

Acquisition Cost and the Performance of Real Estate Investment in Nigeria: A Panel Data Approach

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Abstract

The study examined the impact of acquisition cost on the performance of real estate investments in Nigeria. The ex-post facto research design was adopted to enable the researcher make use of secondary data to determine the cause-effect relationship of the costs of acquisition of assets and performance of real estate investments in Nigeria. The dependent and independent variables were observed over the period, 2015 to 2020. The data collected from the annual financial reports of the various quoted real estate companies in Nigeria were analyzed and tested using econometric analytical technique to determine the impact of the independent variable, on the dependent variables. The hypotheses were tested using the E-view statistical software adopting the Panel Least Square (PLS) method on the regression models adopted. The signs and significance of the regression coefficients were relied upon in explaining the nature and influence of the independent variable on the dependent variable as to determine both magnitude and direction of impact. Findings from the study revealed that investment cost had positive and significant impact on the performance of real estate investments in Nigeria while management cost, and finance cost had negative but significant impact on the performance of real estate investments in Nigeria. The study therefore, recommended that the government should make policies that will encourage real estate investment development in Nigeria, as way of diversifying the economy.

Keywords: Acquisition Cost, Real Estate, Investment, Nigeria

1. INTRODUCTION

There has been an increased appetite for real estate investment in recent years in Nigeria as in other emerging nations of the world. The development of real estate involves the purchase, management, rental, sales of real estate with a purpose of making profit (Abraham, 2009). Real estate investment represents a significant portion of many institutional portfolios as a result of many potential benefits of real estate. Real estate investment is associated with portfolio risk reduction, hedging of unexpected inflation or deflation, delivery of cash flow to the investors and tax benefits (Izzo 2004). Chen and Mills (2006) viewed that real estate is an attractive investment for many reasons, including the high share of total return derived from the income components.

However, investment in real estate involves large investment cost, which is the acquisition cost, unlike the investment of probably small sums in some other investment vehicles. In recent times, the increasing cost of landed property and building materials is of great concern to the real estate sector. The cost of asset acquisition in the country has displayed steep increase in recent times as the costs of various items have continued to rise. This in turn has affected the profitability of real estate development (Ayomittunde, Akindele & Abaka; 2019). In Nigeria, real estate investment was seen in the past as a means to obtain security and regular income, thus decisions were often made on the basis of intuition and past experience

(Ajayi & Fabiyi, 1984). Appraisal of portfolio performance was limited to financial holdings, while limited interest was shown on the level of performance achieved by real estate investment. Location and sound management were recognized as the only important factors influencing the return on real estate investment. Such considerations as basis of investment decision sufficed for the period of the economic boom. However, the recent happenings in the global and national economy and the globalization concept - which has made the whole world a global village; require thorough investigation of all cost forces that influence real estate performance. It is thus imperative that when taking investment decisions, investors and advisors must involve comprehensive analyses of real estate investment performance. It is against this background that this study is aimed at investigating the effect of cost of acquisition on the performance of real estate investment in Nigeria.

2. REVIEW OF RELATED LITERATURE

CONCEPTUAL FRAMEWORK

The Nigerian Real Estate Industry

The real estate is such kind of industry which is engaged in various economic activities such as development, investment, intermediary services, property management, rental and sales along with the links of production, circulation and consumption (Detail Commercial Solicitors, 2015). The real estate, under the title of “GDP barometer”, is sensitive to business cycle. There are three categories of real estate nowadays in Nigeria, the development, intermediary services and property management (Detail Commercial Solicitors, 2015). According to the guide, the development of the real estate mainly involves in property and land development. The intermediary services aim at providing intermediary services for property circulation, including real estate brooking and appraisal. The property management aims at providing support for building, equipment and landscaping and services for security and cleaning. The real estate development is the head and front of real estate industry in Nigeria.

Concept of Company Performance

The notion of performance is a controversial issue in finance and accounting largely because of its multidimensional meanings. The profitability of a company measures its gains over its operative years. Performance can be explored from two points of view: financial and organizational (the two being interconnected); a company’s performance can be measured based on variables that involve productivity, returns, growth or even customer satisfaction (Tudose, 2015; Umechukwu, 2016; Nnubia, 2017).

Financial performance (reflected in profit maximization, maximization on return on assets and maximization on shareholder return) is based on the company’s efficiency. The assessment of financial performance can also be based on the return on investment, residual income, earnings per share, dividend yield, price/earnings ratio, growth in sales, market capitalization, etc.

Financial performance plays a large role in measuring the success of business organizations. Evaluating the company’s performance has three dimensions: the companies’ productivity, profitability and market premium (Omondi & Muturi, 2013). To this end, there are a plethora of measures of financial performance; such as profitability, return on assets (ROA), return on investment (ROI), return on equity (ROE), and operation profit margin (OPM).

Aliet (2012) indicated that profitability is defined as an income generated in the business which is calculated by subtracting the expenses from the revenue. The author went on by indicating that the word profitability derives from the word “profit” denoted by the Greek letter “ π ”. This is defined as the difference between the total revenue of a business and the total cost of a business.

Kew and Watson (2012) provided definitions from four different sources. The authors first gave the English dictionary definition: advantage, benefit/financial gain; excess of returns over outlays. The second definition was from a Business dictionary: the excess of the selling price of the article or service being sold over the cost of providing it". Kew and Watson (2012) also provided a definition from a director of a professional services company: income less expenditure, not cash, and, lastly, a textbook on finance: income less expenditure for a given period.

The above definitions indicate that profitability is a positive balance after calculating the difference between the businesses sales and the operational expenses i.e., Profit = Sales – Expenses.

EMPIRICAL STUDIES

Elile, Akpan & Raju (2019) studied the macroeconomic determinants of real estate investment performance in Nigeria. The study adopted quantitative research method and used secondary data for the period of 37 years (1980- 2017). The analysis was performed using OLS multiple regression with lagged dependent variable model to account for endogeneity in the data set. Results showed that inflation, and GDPr each has significant positive while exchange rate has significant negative effect on real estate sector performance. The study concluded that inflation, per capita GDPr and exchange rate are important macroeconomic determinants of real estate performance in Nigeria.

Okoro, Effiong & Igwe-Kalu (2016) measured that impact of Lack of Real Estate Market Research on Economic Growth and Development in Southern Nigeria Purposive survey approach was used in three urban centers of southern Nigeria. Housing investors in Uyo, Calabar and Aba were interviewed through 1,050 randomly distributed questionnaires to find out their approach to real estate market research before embarking on housing investments and the investment outcomes. The results from testing the research hypothesis using simple linear Regression Analysis indicated there were significant marginal impact of investors' mode of investment decision on the economic growth of Calabar, Uyo and Aba. This is because majority of the housing investors studied do not carry out market research before embarking on real estate investment.

Ayomitunde, Akindele & Abaka (2019) examined the relationship between real estate development and economic growth in Nigeria between the periods of 1981 and 2016 using Johansen cointegration test, DOLS and Granger causality approach. However, the results of this study show that real estate development has a non-significant positive relationship with economic growth in Nigeria. In addition, there is a unidirectional causality which runs from inflation rate to real estate development and economic growth in the country. Furthermore, based on the findings that emerged in this study, the Nigerian government should see real estate as a viable sector that the current mono-cultural nature of its economy could be diversified into since this sector has the capacity to propel the expansion of the country's growth to a sustainable level if well explored and developed.

Ihuah (2016) examined the factors and effects of increasing costs of building materials in real estate development sustainability in Nigeria. The study found that eleven dynamics were significant to contributing to the widespread deficits, deplorable conditions and inaccessibility of housing units' to people. The study further indicates that these factors also underscore the ever increasing rent of residential properties in the area. The study reflection should greatly assist in depicting better ways of tackling these issues so that reductions in the impact of building materials cost increases on real estate provision as experienced in practice can be sustained within the system. A 'think tank' effort is recommended for relevant stakeholders.

Belke & Keil (2017) investigated the fundamental determinants of real estate prices. It contributed to the literature by analyzing a unique panel dataset covering a wide range of real estate market data and other economic variables for nearly 100 German cities. Several robust fundamental determinants are identified, among them the supply-side factors construction activity and housing stock as well as the demand side factors apartment rents, market size, age structure, local infrastructure and rental prices. Results suggest that these factors are robustly linked to fundamental real estate prices and thus can be used to detect misalignments of market prices.

Emoh & Uzuanje (2015) examined the effect of increasing cost of capital on the profitability of real estate developments in Benin City, Nigeria. In carrying out investigation, questionnaires were administered to selected real estate developers who developed for income generating purposes, as well as structured interview with the officials of Central Bank of Nigeria. Data collected were analyzed using the simple percentage analysis to determine the relative strength of responses drawn and the annual repayment model to determine cash flow from real estate development. It was revealed that cost of capital created negative rate of returns which implied that the increasing cost of capital reduces the profit level of real estate development in Benin City property market. The study therefore concluded that the increasing cost of capital in Nigeria affects the profitability of real estate development negatively.

Adekunle & Oladayo (2012) investigated the impact of Acquisition deals on the performance of commercial banks in Nigeria based on a model consists of (1) dependent variables : capital structure, credit risk, liquidity risk, asset profile, and operating efficiency, and (2) independent variables : return on assets, return on equity, and net profit margin. The research analysis used published audited accounts of ten out of twenty-four banks that emerged from the consolidation exercise and data from the Central Banks of Nigeria. The data is analysed by Pearson correlation and Multiple Regression analysis. Results showed that the acquisitions led to improvement of banks performance.

Liang (2013) examined the impact of acquisition announcements made by companies listed on the Hong Kong Stock Exchange, acquiring domestic Hong Kong firms and cross border firms within Hong Kong from 2007 until 2012. The event study methodology is employed to detect whether abnormal returns exist around the announcement day. A sample size of 44 events is utilized. This study found that the announcement effect is significant over the event period (day -2 to day 2) for those companies when the estimation period is day -90 to day -30. Investors can earn abnormal return by trading an acquiring company 2 days before the announcement date.

However, none of these studies examined the cost of acquisition vis-a-vis the performance of real estate investment in Nigeria using the panel data approach. Consequently, this study sought to fill this gap.

3. METHODOLOGY

The study adopted the *ex-post facto* research design to enable the researcher make use of secondary data to determine the cause-effect relationship of acquisition cost and the performance of real estate investments in Nigeria. Real estate investment performance was proxied by Profit after interest and tax while acquisition was proxied by investment cost, management cost and finance cost. Data were collected from published annual financial statement of five (5) quoted real estate companies in Nigeria for a period of six (6) years, 2015 to 2020. The five (5) quoted companies selected based on the availability of data were: Union Home Real Estate Investment Trust; UPDC Real Estate Investment Trust; Skye Shelter Fund Plc; Smart Products Nigeria plc; and ARBICO Plc. Data were analyzed using econometric analytical technique to determine the impact of the independent variable, on the

dependent variables. The hypotheses were tested using the E-view statistical software adopting the Panel Least Square (PLS) method on the regression models adopted. The signs and significance of the regression coefficients were relied upon in explaining the nature and influence of the independent variable on the dependent variable as to determine both magnitude and direction of impact.

The regression model adopted was on the form of, Y on X, which is an equation model that expresses the influence of Y - the dependent variable, on X - the independent or explanatory variable (Udom & Eze, 2018). This could be symbolically represented as:

$$Y = F(X), \text{ that is, } Y \text{ is a function of } X: \quad - \quad - \quad - \quad - \quad \text{equation (1)}$$

Hence, the model for this study is specifically stated as:

$$PAIT = F(INVC, MGTC, FINC) \quad - \quad - \quad - \quad - \quad \text{equation (2)}$$

Equation (2) above is interpreted as PAIT is a function of INVC, MGTC and FINC. Equation (2) could be restated as:

$$PAIT = \beta_0 + \beta_1 INVC + \beta_2 MGTC + \beta_3 FINC + \mu \quad - \quad - \quad - \quad \text{equation (3)}$$

Where

PAIT = Profit After Interest and Tax, a proxy for real estate investment performance

INVC = Investment Cost

MGTC = Management Cost

FINC = Finance Cost

β_0 = Constant

$\beta_1 - \beta_3$ = Coefficients of the regression equation

μ = Possible Error in Estimation

4. DATA ANALYSIS

In this section, the hypothesis of the study was tested and analyzed using the data collected from the annual financial statements of the quoted real estate companies selected. According to Onwumere (2009), to test a hypothesis, it has to be stated in both null and alternative forms. Hence, the hypothesis was stated in its null and alternative form as follows:

H₀: Acquisition cost does not have any significant effect on the performance of quoted Real Estate companies in Nigeria.

H₁: Acquisition costs have significant effect on the performance of quoted Real Estate companies in Nigeria.

TABLE 4.1: Regression Result of the Impact of Acquisition Cost on Performance of Real

Estate Investments in Nigeria

Dependent Variable: PAIT

Method: Panel Least Squares

Date: 08/31/21 Time: 05:29

Sample: 2015 2020

Periods included: 6

Cross-sections included: 5

Total panel (balanced) observations: 30

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	419519.6	555701.0	0.754938	0.4571
INVC	0.241061	0.071688	3.362649	0.0024

MGTC	-9.121470	2.771329	-3.291370	0.0029
FINC	-3.523329	0.916330	-3.845041	0.0007
R-squared	0.741354	Mean dependent var	-709948.9	
Adjusted R-squared	0.711510	S.D. dependent var	4157139.	
S.E. of regression	2232852.	Akaike info criterion	32.19902	
Sum squared resid	1.30E+14	Schwarz criterion	32.38585	
Log likelihood	-478.9853	Hannan-Quinn criter.	32.25879	
F-statistic	24.84115	Durbin-Watson stat	2.257110	
Prob(F-statistic)	0.000000			

Source: Researcher's E-View Result

Model Equation: $PAIT = 419519.6 + 0.241061INVC - 9.121479MGTC - 3.523329FINC + \mu$

Table 4.1 indicates that investment cost has positive and significant impact on the performance of real estate investments in Nigeria (coefficient of INVC = 0.241061, t-value = 3.362649). The probability value of $0.0024 < 0.05$ further indicates that, this is significant. On the other hand, management cost and finance cost had negative and significant impact on the performance of real estate investment in Nigeria (coefficient of MGTC = -9.121470, t-value = -3.291370 and coefficient of FINC = -3.523329, t-value = -3.845041 respectively). On the whole the coefficient of determination which measures the goodness of fit as revealed by R-square (R^2) indicates that 74.13% of the variations observed in the dependent variable (PAIT) were explained by variations in the independent variables (INVC, MGTC and FINC). The test of goodness of fit of the model as indicated by R^2 was properly adjusted by the Adjusted R-Square of 71.15%. The Durbin - Watson statistics of 2.257110 shows that there is no autocorrelation. Hence, the variables are negatively autocorrelated.

Discussion and Implication of Findings

As shown in the appendix, the unit root test revealed that all the data used in the study assumed asymptotic normality. Hence, the variables were stationary at level. Findings indicated that investment cost has positive and significant impact on the profit after interest and tax of real estate investments in Nigeria. Management cost and finance cost had negative and significant impact on profit after interest and tax of real estate investment in Nigeria. Therefore, we reject the Null hypothesis and accept the alternative hypothesis that acquisition cost has significant impact on the performance of real estate investment in Nigeria. The implication of this result is that an increase in investment cost leads to a significant increase in profit after interest and tax while an increase in management cost and finance cost lead to a significant decrease in profit after interest and tax of real estate investment in Nigeria.

5. CONCLUSION AND RECOMMENDATION

CONCLUSION

The recent advocacy in different quarters to diversify the mono-cultural nature of the Nigerian economy to the direction of non-oil sector makes the discovery of other viable sectors that could generate sustainable economic growth becomes imperative in the recent times. Real estate investment appears to be one of such viable options that could generate sustainable economic growth. However, the increasing cost of landed property and building materials is of great concern to the real estate sector. The cost of asset acquisition in the country has displayed steep increase in recent times as the costs of various items have continued to rise. This study was conducted to investigate the impact of acquisition cost on

the performance of quoted real estate firms in Nigeria. Evidence from the panel least square revealed that investment cost had positive and significant impact on the performance of real estate firms in Nigeria while management cost, and finance cost had negative but significant impact on the performance of real estate firms in Nigeria. Therefore, while increase in capital employed for investment increased performance (profitability) of real estate firms, increase in management cost, and finance cost led to a decrease in performance (profitability).

RECOMMENDATIONS

The study therefore recommended that the Nigerian government should see real estate as a viable sector that the current mono-cultural nature of its economy could be diversified into since this sector has the capacity to propel the expansion of the country's growth to a sustainable level if well explored and developed. Therefore, the policy makers in the country should embark on policy measures that will ensure a conducive climate for both local and foreign investors to thrive in this sector of the economy.

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APPENDIX

Panel unit root test: Summary

Series: PAIT

Date: 08/31/21 Time: 05:11

Sample: 2015 2020

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0

Newey-West automatic bandwidth selection and Bartlett kernel

Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-5.11450	0.0000	5	25
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-0.94936	0.1712	5	25
ADF - Fisher Chi-square	15.1807	0.1256	5	25
PP - Fisher Chi-square	14.5401	0.1497	5	25

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary

Series: INVC

Date: 08/31/21 Time: 05:13

Sample: 2015 2020

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0

Newey-West automatic bandwidth selection and Bartlett kernel

Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-5.93419	0.0000	5	25
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-0.18758	0.4256	5	25
ADF - Fisher Chi-square	11.7789	0.3001	5	25

PP - Fisher Chi-square	18.4829	0.0473	5	25
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** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary

Series: MGTC

Date: 08/31/21 Time: 05:14

Sample: 2015 2020

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0

Newey-West automatic bandwidth selection and Bartlett kernel

Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	0.38854	0.6512	5	25
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	1.60560	0.9458	5	25
ADF - Fisher Chi-square	3.52866	0.9661	5	25
PP - Fisher Chi-square	2.91344	0.9834	5	25

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary

Series: FINC

Date: 08/31/21 Time: 05:16

Sample: 2015 2020

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0

Newey-West automatic bandwidth selection and Bartlett kernel

Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-6.37292	0.0000	5	25
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-1.29884	0.0970	5	25
ADF - Fisher Chi-square	17.9523	0.0558	5	25
PP - Fisher Chi-square	29.6901	0.0010	5	25

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.