject the null hypothesized as their trace statistics values are less than the critical values at 5 percent level of significance.

Also, the Eigen value test rejects the null hypothesis if the Eigen value test statistics exceeds the respective critical values. From Table 5, it is revealed that, there is no co-integration among the variables. This is because none of the Max-Eigen statistics is greater than the critical value at 5% level of significance. We therefore do not reject the null hypothesis of any null hypothesized number of co-integrating equations meaning that there is no co-integrating equation reported in the Max-Eigen test. Thus, the numbers of hypothesized co-integrating equations (none, at most 1, 2, 3 and 4) were not rejected since their Max-Eigen statistics values were less than the critical values at 5 percent level of significance. Evidenced from the Trace statistics, there is a long-run relationship between industrial growth and oil revenue in Nigeria.

The impact of oil revenue on industrial growth in Nigeria (Long-run)

In order to determine the nature of the long run relationship by the reversed coefficients using the normalized Johansen co-integrating equation based on the lowest log likelihood.

Table 3. Pairwise Granger causality test result.

Null hypothesis	Obs	F-Statistic	Prob.
OILR does not Granger Cause INGR	42	0.24241	0.7860
INGR does not Granger Cause OILR		0.93292	0.4025
CTAX does not Granger Cause INGR	42	0.08350	0.9201
INGR does not Granger Cause CTAX		0.90462	0.4135
INTR does not Granger Cause INGR	42	2.22522	0.1240
INGR does not Granger Cause INTR		0.15714	0.8552
REXR does not Granger Cause INGR	42	0.11487	0.8918
INGR does not Granger Cause REXR		2.56665	0.0904
CTAX does not Granger Cause OILR	42	3.40977	0.0437
OILR does not Granger Cause CTAX		1.27240	0.2921
INTR does not Granger Cause OILR	42	4.98163	0.0129
OILR does not Granger Cause INTR		0.03764	0.9631
REXR does not Granger Cause OILR	42	0.50928	0.6051
OILR does not Granger Cause REXR		1.04938	0.3603
INTR does not Granger Cause CTAX	42	1.96080	0.1568
CTAX does not Granger Cause INTR		2.34739	0.1114
REXR does not Granger Cause CTAX	42	0.07642	0.9266
CTAX does not Granger Cause REXR		0.30095	0.7419
REXR does not Granger Cause INTR	42	0.44876	0.6423
INTR does not Granger Cause REXR		0.33197	0.7199

Table 4. Result of unrestricted co-integration rate test (Trace).

Null hypothesis	n-r	Hypothesized No of CEs	Eigen value	Trace statistic	0.05 critical value	Prob **
$r = 0$	4	None *	0.586304	71.61853	69.81889	0.0357
$r \leq 1$	3	At most 1	0.388114	38.07881	47.85613	0.2986
$r \leq 2$	2	At most 2	0.325819	19.41284	29.79707	0.4635
$r \leq 3$	1	At most 3	0.098447	4.431083	15.49471	0.8658
$r \leq 4$	0	At most 4	0.012887	0.492898	3.841466	0.4826

Trace test indicates 1 co-integrating equation(s) at the 0.05 level *denotes rejection of the hypothesis at the 0.05 level. **Mackinnon-Haug-Michelis (1999) p-values.

Table 5. Result of unrestricted co-integration rank test (Maximum Eigen value).

Null hypothesis	n-r	Hypothesized No of CEs	Eigen value	Max-Eigen statistic	0.05 critical value	Prob **
$r = 0$	4	None	0.586304	33.53972	33.87687	0.0548
$r \leq 1$	3	At most 1	0.388114	18.66597	27.58434	0.4408
$r \leq 2$	2	At most 2	0.325819	14.98176	21.13162	0.2902
$r \leq 3$	1	At most 3	0.098447	3.938185	14.26460	0.8658
$r \leq 4$	0	At most 4	0.012887	0.492898	3.841466	0.4826

Max-Eigen value test indicates no co-integrating equation(s) at the 0.05 level *denotes rejection of the hypothesis at the 0.05 level.**Mackinnon-Haug-Michelis (1999) p-values.

It is stated as:

$$\begin{aligned} \ln\text{INGR} = & 0.664497\ln\text{OILR} - 0.378231\ln\text{CTAX} \\ & (0.11495) \quad (0.35555) \\ & + 0.452815\ln\text{INTR} + 0.462066\ln\text{REXR} \\ & (1.62894) \quad (0.12212) \end{aligned}$$

Note: Standard Errors in parenthesis.

The coefficient of OILR is correctly signed (positive). The coefficient of the oil revenue is statistically significant at 5% critical level. It implies that, any unit change in OILR will lead to 66.4% increases in Industrial growth (INGR). Thus, there is a strong positive and significant relationship between oil revenue and industrial growth in Nigeria. This signifies that, oil revenue growth is statistically significant at 5% critical level in influencing the industrial output in Nigeria in the long run during the time under study. This is consistent with the findings of Riman et al. (2013) who suggested that a long run behavior exists between oil revenue shock, non-oil export, policy/regime shift and industrial output in Nigeria. More so, the coefficient of CTAX is correctly signed (negative). The coefficient of the company income tax is not statistically significant at 5% critical level. Although, it implies that any percentage change (increase) in CTAX will lead to 37.8% decreases in industrial growth. This finding conform the theoretical underpinnings of the relationship. This may not be unconnected with the behavior of investors towards increase in taxes.

Furthermore, the coefficient of interest rate and real exchange rate are positive which has negated the apriori expectation of negativity and statistically insignificant (interest rate).

Empirical results of the dynamic model (ECM)

There is long-run equilibrium relationship among the variables in the regression model; however, it is the short-run that transmit to the long-run. Thus, error correction mechanism is therefore used to correct or eliminate the discrepancy that occurs in the short-run. The coefficients of the explanatory variables in the error correction model measure the short-run relationship. Thus, the first order specification of the model VAR is selected with a constant and a time trend. The results are summarized in Table 6. The short run estimates in Table 6 shows that, INGR in the current period (t) is influenced by 0.472852 holding all other variables constant.

The coefficient of INGR_{t-1} (that is in the previous year) is correctly signed, being positive though not statistically significant at 5% level. This implies that any percentage change (increase) in INGR in the previous year will lead to 0.022(2.2%) increases in the current INGR. (i.e INGR_t). More so, the coefficient of OILR_{t-1} is not correctly signed being negative. Beside it is not statistically significant at

Table 6. Vector error-correction estimates.

Variable	Coefficient	Standard errors [t-statistic]
INGR_{t-1}	0.022037	(0.16599)[0.13276]
OILR_{t-1}	-0.005747	(0.03612)[-0.15910]
CTAX_{t-1}	-0.037545	(0.09520)[-0.39438]
INTR_{t-1}	1.277763	(0.96407)[1.32539]
REXR_{t-1}	-0.010996	(0.22988)[-0.04783]
ECM	-0.035045	(0.07552)[-0.46403]
C	0.472852	(2.67283)[0.17691]

$R^2 = 0.932834$, $R^2 = 0.871264$ F- statistic = 15.15096; Akaike information criterion = 96.24032, Schwarz criterion = 99.43088.

5% critical level. Thus, there is no strong and significant relationship between oil revenue and industrial growth in the short run. Although it implies that, any percentage change (increase) in OILR in the previous year will lead to -0.0057(0.57%) decreases in industrial growth. The coefficients of CTAX_{t-1} and REXR_{t-1} are correctly signed while INTR_{t-1} is incorrectly signed. Both variables are not statistically significant at 5% critical level.

Furthermore, the coefficient of error correction term is insignificant though with the expected sign but low magnitude (-0.035045). Its magnitude indicates that if there is any deviation the long run equilibrium is adjusted slowly where about 3.5% of the disequilibrium maybe removed each period (that is, each year).

It is obvious from the coefficient of multiple determinations (R^2) that the model has a good fit as the independent variables were found to jointly explain 93.28% of the movement in the dependent variable with the R^2 -adjusted (R^2) of 87.17%. The fitness of the model is continued by the F-statistic which is significant at 15.15096 which explains the overall significance of all the variables incorporated in the model. Coefficients of the short run dynamics show that, oil revenue is not statistically significant at 5% critical level indicating that, oil revenue does not significantly affect the industrial growth of the Nigerian economy in the short-run.

CONCLUSION AND RECOMMENDATIONS

The study concludes that oil revenue has positive significant influence on industrial growth in the Nigeria economy in the long run. Though oil revenue from the empirical literature reviewed is not efficiently managed evidenced by its insignificant relationship with industrial growth in the short run, continuous accumulation of this revenue has positive significant effect in the long run. The study therefore recommends that:

- There should be sustained policy formulation and implementation in the industrial/petroleum sector of the economy through the involvement of stakeholders at both the formulation and implementation of petroleum policies.

ii. Oil revenue should be judiciously used to facilitate infant industries through advanced industrial policies like import substitution, among others. Import of capital goods like machinery, tools and spare parts should be encouraged as it will help in facilitating the assembly of these products within the country

iii. Government should be sensitive with the level of company taxes and interest rate charged on loanable funds as it may increase the number of investors, and make Nigeria economy more business friendly relative to other developing countries. This would increase investment by private individuals, multi-national companies as it would assist the manufacturing sector to achieve economic growth and development. Thus investment should be encouraged through tax incentives. This would lead to more industries that would lead to more industrial output.

iv. To sustain industrialization in Nigeria, manufacturing production should begin to focus on the production of capital goods. Government should make conscious and deliberate efforts to negotiate and acquire available technology in the world in specific areas like industrial sector.

v. National security should be strengthened and tightened to curb the activities of Boko Haram, armed robbers, kidnappers and ethnic militants so as to protect and encourage investment in the country. While industrial core projects (ICPs), such as Ajaokuta Iron and Steel Plants, among others, embarked upon by the government should be completed or rehabilitated and make to function properly in the country.

vi. The study also suggests that Small and Medium Scale Entrepreneurs should be encouraged since they are the major drivers of the production of products for non-oil export.

Conflict of Interests

The author has not declared any conflict of interests.

REFERENCES

- Anyanwu JC, Oyefus A, Oaihenan H, Dimowo FA (1997). "The Structure of the Nigerian Economy". Onitsha, Nigeria: Joannee Educational Publishers Ltd
- Dare-Ajayi D (2007), "Recent Trends and Patterns in Nigeria's Industrial Development", *Afr. Dev.* 32:139-155
- Ekpo UN (2014). "Nigeria Industrial Policies and Industrial Sector Performance: Analytical Exploration", *IOSR Journal of Economics and Finance (IOSR-JEF)* e-ISSN: 2321-5933, p-ISSN: 2321-5925. 3(4):01-11 www.iosrjournals.org
- Ekpo AH (2005). "Industrialization and Nigeria's Economic Development" in *The Challenges of Industrialization : A Pathway of Nigeria Becoming a Highly Industrialized Country in the Year 2015*, Nigerian Economic Society, Ibadan, pp.3-26.
- Hirschman AO (1953). *The Strategy of Economic Development*, 1st Edition, New Haven.
- Ikpeze N, Soludo C, Elekwa N (2004), "Nigeria: The Political Economy of the Policy Process, Policy Choice Implementation" in Soludo C, Ogbu O, Chang H (eds.), *The Politics of Trade and Industrial Policy in Africa: Forced Consensus?*, New Jersey: Africa World Press/IDRC
- Michael R (2001). "Crude Oil Politics. Atlantic: Monthly April, Transparency International Corruption Perception Index".
- National Bureau of Statistics (2014). "Nigerian Gross Domestic Product Report, Quarter two 2014", Abuja–Nigeria.
- Obioma EC, Ozugahalu UM (2005). "Industrialization and Economic Development: A Review of Major Conceptual and Theoretical Issues". In: *The Challenges of Industrialization: A Pathway to Nigeria becoming a Highly Industrialized Country in the Year 2015*, Nigerian Economic Society, Ibandan pp.63-97.
- Otawa, M. (2001). "The National Security Strategy of the United States", Washington DC: US Government Printing Office.
- Riman HB, Akpan ES, Offiong AI, Ojong CM (2013). "Nexus between Oil Revenue, Non-oil Export and Industrial Output in Nigeria: An Application of the VAR Model", *Int. J. Financ. Econ.* 1(2):48-60.
- Sakellaris P (2000). "Production Function Estimation with Industry Capacity Data". University of Maryland and Board of Governors of the Federal Reserve System.
- Wikipedia (2015). "Petroleum industry in Nigeria", www.wikipedia.com.
- World Fact Book (2013). "Central Intelligence Agency.

Full Length Research Paper

Comparison of REIT Dividend Performance in Nigeria and Malaysia

Olusegun Olaopin Olanrele*, Rosli Said and Md Nasir Daud

Department of Estate Management, Faculty of Built Environment, University of Malaya, 50603, Kuala Lumpur, Malaysia.

Received 25 June 2015; Accepted 17 August, 2015

The global survey of Real Estate Investment Trusts (REITs) has indicated a high performance nature of REIT as an investment vehicle for the real estate sector. Studies have been conducted across the REIT markets of America, Europe and Asia-Pacific with similar result of high income yield to the investors. However, there have been no report of the Africa REIT except South Africa Property Unit Trust and Property Loans Stock that features in the EPRA Global REIT survey. In an attempt to assess performance of Nigeria REIT and bring it to global awareness, this paper investigates the performance of Nigeria REIT (N-REIT) in its 7 years of existence (2007 to 2014) using Malaysia REIT (M-REIT) as a benchmark and possible improvement. The study adopted risk adjustment return analysis of the dividend distribution over the period of the REITs establishment. The study found that Nigeria REIT underperforms the benchmark, Malaysia REIT, both in terms of average return 4.8% and risk adjusted return -6.77% per annum against the Malaysia REIT 7.5% and 2.47% respectively. There is no significant differences in the risk return ratio for the two REITs. The underperformance of the Nigeria REIT suggest that the superior performance of REIT does not apply across all REIT markets, suggesting that differences in REIT structure and features can be a determining factor(s) in investment performance. The study recommends an increased capitalisation, market transparency and external management option for N-REITs performance enhancement. The non-evaluation of multivariate effect of these factors in this study is considered to be a limiting factor. Such study could be a future research focus.

Key words: Dividend return, Malaysia, Nigeria, REIT performance, risk adjusted return.

INTRODUCTION

Real estate investment trusts (REITs) are companies that pool together fund from investors and invest the fund in income producing real estate or real estate related assets and distribute the profit before tax to investors (shareholders) in form of dividends (Ong et al., 2011; Oreagba, 2006). Odunsi (2011) defined REIT as a

collective investment scheme that enables investors to pool their resources together to form, own and manage portfolios of real estate properties. REIT has gained global acceptance as a viable and rewarding, high return yielding investment. Therefore, REIT regimes have been established across the continents of the world at different

*Corresponding author. E-mail: oankutsede@ug.edu.gh

Table 1. REIT Regulatory structure and characteristics for Nigeria and Malaysia.

	Nigeria REIT	Malaysia REIT
Management	Internal Management	External
Minimum Capitalisation	NGN1bn (US\$5m)	RM100m (US\$28m)
Property Investment	At least 75% on real estate assets for close end and 70% on real estate assets for open end.	75% (50% in real estate asset and 25% in related securities)
Overseas Investment	No	Yes, Securities Commission's approval required
Property Development	Yes, only for inclusion in portfolio	Yes in case of uncompleted or property under construction up to 10% of total asset
Gearing	25% of fund	50% of fund
Distribution	At least 90%	At least 90%
Capital gain tax	Exempted	Exempted
Stamp duty	15%	Exempted
Unit Holder	Minimum of 100	No restriction but foreigners cannot hold more than 70%.
Market transparency	Opaque	Transparent
Withholding tax	10% in the hand of unit holders	10% WHT on Shareholders
Listing	Nigerian Stock Exchange (NSE)	Bursa Malaysia – not mandatory
Regulatory body	Securities and Exchange Commission (SEC)	SC guidelines on REITs 2012 (2005 for Islamic REIT)
Legislation	Investment and Securities Act (ISA) 2007	Securities Commission Act, 1993; Malaysian Income Tax Act of 1967, and Capital Market Services Act 2007
Capitalisation	US\$224m	US\$7.1bn

Source: Authors' compilation from EPRA 2014; ISA, 2007; Pham, 2013; Newell and Osmadi, 2009.

times. Generally, for a company to qualify to operate as a REIT and enjoy the peculiar benefit of the tax exemption at the corporate level, there are requirements to be met. These include (1) investing not less than 70% of the fund in real estate or real estate related assets, (2) generate 75% of income from real estate and related investments, (3) distribute 90% of pre-tax income to shareholders as dividend, (4) must be owned by not less than 100 persons among others. The distribution of almost all the profit as dividend qualifies REITs for tax exemption and lead to the high return yielding quality but also creates a challenge of profit reinvestment whenever the opportunity presents itself. REIT is of three types, (i) Equity, (ii) Mortgage and (iii) Hybrid, which is a combination of the first two. REIT started in the United States of America (USA) in 1960 and has since grown globally to not less than 817 companies with capitalisation of US\$1.4 trillion (EPRA, 2014).

REIT was established in Nigeria following the enactment of the Investment and Securities Act (ISA) of 2007 (Odunsi, 2011; Oreagba, 2010). The Securities and Exchange Commission (SEC) is the regulatory body for REIT in Nigeria and issued the first set of registration and operation requirements and guidelines which led to the listing of the first two REITs in Nigeria, Skye Shelter REIT in 2007 and Union Homes (UHOMES) REIT in 2008. In 2013, the Nigeria REIT industry witnessed the entry of

UPDC REIT as the third REIT. The total capitalisation of REIT in Nigeria is US\$224million (NSE, 2014). REIT in Malaysia started back in 1989 as Property Trust Fund fashioned in line with the Australian Listed Property Trust model (Hwa, 2009; Newell and Osmadi, 2009; Pham, 2013). The Malaysia Central Bank (Bank Negara Malaysia) approved the first regulatory framework under the Company Act 1965 and Securities Commission Act 1983 (Rozali and Hamzah, 2006). The securities commission then became the regulator (Hwa, 2009) and published further guideline which was revised in 2002. The Malaysian REIT in the modern form came into existence in 2005 following the revision of the guidelines in 2002 (Ong et al., 2011). Malaysian REIT has 17 listed REIT companies (13 conventional and 4 Islamic) with a total capitalisation of US\$7.1billion (EPRA, 2014). Table 1 shows the REIT structure of Nigeria and Malaysia.

Studies on REIT performance, growth and its diversification benefits in both the developed and emerging markets across America, Europe and Asia are extensive. The findings were reported in literatures and past studies (Hamzah and Rozali, 2010; Liow and Adair, 2009; Newell et al., 2013; Newell and Osmadi, 2009; Ong et al., 2012). Few studies have investigated Nigerian real estate securities and property market (Amidu and Aluko, 2006; Amidu et al., 2008; Olaleye and Ekemode, 2014).

The Malaysian REIT market has also been investigated

extensively and the performance in term of dividend distribution and price appreciation is adjudged high and in most cases, higher than the market benchmark (FBMKLCI) as reported in Newell and Osmadi (2009), Newell et al. (2002), and Pham (2013). On the contrary, the Nigerian REIT sector has not attracted a study of its performance. Odunsi (2011) investigated the challenges and performance of adopting REIT structure in financing real estate in Nigeria. The study could not assess the N-REIT performance due to lack of trading data to compute index series for the Nigeria REIT. Other studies that has studied real estate securities in Nigeria did not include REIT in their studies (Amidu et al., 2008 and Olaleye and Ekemode, 2014). The Nigerian economy is the largest in the African continent with growth rate of 8.5% and has established REIT regime for 8 years. This paper investigates the dividend return performance of the Nigerian REIT using the Malaysia REIT as benchmark. M-REIT was chosen because of common features the two countries share in their REITs structures and regulations and being the regional leader in terms of economic progress. While Nigeria is regarded as the giant of Africa with the largest economy, Malaysia is called the Asian tiger leading the ASEA countries economic development.

REIT PERFORMANCE ANALYSIS

REIT performance analysis as a securitised investment in real estate and mortgages has consideration for two important factors which are (i) the prices of REIT stocks in the stock market (share price) and (ii) the net operating income from real estate assets. While the share price movement in the stock market is an indication of value/capital appreciation, the income from underlying property assets determines the dividend distribution. The difference in the stock market and the property market is also reflected in the price movements. Prices moves (changes) in stock market every minute but, it takes some time for prices of properties to change (Chan et al., 2003). The performance of REIT most time has been adjudged higher than the market with little distortion that may arise as a result of general economic situation like the various economic crisis (Asian 1997 or GFC 2007-8). Chan et al. (2003) summarised that REIT outperformed the stock market at a specific time period with a risk adjusted return while it underperformed the stock market in the long run. The unstable performance trend was traced to the property market behaviour which exhibits a cyclical in return with a period of boom always followed by periods of bull and recovery and recession in a cyclical way. REIT performance is also a function of type, whether equity or mortgage. Equity REIT has been found to have superior performance over Mortgage or Hybrid (Chan et al., 2003; Grupe and DiRocco, 1999).

REIT performance can be literally explained in terms of its operational success which is revealed in its profitability

to the investors. Returns from REITs are primarily derived from dividend yield and share price appreciation of the REIT. REIT markets have proved extremely successful in U.S. Australia, and in the emerging REIT markets in Asia and in Europe (Hoesli and Lizieri, 2007). The operations of Real Estate Investment Trusts (REITs) are tailored towards investing in income generating real estate assets, most especially commercial properties - office and retail properties. The recent trend however shows that REIT fund is invested in healthcare and hospitality facilities as well as high rise income yielding residential properties (condominium), industrial and agricultural properties.

Investment performance analysis could be done in many ways. Preceding studies adopted risk return approach, with emphasis on risk adjusted returns (Newell and Osmadi, 2009; Newell and Peng, 2012; Newell et al., 2002). Some studies have compared different REIT volatility with different indices like the Sharpe ratio, Treynor index. Others compare REITs return with their respective market index like S&P500 index, AUX 200, index, NAREIT index, KLCI index or KLPI index. Some others find the correlations between REIT and other investment vehicles while some investigated the contributions or impact of different determining factors of REIT performance on the dividend. While Jensen, Sharpe and Treynor indexes measures performance on a risk adjusted basis, more studies adopted Jensen alpha as a systematic risk adjusted method of performance measurement (Kim and Jang, 2012). The investment portfolio is another factor in the performance evaluation. Using value weighted portfolio such as S&P 500 index as a proxy is not uncommon in REIT performance assessment but usually result in higher Jensen index than the equity weighted portfolio (Chan et al., 1990; Han and Liang, 1995; Titman and Wang, 1986). REITs are relatively average stock or small capitalized stocks, therefore the adoption of S&P500 index as a benchmark may not reflect the small cap nature of REITs. REITs are also more of equity weighted than value weighted stock (Kim and Jang, 2012).

This study focused on the dividend return performance of REIT in Nigeria with the aim of learning some lessons from the Malaysia REIT experience. The study therefore adopted M-REIT as the benchmark against a closer South Africa, the only African country in the coverage of EPRA reports. However, South Africa just legislated in favour of REIT in 2013, it has operated both PUT and PLS from 2002 to 2013 and will not offer a competitive REIT experience.

METHODOLOGY AND DATA

Previous studies have identified and agreed that REITs have similar characteristics of return and risk to the stocks in the capital market and its performance can be assessed in the same way stock performance is assessed (Cannon and Vogt, 1995; Fisher et al., 2007; Glascock et al., 2000; Han and Liang, 1995; Lee and Chiang,

Table 2. Malaysia REIT Dividend Return for the Period 2005 – 2014.

REIT	Dividend														Aggregate Return			
	2005		2006		2007		2008		2009		2010		2011		2012	2013	2014	
	RM	%	RM	%	RM	%	RM	%	RM	%	RM	%	RM	%	%	%	%	
AHP	0.05	4.47	0.05	6.62	0.055	6.20	0.06	8.22	0.065	7.20	0.07	7.35	0.072	7.15	8.72	8.91%	8.20%	
UOAREIT	-		0.039	5.61	0.085	6.12	0.085	7.66	0.1	7.90	0.115	7.90	0.1	6.25				
STAREIT	-		0.035	4.34	0.067	7.15	0.069	9.50	0.069	8.08	0.065	7.50	0.066	7.63				
TWRREIT	-		-		0.053	3.27	0.085	9.64	0.094	8.20	0.1	8.20	0.1	8.50				
AMFIRST	-		-		0.073	7.11	0.088	10.84	0.098	9.30	0.098	8.31	0.098	7.85				
ARREIT	-		-		0.054	5.10	0.07	9.60	0.072	8.37	0.072	8.42	0.073	8.21				
HEKTAR	-		-		0.107	7.09	0.102	12.25	0.103	9.20	0.103	8.17	0.105	8.20				
QCAPITAL	-		-		0.005	0.28	0.065	7.02	0.075	6.95	0.077	7.26	0.08	7.19				
ATRIUM	-		-		0.065	6.27	0.084	13.25	0.07	7.55	0.086	9.15	0.085	8.15				
Annual Return		4.47		5.54%		5.35		9.78		8.08		8.01		7.68	8.72%	8.91%	8.20%	7.47%

Source: Authors computation from Malaysia REITs' annual reports and Malaysia Stock Exchange – Bursa Malaysia.

Table 3. Nigeria REIT Dividend Return for the period 2008 – 2014 (SkyeREIT).

Year	Dividend return
2008	4.63%
2009	5.69%
2010	5.28%
2011	3.65%
2012	4.12%
2013	4.65%
2014	5.89%
Average Return	4.8%

Source: Authors computation from SkyeREIT's annual reports.

is the availability of the annual report of the REIT for a period not less than 5 years. At the time of data collection, 9 M-REITs met the selection criterion. The average returns for years 2005 to 2011 were computed manually using the extracted data from the sample REITs annual reports while the annual average returns for the years 2012 to 2014 were collected from the website of the Malaysian Stock Exchange (Bursa Malaysia). Average returns for the REIT companies were computed for each year to arrive at aggregate yearly return for the REITs and the mean return for the period of REIT existence in Malaysia was calculated to represent the average annual returns for the REIT sector (Table 2). REIT was established in Nigeria in 2007 with 3 listed REITs. Only Skye Shelter REIT has the record of dividend distribution for not less than 5 years as reveal by the annual reports expressed on a yearly yield basis. The average return for the period of REIT existence in Nigeria is calculated and it represents N-REIT rate of return (Table 3).

In order to compute the risk adjusted return for both REITs, the standard deviation was calculated and the yield on government securities from the countries' respective central banks was adopted as risk free yield (10.35 for Nigeria and 3.2% for Malaysia). Figure 1 presents the aggregate annual yields.

EMPIRICAL RESULT

The risk adjusted performance analysis of Nigeria and Malaysia REITs for their respective period of existence is presented in Table 4. Nigeria REIT has average annual return of 4.8% while Malaysia REIT yield 7.5% on an annual average. N- REIT performs lower than the benchmark M-REIT. Nigeria REIT presents a low volatility investment with lower risk of 0.8% against Malaysia REIT which offered 1.74%. This saw N-REIT having 46% of the level of M-REIT risk. This risk scenario is not unexpected as it is consistent with the conventional belief of low risk, low return and high risk, high return. Nigeria REIT has a lower return and lower risk. This is further strengthened by the risk return ratio of 0.17 for Nigeria and 0.23 for Malaysia. However, the risk return ratio does not show a significant difference between the two markets. The risk adjusted return performance for Malaysia REIT shows a superior performance and

2010; Liang et al., 1996; Mueller and Mueller, 2003; Mueller et al., 1994). This study adopted the dividend return analysis of both Nigeria and Malaysia REITs.

In Malaysia, there are 17 REITs (13 conventional and 4 Islamic). The conventional REIT constitutes the sample frame for the study. The decision rule for sample selection

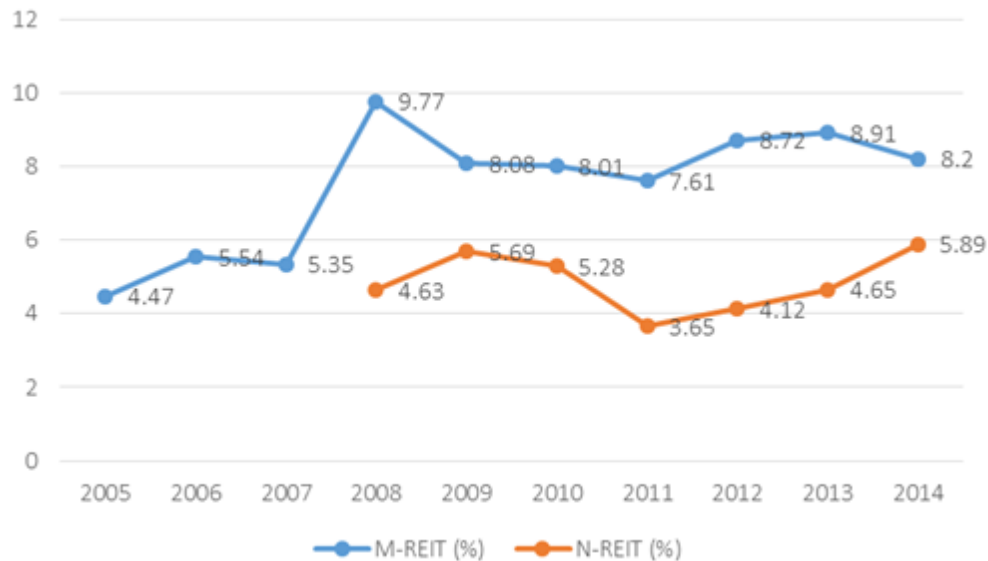


Figure 1. Aggregate Annual REIT Return (yield).

Table 4. Risk adjusted performance analysis.

	N-REIT	M-REIT
Average Annual return	4.8%	7.5%
Annual risk	0.82%	1.74%
Risk free yield	10.35%	3.2%
Risk-Return Ratio	0.17	0.23
Sharpe Ratio	-6.77	2.47

delivered the higher return of 2.4%, clearly outperformed Nigeria REIT (-6.77%).

This study assessed the performance of Nigeria REIT using Malaysia REIT as its benchmark. The study found that Nigeria REIT underperform the benchmark (M-REIT) in terms of both average return and risk adjusted return, a low performance result.

DISCUSSION

The study found a low performance REIT in term of dividend return to investors. The findings of minimal performance contradict the popular consensus of superior performance of REIT in most markets. Havsy (2012) found average long term yield of REIT in America to have outperformed the S&P500 index with 7 to 8% yield. The dividend from Asian REIT in 2010 was between 4.1% and 9.3% as reported by the Philippine First Metro Investment Corporation (FMI) in 2010. Alias and Soi Tho (2011) also reported dividend yield of between 4.79% and 13.46% for three Malaysian REITs in 2007 to 2008 outperforming the KLCI. However, the finding of this study suggests that

Nigeria is one of the few markets that have low REIT return in agreement with the studies of Osmadi (2007), Ooi and Liow (2003) and Peng and Newell (2012) indicating REIT underperformance. Chan et al. (2003) warned that REITs do exhibit low performance especially in the period of economic/financial crisis. N-REIT came into existence amidst global financial crisis.

Most of the earlier studies compare REIT return performance with their market or other indexes serving as benchmarks. This study chooses a similar REIT market sector performance as a benchmark (M-REIT). The choice of benchmark prompts a careful examination of the REIT structures of both the benchmark and the comparable as presented in Table 1 in order to identify what could be responsible for a wide gap in the performance between M-REIT and N-REIT, and such a low N-REIT performance. The study identified three areas of differences in the REIT structure in respect of capitalisation, management style and transparency. In term of size, Nigeria REIT is a low capitalised (US\$224m) compare to Malaysia REIT (US\$7.1bn). The N-REIT adopted internal management system against M-REIT's external management style. The transparency rating of the real estate markets by JLL in 2014 ranks Nigeria in the opaque region and Malaysia in the transparent region (Table 1). These items/factors of differences were linked to previous studies that have explored their effects on REIT performance. Linneman (1997) reported a significant economies of scale benefit to highly capitalised REITs and was corroborated by another study of Ambrose and Linneman (2001) that a larger size REIT makes a higher profit. Bers and Springer (1998); Capozza and Lee (1995); Capozza and Seguin (1998) and Rosentha I (1996) agreed that a big size REIT easily

identify opportunities in the market and usually bid for properties that possess potential for higher returns. Alias and Soi Tho (2011) posit a positive relationship between size, profit and yield. The result was in agreement with the position of the larger the size, the better the performance.

However, other studies found a negative relationship between capitalisation and yield (Chan et al., 2003; Hardin III and Hill, 2008; Yong et al., 2009). Their view was that after an optimum size is reached in capitalisation, the economies of scale benefit start to diminish with increased running cost that minimises the profit. Both Nigeria and Malaysia REITs are considered low capitalised (small size) REIT market but the Malaysia REIT is bigger in size and has outperformed N-REIT. Thus, the findings of larger size, higher yield is upheld by this study.

Chan et al. (2003) said management style (advisor puzzle) is another factor determinant of REIT performance. Earlier studies found that internally managed REITs outperformed externally managed REITs (Ambrose and Linneman, 2001; Cannon and Vogt, 1995; Capozza and Seguin, 1998; Golec, 1994). The argument was that payment to an external manager in terms of fees reduces profit and also that externally managed REITs seek growth in terms of property development and acquisitions. The finding of this study is in contrast to the high performance result for the internally managed REIT. Nigeria REIT is internally managed and underperform Malaysia REIT which is an externally managed REIT. Intertwined with management effect on REIT performance is the transparency status of the market. Baum (2008) reiterated the effect of political risk on investment funds. A sub-factor of importance under political risk is market transparency. The postulation is that the more transparent a market is, the better the investment funds flow and the higher the performance and yield. JLL (2014) out of 103 countries, ranked Nigeria 'opaque' (86) and Malaysia 'transparent' (27) in the global real estate transparency index table. The findings of this study agreed that the more transparent the market, the better the REIT return and yield and the better the investment performance.

CONCLUSION

This paper examined the performance of Nigeria REIT in comparison with Malaysia REIT and find a low performance result for Nigeria REIT with negative risk adjusted return suggesting underperformance. The findings is at variance with the general consensus of REIT superior dividend yield in most REIT markets. There are a number of lessons to learn from the developed and growing REIT markets especially from the benchmark adopted in this study, Malaysia REIT.

Firstly, Nigeria REIT performance is low because it is a low capitalised REIT market. Increased capitalisation of

N-REIT can be achieved by making policies that will attract foreign direct investment (FDI) into the Nigerian property market. Secondly, this study found that externally managed REITs have good performance. In Nigeria, REITs are internally managed wherein the chief executive officer (CEO) of a REIT sponsor could become the executive chairman of the REIT subsidiary. Malaysia REIT is externally managed as stipulated in the Malaysia REIT law and an Estate Valuer is required to manage REIT. A similar provision can be made in the N-REIT laws and regulations to pave the way for adoption of external management system for REITs in Nigeria. Embedded in the management is transparency. The internal management system as being operated in Nigeria REIT sector could create an unhealthy situation in terms of transparency for N-REIT. Nigeria real estate market need to be transparent and leave the opaque rating level to attract investment in the REIT sector. Political stability, coupled with economic transparency will lead to a more vibrant REIT market and real estate sector in Nigeria. The Malaysian real estate finance sector is also a successful sector for both home ownership and development finances having low and competitive interest rates. Nigeria on the other hand has an inaccessible, obstacles filled real estate finance sector with a high interest rate (above 20%). Nigeria can learn from Malaysia real estate financing system to restructure and develop Nigerian real estate sector. Learning and adopting a working policy from other markets (economy) is not a new thing to Nigeria. In 2010/2011, the Central Bank of Nigeria (CBN) adopted the Malaysia 'Cagamas' model to rescue the financial market (banking sector) from total collapse due to the effect of the global financial crisis of 2007/2008. The CBN established Asset Management Corporation of Nigeria (AMCON) which acquired the 'sick' banks, shore up their capital base with funds and repackaged the rescued banks for sale to the public. M-REIT can also be emulated for a viable REIT sector development in Nigeria.

STUDY LIMITATION

The study investigates the performance of Nigeria REIT and compares it with the Malaysia REIT using the dividend return. In the course of the study, some factors were identified to have influence on performance as presented by the differences in REIT structures. The findings of this study were discussed in relation to the differences in the structure and their impact on REITs. The study did not investigate all factors that affect REIT performance to ascertain their multivariate effect. This is considered as a limitation of the study and could be an enhancement of this study in the future research.

Conflict of Interests

The authors have not declared any conflict of interests.

REFERENCES

- Alias A, Soi TCY (2011). Performance Analysis of REITS: Comparison between M-REITS and UK-REITS. *J. Survey. Construct. Property*, 2(Special issue):38-61.
- Ambrose BW, Linneman PD (2001). REIT Organisational Structure and Operating Characteristics. *J. Estate Res.* 21(3):141-162.
- Amidu A, Aluko BT (2006). "Performance analysis of listed construction and real estate companies in Nigeria" *J. Real Estate Portfolio Manage.* 12(2):177-185.
- Amidu A, Aluko BT, Nuhu MB, Saibu MO (2008). Real estate security and other investment assets. *J. Property Invest. Financ.* 26(2):151-161.
- Baum A (2008). Unlisted Property Funds: Supplying Capital to Developing Property Markets? Paper presented at the Inter. Real Estate Res. Symposium (IRERS 2008), Kuala Lumpur, Malaysia.
- Bers M, Springer T (1998). Economies - of - scale for real estate investment trust. *J. Real Estate Res.* 14:275: 290.
- Cannon S, Vogt S (1995). REITs and their management: An analysis of organisational structure, performance and management compensation. *J. Real Estate Res.* 10, 297-317.
- Capozza DR, Lee S (1995). Property types, size and REIT value. *J. Real Estate Res.*, 10(4), 363 - 380.
- Capozza DR, Seguin PJ (1998). Managerial style and firm value. *Real Estate Econ.*, 26, 131 - 150.
- Chan KC, Hendershott PH, Sanders AB (1990). Risk and Return on real estate: evidence from equity REITs. *Real Estate Econ.* 18(4):431-452.
- Chan SH, Erickson J, Wang K (2003). *Real Estate Investment Trusts: Structure, Performance and Investment Opportunities*. New York, USA: Oxford University Press.
- EPRA. (2014). *Global REIT Survey 2014: European Public Real Estate Association*.
- Fisher J, Geltner D, Pollakowski H (2007). A quarterly transactions-based index of institutional real estate investment performance and movements in supply and demand. *J. Real Estate Finance and Econ.* 34:5-33.
- Glascok JL, Lu CL, So RW (2000). Further evidence on the integration of REIT, bond and stock returns. *J. Real Estate Finance, Econ.* 20(2):177-194.
- Golec J (1994). Compensation policies and financial characteristics of real estate investment trusts. *J. Account. Econ.* 17, 177-205.
- Grupe MR, DiRocco CJ (1999). The NAREIT index of REIT industry performance. *Real Estate Finance*, 16(1):21-50.
- Hamzah AH, Rozali MB (2010). Empirical Investigation on the Performance of the Malaysian Real Estate Investment Trusts in Pre Crisis, During Crisis and Post Crisis Period. *Intern. J. Econ. Finance*, 2(2), 62-69.
- Han J, Liang Y (1995). The historical performance of real estate investment trusts. *J. Real Estate Res.* 10(3), 235-262.
- Hardin III WG, Hill MD (2008). REIT Dividend Determinant: Excess Dividends and Capital Markets. *Real Estate Econ.* 36(2), 349 - 369.
- Hoesli M, Lizieri C (2007). *Real Estate in the Investment Portfolio. A report for the Investment Strategy Council* (pp. 94-95). Norway: Ministry of Finance.
- Hwa TK (2009). Impact of Single-Tier Taxation System on Dividend Returns of Indirect Property Investment in Malaysia. *J. Valuat. Property Sci.* 9(1).
- JLL. (2014). *Global Real Estate Transparency Index*.
- Kim J, Jang SC (2012). Comparative analyses of hotel REITs: examining risk-return and performance characteristics. *Inter. J. Contemporary Hospit. Manage.* 24(4), 594-613.
- Lee ML, Chiang K (2010). Long-run behaviour of equity REITs: become more like common stocks after the early 1990s. *J. Property Invest. Financ.* 28(6):454-465.
- Liang Y, Chatrath A, McIntosh W (1996). Apartment REIT and apartment real estate. *J. Real Estate Res.* 11(3):277-289.
- Linneman P (1997). Forces changing the real estate industry forever. *Wharton Real Estate Rev.* 1:1-12.
- Liow KH, Adair A (2009). Do Asian real estate companies add value to investment portfolio? *J. Property Invest. Financ.* 27(1):42-64.
- Mueller AG, Mueller G.R. (2003). public and private real estate in a mixed-asset portfolio. *J. Real Estate Portfolio Manage.* 9(3):193-203.
- Mueller GR, Pauley KR, Morrill WKJ (1994). Should REIT be included in a mixed asset portfolio? *Real Estate Financ.* 11(1):23-28.
- Newell G, Adair A, Nguyen TK (2013). The significance and performance of French REITs (SIICs) in a mixed asset portfolio. *J. Property Invest. Financ.* 31(6):575-588.
- Newell G, Osmadi A (2009). development and preliminary performance of Islamic REIT in Malaysia. *J. Property Res.* 26(4):329-347.
- Newell G, Peng H (2012). The significance and performance of Japan REITs in a mixed-asset portfolio. *Pacific Rim Property Res. J.* 18(1):21-34.
- Newell G, Ting KH, Archeampong P (2002). Listed Property in Malaysia. *J. Real Estate Literature* 10:109-118.
- Odunsi AB (2011). Challenges and Performance of Adopting REIT Structure in Financing Real Estate in Nigeria. (M.Sc. Thesis), University of Reading, United Kingdom.
- Olaleye AA, Ekemode B (2014). Integration between real estate equity and non-real estate equity. *J. Property Invest. Financ.* 32(3):244-255.
- Ong TS, Teh BH, Chong MP (2011). A Study on the Performance of Malaysian Real Estate Investment Trusts from 2005-2010 by using Net Asset Value Approach. *Internat. J. Econ. Financ.* 2(1):1-15.
- Ong TS, The BH, Soh CH, Yan YL (2012). Malaysian Real Estate Investment Trusts: A performance and Comparative Analysis. *Int. J. Econ. Financ.* 4:73-84.
- Oreagba F (2006). Real Estate Investment Trusts (REITs). Paper presented at the Seminar on Real Estate Investment Trust, Lagos, Nigeria.
- Oreagba F (2010). Position paper on implementation of REIT in Nigeria (N-REIT): A seminar on Real Estate Investment Trust (REIT): Nigerian Stock Exchange.
- Pham AK (2013). An empirical analysis of real estate investment trusts in Asia: Structure, performance and strategic investments implications. (PhD Thesis), University of Western Sydney, Australia.
- Rosenthal M (1996). Bigger REITs, better REITs. *Institutional Investor*, 30(February):101.
- Rozali MB, Hamzah AH (2006). The Performance of Listed Property Trust in Malaysia: An Empirical Investigation. Paper presented at the 12th Pacific Rim Real Estate Society Conference, Auckland, New Zealand.
- Titman S, Wanga A (1986). "Risk and the performance of real estate investment trusts: a multiple index approach". *J. Am. Real Estate Urban Econ. Assoc.* 14(3):414-431.
- Yong J, Allen DE, Lim LK (2009). AREIT returns from 1990-2008: A multi-factor approach. Paper presented at the 18th World IMACS/MODSIM Congress, Cairns, Australia. <http://mssanz.org.au/modsim09>

SUCCESS

African Journal of Business Management

Related Journals Published by Academic Journals

- Journal of Geography and Regional Planning
- Journal of Economics and International Finance
- Journal of Hospitality Management and Tourism
- International Journal of Sociology and Anthropology
- Journal of Public Administration and Policy Research
- African Journal of Marketing Management

academicJournals