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RESEARCH ARTICLE

Assessing the Effect of Operational Costs on the Earnings of Construction/Real Estate Firms in Nigeria

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ABSTRACT

This study examined the effects of operational cost on earnings of construction and real estate firms in Nigeria. The specific objectives of the study are to: Appraise the effect of registrars' fee on earnings per share of construction and real estate firms in Nigeria. Investigate the effect of property maintenance expenses on earnings per share of construction and real estate firms in Nigeria. Examine the effect of legal fee/charges on earnings per share of construction and real estate firms in Nigeria. A sample of 3 firms was selected from 9 construction/real estate firms quoted on the Nigeria Stock Exchange during the period of 2013 to 2019. Cross sectional data were obtained from the annual report and financial statements of the firms and analyzed using Ordinary Least Square Regression Analysis. Result of analysis suggest that the effect of each of the three independent variables, (registrars fee, property maintenance fee and legal fees/charges) on the dependent variable (earnings per share) is positive and statistically significant. On the strength of these findings the study recommends that construction/real estate firms in Nigeria should ensure that all properties acquired are registered with Land Registry to properly secure ownership of the property. This is to prevent any possible loss resulting from improper acquisition. It is also recommended that the firms should ensure that properties are maintained as and when due. Regular maintenance of properties will prolong the lives of the assets and this will in turn ensure regularly and uninterrupted earnings for the firms. It was finally recommended that the firms should ensure that all legal fees and charges relating to property acquisition, development, leasing or sales be settled promptly. This is to avoid possible litigation and loss of property through improper acquisition.

Keywords: *Operational Costs; Earnings of Construction; Real Estate Firms in Nigeria; Property Maintenance Expenses*

Introduction

The main objective of any construction and real estate organization is to maximize profit and create wealth for the shareholders. They may also be other sub-objectives such as, employee satisfaction, customer service, access to financing, increasing market share, brand loyalty, being a marketplace leader, being a corporate responsible firm among others (Ajator, Okoye & Agbonome, 2015). In order to achieve the main objective of the firm and indeed the other objectives, some expenses have to be incurred in the course of running the firm. Some of these expenses are collectively known as operational cost. These operational costs are costs that are not directly linked with the production process of the firm. Examples operational cost in construction and real estate firms are, valuation fees, legal fees, property maintenance expenses, registrars' fee, audit fee, insurance premium among others (Khalid & Khan, 2017).

Operating costs or operational expenses are expenses a business incurs in order to keep it running, such as staff wages and office supplies. Operating expenses do not include the cost of goods sold (materials, direct labour, manufacturing overhead) or capital expenditures (larger expenses such as buildings or machines). These are the day-to-day business expenses required to keep the business running (Kimberlee, 2018). In construction or real estate firms, operational costs or overhead costs are those costs that are not a component of the actual construction work but are incurred by the contractor to support the work (Peurifoy & Oberlander, 2002). Operational or overhead costs in construction and real estate business are classified into two, project overhead costs and firm's overhead costs. Project overhead costs are expenses that cannot be linked directly to a particular work but are required to construct the project. A firm's overhead costs are expenses that represent

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the cost of doing business and often are considered as fixed expenses that must be paid by the contractor. Examples of construction overhead cost are, registrars' fee, legal fee, property maintenance fee, valuation fee, agency fee, insurance premium, audit fee among others. This study adopted registrar's fee, property maintenance expenses and legal fees as independent variables and proxies for corporate charges of construction and real estate firms.

Real Word Law (2020) defines registrars' fee as the fee paid for registration of real property with the Land Registry Offices. Chen (2020) says that the term maintenance expense is any cost incurred by an individual or business to keep their assets in good working condition. Thus, property maintenance expenses are those expenditures incurred to keep real estate property in good condition. Examples of such cost are cost of sidewalks maintenance, landscaping, tennis court, swimming pool, elevator, sewage lines, trash collection and cost of maintaining buildings' physical exterior. Kalfrin (2020) describes l**egal fee** or legal charges as the money a **legal** practitioner charges when he offers **legal** services to a client. In real estate and construction business such costs include, expenses on investigation of title, legal expenses during assignment, registration and application for Governor's consent. Brown (2016) defines **earnings per share a**s the portion of a firm's earning, net of taxes and preferred stock dividend, that is allocated to each share of common stock. When a firm shows convincing signs that it has the capacity and potentials of earnings especially in the long term, investors are most likely to be attracted to such firm which could lead to an increase in its earnings per share.

Statement of the Problem

By its nature construction/real estate industry involves a lot of cost prompting the firm managers to engage in a lot of cost estimation, management and control. In view of this, construction firms engage in a lot of cost estimation each time a contractor is to be awarded. In addition to this, the managers also engage in cost management and cost control during job execution to ensure that cost variations will not adversary affect firm profitability and firm growth. Among the significant cost that are managed and control is operational cots such as professional fee, valuation fee, trusteeship fees, registrars' fees, audit fees, custodian fees, legal fees or legal charges, management fees, agency fees and so on. Some construction and real estate firms in Nigeria has died off and exited the market as a result of inaccurate estimation of these cost, poor cost management and control. This is because they are unable to generate earnings earning to grow and maximize wealth for the shareholders of the firms. This has prompted the present research to examine the effects of operational cost on earnings of construction and real estate firms in Nigeria.

Objectives of the Study

This study examines the effects of operational cost on earnings of construction and real estate firms in Nigeria.
The specific objectives of the study are to:

a. Appraise the effect of registrars' fee on earnings per share of construction and real estate firms in Nigeria.
b. Investigate the effect of property maintenance expenses on earnings per share of construction and real estate firms in Nigeria.
c. Examine the effect of legal fee on earnings per share of construction and real estate firms in Nigeria.

Research Questions

The following research questions were formulated in accordance with the specific objectives of the study:

i. What is the effect of registrars' fee on earnings per share of construction and real estate firms in Nigeria?
ii. How do property maintenance expenses affect earnings per share of construction and real estate firms in Nigeria?
iii. To what extent does legal fee affect earnings per share of construction and real estate firms in Nigeria?

Statement of the Hypotheses

The null hypotheses formulated to address the research questions are:

i. Registrars' fee does not significantly affect earnings per share of construction and real estate firms in Nigeria.
ii. Property maintenance expenses does not significantly affect earnings per share of construction and real estate firms in Nigeria.

iii. Legal fee does not significantly affect earnings per share of construction and real estate firms in Nigeria.

Review of Related Literature

Conceptual Review

Operational Cost

Murphy (2021) defines operating costs as those costs associated with the maintenance and administration of a business on a day-to-day basis. Operating costs include direct costs of goods sold and other operating expenses often called selling, general, and administrative which includes rent, payroll, and other overhead costs, as well as raw materials and maintenance expenses. Operating costs exclude non-operating expenses related to financing, such as interest, investments, or foreign currency translation. Operating costs are the ongoing expenses incurred from the normal day-to-day running of a business.

Dagostino & Feigenbaum (2003) states that the costs of transacting in real estate are many and varied. This is what makes real estate investment a long-term game. Some of the cots include, broker fee, search fee, legal fee or legal charges, financing cost, statutory costs. Brokerage is one of the most known costs associated with real estate transactions. This cost is typically a charge by a broker. The job of the broker is to make the buyer and the seller meet. The broker also has to assist during the period of negotiations and convey the offers and counter offers between the buyers and sellers. Search costs are another commonly known cost that are associated with real estate investing. These costs include money paid to newspapers and magazines to advertise the property. Nowadays, online portals allow sellers to advertise their properties for free. Across the world, whenever real estate transactions take place, the government usually adds to the transaction costs by taking a portion of the sale proceeds. This is called the statutory cost. This study, however, adopted valuation fees, custodian fees and legal charges as independent variables and proxies for corporate charges of construction and real estate firms.

Registrars Fees

Real Word Law (2020) defines registrars' fee as the fee paid for registration of real property with the Land Registry Offices. The Registrar of real properties is responsible for approving and registering all types of transactions related to real property in accordance with the laws and regulations of each country. The Registrar administers the laws, regulations and procedure designed to ensure the protection of the rights of buyers, sellers and leaseholders of all properties. There are Land Registry Offices in all states of Nigeria where the registers and records of all real property in urban areas are registered and updated as further real estate transactions occur. Real estate title records are duly documented in the Register of Deeds securely kept at the respective Lands Registry Offices in the respective states in Nigeria. The register is an authoritative record of the interests in specific properties. All subsequent transfer of interests in real property are registered in the respective files as a charge and record of the transfer of the title to the purchaser or assignee.

Property Maintenance Expenses

Fuscaldo (2021) defines property maintenance fees as the monthly fee paid by property owners for the upkeep of the buildings, grounds, and common areas. Whether you are thinking of buying an apartment or a large property complex as an investment property or as a primary residence, it involves more than just your monthly mortgage and living expenses. An additional cost of owning an apartment or a large property complex is their monthly maintenance fees. The monthly fee covers the cost of the upkeep of the buildings, grounds, and common areas. The monthly maintenance fee is dependent on the location and size of the apartment. Of course, location can be a significant driver of the costs of a property and its monthly fees, especially if the property is situated in a highly-desired area such as a city or near the beach. Those who purchase a property pay the monthly maintenance fee, which is distributed to pay the necessary expenses for the property maintenance. This covers the cost of maintaining the lobby and common areas, sidewalks, landscaping, tennis court, swimming pool, elevator, snow removal, sewage lines, trash collection and buildings' physical exterior.

Legal Charges

Kalfrin, (2020) describes l**egal fee** or legal charges as the money a **legal** practitioner get when he offers **legal** services to a client. Olusola, (2020) states that when buying a property in Lagos or perhaps anywhere else in Nigeria, it is statutory for the buyer of the property to register the property with the authorities. The land registration process in Lagos is governed by the provisions of the Land Registration Law of Lagos State (2015) and also the Land Use Act, which is the principal legislation governing the land transactions throughout Nigeria. It is of supreme importance to take particular measures before the purchase of land, or maybe land with structure during the course of buy and even after the purchase has been created for the benefit of securing one's interest in the said property. A willing purchaser as a question of importance must check out the name of the actual owner to the stated land and in a number of cases the track record of that vendor to forestall any future legal issues. Prior to the registration of property in Nigeria, there are various stages to follow when buying a property. This includes investigation of title, assignment stage, registration stage and application for Governor's consent. Each of these stages involves legal practitioners and the fees paid to them for the services is call legal charges.

Earnings Per Share

Kelley & Hora (2008) defines earnings per share as a profitability ratio that provide information to firm investors about the value of a unit of share and the amount, they have earned from every kobo share invested in the firm. Islam, Khan, Choudhury & Adnan (2014) opine that, earnings per share symbolizes the part of a company's earnings, net of taxes and preferred stock dividend that is apportioned to each share of common stock. It refers to the ratio of the profit after tax of the company for any financial year after payment of preference dividend. Ekwe & Inyama (2014) states that e**arnings per share** is a carefully scrutinized metric that is often used as a barometer to gauge a company's profitability per unit of shareholder ownership. As such, earnings per share is a key driver of share prices. It is also used as the denominator in the frequently cited price earnings ratio (P/E ratio. Earnings per share is calculated by dividing the company's total earnings or income by the number of shares the company has outstanding. Islam et al (2014) also stat that the figure for earnings per share can be computed simply by dividing net income earned in a given reporting period by the total number of shares outstanding during the same term or is calculated by dividing earnings after interest, depreciation and tax by total number of outstanding shares.

Theoretical Reviews

This study is anchored on Financing Constraint Theory developed by Goldratt in 1990

Financing Constraint Theory

This theory was propounded by Goldratt in 1990. In the theory, he argues that firms which do not make profit, do not have a buffer to invest and will not be able to finance their growth or at least their sustainability, and will finally disappear. Here, the buffer is the retained earnings, which will be small if the company does not make profit or decides to allocate all of its profit to the shareholders. This buffer equals to the internal capital, which is preferred to external capital according to the pecking order theory. Put in another way, the theory states that the companies which generate profit and then retain it, avails itself of good growth opportunities while the companies having no or low profits cannot avail good investment opportunities, so they do not grow rapidly (Jang and Park, 2011).

Audretsch & Elston (2002) is linked to this theory line of thinking when they emphasized the importance of the effect of firm size on the profitability-growth relationship. They considered firm size as a dynamometer, which measures the power of the profitability-growth relationship. According to them, a decrease in firm size weakens the impact of profitability on growth.

Wagenvoort (2003) stated that small firms will face more financial distress, hampering the growth of these companies. Bechetti & Trovato (2002) and Carpenter & Petersen (2002) believed that the constraints mostly affect the growth of small firms. Oppositely, larger firms will face less financial constraints and are more likely being exempted to safeguard profitability. Consequently, larger firms will exploit profitability more accurately and profoundly, leading to more investments and a quicker growth process.

Empirical Reviews

Registrars Fees and Earnings Per Share

Siti & Siska (2018) explored the effect of operational cost and operational revenue on return on asset of Sharia Banking, Indonesia from 2012 to 2016. Sharia Enterprises PT. Bank Sumut was selected for the study. A quantitative research design was adopted for the study. Secondary data relevant to the variables were collected from the PT. Bank Sumut during the period of 2012 to 2016. The method of analysis used is simple linear regression analysis. Result of analysis suggests that operational cost and operating income have negative effect on return on asset. This implies that the higher operational costs and operating income lead to ability of the Bank to reduce operational costs and increase operating income. This intern leads to decrease in the profit generated by the Bank. This eventually lower the return on assets.

Muriithi (2017) appraised the effect of operating costs on financial performance of occupational pension schemes in Kenya from 2007 to 2009. The target population of the study is 329 pension schemes, out of which 164 were sampled using stratified random sampling technique. Secondary data were obtained from the sampled pension schemes for the 3 years' period of the study. The variables of the study are, value of assets, investment returns, investment costs, administrative costs and other costs as indicated in the audited financial statements. The independent variable is return on assets. The financial performance was done using financial ratios, such as, investment cost ratio and operating expense ratio were computed annually for each category. The data collected were analyzed using, regression analysis, tabular trend and ratios analysis showing the annual average. The analysis shows that there a strong inverse relationship exists between financial performance and investment management costs as well as administrative cost. It was recommended thereafter that trustees/authorities should monitor and regulate the operating costs incurred by the pension schemes.

Gülfen & Şule (2016) sampled 16 technology firms listed on Istanbul Stock Exchange and analyzed the impact of operating expenditures on firm performance in Turkey. Secondary data covering 2008 to 2015 were collected from the firm for analysis. The independent variables of the study and measures of operating expenditure are, research & development, marketing, sale & distribution expenditures and general administrative while the independent variable and measure of rim performance is return on equity. Regression analysis, Pedroni Cointegration and Unit Root test were among the statistical tools of analysis for the study. Result of analysis indicate that there is a long term relationship between firm performance and operating expenditures items consisting of general administrative expenditures, marketing-sale-distribution expenses and research & development. When the coefficients for this long term relationship are analyzed, it was observed that general administrative expenditures and firm value has an adverse relationship, while marketing, sale & distribution expenditures and research-development have a direct relationship. It was further observed that while marketing-sale-distribution and research-development expenditures increase firm performance, general administrative expenditures decrease.

El-Sawalhi & El-Riyati (2015) adopted survey to examined the overhead costs management practice in the construction industry in the Gaza Strip, Israel. Structured questionnaire and personal interviews were used to collect primary data from the respondents made up of sixty-three (63) contracting firms staff working in the construction industry in the Gaza Strip. Out of the 63 respondents, 34.34% of them are working in buildings while 25.30% is roads, 22.89% is water and sewage, 13.25% is electro mechanical works, while 4.22% are working in other types of construction firms. Finding from the study indicates a good awareness of the overheads costs and its components. Contractors are taking several precautionary measures to minimize any risks associated with overheads costs. Factors affecting the estimation of overhead costs are including the management capacity of the firms and its policy, led by the firm's experience and ability to implement the project within the time frame.

Property Maintenance Expenses and Earnings Per Share

Using Pearson Correlation analysis, Wahid, Farah Ahmad & Aziz (2018) explored the determinants of firm profitability and risk in the Real Estate Industry in Singapore from 2013 to 2017. Five (5) real estate and properties firms which operating in Singapore during the period were sampled for the study. The sampled firms: Frasers Centerpoint Limited, Far East Orchard, CapitaLand, City Development, and Bukit Sembawang show that the performances were favorable from the year 2013-2017. The dependent variable of the study is return on equity while the dependent variables are operating ratio, average collection period, liquidity ratio, market risk and index score. The result of the analysis shows that firm-specific risk like, credit ratio, quick ratio, and operating ratio have a close relationship to the return on assets of the firms.

Akeem (2017) studied the effect of cost control and cost reduction techniques on organizational performance in Nigeria manufacturing firms. Descriptive survey research, using a questionnaire method was adopted for the study. The study targeted manufacturing firms listed in Nigeria, out of which Chemster Paint Industry in Nigeria was selected for the study. A sample of 50 staff of the firm were selected for the study. Thus, total of 50 questionnaires were administered to the respondents. Regression analysis was used to test the null hypotheses formulated for the study. Result of the analysis indicates that cost control has a positive impact on organizational performance and also the style of management has a positive impact on organizational performance.

Khalid & Khan (2017) examined the impact of operating and financial expenses on sales revenue using Fauji Fertilizer Company Limited Pakistan as evidence. The adopted time series data for fourteen years covering 2002-2015. The data were analyzed using ordinary least square and multiple regression analysis. Elasticity and causality tests was also used for the study. Results of analysis indicate that there is a substantial relationship between operating expenses and sales revenue of the firm, however; the relationship between financial expenses and sales revenue is not so strong comparatively. The results also confirmed that there is a significant increase in the sales revenue of the firm caused by a unit change in operating expenses. The study recommended that the firm should create awareness for its products and services through advertising and general publicity on the uses and benefits of their multi-products produced.

Using survey method, Plebankiewicz & Leśniak (2013) analyzed overhead costs and profit calculation by Polish contractors in 2004 and 2010. Pilot ones was carried out in April 2004 among twelve contractors. Questionnaire used during interviews with company representatives had three parts. In the second and third pilots, the questions concerned aspects of overhead costs and profit calculations interesting for the authors. The next survey, including 58 companies, was carried out in the first half of 2010. Questionnaire, similarly as the one from 2004, consisted of three parts. Regression and correlation analysis were the statistical tolls used to analyze the data collected for the study. Findings form the analysis indicates that Legal regulations in effect in Poland since 2001 allow the contractor freedom in shaping overhead costs and profit. It was also observed that Polish Contractors are unwilling to calculate overhead costs in detail while it is a frequent practice in other countries. It was equally ascertained after analysis that Polish contractors uses overhead and profit indexes peculiar to the country which is more often adjusted to suit a particular project.

Legal Charges and Profit for the Year

Abulaila & Aloudat (2019) analyzed the impact of quality cost on the financial performance of banks in Jordan during 2009 to 2015. Twenty-five (25) banks operating in Jordan during the period were targeted, out of which twelve (12) were sampled using disclosure of required variables as criteria. Secondary data were collected from the financial reports of the sampled banks. The independent variable (quality cost) was proxied by preventive costs, appraisal costs, internal failure costs, and external failure costs while the dependent variable (performance) was proxied with return on assets, earnings per share and Tobin Q). Control variable (bank size) was measured by the total assets of the bank. Descriptive statistics, multiple regression and Hausman Test were used to analyze the data collected. The most important finding from the study is that banks operating in Jordan are concerned about quality activities. Other findings include, the existence of statistically significant effect of quality cost on financial performance. The study also indicated that there are variations in the effect of the quality costs dimensions (negative and positives) on the financial performance indicators. Furthermore, the results indicated that the size of the bank is the most important variable in affecting the performance of banks operating in Jordan. It was recommendations that the banks should give attention to appraisal costs because the results of the study indicated that there is a positive effect of these costs on the returns of assets and on Tobin Q.

Yismalet & Patel (2018) adopted survey method to assess project cost management practice and profitability of domestic contractor in India. Primary data collected were analyzed using tables and chats. Result of analysis indicates that construction cost management is the most important function for project success, and the construction project performance is generally expressed in terms of cost and its variance from the budget. However, it has not been effectively used due to the presence of a large quantity of data with many complex interrelationships. That projects cost management system complements the broad functions of cost estimation & tendering, planning

& scheduling/ budgeting, and cost and financial control. In view of this it was recommended that India contractors should have a cost management system which integrates estimating, tendering, budgeting and controlling.

Using a survey research design, Smithwick, Lines, Sawyer & Sullivan (2017) adopted Correlation analysis to examined construction overhead expenses during the great recession USA. The objective of this paper was to conduct a study of how the industry adjusted their overhead costs because of the 2008-2013 industry decline. The study collected information on how companies reduced expenses in thirteen overhead categories, along with various demographic information. A total of 480 contractors responded to the survey, and 95 percent reported that they reduced overhead in one or more areas. Correlation analysis was used to conducted an analysis to test the strength of association between two different relationships. Result suggest that nearly every firm surveyed for this study reported that they cut overhead because of the Great Recession. The median percentage reduction in overhead was between 11-25 percent. While the recession had a negative impact on many people, and especially construction firms, the study propose that it also presents a fresh opportunity for organizations to reconsider how they manage their overhead expenses.

Mahdavi, Moghaddam & Alipour (2011) studied, cost, revenue and profit efficiency using Iranian automobile and parts industry listed in Tehran stock exchange during the years 2006 to 2009. Twenty-three (23) belonging to the automobile and parts industry were sampled for the study. The independent variables include, firm size, operating costs, profitability, asset turnover ratio and different efficiency measures. The data collected from the firms were analyzed using correlation and regression analysis. Findings from the study indicates that average cost, revenue and profit efficiency of surveyed companies over the given period were 0.51, 0.57 and 0.27, respectively. Detailed findings show that there is significant positive relationship between return on equity, sales to fixed assets and cost efficiency between sales to fixed assets, log. total assets, sales to total assets and revenue efficiency. Finally, that there is a strong relationship between sales to fixed assets, log. total assets and profit efficiency. These results implied that the more a company was large, the more it earns revenue and profit.

Methodology

Research Design

E*x-post facto* researcher design was adopted for the study. This means that the data collected and used to conduct the study were historical financial data which were in existence before the study was conducted.

Area of the Study

This study was conducted in in Nigeria and precisely on construction and real estate firms listed on the Nigeria Stock Exchange during 2013 to 2019 periods.

Sources of Data

Secondary data is the main data source for the study. These secondary data were sourced from the published annual reports and financial statements of the selected construction and real estate firms listed on the Nigeria Stock Exchange during the period of 2013 to 2019.

Population of the Study

A total of Nine (9) construction and real estate firms were listed on the Nigeria Stock Exchange during the period. These nine firms constituted the population of the study.

Sample Size Determination

The study targeted the 9 construction and real estate firms listed on the Nigeria Stock Exchange during the period, out of which 3 were sampled for the study. Disclosure of the research variables in the annual report or financial statement for a reasonable number of years of the study is the criteria in selecting the firms. The construction and real estate firms eventually sampled are: UPDC Real Estate Investment Trust, Union Homes Real Estate Investment Trust, and Smart Products Nigeria Plc. The independent variable of the study and measure of firm earnings is

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earnings per share while registrars' fee, property maintenance expenses and legal fees are the independent variables and measures of operational cost.

Model Specification

The following model was developed in line the variables of the study:

$EPS = \beta_0 + \beta_1(RGF) + \beta_2(PME) + \beta_3(LGF) + \varepsilon$

Where:
EPS = Earnings Per Share
RGF = Registrars' Fee
PME = Property Maintenance Expenses
LGF = Legal Fees
β = Beta
ε = error margin

Method of Data Analysis

The study used multiple regression analysis to analyze the secondary data collected from the sampled construction and real estate firms during the period of 2013 to 2019. This was supplement with Adjust R-square test was also use to measure the extent by which the variations in the dependent variable (earnings per share) is explained by the combination of independent variables (registrars fee, property maintenance expenses and legal fees).

Discussion of Findings

Data Presentation

Three construction and real estate firms were selected for this study based on disclosure of required data. The three firms are: (i) Union Homes, (ii) UPDC and (iii) Smart Products. Secondary data were collected from the published annual reports and financial statement of the selected firms for purpose of analysis. The data collected is presented in table 1

Table 1: Raw Data

FIRM	*YEAR*	*REGISTRARS*	*PROPERTY*	*LEGAL*	*EARNINGS*
		FEE	**MAINT. EXP**	**FEE**	**PER SHARE**
		N(000)	**N(000)**	**N(000)**	**-**
UNION HOMES	2013	271	15,477	1,055	2.37
	2014	291	7,671	1,159	(5.16)
	2015	390	18,700	1,150	2.09
	2016	291	7,491	4,146	1.48
	2017	261	2,231	3,670	1.18
	2018	1,021	25,582	855	1.93
	2019	540	27,982	2,921	1.87
UPDC	2013	-	10,265	114,778	1.86
	2014	1,534	16,346	115,955	2.10
	2015	1,602	22,616	112,963	0.23
	2016	-	20,158	107,075	(0.88)
	2017	1,889	26,000	133,879	0.83
	2018	1,889	-	104,669	0.99
	2019	2,129	27,500	194,235	(0.17)
SMART PRODUCTS	2013	216	1,382	327	0.27
	2014	469	1,038	210	0.28
	2015	240	747	276	0.37
	2016	364	541	18	0.29

2017	419	819	420	0.19
2018	722	774	538	0.26
2019	973	1,118	3,631	0.12

Source: Author's Compilation 2022

Data Analysis

Data analysis is a process of inspecting, cleansing, transforming, and modeling data with the goal of discovering useful information that will assist in making conclusions, and supporting decision-making. In view of this, the raw data collected from the selected real firms analyzed were analyzed using Ordinary Least Square Regression Analysis and the results presented in tables 1.

Table 2: Least Square Regression Analysis

Dependent Variable: EPS
Method: Least Squares
Date: 05/15/22 Time: 15:45
Sample (adjusted): 3 21
Included observations: 18 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	40252.81	12130.81	1.028201	0.2225
RGF	0.007486	2.101277	2.048990	0.0000
PME	0.005377	3.813209	3.555029	0.0045
LGF	0.006164	1.012261	2.425773	0.0009

R-squared	0.890270	Mean dependent var	64570.42
Adjusted R-squared	0.856108	S.D. dependent var	59941.13
S.E. of regression	13356.11	Akaike info criterion	38.29451
Sum squared resid	1.231280	Schwarz criterion	15.42544
Log likelihood	-222.3591	Hannan-Quinn criter.	15.24792
F-statistic	48.05419	Durbin-Watson stat	1.999550
Prob(F-statistic)	0.000000		

Source: E-View 10 output, 2022.

Result of data analysis is presented in table 2. Results from the table shows that the Coefficient of Determination (Adjusted R-Square) is 0.856108. This implies that 86% of the variation in Earning Per Share of the selected construction and Real Estate Firms is explained by the independent variables, comprising of, Registrars' Fee, Property Maintenance Expense and Legal Fee/Charges while the remaining 14% is explained by other variables not included in the model of the study. Results from the table also indicates that Durbin Watson Statistics is 1.999550, which is closer to 2 than 0. This result indicates that there is no trace of autocorrelation in the model of the study.

Test of Hypotheses

Decision Rule

Level of significance (α) = 0.05. Reject the null hypothesis if the significant value in the regression coefficients is less than the level of significance (0.05), otherwise accept the null hypothesis. Based on this decision rule, the findings from the test of hypotheses are hereby presented below:

Hypothesis One

H_0: Registrars' fee does not significantly affect earnings per share of construction and real estate firms in Nigeria.
H_1: Registrars' fee significantly affects earnings per share of construction and real estate firms in Nigeria.

Table 2 shows that the significant value of registrars' fee in the regression model is significant at 0.05 level of significance (0.0001<0.05). Therefore, we reject the null hypothesis and accept the alternative that registrars' fee significantly affects earnings per share of construction and real estate firms in Nigeria.

Hypothesis Two

H_0: Property maintenance expenses does not significantly affect earnings per share of construction and real estate firms in Nigeria.

H_1: Property maintenance expenses significantly affect earnings per share of construction and real estate firms in Nigeria.

The Table also shows that the significant value of property maintenance expenses in the regression model is significant at 0.05 level of significance (0.0045<0.05). Thus, we reject the null hypothesis and accept the alternative that property maintenance expenses significantly affect earnings per share of construction and real estate firms in Nigeria.

Hypothesis Three

H_0: Legal fee/charges do not significantly affect earnings per share of construction and real estate firms in Nigeria.

H_1: Legal fee/charges significantly affect earnings per share of construction and real estate firms in Nigeria.

The Table also shows that the significant value of legal fee/charges in the regression model is significant at 0.05 level of significance (0.0009<0.05). Thus, we reject the null hypothesis and accept the alternative that legal fee/charges significantly affect earnings per share of construction and real estate firms in Nigeria.

Discussion of Results

Discussion of Finding One: Result from the regression analysis in Table 2 reveals that the regression coefficient of Registrars' Fee (RGF) is 0.005377 while the significant value is 0.0045, which is significant at 5% level of significance (0.0000<0.05). In view of these results, we can conclude that RGF positively and significantly affects earnings per share of Construction and Real Estate Firms in Nigeria during the period. This result is in agreement with the findings of Khalid & Khan (2017) who found that a substantial relationship was found existing between operating expenses and sales revenue. The result, however, contrasts sharply with the findings of Siti & Siska (2018) who found that operational cost and operating income have negative effect on return on asset.

Discussion of Finding Two: Result from the regression Table 2 also shows that the regression coefficient of Property Maintenance Expenses (PME) is 0.007486 while the significant value is 0.0000, which is significant at 5% level of significance (0.0045<0.05). Therefore, we state that PME positively and also significantly affects earnings per share of Construction and Real Estate Firms in Nigeria during the period. This result is in agreement with Gülfen & Şule (2016) who noted that a long term relationship between firm performance & operating expenses items consisting of general admin exp., marketing-sale-distribution ex and R&D exp. were dictated. The result, however is inconsistent with *Muriithi (2017) who observed that a* strong inverse relationship exists between financial performance and investment management costs as well as admin cost

Discussion of Finding Three: Result from the regression Table 2 equally indicate that the regression coefficient of Legal Fees/ Charges (LFC) is 0.006164 while the significant value is 0.0009, which is significant at 5% level of significance (0.0009<0.05). In the light of this, we assert that LGC positively and also significantly affects earnings per share of Construction and Real Estate Firms in Nigeria during the period. This result contrasts with Abulaila & Aloudat (2019) who detected existence of statistical significant effect of quality cost on financial performance was observed.

Summary of the Findings

In view of the data analysis and findings together with the deduced discussions we summarize the findings of the study as follows.

a) The registrars fee positively and significantly affects earnings per share oil construction and real estate firms in Nigeria. The implication of this finding is that the earnings of construction/real estate firms improves with prompt payment of registrars' fee.

b) Property maintenance expenses positively and significantly affects earnings per share oil construction and real estate firms in Nigeria. The implication of this fining is improves the value of the real estate building and by so doing attracts additional earnings in terms of tenancy income.

c) Legal fee/charges positively and significantly affects earnings per share oil construction and real estate firms in Nigeria. The implication of this result is payment of legal fees will prevent losses for the firms thereby increasing earnings for the firms.

Conclusion

This study examined the effects of operational cost on earnings of construction and real estate firms in Nigeria from 2013 to 2019. The study adopted ex-post factor research design. A sample of 3 firms was selected from a total population of 9 construction and real estate firms listed on the Nigeria Stock Exchange during the period. Secondary data were collected from the selected firms and analyzed using Ordinary Least Square Regression Analysis. In view of the findings from the study, we conclude that the model is significant in explaining the variations in the dependent variable. We also conclude that the effect of each of the three independent variables, (namely, registrars fee, property maintenance fee and legal fees/charges) on the dependent variable (earnings per share) is positive and statistically significant.

Recommendation

Based on the findings of the study, we recommend as following for construction and real estate firm managers in Nigeria:

a) Construction/Real Estate firms in Nigeria should ensure that all properties acquired be registered with Land Registry to properly secure ownership of the property. This is to prevent any possible loss resulting from improper acquisition. This will in-turn increase earnings generation for the firms.

b) The firms should also ensure that its properties are maintained as and when due. Regular maintenance of properties will prolong the lives of the assets and this also ensure regularly and uninterrupted earnings for the firms.

c) Finally, the Construction/Real Estate firms should ensure that all legal fees and charges relating to property acquisition, development, leasing or sales are settled. This is to avoid possible litigation and loss of property through improper acquisition.

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