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# Organizational Structure and Financial Performance of Quoted Conglomerates in Nigeria

**Abstract**

The purpose of the study is to consider if any the effect of organizational structure on the financial performance of quoted conglomerates in Nigeria covering 2013 and 2017 accounting period. The study used board size, company size and the number of board meetings as proxies for an organizational structure as explanatory variables while Return on Equity and Assets are used as a proxy for financial performance. The study gathered secondary data from publicly available annual reports and the Nigerian Stock Exchange publication. Adinsoft's XLSTAT Statistical and data analysis solution to analyze the financial data using multiple regression. The results of the data analysis showed that board size, company's size and the number of board meetings held during the period do not have any significant impact on the Return on Equity when individually and jointly considered. However, these factors have a significant relationship with the Return on Assets when considered individually and jointly. The study recommends that conglomerates should design an appropriate organizational structure that will minimize the impact of external factors affecting their businesses. The study is limited to only five years and the financial information of one of the companies was not available. The financial results of most of the companies were also negative during the period limiting the researcher's ability to ascertain may be the findings will be different with positive financial results.

**Key Word:** Organizational structure, Return on Equity, Return on Assets, organizational theories.

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## INTRODUCTION

Every organization, whether profit-making or non-profit making, is established to achieve specified objectives and goals. The activities, procedure, and processes of the organization are designed to ensure those organizational goals and objectives are achieved seamlessly. The arrangement and design of organizational activities in a defined and specified format to achieve the desire can be called the organizational structure. The design of organizational structure can promote or inhibit the way and manner, an organization will respond to change or improve its ability to survive in a turbulent business environment. It can also affect the ability of an organization to add value to its customers (Martínez-León & Martínez-García, 2011).

An organizational structure can be static as well as dynamic. A static organizational structure may guarantee and promote stability of the organization. However, a dynamic organization will also promote a company's ability to respond seamlessly and swiftly to the changing operation and business environment. Organizational structure has both a positive and negative influence on a learning organization (Martínez-León & Martínez-García, 2011). The question is then how does an organizational structure affect the financial performance of the organization?

A conglomerate is defined as a group of companies who have business and ownership interest in both related and unrelated businesses across industries. It must have at least ownership interest in more than one industry. Positive financial performance has been accepted generally as one of the key objectives of profit-making organizations. If an organizational structure relates to how an organization is run, then the design of organizational structure would have an impact on the ability of the organization to achieve its set objectives and goals. It is therefore important to explore how an organizational structure affects financial performance. The primary purpose of the study is to assess the relationship between organizational structure and financial performance. To achieve this objective, this paper will explore the types and designs of organizational structure, review the various measures of financial performance, discuss the various theories of organizational structure and finally determine which organizational structure design is in use by the conglomerates and how does the structure affect the financial performance of the companies between 2013 and 2017.

### Research Question

The following research questions would be answered in the course of this study:

- What is the effect of board size, frequency of meeting and company size on the Return on Equity?
- What is the effect of board size, frequency of meeting and company size on the Return on Assets?

### Hypothesis

The following hypotheses would be tested:

- **$H_o$**: Board size, company size and number of board meetings do not have a significant relationship with the return on Assets
- **Ho**: Board size, company size and number of board meetings do not have a significant relationship with return on equity

### Significance and Scope of Study

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The way and design of how an organization is run will determine the success or otherwise of the organization. An organizational structure affects the way strategies are formulated and implemented. It affects how organizational activities are executed in an organization. The study conducted a review of several past literatures. While many past studies have identified the impact of organizational structure on many aspects of an organization, not so much research has been done on the impact of organizational structure on financial performance.

This study has provided a platform for further studies in this area. It has also increased the body of knowledge on the impact of organizational structure on organization success or otherwise.
Although in the course of the review, the study touched on other areas, the primary scope of the study is limited to organizational structure and financial performance among the quoted conglomerates in Nigeria. There are many factors that affect the financial performance of the organization, this study only focused on organizational structure, and specifically on the size of the organization, the size of the board and meetings frequency.

In addition, this study covers five years between 2013 and 2017, which is the most recent financial performance of the companies.

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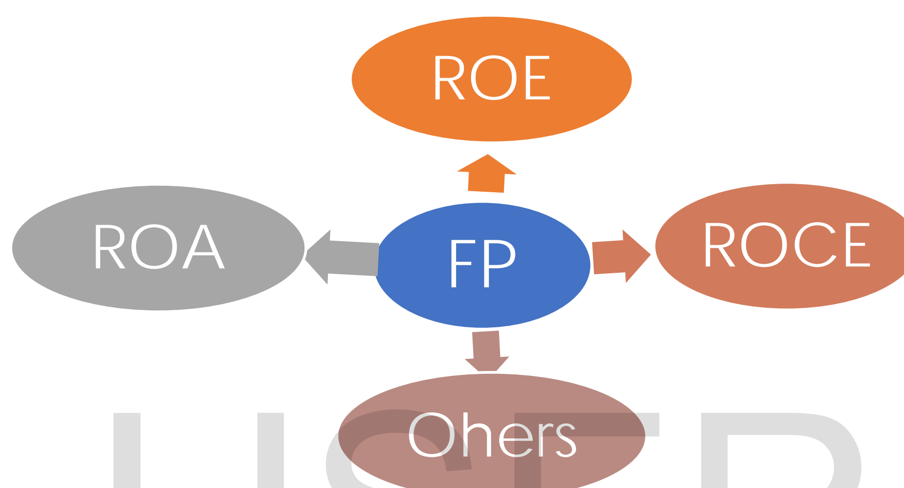
## 2. REVIEW OF RELEVANT LITERATURE

### 2.1 Financial Performance

The objective of every business organization is to make a profit to enhance the wealth of its shareholders. This goal overrides other objectives the organization may have. In the light of this, organizations set up financial target every year in the form of an annual budget. There are various measures to assess the financial performance of a company. Measuring financial performance is one of the feedback systems a company must install to ensure its continuity.

**The Conceptual chart**




***Source: The Researchers***

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Return on Equity (ROE) can be described as the earnings generated by each ordinary share in issue during a period financial period. It is calculated as net profit after tax divided by the outstanding number of shares in issue during the period.

It is a direct measurement of the financial performance of an organization. The higher the ROE, the better the financial performance of the company.

Return on Assets, like ROE, is measured as the amount of profit generated by the total assets of the company. It is calculated as net profit after tax divided by the total assets of the company. Total assets include current assets and long-term assets.

The Return on Capital employed is earnings made by the capital employed by a company in a measuring period. Capital employed is defined as Equity and long-term debt deployed by an organization during a reporting period. It is therefore calculated

There are other measures of financial performance. There is gross profit margin and net profit margin. Gross profit margin measures the profitability of a company from its core business activities. It is calculated as gross profit divided by sales for a period. It measures the going concern ability of the company.

The higher the gross profit margin, the higher the ability of a company to continue in operation to a foreseeable future. Once the company gross profit is equal to or lower than the administrative expenses, the company is at a shutdown position.

Net profit margin is the percentage of profit after tax to sales. It measures the return to ordinary shares holders. While net profit margin may not a critical determinant of going concern like gross margin, consistent and continuous sterilization or stagnation of net profit margin could portend a concern on the going concern ability of an organization. It also measures the cost efficiency or ability of a company to generate enough revenue to cover its cost profitably.

These financial performance measures could be a pointer to the need for concerned attention rather than ultimate shut down of operation.

### 2.1.1 Determinants of Financial Performance

Just like no aircraft can fly on one wing, several factors are responsible for the success or otherwise of a company. The nature of the company and operational sector may infuse some flavours into the various determinants but essentially, there are common determining factors. The business environment and culture in China or other Asian countries are different from what is obtainable in Nigeria. Likewise, the American (United States) and European firms are in different business climate from what is obtainable in Brazil. Business environment and climate in emerging markets like South Africa and Nigeria are more turbulent and unpredictable than the established German or Japanese markets. There are two broad categories of factors that determine the financial performance of a company and they are internal and external factors (Ongore and Kusa, 2013) while reviewing the determinants of financial performance of commercial banks in Kenya. They concluded from their findings that the board of directors and management decision significantly determine the financial performance of commercial banks in Kenya.

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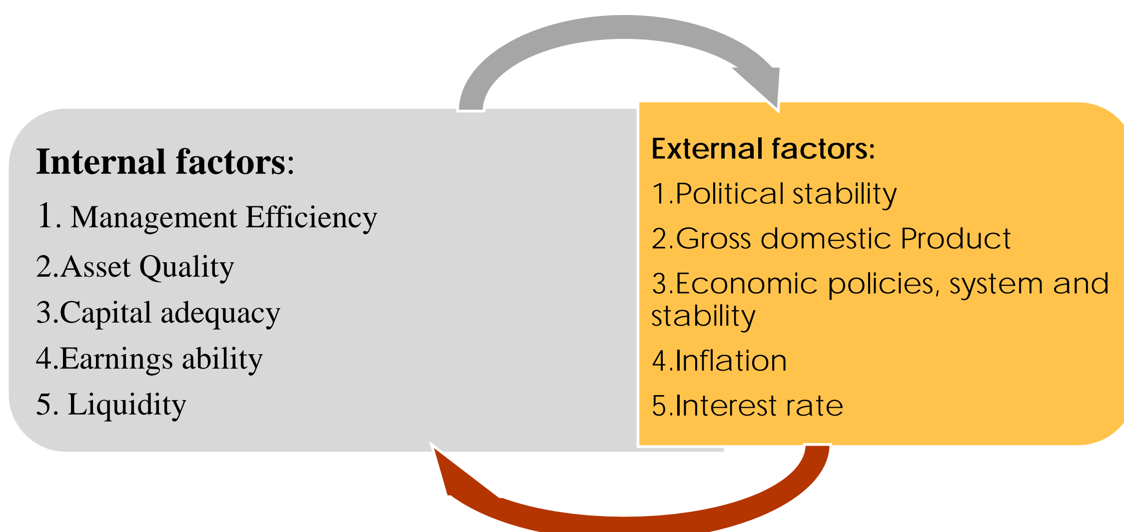
Using the CAMEL model, Ongore and Kusa (2013) identified the following as internal factors affecting the financial performance of commercial Banks.

- Capital Adequacy
- Asset Quality
- Management Efficiency
- Earnings Ability
- Liquidity

While some of the external factors include:

- Macroeconomic policy stability
- Gross Domestic Product
- Inflation
- Interest Rate
- Political stability



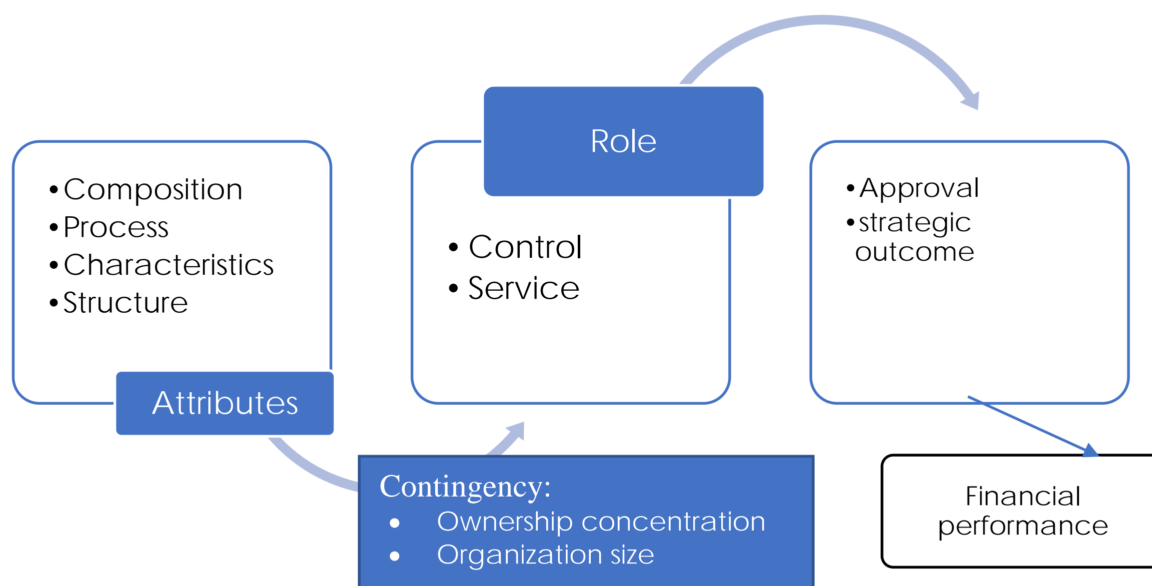

***Source**: Ongore & Kusa (2013)*

The potency and impact of both the internal and extremal factors on a company's financial performance will be determined by the quality and flexibility of the company's governance. A rigid organizational structure may be overly inflexible to respond to the changes in the external environment.

In old research conducted in 1989 by Shaker Zahra and John Pearce, Board of Directors and its composition are the key determinants of Financial and other performances of an organization. They identified that board composition, structures, characteristics, and process affect their control and service delivery roles. However, two contingency factors were also identified as influencers of the control and service roles of the Board. These factors include ownership concentration and company size. Accordingly, highly concentrated ownership will have a strong member of the board who will exert control to ensure the survival and growth of the organization. Survival, which is functional profitability and the growth in that profitability is the key financial measures of the organization.

A small organization, however, seems to have a rubber stamp board of directors are merely cronies of the CEO or owner. The Board of Directors of large organizations seem to have more formalized roles.

According to Zahra and Pearce (1989), the two board roles of control and service affect strategic outcome and approval, which in turns influences the financial performance of the organization.




*Source:* ***Adapted from Zahra & Pearce (1989)***

Similarly, Njiru (2014) stated that the size, composition, complexity, centralization and formalization of organizational structure affect return on assets.

The study recommended that members, size and composition of the Board should be considered in the design of organizational structure because they shape the strategic directions of the organization.

**2.2 Organizational Structure**

Andrews (2010) explained that an organizational structure is composed of both the physical characteristics of the organization such as the size of the organization and the structural element, which relates to the decision-making process, whether it is centralized or decentralized, whether bureaucratic or flexible. The elements of an organizational structure (Daft, 2007) includes:

- Formal reporting relationship and extent of control of the board of directors and key management staff
- Formal reporting relationship and the extent of control of Supervisors and line managers
- System for effective communication and interaction among departments and business units or divisions
- Alignment of people who perform similar or related roles into a common functional or geographical unit

The type of organizational structure will usually have a direct impact on the functions performed in the organization and the functioning of the organization affects its effectiveness (Andersen & Jonsson, 2006). They cited Duncan (1979) that the right organizational structure may direct impact on its effectiveness. The best organizational structure is the one that fits the organization environment (Andersen & Johnson, 2006).

### 2.2.1 TYPES OF ORGANIZATIONAL STRUCTURE

**Vertical and horizontal Organizational Structures**

The design of the organization is very critical to the flow of information across the organization.

The flow of information of information determines how quickly decisions are being communicated and executed and how swift feedback is being received to enhance and modify the decision-making process. Richard Daft 2007) recognized two dimensions.

Vertical and horizontal organizational structure. The vertical organizational structure came with the early management school and thought. It is akin to bureaucratic and very centralized decision-making process where the most important decision-making seats at the peak of the pyramid. With an increasing need for flexibility to respond to the changing business environment and need, an alternative horizontal design also emerged. The later structure is decentralized and supports a shared task environment.

In accordance with Richard's proposition, the table below illustrates the distinguishing features of both types of organizational structure.

| Vertical Organizational Structure | Horizontal Organizational Structure |
|---|---|
| Specialized tasks environment | Shared tasks environment and people are empowered |
| A hierarchical environment with many rules | Hierarchy is relaxed and there are few rules |
| Communications and reporting system | Communication among the team is horizontal and often face to face |
| The decision-making system is centralized | Decision-making system is decentralized |
| Teams are usually small | Many teams and task force |

Source: Adopted from Richard Daft (2007).

Although an organization can be formally vertical or horizontal in orientation, each organization must define its level of specialization and flexibility in order to achieve its goals and objectives. Therefore, an organization with a hierarchical organizational structure may infuse some horizontal communication and reporting system while an organization whose orientation is horizontal may also establish many rules and procedures; it may also remove some of the decision making the power of the team.

Although traditional organizational structure is hierarchical and centralized, modern organizations whose organizational outlook is hierarchical have also introduced some elements of a learning organization. There has also been considerable devolution of power.

### 2.2.2 DESIGN OF ORGANIZATIONAL STRUCTURE

**Divisional and Functional Organizational Structures**

Apart from the two conventional dimensions of organization structure, an organizational structure may also be divisional or functional.

For a divisional structure, governance is mapped along product or service. One of the distinguishing features of a divisional design is that the organization is mapped on the bases of its output (Daft 2007).
For example, SCOA Plc has 7 divisions fashioned along the products and services it offers. The divisions include Trac, power, IT, Motor, furniture, medical and telecommunications. Some of the divisions could be legal subsidiaries while others may not have legal existence. In the case of John Holts Plc, it has both divisional structure and subsidiaries. In addition to the divisional structure, some organizations may structure the division in a hierarchical order where each of the divisions has reporting lines.

Some of the strength and weaknesses of a divisional structure according to Richard Daft (2007) includes:

**Strengths**
1. It is better fitted to a turbulent and unstable business environment
2. Customers are more satisfied because each division is focused on a specific product or service
3. Coordination is usually high among the divisions
4. Divisions are often permitted to adapt to changing product and customers preferences
5. Best in large organizations with several products
6. Decision making is centralized

**Weaknesses**
1. Economies of scale in may be eliminated in functional departments
2. It can lead to poor coordination along product lines
3. In-depth competence, specialization, and versatility are usually eliminated
4. Makes integration and standardization across product lines difficult

**The strength of any organizational structure is its flexibility.**

**Functional Design of Organizational structure**
Unlike divisional design, functional design is the group of the team according to the function they perform. For example, the engineering team is group together, Finance and Account are also aligned along a line of reporting and physical representation.

This is a common design of an organizational structure. Transnational Corporation of Nigeria Plc is designed in this line. The adopted the following strengths and weaknesses from Richard Daft (2007).

**Strength**
1. It makes rooms for economies of scale for the functional departments
2. It provides opportunities for in-depth expertise and specialization
3. Functional goals are easily achieved by organizations
4. It is better designed if the products or services being provided are few

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**Weaknesses**
1. This design may inhibit a rapid response to environmental changes
2. There could be decision overhang leading pile up unattended to issues
3. It could lead a dysfunctional system where people work across purposes.
4. It can be demotivational and boring
5. Team members may be deprived of a holistic view of organizational goals and objectives
6. The team member may become parochial and limited in mindset and view.

**Geographical Design**

This is an organizational designed that is fashioned along geographical locations and it is usually suitable for organizations that have independent or semi-independent status in different locations. This is more common with multinational organizations. The design in each location could functional-vertical or functional-horizontal. It could also be divisional vertical and divisional-horizontal structure.

**Strength**
1. Each location is given some levels of freedom to take decisions
2. It is very suitable for speedy and swift response to environmental changes and requirements
3. Each geographical location can customize and response to the need of customers/clients
4. It is more flexible

**Weakness**
1. Economies of scale may be lost due to geographical distance
2. It may lead to an overall dysfunctional organization with each locations doing things differently

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**2.3 The Conglomerates in Nigeria**

1. **Transnational Corporation of Nigeria Plc:** This is the first indigenously created and managed conglomerate in Nigeria. It is also the first conglomerate conceived at the inception as it was established as a conglomerate. It currently plays in power, Energy, Agriculture, and Hospitality. Both the holding company and one of its subsidiaries are listed and traded on the floor of the Nigeria Stock Exchange. This company operates a vertically simple organizational structure. The Board is made up 8 members including the Managing Director according to the Company's website. There are three committees of the Board who support in the discharge of Board duties. The Board is made up both dependent and independent members as contained in the 2017 financial statements and 2017/2018 The Nigerian Stock Exchange fact book (page 59). The organization is headed by the chairman, Mr. Tony Elumelu, CON, followed by the Managing Director and then by the Directors and supported by Board committees. Based on the personal experience of the researcher and the interview conducted on executive management, decision making is very fast and direct.

2. **UAC of Nigeria Plc:** This is one of the quoted conglomerates operating in the Food and Beverage, Real Estate, Paint and Logistics sectors of the economy. The Company operates through a subsidiary, sub-subsidiary and Joint venture Companies.

UAC operates a vertical organizational structure with divisional design model. The board of Directors is made up of nine directors headed by the board chairman, followed by the Managing director and other directors, including independent director as indicated on page 17 of the 2017 annual report. This is also corroborated by 2017/2018 NSE fact book (page 60). The Board is supported by three Board committees. The chief operating decision maker is the executive committee, which is made up of the three executive directors (page 123 of 2017 annual reports). In addition, the company also has Group Management Committee, which is made up the executive directors and the Managing Directors of the subsidiaries. This is a very complex structure and decision making will be relatively slow.

3. **A.G. Leventis (Nigeria) Plc**: This is another quoted conglomerate in Nigeria and has branches throughout Nigeria and its activities consist of seven business units. The Company focuses om power, FMCG, logistics, and real estate. It has five subsidiaries and two division. It operates a vertical organizational structure. The Board of Directors is made up seven members. The Managing Director doubles as the vice chairman of the Board. The Board is headed as Ahmed Kazalma Mantey. The Vice-chairman is described as executive vice chairman. The Board is supported by the two board committees in addition to the statutory audit committee as provided in the company's annual reports for 2017. From the personal experience of the researcher, the being started as a family business, the influence of the family is very strong on the business in Nigeria as the appointment of a management staff is usually concluded in Greece, oftentimes via video conference.

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4. **John Holt:** John Jolt is one of the quoted conglomerates in Nigeria. It has eight divisions and two subsidiaries. The Group office is responsible for managing all centralized functions of such as Purchasing, Insurance, Finance, Human Capital Development, IT and Legal. It operates both divisional and vertical organizational structure. The company has six-board members. The Board is headed by Chief Christopher Ikechi Ezeh, MFR. Apart from the statutory audit committee, no other committee was reported by the Company's website or 2017 audited financial statement. It was also noted that the company had not done its AGM for 2017. The company is a loss-making company and owned significantly by John Holt Liverpool.

5. **SCOA Nigeria Plc:** This is one of the conglomerates in Nigeria. It has eight divisions and two subsidiaries. One of the two subsidiaries is not functional. The company is a loss-making with the threat of going concern. The board is made up of eleven members headed by Henry Agbamu. The Board is supported two Committees apart from the statutory audit Committee.

6. **Challarams Nigeria Plc**: The company is involved in distribution, trading, and manufacturing. It has three subsidiaries and eight associated companies. The board is made up of five directors (executive and non-executive) and it is chaired by Asiwaju Solomon Kayode Onafowokan, OON. The Board is supported by the statutory audit committee and other committeess of the Board. The company also operates a vertical organizational structure.

## 2.4 THEORETICAL FRAMEWORK

Kumudinei and Masayasu (2006) identified two broad theories of organizational structures. These are equilibrium and process-based theories. Equilibrium theories include the traditional organization of Max Weber bureaucratic theory, Henry Fayol Administrative structure theory while process-based theories include the structural contingency theory and configuration theory.
The equilibrium theories are the early theories based on classical and scientific management theories while process-based theories are modern-day theories based on human relations and contingency management theories. Kumudimei and Masayasu (2006) posited that both equilibrium and process-based theories are on the extreme side. While the equilibrium-based theories speak about equilibrium between personal interest and organization interest. An equilibrium between organization structure and organization environment. However, another theory that combines both processed based and equilibrium is the recursive theory. It is a convergence of the other two theories. This theory is based on the recursive theory.

## 2.5 EMPIRICAL REVIEW

An organizational structure that allows for learning and deeper interactions among team members tend to be more successful than organizations that have otherwise organizational structure (Allison & Robert, 2011). Both vertical and horizontal organizational structure is efficient depending on the ability of team members to make the best of it and accordingly, the efficient organizational structure would usually result in efficient organization and good performance (Ikeda, Ito & Sakamoto, 2010). It has also been reviewed that an efficiently designed structure reduces operational processes and operational costs, therefore a value-adding organization design improves operational efficiency and hence improve financial performance(Kwasa, Bloebaum & Mesmer 2015). Centralized and hierarchical organizational structure facilitates performance gains, especially where goal congruence is achieved (Rhys 2010).

Njiru (2014) conducted a research on the impact of organizational structure on the financial performance of state-owned corporations in Kenya. According to him, the size, composition, complexity, centralization, and formalization affect return on assets. The study recommended that board members, size and composition should be considered because they shape the strategic directions of commercial state corporations in Kenya.

Kusa and Ongore (2013) conducted a study on the determinants of financial performance of commercial banks in Kenya. The study identified two sets of determinants: internal and external factors. The internal factors include management efficiency, capital adequacy, assets quality, and liquidity while external factors included macro-economic variables. From this study, it is seen that management efficiency is a determinant of financial performance.

Ujunwa (2012) conducted research on the impact of board of director characteristics (size, skills, experience, nationality, gender) on the financial performance of quoted firms in Nigeria. The study used panel data analysis model to analyze data of 122 firms between 1991 and 2008 and found that CEO duality, board size, and gender diversity are negatively linked with firm performance whereas board member nationality, board ethnicity and number of board members with Ph.D. positively linked with firm's performance.

Fauzi and Locke (2012) conducted a research on the relationship among, organizational structure, ownership and firm's performance among New Zealand firms. The study used a balanced panel of 79 New Zealand listed firms and a Generalized Linear Model to analyze the data. The study concluded that the board of directors, board committees and manager

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ownership have a positive and significant relationship with firm's performance. While non-executive directors, female board members, and block holders have a negative impact on the performance of firms in New Zealand. The study used only 79 of New Zealand quoted firms covering only period between 2007 and 2011.

Andersen and Johnson (2006) investigated the importance of organizational structure based on the structure, function, and effectiveness. They defined effectiveness as the degree of profitability. The organizational structure was defined as the division of work or authority while the function was explained as what people do or activities they carry out in an organization. The researcher used 36% or 324 out of the 892 questionnaires sent out to all manufacturing companies in Sweden. The study concluded using regression analysis that organizational structure affects its functioning. Although the functioning of the organization also showed to have an impact, it is the training and quality of leadership that have a direct impact on profitability.

Dalton, Daily, Johnson, and Ellstrand (1999) conducted research using the meta-analytic procedure on the relationship between the the number of directors on the board of a company and the company's performance using 131 firms and concluded that there is systematic evidence of a nonzero, positive relationship between board size and firms' performance.

**Literature Gap**

No previous study was conducted on conglomerates in and outside Nigeria. Similarly, the only study conducted on Nigerian firm covered only 1991 and 2008. The study also focused on board characteristics. This study will review the impact of meeting frequency, board size, and company size on the financial performance of quoted conglomerates in Nigeria covering 2013 to 2017.

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## 3. METHODOLOGY

The study covers the six quoted conglomerates on the floor of the Nigerian Stock Exchange. The companies are Challarams Plc, Transnational cooperation of Nigeria Plc, John Holts Plc, SCOA Nigeria Plc, UAC Plc and Leventis Nigeria Plc. However, John Holts, SCOA and Leventis are loss-making and have not been consistent in conducting AGMs, hence their financial performance has been included for the purpose of data analysis. This is an ex-post facto review of the impact of organizational structure and financial performance of quoted conglomerates in Nigeria. The study gathered secondary data from the annual reports of the companies from their websites and that of the Nigerian Stock Exchange from 2013 to 2017. In addition, the researcher also conducted an interview on the financial advisers of the three loss-making companies to enhance the findings of the data analysis.

The study regressed the frequency of meetings of the board, board size, and size of the companies are regressed against financial performance measures to assess if there is a significant relationship among them using Adinsoft (2019)'s XLSTAT statistical and data analysis solution.

**Model equations:**

- **ROE**=F (BS, S, CS), ROE: $a+b_1BS+b_2S+b_3CS$
- ROA: F (BS, S, CS), ROE: $a+b_1BS+b_2S+b_3CS$

Most of the previous studies relied on the secondary data and survey method. Some of them also used the direct interview. The secondary data have been submitted for public scrutiny by regulators and investors.
The financial information contained therein has been reviewed and certified by the external auditors. Although the financial advisers the researcher interviewed have asked for confidentiality protection, they have worked with the companies for over five years. Previous researches have also used regression analysis to test the relationship among variables.

## 4. Results and Presentation of Data

### 4.1 Presentation of Results

| ROA | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Transcorp Plc | 5% | 2% | 1% | -25% | 5% |
| UAC Nigeria Plc | 8% | 8% | 4% | 5% | 1% |
| Challarams Plc | 1% | -44% | 0% | 1% | 2% |
| Leventis Nigeria Plc | 2% | 1% | -1% | -13% | -19% |
| SCOA | 1% | 2% | -12% | -12% | -15% |
| **Average** | 3% | -6% | -2% | -9% | -5% |

The researchers could not obtain annual reports of John Holts Plc. Except for UACN and Challarams, all the companies has a negative return on assets. Transcorp had an exceptional write-off of N16bn in 2016, which resulted in a loss for the year.

| ROE | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Transcorp Plc | 8% | 4% | 2% | -1% | 14% |
| UAC Nigeria Plc | 14% | 14% | 7% | 8% | 2% |
| Challarams Plc | 5% | -2% | -268% | 11% | 19% |
| Leventis Nigeria Plc | 4% | 3% | -2% | -40% | -124% |
| SCOA | 4% | 6% | -61% | -61% | -42% |
| **Average** | 7% | 5% | -65% | -17% | -26% |

**Source: Researchers' Analysis**

The average ROE for 2015 to 2017 was negative because of the impact of Challarams, A.G Leventis and SCOA ROEs for the respective year depressed the ratio.

| Board meetings | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Transcorp Plc | 4 | 4 | 4 | 4 | 4 |
| UAC Nigeria Plc | 7 | 7 | 7 | 7 | 7 |
| Challarams Plc | 4 | 4 | 4 | 4 | 4 |
| Leventis Nigeria Plc | 4 | 4 | 4 | 5 | 4 |
| SCOA Nigeria Plc | 5 | 5 | 5 | 5 | 5 |
| **Average** | **4.8** | **4.8** | **4.8** | **5** | **4.8** |

**Source: Researchers' Analysis**

The researcher did not include the board statistics for John Holt Plc as annual report was o not available. The average number of meeting for the conglomerates was 5 times during the year. Except for UACN and SCOA, all the companies met four times during the period.

| **Board size** | **2013** | **2014** | **2015** | **2016** | **2017** |
|---|---|---|---|---|---|
| Transcorp Plc | 7 | 7 | 7 | 7 | 7 |
| UAC Nigeria Plc | 8 | 8 | 8 | 9 | 9 |
| Challarams Plc | 6 | 6 | 6 | 6 | 6 |
| Leventis Nigeria Plc | 8 | 8 | 8 | 8 | 7 |
| SCOA Nigeria Plc | 10 | 10 | 10 | 10 | 10 |
| Average | 7.25 | 7.8 | 7.8 | 8 | 7.8 |

**Source: Researchers' Analysis**

The average board composition during the period was 8 members. UACN, Leventis and had changes in their board composition.

| **Company size** | **2013** | **2014** | **2015** | **2016** | **2017** |
|---|---|---|---|---|---|
| Transcorp Plc | 6 | 6 | 6 | 6 | 6 |
| UAC Nigeria Plc | 10 | 10 | 10 | 10 | 8 |
| Challarams Plc | 6 | 6 | 7 | 7 | 7 |
| Leventis Nigeria Plc | 8 | 8 | 8 | 12 | 12 |
| SCOA Nigeria Plc | 4 | 4 | 3 | 2 | 2 |
| Average | 7.5 | 6.8 | 6.8 | 7.4 | 7 |

**Source: Researchers' Analysis**

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The minimum size of companies and divisions within the sector was 2 while the maximum the researcher noted was 12.

### 4.2 Discussion and Summary of Findings

Using the Adinsoft XLSTAT, the following are the result of the analysis, the tables below present the result of the data analysis.

Summary statistics:

| Variable | Observations | Obs. with missing data | Obs. without missing data | Minimum | Maximum | Mean | Std. deviation |
|---|---|---|---|---|---|---|---|
| ROE | 5 | 0 | 5 | -0.645 | 0.068 | -0.191 | 0.290 |
| ROA | 5 | 0 | 5 | -0.087 | 0.032 | -0.037 | 0.046 |
| BS | 5 | 0 | 5 | 7.250 | 8.000 | 7.730 | 0.282 |
| M | 5 | 0 | 5 | 4.800 | 5.000 | 4.840 | 0.089 |
| CS | 5 | 0 | 5 | 6.800 | 7.750 | 7.290 | 0.385 |

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From the summary statistics, the mean of the dependent variables, ROE and ROA are -0.191 and -0.037 respectively. While means of Board Size (BS), number of board meetings (M) and company size (CS) are 7.73, 4.84 and 7.29 respectively.

Correlation matrix:

| | BS | M | CS | ROE | ROA |
|---|---|---|---|---|---|
| BS | **1** | 0.535 | -0.215 | -0.420 | -0.919 |
| M | 0.535 | **1** | 0.160 | 0.048 | -0.607 |
| CS | -0.215 | 0.160 | **1** | -0.557 | 0.494 |
| ROE | -0.420 | 0.048 | -0.557 | **1** | 0.037 |
| ROA | -0.919 | -0.607 | 0.494 | 0.037 | **1** |

Board size has a weak negative correlated with Return on equity ROE) and almost perfectly negatively correlated with Return on Asset (ROA). On the other hand, the number of board meetings is positively correlated with ROE, but the correlation is very weak. However, it is negatively

correlated with ROA. Company size is negatively correlated with ROE but positively correlated with ROA. On the strength of the correlation coefficient alone, it can be concluded that the Board side does have a significant relationship with both ROE and ROA. The number of board meetings is positively related to ROE, but the relationship is a weak and significant negative relationship with ROA. Company size is negatively related to ROE but positively related to ROA during the reference period.

**Test of Hypothesis and interpretation of Result**

Test of Hypothesis: *BS, M & CS does not have a significant relationship with ROE*

The goodness of fit statistics (ROE):

| | |
|---|---|
| Observations | 5.000 |
| Sum of weights | 5.000 |
| DF | 1.000 |
| $R^2$ | 0.951 |
| Adjusted $R^2$ | 0.803 |
| MSE | 0.017 |
| RMSE | 0.129 |
| MAPE | 39.653 |
| DW | 1.201 |
| Cp | 4.000 |
| AIC | -20.538 |
| SBC | -22.101 |
| PC | 0.443 |

*Source: XL Stats*

Judging from the $R^S$ of 95%, it is conclusive that the explanatory variables together (BS, M, and CS) provided enough information on the ROE during the reference period.

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Analysis of variance (ROE):

| Source | DF | Sum of squares | Mean square | F | Pr > F |
|---|---|---|---|---|---|
| Model | 3 | 0.321 | 0.107 | 6.440 | 0.280 |
| Error | 1 | 0.017 | 0.017 | | |
| Corrected Total | 4 | 0.337 | | | |

*Source: XL Stats*

Looking at the result of the ANOVA table above and comparing the value of F statistics against the P-Value, the three explanatory variables, that is, Board meetings, board size, and companies do not have a significant effect on the financial performance of conglomerates using ROE.

Type I Sum of Squares analysis (ROE):

| Source | DF | Sum of squares | Mean square | F | Pr > F |
|---|---|---|---|---|---|
| BS | 1 | 0.060 | 0.060 | 3.589 | 0.309 |
| M | 1 | 0.035 | 0.035 | 2.127 | 0.383 |
| CS | 1 | 0.226 | 0.226 | 13.603 | 0.169 |

Type III Sum of Squares analysis (ROE):

| Source | DF | Sum of squares | Mean square | F | Pr > F |
|---|---|---|---|---|---|
| BS | 1 | 0.209 | 0.209 | 12.617 | 0.175 |
| M | 1 | 0.113 | 0.113 | 6.789 | 0.233 |
| CS | 1 | 0.226 | 0.226 | 13.603 | 0.169 |

*Source: XL stats*

The researcher further analyzed the data further considering both types I and III sum of squares, and the results show that these factors have no effect on ROE. Although Board size and company showed a weak effect. We will, therefore, accept the Null Hypothesis that Company size, number of board meetings and board size do not have a significant effect on Return on Equity of the quoted conglomerates in Nigeria between 2013 and 2017.

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Test of Hypothesis: *BS, M & CS does not have a significant relationship with ROA*

**The goodness of fit statistics (ROA):**

| | |
|---|---|
| Observations | 5.000 |
| Sum of weights | 5.000 |
| DF | 1.000 |
| $R^2$ | 1.000 |
| Adjusted $R^2$ | 1.000 |
| MSE | 0.000 |
| RMSE | 0.001 |
| MAPE | 0.650 |
| DW | 1.201 |
| Cp | 4.000 |
| AIC | -70.032 |
| SBC | -71.594 |
| PC | 0.001 |

*Source: XL Stats*

Judging from the $R^S$ of 100%, it is conclusive that the explanatory variables together (BS, M, and CS) provided enough information on the ROE during the reference period.

Analysis of variance (ROA):

| Source | DF | Sum of squares | Mean squares | F | Pr > F |
|---|---|---|---|---|---|
| Model | 3 | 0.009 | 0.003 | 3419.873 | **0.013** |
| Error | 1 | 0.000 | 0.000 | | |
| Corrected Total | 4 | 0.009 | | | |

*Source: XL Stats*

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Considering the result of the ANOVA table above and comparing the value of F statistics against the P-Value, the three explanatory variables, that is, Board meetings, board size, and companies size do have a significant effect on the financial performance of conglomerates using ROA.

Type I Sum of Squares analysis (ROA):

| Source | DF | Sum of squares | Mean squares | F | Pr > F |
|---|---|---|---|---|---|
| BS | 1 | 0.007 | 0.007 | 8663.035 | **0.007** |
| M | 1 | 0.000 | 0.000 | 192.063 | **0.046** |
| CS | 1 | 0.001 | 0.001 | 1404.520 | **0.017** |

Type III Sum of Squares analysis (ROA):

| Source | DF | Sum of squares | Mean squares | F | Pr > F |
|---|---|---|---|---|---|
| BS | 1 | 0.002 | 0.002 | 2794.504 | **0.012** |
| M | 1 | 0.001 | 0.001 | 653.757 | **0.025** |
| CS | 1 | 0.001 | 0.001 | 1404.520 | **0.017** |

*Source: XL Stats*

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The result of the analysis of both type I and type III sum of squares as contained in the tables above show that these factors have a significant effect on ROA. Each of the explanatory variables has a significant effect on Return on Asset. We will, therefore, reject he Null Hypothesis and accept the alternate hypothesis that Company size, number of board meetings and board size do have a significant effect on Return on Assets of the quoted conglomerates in Nigeria between 2013 and 2017.

### 4.3 Findings, Conclusion, and Recommendation

- The results of the data analysis show that the number of board meetings, the size of the board and the size of the company individually and collectively do not have any significant effect on the Return on Equity
- The result of the data analysis, however, shows that the size of the board, company size, and the number of meetings individually and collectively do have a significant effect on Return on Asset. The impact of board size and company size are more than the impact of the number of meetings during the period
- The explanation received from the financial advisers of the companies provided additional information that other factors such as funding, external economic factors, economic recession, government policies, political uncertainty affected the financial performance of the companies during the period between 2013 and 2017

### Conclusion

- Based on the findings presented above, Board meetings, the size of the board and company size of the five conglomerates do not affect the Return on Equity during 2013 and 2017
- Return on Asset was however affected significantly by these factors during the period.
- External economic factors, political climate, economic recession, government policies are other factors that affected the performance of the conglomerates during the period.

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### Recommendations

- Conglomerates should design an organizational structure that can minimize the impact of external factors such as economic recession, political uncertainty, and external economic factors as they affect the sectors, they operate in.

### Limitation

- The data analysis does not cover the financial information of John Holts Plc as the number of meetings and company size for the respective year was not available
- The financial performance of most of the companies was negative during the period and hence we could not confirm if the result of our research could have been different if the financial performance was positive
- The study covered only five years between 2013 and 2017, hence the period may not be long enough to take a conclusive position on the impact of the factors on financial performance
- The study used the secondary data source to analyze data. Although the researcher conducted an interview on the companies' financial advisers to obtain additional information on their performance, other methods of data collection may have produced different results.

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