



SOKOTO

Journal of Management Studies

ARTICLES

Strategic Renewal, Corporate Venturing and Internationalization of Banks in Nigeria **By** **Ango Nuhu Aliyu Ph.D.**

Corporate Financial Policy and Performance of Non -Interest Financial Institutions in Nigeria **By** **Nuraddeen Usman Miko, Ph.D. and Idris Mohammed**

Impact of Changes in Ownership Structure on Performance of Quoted Manufacturing Firms in Nigeria **By** **Adigbole Ezekiel A. (PhD); Olaoye Clement O., Ph.D. and Fakiyesi, Oyindamola A. and Dikki Anetie E., Ph.D.**

Effects of Product Quality on Customer Retention: A Study of Selected Table Water Firms in Niger State **By** **Iyanuoluwa Oni and Ahmad Audu Maiyaki, Ph.D.**

Impact of Liquidity Management on the Financial Performance of Banks: Evidence from Nigeria Deposit Money Banks **By** **Babatunde, Abdullahi Adio**

Weighing the Challenges of Managing Higher Educational Institutions in Nigeria: Is Progressive Utilization Theory (PROUT) A Respite **By** **Abubakar Allumi Nura, PhD.. and Bilyaminu Tukur**

The 1999 Constitution and the Revenue Allocation Act in Nigeria: Congruent and Incongruent **By** **Nuruddeen Muhammad Koko and Azmil Moh'd Tayeb**

Associated Factors of Unemployment and Imperatives for Sustainable Development in Nigeria **By** **Dimis Inusa Mai-Lafiya; Eneji Mathias Agri; Rosemary A. Anga; Josephine O. Onuoha; John Naphtali and Marcela Bagla**

Unemployment, Poverty and Security Challenges in Nigeria **By** **Ruqaiyat Mohammed Ka'oje, Ph.D.**

Empirical Analysis of Free Trade Agreements (FTAs) on Nigeria's Economic Growth **By** **Adekunle Akeem Adeyemi; Ebipanipre Gabriel Mieseigha; Taophic Olarewaju Bakare**

Effect of Social Infrastructure and Managerial Skills on the Performance of Small and Medium Enterprises (SMEs) in Gombe State **By** **Ahmed Audu Maiyaki, Ph.D. and Kabiru Shuaibu Muhammad**



A Quarterly Publication of The Faculty of Management Sciences, Usmanu Danfodiyo University, Sokoto-Nigeria

PUBLISHED BY
THE FACULTY OF MANAGEMENT SCIENCES
Usmanu Danfodiyo University, Sokoto - Nigeria

Impact of Changes in Ownership Structure on Performance of Quoted Manufacturing Firms in Nigeria

ADIGBOLE EZEKIEL A., Ph.D.^{*}, OLAOYE CLEMENT O., Ph.D. AND
FAKIYESI, OYINDAMOLA A.^{**} AND DIKKI ANETIE E., Ph.D.^{***}

Abstract

This study examined the impact of ownership structural changes on performance of quoted manufacturing firms in Nigeria. Specifically, the study analyzed the impact of changes in ownership concentration, change in equity capital and change in debt capital on performance measured in terms of return on asset and return on capital employed. The study sampled five quoted manufacturing firms randomly over a period of five (5) years (2012-2016). Data collated were analyzed using correlation analysis, pooled OLS estimation, fixed effect estimation and random effect estimation. The results of the study revealed that ownership concentration exerts insignificant negative impact on return on asset and return on capital employed, with 0.015686 unit decline in return on asset for every percentage change in the ownership concentration, and decline of 0.2225643 in return on capital employed, change in equity capital by a million will increase return on asset by 5.67e-06, and return on capital employed by .0004006, change in debt capital has the capacity to decline return on asset by -3.25e-08, as against its positive influence of 8.23e-06 on return on capital employed. It can be concluded that even though structural changes enhance performance, changes in ownership concentration and debt capital has the capacity to impede improved performance of manufacturing firms. Hence, it is suggested that manufacturing firms in Nigeria should be strategic in their actions when it comes to structural changes in terms of changes in ownership concentration and debt capital so as not to erode their prospect of improving their performance.

Keywords: *Structural Changes, Performance, Quoted, Manufacturing Firms, Nigeria*

Introduction

Maintaining a definite capital structure has always been a fundamental issue in the discourse of performance of quoted firms, all over the world. This is

^{*} Adigbole Ezekiel A., Ph.D. is a lecturer in the Department of Accounting, Faculty of Management Sciences, University of Ilorin.

^{**} Olaoye Clement O., Ph.D. and Fakiyesi, Oyindamola A. are lecturers in the Department of Accounting, Faculty of Management Sciences, Ekiti State University, Ado-Ekiti, Ekiti State.

^{***} Dikki Anetie E., Ph.D. is a lecturer in the Department of Accounting, Institute of Administration, ABU, Zaria.

because the tendency of any business entity in sustaining operational stability in the dynamics of business environment depends largely on the framework and the strength of the structure that defines the organization both in terms of capital and ownership. Observably, firms that desire optimum performance and business sustainability accord great importance to what defines their structure (Chechet & Olayiwola, 2014). The structure of an organization is of key concern both to managers and stakeholders because it is the compass that positions the organization for optimum productivity and operational effectiveness (Ong & Teh, 2011). When changes in the structure of an organization (both in terms of finance mix and ownership), is not well managed, it exposes the organization to internal and external business shocks, thus eroding the tendency for optimality and efficiency (Osuji & Odita, 2012). Changes in the structure of an organization whether in terms of ownership or capital alters the momentum of operation and this goes a long way in influencing the outcome of the business. Maintaining structural optimality goes a long way in facilitating maximum business return, growth and expansion sustainability (Chandrasekharan, 2012).

Ownership structure both in terms of ownership concentration and/or ownership mix plays pivotal role in the determination and sustenance of performance of quoted firms. Obasan, Shobayo and Amaghionyeodiwe (2016) have observed that the composition of ownership of any business entity is a key determinant of the direction of performance due to owners influence on the decision that defines the framework of operation of the business. The degree of managerial, insiders or foreign ownership of a firm reflects in the functionality and the strength of strategy adopted in the organization, and this exert direct or indirect impact on the outcome of the business operation (Farooque, Zijl, Dunstan, & Karim, 2007). The interconnection between the finance mix and performance of a firm cannot be undermined. This is because finance mix defines the structure of capital employed in the operations of business entity to maximise the business aims and objectives (Saad, 2010). The structure of capital used by a firm enclosed the framework of long-term debt, short-term debt, and equity composition of a firms as a sensitive determinant of performance (Tian & Zeitun, 2007). Changes in the capital structure of any quoted firm directly or indirectly reflect itself in the operational outcome, and this could be harmful when the level of capital is not optimal (Chandrasekharan, 2012). As relayed by Velnampy and Niresh, (2012), changes in the capital structure of quoted firms has direct influence on profitability, as such for a firm to maintain optimal performance in terms of profitability, there is need to take consideration of the structure of its finance mix vis-à-vis the dynamics of the business environment. Changes in the capital structure of a firms plays a fundamental role in the discourse of cost of

finance as well as value of firm. The requirement is that the structural composition of a firm should culminate into the maximization of firm's value at a minimum cost (Chechet & Olayiwola, 2014).

Growing interest on the interconnection between structural changes and performance of quoted firms has taken several dimensions of empirical investigation in recent years. While some studies focused on tracking the impact of capital structure on performance of firms (see Chandrasekharan, 2012; Chechet & Olayiwola, 2014; Julius, Barine, & Oluwatosin, 2015; Ogebe, Ogebe, & Alewi, 2013; Ong, & Teh, 2011; Osuji, & Oditia, 2012; Simon-Oke & Afolabi, 2011; Suleiman, & Nour, 2012); others analyzed the influence of ownership structure on performance (see Albert & Appiah, 2014; Echekoba & Ananwube, 2016; Gayan & Shanika, 2016; Gugong, Arugu & Dandago, 2014; Ibrahim, 2012; Maryam & Mu'azu, 2017; Obasan, Shobayo, & Amaghionyeodiwe, 2016). Findings from these past studies only establish the role of capital structure and ownership structure in the discourse of corporate performance without giving any clue of how changes in the structure, influence performance. The observed gap stems from the fact that previous studies do not measure in actual term, changes in structural composition of firms within the fiscal year when relating it to performance. Hence, this study set to analyze the impact of structural changes on performance of quoted firms in Nigeria, with specific objectives of ascertaining the:

Impact of changes in ownership concentration on performance of quoted manufacturing firms in Nigeria;

Impact of changes in equity capital on performance of quoted manufacturing firms in Nigeria; and

Impact of changes in debt capital on performance of quoted manufacturing firms in Nigeria.

Literature Review

Concept of Structural changes

Structural change in an organization can be conceptualized as the alteration, adjustment, augmentation in the framework of finance, corporate governance and ownership of an organization (Ong & Teh, 2011). Structure of a firm could either be the structure of the finance mix i.e. the capital structure which refers to the firm's financial framework which consists of the debt and equity used to finance the firm. Capital structure in financial term means the way a firm finances their assets through the combination of equity, debt, or hybrid

securities (Saad, 2010). In short, capital structure is a mixture of a company's debts (long-term and short-term), common equity and preference shares.

Modigliani-Miller (MM) theory is the broadly accepted capital structure theory because it is the origin of capital structure theories which had been used by many researchers. According to MM theorem, capital structure theories operate under perfect market with the assumptions that: no taxes, rational investors are involved, perfect competition exist, no bankruptcy costs and there is efficient market. MM theorem states that capital structure or finances of a firm is not related to its value in perfect market. In reality, capital structure of a firm is difficult to determine. A firm has to issue various securities in a combination that can maximise its overall value; that is having an optimal capital structure. An optimal capital structure is the level of capital mix which results in the minimum weighted-average cost of capital that delivers the maximum value of the firm. Capital structure is closely link with corporate performance, as such, care must be taken by firms in obtaining a level that will maximise firm's value (Tian, & Zeitun, 2007). On the other hand, a firm's structure can be viewed in terms of control over the business and influence on the functioning and operation. According to Obasan, Shobayo, and Amaghionyeodiwe (2016) there are two divisions of ownership structure, namely, managerial/insider ownership, and foreign ownership. It was observed that ownership structure as viewed in terms of ownership concentration defines the extent of shareholders influence on the operation and functioning of the organization (Obembe, Adebisi & Adeleye, 2010). Studies on the interconnection between ownership structure and performance of firms reflect mix discoveries, while some studies found positive interrelationship (Obasan, Shobayo, & Amaghionyeodiwe, 2016; Albert & Appiah, 2014; Obembe, Adebisi, & Adeleye, 2010), others discovered negative interrelationship (see Gayan, & Shanika, 2016; Uwuigbe, 2013; Guyong, Arugu and Dandago, 2014; Reem, 2015; and Ibrahim, 2012).

Concept of Performance

Performance as a term is what every firm view as important in their business endeavour because it depicts the success or failure of activities carried out in the business. In the work of Maymand (2014), performance was defined as a general measure of a company's overall strength over a given period of time. It may also be defined as the results of a company's policies and operations in terms of money (Kabethi, 2013). Performance according to Chechet and Olayiwola (2014) measures a firm's effectiveness and efficiency in achieving predetermined organizational goals which could be financial or operational. When the performance is measured in terms of maximization of profit or

revenue it is said to be financial, while when it is measured in terms of firm's growth and/or expansion, it is operational. Organizational performance captures a firm's ability to employ the available resources towards increasing shareholders' wealth and generation of sustainable profits to strengthen its capital base (Musomba, 2012). An organization's performance indicators are centered on variables that can be attributed to productivity, growth, returns and to some extent, customer satisfaction. Also, Mihai and Mihai (2014) identified modern value creation measures for performance which are categorized under accounting, financial, and market indicators. Accounting measures include earnings per share, operating profit, return on assets and return on equity and return on capital employed; financial measures include: net present value, free cash flow; and market measures include: market value added and total shareholders return. However, most research performance indicators mostly used in quantitative empirical studies include return on asset, profit after tax, return on equity, earning per share, return on capital employed (Osuji and Osita 2012; Ong & Teng, 2011; Ogebe, Ogebe & Alewi, 2013).

Empirical Review

Empirical Evidence on the Relationship between capital Structure and Performance

Ong and Teh (2011) examined capital structure and corporate performance of Malaysian construction sector. The study specifically analyzed the relationship and interdependence between capital structure and corporate performance of firms in the construction sector before and during crisis. The study employed data from 2005-2008 for 49 listed construction companies in Main Board of Bursa, Malaysia. Data collected in the study were analyzed using pooled regression analysis. The result revealed that debt to equity market value, long term debt to common equity and debt to capital have direct impact on corporate performance of large companies and other independent variables do not affect the dependent variables. The study concluded that there is relationship between firm's capital structure and corporate governance.

Osuji and Odita (2012) investigated the impact of capital structure on the financial performance of Nigerian firms. The study collated data from 2004 to 2010 for 30 non-financial firms listed on the stock exchange, and data collated were analyzed with the use of descriptive analysis, correlation and regression techniques of analysis. The result revealed that debt ratio has negative and significant impact on return on asset and return on equity, that asset turnover and firm size have positive impact on return on asset and return on equity, but the impact of firm size on return on equity was not significant. Therefore, the

study concluded that capital structure has inverse relationship with firm performance.

Tudose (2012) assessed capital structure and firm performance. Specifically, the study examined the evolution of debates on the issue of capital structure and financial performance. The study employed conceptual, theoretical and empirical approach. The study revealed that the relationship between financial structure and financing structure is a part-whole type; the different is embedded in maturity of funds; and the choice of performance measure depends on objective. Also, the study revealed some researchers were in support of positive relationship between capital structure and firm performance; some were against positive relationship between capital structure and firm performance; while some studies provided a mixed evidence.

Julius, Barine and Oluwatosin (2015) analysed capital structure and financial performance in Nigeria. Specifically, the study focused on the impact of post-consolidation capital structure on performance of firm listed on the Nigerian Stock Exchange. The dependent variable was bank performance and the explanatory variables were bank equity and bank debt. The study collated data over the period 2005-2012 for 17 quoted firms in Nigeria. The study analysed data using regression analysis. The study revealed positive and significant impact of bank equity and debt on performance of banks in Nigeria. Therefore, the study concluded that capital structure strongly affects bank performance. Thus, the study recommended that Nigerian banks should use more debt in capital mix in order to reduce overall cost of capital; and increase the use of equity capital to improve their earnings.

Suleiman and Nour (2012) examined the effect of capital structure on the performance of Palestinian financial institutions. Specifically, the study focused on the relationship between market efficiency and capital structure of financial institution in Palestinian. The study employed return on equity and Tobin's Q as proxies for market efficiency. Capital structure was captured by return on assets, total deposit to assets, total loans to deposits and total loans to assets. The study adopted data collated over the period of 2007-2010 for 8 banks quoted in Palenstine. The study analysed data using descriptive analysis and correlation matrix. The study revealed that total deposit on asset and total loans to assets has insignificant impact on return on equity. However, the result revealed overall significant of the variables on return on equity. Also, the result revealed that only total loan on deposit has insignificant impact on Tobin's Q.

Ogebe, Ogebe and Alewi (2013) investigated the impact of capital structure on firm's performance in Nigeria. The study specifically analysed the impact of leverage and macroeconomic variables on the value of firms. The study employed data collated for the period 2000-2010 for 6 firms in Nigeria. The study analysed data using correlation analysis, pooled and fixed effect model. The result revealed that, except for leverage, all explanatory variables has positive impact on the value of highly geared firms. Also, leverage has negative and significant impact on the value of lowly geared firms; inflation and gross domestic product have positive impact on value of lowly geared firms, but the impact of gross domestic product was insignificant. However, the study revealed that impact of leverage on performance is larger for highly geared firm compared to lowly geared firms.

Empirical Evidence on the Relationship between Ownership Structure & Performance

Obembe, Adebisi, and Adeleye (2010) examined corporate governance, ownership structure and performance of manufacturing firms in Nigeria. Specifically, the study focused on the role of corporate governance on firm performance in Nigeria. The study adopted two models. The first regressed return on asset, while the second regressed Tobin's Q, on the explanatory variables. Explanatory variables of the study were market structure, ownership concentration, foreign ownership, ownership control, board size, managerial ownership, competitions, number of workers, total assets and business cycle. The study employed data collated for 76 non-financial firms over the period 1997-2007. The study analysed data using least square method and fixed effect model. The study revealed firm performance depends majorly on market structure, competition and firms.

Obasan, Shobayo and Amaghionyeodiwe (2016) assessed ownership structure and the performance of small and medium enterprises in Nigeria. The study specifically investigated the significant impact of ownership structure on the performance of small and medium scale enterprises in Nigeria. The study hypothesized that insider ownership structure and foreigner ownership structure have no significant impact on performance of small and medium enterprises in Nigeria. The study employed primary data collected from 399 owners of small and medium enterprises. The study analysed data using regression analysis and analysis of variance. The study discovered that insider ownership structure and foreign ownership structure have positive impact on performance of small and medium scale in Nigeria. Therefore, the study concluded that ownership structure has significant effect on performance of small and medium scale enterprises.

Uwuigbe, (2013) examined corporate governance and share price in listed firms in Nigeria. The study focused specifically on the relationship between corporate governance mechanisms and share price among listed firms in Nigeria. Corporate governance (dependent variable) was measured by ownership structure and audit committee. Share price was taken as explanatory variable with earning per share as control variable. The study employed data collated over the period 2007-2009 for 30 listed firms in Nigeria. The study analysed data using correlation analysis and regression analysis. the study revealed that ownership structure and earning per share have negative impact on share price while audit committee has positive impact on share price. Therefore, the study recommended, among others, that there should be moderate amount of share shareholding for board of directors in Nigeria.

Albert and Appiah (2014) investigated the effect of ownership structure and corporate governance on capital structure of Ghanaian listed manufacturing companies. The study specifically analysed the relationship between corporate governance and capital structure; and the effect of ownership structure on the leverage of listed manufacturing firms in Ghana. The study adopted data collated over the period 2007-2011 for 8 listed manufacturing firms in Ghana. The study analysed the data collected using correlation analysis and regression analysis. The study revealed that board size and board composition have positive impact on debt to equity positively; and managerial and institutional ownership have positive and significant relationship with capital structure. Also, the study revealed that firm size and profitability have significant effect on corporate financing decision. Therefore, the study concluded that corporate governance and ownership structure are major determinant of firms, capital structure.

Gugong, Arugu, and Dandago, (2014) assessed the impact of ownership structure on the financial performance of listed insurance firms in Nigeria. The dependent variable, financial performance, was captured by return on assets and return on equity while explanatory variable are managerial shareholding and institutional shareholding. The study adopted data collated over the period of 2001-2010 for 17 insurance firms listed on Nigerian Stock Exchange. The study revealed that managerial shareholding and institutional shareholding has positive and significant relationship with performance measure. Therefore, the study recommended that firms should design effective the code of corporate governance in order to assess the impact of ownership structure on performance.

Reem (2015) examined the relationship between ownership structure dimensions and corporate performance. Corporate performance was measured by return on assets and Tobin's Q. The study hypothesized that there is a negative relationship between ownership structure; significant relationship between managerial ownership and corporate performance; and significant relationship between institutional ownership and corporate performance. The study employed data for the period 2007-2011 for 6 listed companies. The study analysed data using Two stage least square. The study revealed that ownership structure has negative impact on return on equity; institutional ownership has negative effect on return on equity and effect of managerial ownership on return on equity was insignificant. However, the study revealed that managerial ownership depicted positive effect in case of reduction in ownership concentration. The study suggested that future researches can employ longer and different time series.

Methodology

Model Specification

The study measured performance of firms in terms of both Return on Asset (ROA) as calculated by the ratio of net income to total asset, and Return of Capital Employed (ROCE), calculated by dividing earnings before interest and tax by capital employed (sum of shareholder's equity and debt liabilities or total assets minus current liability). Structural changes was measured in terms of change in ownership concentration (COC) as measured by change in the concentration of shareholders at the top (share range), change in equity capital (CEC), as measured by change in total equity, and change in debt capital (CDC), as measured by change in total debt. The two models were controlled by firms size (FZ) as measured in terms of natural log of total asset. The linear representation of the two models estimated in the study is given below:

$$ROA_{it} = \beta_0 + \beta_1 \Delta COC_{it} + \beta_2 \Delta CEC_{it} + \beta_3 \Delta CDC_{it} + \beta_4 FZ_{it} + U_i \quad (\text{Model 1})$$

$$ROCE_{it} = \beta_0 + \beta_5 \Delta COC_{it} + \beta_6 \Delta CEC_{it} + \beta_7 \Delta CDC_{it} + \beta_8 FZ_{it} + U_i \quad (\text{Model 2})$$

Where:

ROA=Return on Asset (ratio)

ROCE=Return on Capital Employed (ratio)

COC=Change in Ownership Concentration (% of share concentration)

CEC=Change in Equity Capital (in million naira)

CDC= Change in Debt Capital

FZ= Firm's Size (natural log of total asset)

=Stochastic Error Term,

Source(s) of Data and Method of Analysis

Data used in the study were sourced from the annual report of 5 purposively selected quoted manufacturing firms in Nigeria. Firms sampled in the study include Nascon Allied industries Plc, Dangote Sugar Refinery Plc, Flour Mills of Nigeria Plc, Guinness Nigeria Plc, and Vita foam Plc. The study covered a period of five (5) years (2012-2016).

Data collated were analyzed using correlation analysis, pooled OLS estimation, fixed effect estimation and random effect estimation, followed by post estimation test for evaluating estimations for consistency and efficiency.

Data Analysis, Interpretation and Discussion of Results

Correlation Analysis

Result presented in Table 1 revealed that there is negative correlation between return on asset (ROA) and all the explanatory variables used in the study. In specific terms, the result showed correlation coefficient of -0.1535, -0.1027, -0.0804, -0.5238 for return on asset and change in ownership concentration, return on asset and change in equity capital, return on asset and change in debt capital, return on asset and firm's size respectively. This implies that changes in ownership concentration, equity capital, debt capital and firm's size move in opposite direction with return on asset, meaning over the period covered in the study across sampled firm, as return on asset increases, change in ownership concentration, changes in equity capital and debt capital falls. Correlation coefficient reported in table 1 for return on capital employed and the explanatory variables stood at -0.4161, 0.0967, 0.0134, -0.0996 for return on capital employed; and change in ownership concentration, change in equity capital, change in debt capital and firm's size respectively. The result reflects that return on capital employed moves in the same direction with change in equity and change in debt capital, but in opposite direction with change in ownership and firm's size. Reported correlation coefficient for pairs of explanatory variables stood at -0.1479, -0.0661, -0.2276, 0.3421, 0.5333, 0.2427 for COC and CEC, COC and CDC, COC and FZ, CEC and CDC, CEC and FZ, CDC and FZ respectively.

Table 1: Correlation matrix

	ROA	ROCE	COC	CEC	CDC	FZ
ROA	1.0000					
ROCE	0.8332	1.0000				
COC	-0.1535	-0.4161	1.0000			
CEC	-0.1027	0.0967	-0.1479	1.0000		
CDC	-0.0804	0.0134	-0.0661	0.3421	1.0000	
FZ	-0.5238	-0.0996	-0.2276	0.5333	0.2427	1.0000

Source: Authors' Computation, (2018)

Pooled OLS Estimations Results

Result presented in Table 2 revealed impact of explanatory variables on return on asset and return on capital employed when heterogeneity effect across firms sampled in the study is not given consideration. As reported in table 2 all the explanatory variables exert negative impact on return on asset and return on capital employed except change in equity capital. The result showed that in the absence of heterogeneity effect across firm higher changes in ownership concentration, debt capital and firm's size will culminate into both reduced return on asset and return on capital employed, while increased changes in equity capital leads to improved return on asset, and return on capital employed. Result showed that the impact of change in ownership on return on capital employed is statistically significant, with coefficient estimate value of -5.171917 ($p = 0.034 < 0.05$). R-square value reported for model showing the impact of structural changes on return on asset stood at 0.3928, while for estimation showing the impact of structural changes on return on capital employed the reported R-square stood at 0.2395, which implies that when heterogeneity effect across firms sampled in the study is not incorporated into the model only about 39% and 24% of the systematic variation in return on asset and return on capital employed respectively can be explained by variation in change in ownership concentration, change in equity capital and change in debt capital, when the influence of firm's size is under control. For more robust investigation into the impact of structural changes on performance of manufacturing firms, there is need to incorporate the heterogeneity effect across firms sampled in the study using the fixed effect and random effect approaches respectively.

Table 2: Pooled OLS Estimations

Variables	ROA		ROCE	
	Coefficients	Probability	Coefficients	Probability
C	.9866623	0.001	94.36239	0.097
COC	-.0156586	0.132	-5.171917	0.034
CEC	5.67e-06	0.277	.0009417	0.423
CDC	-3.25e-08	0.968	-8.25e-06	0.964
FZ	-.0465826	0.003	-4.049834	0.208
R-square = 0.3928			R-square = 0.2395	
Adjusted R-square= 0.2713			Adjusted R-square=0.0874	
F-stat= 3.23			F-stat= 1.57	
Prob(F-stat)= 0.0336			Prob(F-stat)= 0.2197	

Source: Author's Computation, (2018)

Fixed effect Estimations Results

Table 3 reported estimation result showing the impact of structural changes on return on asset and return on capital employed, when heterogeneity effect across manufacturing firms sampled in the study is incorporated as fixed effect. Result showed that change in ownership concentration exerts positive insignificant impact on return on asset, with coefficient estimate of .0010259 ($p=0.862 > 0.05$), and negative insignificant impact on return on capital employed, with coefficient estimate of -.2225643 ($p=0.749 > 0.05$). Impact of change in equity capital on return on asset and return on capital employed is positive and insignificant, with coefficient estimates of $1.52e-06$ ($p=0.601 > 0.05$), and .0004006 ($p = 0.252 > 0.05$) respectively. result revealed that change in debt capital exert insignificant positive impact on both return on asset and return on capital employed, with respectively coefficient estimates of $2.17e-10$ ($p=1.000 > 0.05$), $8.23e-06$ ($p=0.868 > 0.05$). Reported intercept deviation terms stood at .3659603 ($p=0.005 < 0.05$), .4169119 ($p=0.017 < 0.05$), .3844703 ($p=0.007 < 0.05$), -.1741842 ($p=0.000 < 0.05$) for Dangote Sugar Refinery Plc, Flour Mills of Nigeria Plc, Guinness Nigeria Plc and Vitafoam Plc for return asset estimation and 35.60526 ($p=0.017 < 0.05$), 37.56343 ($p=0.059 > 0.05$), 38.68868 ($p=0.018 > 0.05$), --48.21273 ($p=0.000 < 0.05$) for return on capital employed. Reported R-square stood at 0.8766 and 0.9583 for the two estimated models. Thus, about 88% and 96% of the systematic variation in return on asset and return on capital employed respectively can be explained by change in ownership concentration, equity capital and debt capital, when firm's size is under control.

Table 3: Fixed effect Estimations

Variables	ROA		ROCE	
	Coefficients	Probability	Coefficients	Probability
C	3.969026	0.000	477.569	0.000
COC	.0010259	0.862	-.2225643	0.749
CEC	1.52e-06	0.601	.0004006	0.252
CDC	2.17e-10	1.000	8.23e-06	0.868
FZ	-.2255556	0.001	-26.42623	0.001
Fixed Effect				
DANGOTE	.3659603	0.005	35.60526	0.017
SUGAR				
FLOUR MILLS	.4169119	0.017	37.56343	0.059
GUINNESS	.3844703	0.007	38.68868	0.018
VITAFOAM	-.1741842	0.000	-48.21273	0.000
	R-square = 0.8766		R-square = 0.9583	
	Adjusted R-square = 0.8149		Adjusted R-square = 0.9374	
	F-stat = 14.21		F-stat = 45.96	
	Prob(F-stat) = 0.0000		Prob(F-stat) = 0.0000	

Source: Author's Computation, (2018)

Random Effect Estimation Results

Random effect estimation result presented in Table 4 revealed that when heterogeneity effects across manufacturing firms sampled in the study is incorporated into the error term of the model. The result showed that change in ownership concentration exerts insignificant impact in return on asset, with coefficient estimate of -0.0156586 ($p=0.116 > 0.05$), while its impact on return on capital employed is negative but significant, with estimates of -5.171917 ($p=0.022 < 0.05$). Change in debt capital exerts insignificant negative impact in both return on asset and return on capital employed with coefficient estimate of $-3.25e-08$ ($p=0.968 > 0.05$), and $-8.25e-06$ ($p=0.964 > 0.05$) respectively, while impact of change in equity capital on return on asset and return on capital employed is positive and insignificant with reported coefficient estimates of $5.67e-06$ ($p=0.263 > 0.05$) and $.0009417$ ($p=0.414 > 0.05$) respectively. Reported R-square stood at 0.5998 and 0.2395 for model 1 and model 2. Thus, showing that about 60% of the systematic variation in return on asset, can be explained by variation in change in ownership structure, equity capital and debt capital when controlled for firm's size, while they can only explain about 24% of the systematic variation in return on capital employed size is under control.

Table 4: Random Effect Estimation

Variables	ROA		ROCE	
	Coefficients	Probability	Coefficients	Probability
C	.9866623	0.000	94.36239	0.081
COC	-.0156586	0.116	-5.171917	0.022
CEC	5.67e-06	0.263	.0009417	0.414
CDC	-3.25e-08	0.968	-8.25e-06	0.964
FZ	-.0465826	0.001	-4.049834	0.193
	R-square = 0.5998		R-square = 0.2395	
	Wald chi2=12.94		Wald chi2=6.30	
	Prob(chi2)=0.0116		Prob(chi2)=0.1779	

Source: Author's Computation, (2018)

Post Estimation Tests Results

Result of restricted F-test conducted in the study as seen in Table 5 revealed that there is evidence to invalidate the restriction of pooled OLS estimation for the two models, which therefore validated the need to incorporate heterogeneity effect in the sample firms into the model. Also, the reported Hausman test as shown Table 6 revealed that the most consistent and efficient estimate for the impact of structural change on return on asset is the random effect presented in Table 4, while the most consistent and efficient estimation for analyzing the impact of structural changes on return on capital employed is the fixed effect estimates reported in Table 3. Hence, analysis and inference in this study was based on the findings reflected by the random effect estimation of model 1 and fixed effect estimation for model 2.

Table 5: Restricted F Test of Heterogeneity

	F-statistics	Probability
Model 1	15.69	0.0000
Model 2	68.94	0.0000

Source: Author's Computation, (2018)

Table 6: Hausman Test

	Chi-square stat.	Probability
Model 1	6.55	0.0876
Model 2	11.20	0.0107

Source: Author's Computation, (2018)

Discussion of Results

Investigation of the influence of structural changes on performance revealed that structural change measured in terms of the change in the ownership concentration exerts insignificant negative impact on return on asset, with 0.015686 unit decline in return on asset for every percentage change in the ownership concentration within the same fiscal year. Also, it was discovered from the fixed effect estimation of model 2 as presented in Table 3 that one percentage change in the ownership concentration within the years will decline the return on capital employed by 0.2225643. It was established from the result that structural changes measured in terms of changes in ownership concentration does not significantly influence performance of manufacturing firms measured both in terms of return on asset and return on capital employed. Result showed that structural change measured in terms of change in equity capital has positive impact on performance measured in both return on asset and return on capital employed. Corresponding estimate revealed that change in equity capital by a million will increase return on asset by $5.67e-06$, and return on capital employed by .0004006. The result showed that influence of change in equity capital on performance of manufacturing firms sampled in the study is not significant, though it has the prospect of improving the performance within the fiscal year. The result also reflect that change in debt capital has insignificant impact on performance measured both in terms of return on asset and return on capital employed, though increase in change in debt capital has the capacity to decline return on asset by $-3.25e-08$, as against its positive influence of $8.23e-06$ on return on capital employed. Discoveries made in this study aligns with findings of previous studies such as Uwuigbe (2013), Guyong, Arugu and Dandago (2014), Reem (2015) and Ibrahim (2012).

Conclusion and Recommendation

The study established that structural changes through changes in ownership concentration, changes in equity capital and debt capital jointly influence performance of manufacturing firms in Nigeria. Notably change in ownership concentration has no significant influence on performance of manufacturing firms, though the impact is negative. It stands that though structural changes do not reflect significant impact on performance, impact of changes in ownership concentration and debt capital has the capacity to impede improved performance of manufacturing firms in the country.

In the light of the findings of this study, it is recommended that manufacturing firms in Nigeria should be strategic and take caution when it comes to

*Impact of Changes in Ownership Structure on Performance of Quoted Manufacturing Firms
in Nigeria*

structural changes in terms of changes in ownership concentration and debt capital, so as not to erode their prospect of improving performance both in the current period and in the future. It is also advisable for firms to put in place organizational framework that can help in harnessing structural changes in terms of changes in equity capital.

References

- Albert, A. and Appiah, R. O. (2014). The effect of ownership structure and corporate governance on capital structure of Ghanaian listed manufacturing companies. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 4 (1): 109-118.
- Chandrasekharan, C. V. (2012). Determinant of capital structure in the Nigerian listed firms. *International Journal of Advanced Research Management and Social Sciences*, 1(2), 108-133.
- Chechet, I. L. and Olayiwola, A. B. (2014). Capital structure and profitability of Nigerian quoted firms: The agency cost theory perspective. *American International Journal of Social Science*, 3 (1): 189-208.
- Echekoba, F. N. and Ananwube, A. C. (2016). The effect of financial structure on the performance of Nigeria consumer goods firms. *Journal of Scientific Research and Report*, 10 (4): 1-15.
- Farooque, O. A., Zijl, T. V., Dunstan, K., and Karim, A. W. (2007). Ownership Structure and Corporate Performance: Evidence from Bangladesh, *Asian Journal of Accounting and Economics*, 14, pp. 127-150.
- Gayan, M.A. and Shanika, I. (2016). Impact of ownership structure on firms' performance. *International Journal of Scientific and Research Publications*, 6 (10): 111-115.
- Gugong, B. K., Arugu, L. O. and Dandago, K. I. (2014). The impact of ownership structure on the financial performance of listed insurance firms in Nigeria. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 4 (1): 409-416.
- Ibrahim, R. (2012). *Effects of ownership structure on the performance of listed companies on the Ghana stock exchange*. (Master's Thesis). Kwame Nkrumah University of Science and Technology. Retrieved from:
- Julius, B. A., Barine, M. N. and Oluwatòsin, O. A. (2015). Capital structure and financial performance in Nigeria. *International Journal of Business and Social Research*, 5 (2): 21-31.

Impact of Changes in Ownership Structure on Performance of Quoted Manufacturing Firms in Nigeria

- Kabethi, L. (2013). The effect of working capital management practices on the financial performance of small and medium enterprises in Kenya. *Interdisciplinary Journal of Contemporary Research in Business*, 2 (3): 36-40.
- Maryam, A. and Mu'azu, S.B. (2017). Evaluating institutional ownership and financial performance of industrial goods sector in Nigeria. *International Journal of Advanced Research in statistics, Management and Finance*, 5 (1): 84-98.
- Maymand, M. (2014). The effect of business process reengineering factors on organizational agility using path analysis. *Asian Economic and Financial Review*, 4 (12): 75-84.
- Mihai, L. O. and Mihai, C. (2014). The impact of foreign ownership on the performance of Romanian listed manufacturing companies. *The International Journal of Management Science and Information*, 2: 106-122.
- Musomba, R. (2012). A survey of factors affecting choice of strategy in Kenya commercial banks. *Journal of Management Research*, 2 (3): 36-40.
- Obasan, K. A., Shobayo, P. B. and Amaghionyeodiwe, A. L. (2016). Ownership structure and the performance of small and medium enterprises in Nigeria. *Journal of Small Business and Entrepreneurship Development*, 4 (1): 11-21.
- Obembe, O. B., Adebisi, S. A. and Adeleye, O. K. (2010). Corporate governance, ownership structure and performance of manufacturing firms in Nigeria. *Corporate Ownership and Control*, 8 (1): 696-708.
- Ogebe, P., Ogebe, J. and Alewi, K. (2013). The impact of capital structure on firm's performance in Nigeria. Munich Repec Archive. Retrieved from: <http://mpra.ub.uni-muenchen.de/46173/>.
- Ong, T. S. and Teh, B. H. (2011). Capital structure and corporate performance of Malaysian construction sector. *International Journal of Humanities and Social Science*, 1 (2): 28-36.
- Osuji, C. C. and Odita, A. (2012). Impact of capital structure on the financial performance of Nigerian firms. *Arabian business and Management Review*, 1 (12): 43-61.



AL-HAQQ PRINT Enterprises 08032934584, 08053359297
E-mail: alhaqqprint@gmail.com

