



# MACROECONOMIC FLUCTUATIONS AND EVENT CENTRES' RETURN DYNAMICS IN AKURE COMMERCIAL PROPERTY MARKET, NIGERIA

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This study explores the influence of selected macroeconomic variables on the event centres' return as an investment property in Akure between the period of 2005 and 2014. As at the time of this research, there are twenty-four (24) event centres situated at various locations in Akure. Twenty-four (24) well-structured questionnaires were administered on the managers of event centres in Akure, out of which eighteen (18) were appropriately filled and returned, and analyzed using econometric analysis (Multiple Regression models). The result of the coefficient of determination ( $R^2$ ) establishes that the considered macroeconomic variables account for 97.5% of the variation in event centres' return. However, the regression coefficient reveals that inflation rate and exchange rate have significant effects on event centres returns with p-values of 0.019 and 0.043 respectively. A unit change in these variables will result in 69.5% and 21% changes in the event centre's return respectively. While there is an inverse relationship between event centre returns and rate, it shows a direct relationship with the exchange rate. This study concludes that the Nigerian macro-economy influences the return of her specialized real estate investment with trading potentials as shown through the findings of this research. It is therefore recommended that Government should ensure that the macroeconomic variables are monitored so as to ensure stability in property construction, sales and rental price, as these can influence the performance of property market as well as the nation's economy.

Keywords: dynamics, event centres, fluctuations, macroeconomics, return

## INTRODUCTION

There is a growing concern about the level of performance of real estate investments all over the globe. As every investor wishes to maximize the benefit accruable from his asset, careful study has to be carried out on the various aspect of real property investment. Event centre is an emerging area

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of investment opportunity, especially in this part of the world where social activities are on the increase, has attracted more attention from real estate investors in recent years (Abbott & Geddie, 2001; Ezeokoli, 2015; Tade & Nnamani, 2017; Ayuba & Agah, 2018). This emerging trend has necessitated the study of its performance in relation to other real estate options as well as factors influencing such performances. However, the study of the performance of event centres in Akure with respect to the general economic condition of the nation as measured by the inflation rate, exchange rate, unemployment rate, the Gross Domestic Product and the interest rate (macroeconomic variables) is yet to be explored.

The environment an investment is situated has the ability to influence its return either positively or negatively. Such externalities and conditions could both be at the micro or macro level and often cause fluctuations in the expected returns of an investment. The macroeconomic factors are indicators or main signposts, which signals the current trend in the economy. They have no direct link or contact with the investment but influence the behaviour of such investment. These factors include the average prime rate, consumer price index, money supply, trade balance, producer price index etc. Oyekanmi (2005) categorized them into political, environmental, legal, social, economic or combination of the factors. Fischer (1993) posited that the interplay between various macroeconomic factors is the subject of a great deal of study in the field of macroeconomics.

The macroeconomic variables as a whole have been found to have an effect on real estate investment returns. According to Lynn (2007), when one-factor changes, ripple effect occurs, and the economy is affected much more since macro-economic factors often influence one another. To this end, measuring the effect of macro-economic variables is usually a difficult task.

The findings from local and foreign researches conducted on the relationship between macroeconomic variables and real estate investment return have shown a varying pattern. Fama and Schwert (1977) conducted a study on real asset returns and inflation and observed that private residential estates were the only form of investment that provided a complete hedge against expected and unexpected inflation when compared with government debt instruments and returns on human capital. Also, Demary and Voigtländer (2009), while studying the inflation hedging properties of real estate in Canada, USA, Finland, France, Germany, Ireland, the Netherlands, Sweden and the UK, observed that investment in real estate equities did not protect the investor against inflation. However, this is contrary to that of Fama and Schwert (1977). Also, Nzalu (2013) averred that GDP, interest rates and inflation rates do greatly determine the real estate investments returns in Kenya. On the other hand, Renigier-Bilozor and Wisniewski (2012) established that total consumption expenditure, net income, unemployment and population growths are influential factors of the real estate investment. While interest rates and interest rate spreads, for instance, were considered good indicators of economic activity, they are also found to influence property return movements.

Bello (2005), while studying the inflation hedging characteristics of residential property investment in Nigeria between 1996 and 2000, established that real estate investment in Nigeria is not an all-time hedge against inflation. As closely related as the various researches are, they have all produced different results. This disparity can be attributed to various factors including varying timeframes, fluctuating economic conditions, and differences in microeconomic and macroeconomic indicators among other issues. The problem is also drawn from the expectations and fear of investors, most especially commercial real estate investment in Nigeria about the security of their investments and the lack of information in the property market to address such fears. Most of the studies on the effect of macroeconomic variables focused on residential and office or retail properties, which are income generating properties. Studies have fully been carried out on specialized properties with trading potentials such as event centres as it relates to macroeconomic fluctuations, unlike other property types. Therefore, this study examines the effect of Interest Rates, GDP, Inflation Rate, Unemployment Rate and Exchange Rate on the returns of event centres in Akure, because they have been the major variables of study by previous authors in relation to other real estate investment options like office, retail and residential property types.

The aim of this study is to assess the performance of event centres in Akure with a view to analyzing the influence of a macro-economic variable on their return. To achieve this, the study seeks to analyze the trend in the rate of return from event centres in Akure; and determine the relationship between macro-economic variables and return from event centres.

## **LITERATURE REVIEW**

Majority of studies on real estate return and macroeconomic factors have been conducted in developed countries where financial innovation is high, and the economy is fairly stable. The study of Giussani, Hsai and Tsolacos (1992) on the relationship between changes in commercial rental values and fluctuations in economic activity, analyzed the European monthly data from 1983 to 1991 using a predictive model. It suggested that real Gross Domestic Product (GDP) is the most significant explanatory variable for commercial properties' rental values. McCue and Kling (1994) extended the examination of the link between property and the economy in another direction. The study treated real estate return as a residual by controlling for the covariance between equity Real Estate Investment Trust (REIT) returns and the overall stock market resulting from industry effects. In the analysis, vector autoregressive model was employed to test the relationships between these real estate residual and macroeconomic variables, and it was concluded that macroeconomic variables account for 60% variance in real estate returns.

A study conducted by Brooks and Tsolacos (1999) used the vector autoregressive model to establish the impact of economic and financial factors on UK property performance. The study used property returns, the rate of unemployment, nominal short-term interest rates, the interest rate spread, unanticipated inflation and the dividend yield as the predictor variables. The

property returns were based on a listed property (equity type). Despite using unanticipated inflation, the study found that using actual inflation yielded the same results. In a nutshell, the study found no strong suggestive evidence of any influence of macroeconomic factors on house prices.

Quan and Titman (2003) analyzed the impact of inflation on real estate prices. Cross-sectional regression and a time series test were performed using data from 17 countries. The cross-sectional regression showed that the rate of inflation has a statistically insignificant impact. This implies that commercial real estate is a good long-term hedge against inflation. However, the time series test indicated that real estate is not a good hedge against inflation on a year-to-year basis.

Another important determinant of the prices of commercial real estate is the GDP. De Wit and Van Dijk (2003) examined on a macro level, the consequences of the impact of economic growth, and supply and demand factors on direct real estate returns. The results of the regression analysis showed that the rate of inflation and GDP have a positive impact on the prices of direct real estate, while there is a significant negative relationship between the rate of unemployment and capital appraisal. Also, Vishwakarma and French (2010) examined the influence of macroeconomic variables on the India real estate sector between 1996 and 2007. Using a structural break, it concluded that macro-economic variables explain 10% of the variation in the real estate market between 1996 and 2000 with such variation increasing to 23% between 2000 and 2007.

Appergis (2011) examined the prospects of housing prices and macroeconomic factors within the European Monetary Union. The study analyzed the dynamic effects of specific macroeconomic variables (i.e. housing loan rates, inflation and employment) on the price of new houses sold in Greece using an Error Correction Vector Autoregressive (ECVAR) model. The variance decompositions showed that the housing loan rate is the variable with the highest explanatory power over the variation of real estate investment, followed by inflation, and then employment. Ojetunde, Popoola and Kemiki (2011) conducted a study on the interaction between the Nigerian residential property market and the macro-economy with empirical evidence based on vector autoregressive model. The model suggests that macroeconomic shocks explain 28% of the variation in residential property rents. The result showed that exogenous influence of the economy (real GDP and Exchange rate) account for 31.4% of the variation within the residential property market.

The work of Nzalu (2013) revealed that GDP is the most significant contributor to the growth in real estate. In addition, GDP growth, interest rate variation and growth in inflation were found to be a statistically significant determinant of real estate growth. The study investigated factors such as GDP Growth, the influence of interest rate, inflation rates and population growth. The study adopted both quantitative and descriptive research design to obtain information especially true for many real estate investors in Kenya. Also, in assessing the determinants of residential real estate prices in Kenya, Karoki (2013) found that there is a significant negative relationship between

residential real estate prices and interest rates, and positive relationships with GDP, and level of money supply. Interest rates have the most significant effect on house prices followed by GDP and level of money supply. Thus, the rise in property prices is well explained by macroeconomic variables.

Rodenholm and Bernardi (2013), in a comparative study of the real estate market in Sweden and Switzerland, examined the effect of macroeconomic variables on securitized real estate markets. The study investigated the extent to which macroeconomic factors influenced real estate stock prices before and after the outbreak of the financial crisis in 2007. The results showed that the macroeconomic effects on real estate stock prices differ among small economies and are inconsistent in the pre-crisis and crisis period. Those factors that showed some regularity in relation to the real estate markets are all share indices, term structure and real GDP per capita.

Evidently, different authors have established that GDP, money supply and interest rates are among the factors that determine the level of and value of the real estate investments. However, the diverse researchers have not concluded on the direction of causation or the strength of the relationship that exists between the selected macro-economic variables and real estate investments. Furthermore, the findings by different authors have been inconclusive, while the larger numbers of them dwell on inflation and GDP. Also, the research is mostly carried out in developed economies and are mostly on general real estate investment, which is a too large market to cover. This has left a gap to be filled in terms of the strength of the influence, choosing a specific commercial property type, and using Nigeria macroeconomic variables that are highly volatile.

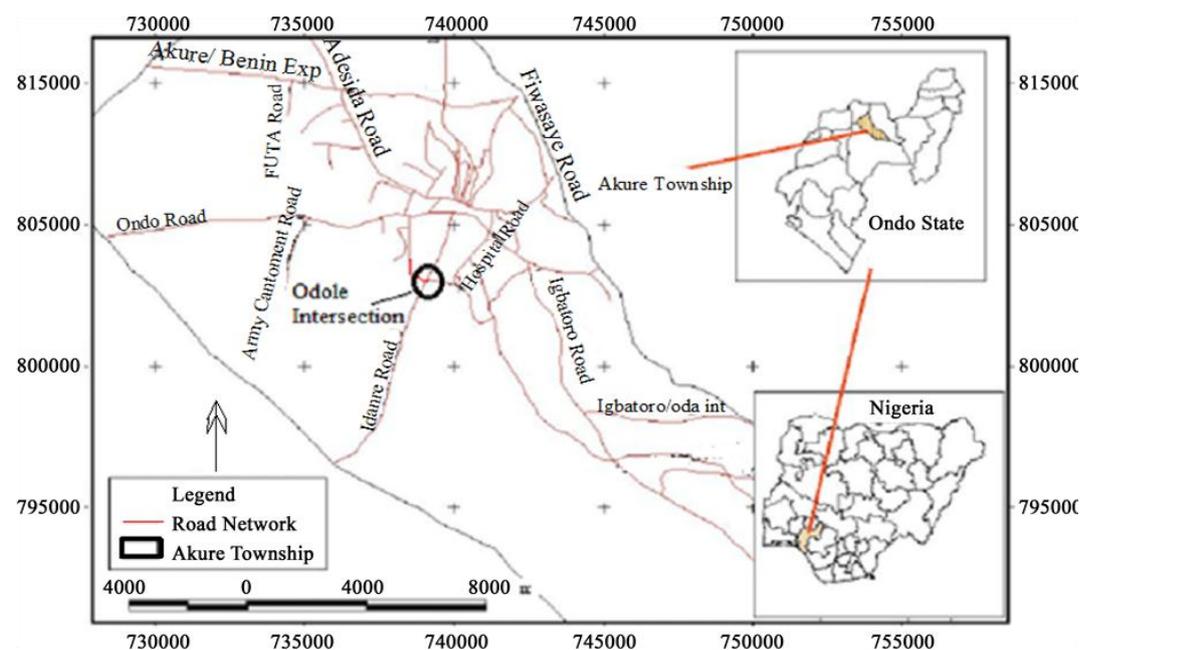
An examination of the existing empirical literature concerning the relationships between macroeconomic variables and property markets reveals a number of shortcomings. First, many studies in the past have focused on the analysis of a single macroeconomic factor; of these, the larger number have been concerned with interest rates or inflation rates and few have concerned themselves with a broader examination of the role of several macroeconomic variables in the return generation process. Secondly, with few exceptions, these studies have been conducted in the developed countries of the world. Thus, similar studies of other macroeconomic factors and property market environments are expected to generate useful comparative evidence. Thirdly, nearly all studies were limited to residential property returns with less focus on commercial properties especially event centres, which is a special type of commercial property investment due to its unique income generation pattern (Ezeokoli, 2015). Thus, this study will include some of the variables considered by the previous authors, which include real GDP, inflation rate, exchange, interest rate and employment rate, and how they affect returns from an event centre.

## **THE STUDY AREA**

Akure is a city in south-western Nigeria and the capital city of Ondo State. The city, which is dominantly populated by people of the Yoruba ethnic group,

is a medium-size, but rapidly growing urban centre located on latitude 7° 15' North of the Equator and 5° 15' East of the Greenwich Meridian. It is located within the tropical rain forest region of Nigeria. The city has witnessed immense growth in the size of built-up areas, a number of immigrants, transportation, and commercial activities since it became the capital city of Ondo State in 1976 and has attracted both major investors and private developers into the city. The city has a population of approximately 387,087 people and many are still trooping into the city (Eniola, 2015).

Akure is characterized by administrative occupation due to the state government and the local government seat located in the city, and this has influenced the real estate investment as the city is believed to be a greener pasture for the rural dweller seeking for a better means of living, this has encouraged rural-urban drift in favour of the city. Moreover, this has also stimulated the demand for residential and commercial space. A major type of commercial property springing up in Akure is an event centre. Some of these include BTO hall, Font Hall, Exclusive Event Centre etc. The growth in this type of development in Akure could be attributed to growth in social activities resulting from the growing population.



Source: Ayeni (2012)  
 Fig. 1: Map of Akure showing the Transport Routes

**METHODOLOGY**

The data for this study was gotten from both primary and secondary sources. The primary data, which bothers on the return from the event centres, was obtained from the managers of event centres in Akure, while data on the macroeconomic variables was gotten from National Bureau of Statistics' record (NBS). A reconnaissance survey and physical enumeration of event centres in Akure show that there are twenty-four (24) event centres in Akure with different designs and capacities and scattered around the town. In the

course of data collection, twenty-four (24) structured questionnaires were administered on all the managers of these centres, while only eighteen (18), which represents 75% of the total population were retrieved and fit for analysis. The average annual income return from the purpose-built event centres in Akure was examined and measured against the macro- economic variables prevailing in the country. The development of event centres in Akure was a recent phenomenon unlike the office and retail property types, which have been for long. Social functions took new turns when celebrants or organizers find their social functions more convenient to be carried out in a closed house rather than being in an open field as it used to be. Hence, the need to look at the trends in event centres’ return between 2005 and 2014. Inferential statistics were used to identify and analyze the effect of the selected macroeconomic variables on the event centres’ average income returns in order to show the relationship between the independent variables and the dependent variable, as well as measure their effects on the dependent variable. According to Pallant (2011), a multiple regression model, which is an inferential statistic, allows a more sophisticated exploration of the interrelationship among a set of variables. This technique extends the linear equation to include multiple independent variables following the same principle. Therefore, the relationship existing between the dependent and independent variables could be defined as:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \mu \quad (1)$$

Where; Y = Rate of event centre returns

$\alpha$  = Constant

$X_1 - X_n$  = the independent variables, i.e. macroeconomic variables

$\beta_1 - \beta_2$  = Beta coefficient of the variable  $I$  that measure the amount of the change in Y associated with a unit change in X while,

$\mu$  = the error term assumed to be associated with the Variables.

The assessment of the formulated models was done with the view to establishing how appropriate they are for use and for further studies. Results of the models will be evaluated based on the correlation coefficient (R); the coefficient of determination (R<sup>2</sup>); the significance of the regression equation (F-ratio); and the Residual Analysis.

**Table 1: Operationalization of Variables**

Variables	Description of Variables	Measurement
INFRATE	Inflation Rate	Actual (%)
UNEMP	Unemployment Rate	Actual (%)
EXRATE	Exchange Rate (Naira to US\$)	Actual (%)
GDP	GDP Growth rate	Actual (%)
INTRATE	Interest Rate	Actual (%)
RETURN	Rate of Return [(Rt - Rt-1) /Rt-1] *100	Actual (%)

Source: Author’s Compilation, 2015

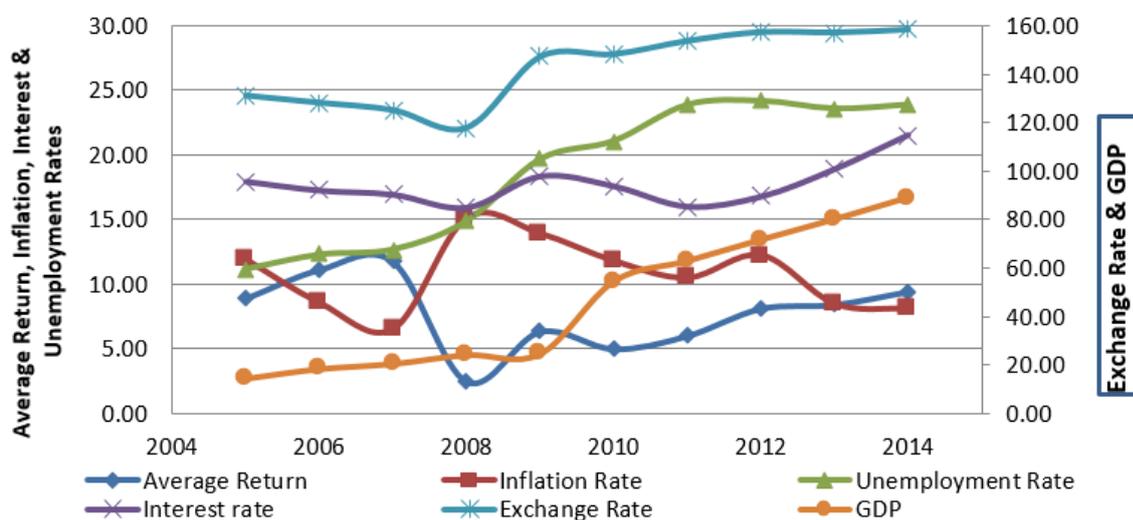
## RESULT AND DISCUSSIONS

This section presents the results from the analyzed data gotten from the event centres in Akure and the discussion of the results. The analysis shows the trends in the average return from event centres and the macroeconomic variables that were considered. The relationships among the variables were also examined, while the effects measured using the regression model. The data on the selected macroeconomic variables were gotten from the secondary source i.e. the National Bureau of Statistics record.

**Table 2: Trends of Average Return from Event Centres and Macroeconomic variables between 2005 and 2014**

Year	Average rate of return (%)	Inflation rate (%)	Unemployment rate (%)	GDP (billion)	Exchange rate	Interest rate (%)
2005	8.88	17.9	11.19	14,610.88	131.28	14.0
2006	11.09	8.2	12.3	18,564.59	128.65	14.0
2007	11.70	5.4	12.7	20,657.32	125.81	14.0
2008	2.47	11.6	14.9	24,296.33	118.55	17.5
2009	6.33	11.5	19.7	24,794.24	148.90	17.5
2010	4.99	13.7	21.1	54,612.26	150.30	18.0
2011	6.00	10.8	23.9	62,980.40	153.61	18.0
2012	8.10	12.2	24.2	71,713.94	157.49	19.1
2013	8.40	8.5	23.6	80,092.56	157.31	19.1
2014	9.40	8.1	23.9	89,043.62	158.55	21.3

Source: Field Survey, 2015



Source: Field Survey, 2015

Fig.2: Trend of Event Centre Return and the selected Macroeconomic Variables

Fig. 2 shows that inflation rate fluctuation has a long-term inverse relationship with event centres return in the study area. For instance, between 2005 and 2007, inflation rate was steadily reducing, while there was an upward movement in the event centres' return. In 2008 however, there was a notable swift upward movement in inflation and unemployment rates,

while the return from event centre took a downturn. These notable changes could be as a result of the global financial crisis that started in 2007 and 2008. Since 2010 however, the event centre's return has maintained a steady growth at an average annual rate of 17.15% as the fluctuations in the macroeconomic variables were also observed. Furthermore, figure 2 has shown those event centre returns has a positive relationship with the exchange rate, while it has a negative relationship with inflation in the economy. However, the unemployment rate continued to increase notwithstanding the drop in inflation rate after the 2007 economic crisis.

### Relationship between Macroeconomics Variables and Return from Event Centres

Tables 3, 4 and 5 are the model summary, analysis of variance and model coefficient of the regression analysis on the effect of macroeconomic variables on the event centre's return in Akure.

**Table 3: Model Summary**

R	R Square	Adjusted R Square	Std. Error of the Estimate
.967 <sup>a</sup>	.935	.854	1.08146

Source: Field Survey, 2015

Table 3 reveals that there was a strong relationship between the selected macroeconomic variables and event centres' return as shown by the correlation coefficient (R) of 0.967 equivalent to 96.7% relationship. Also, the result shows that 93.5% variation in the dependent variable (event centres' return) is caused by the selected macroeconomic variables, which are the Interest, Exchange, Inflation, Unemployment rates and GDP, leaving 6.5% causal effect to other variables that were not considered in this model.

**Table 4: Analysis of Variance (ANOVA)**

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	67.222	5	13.444	11.495	.017 <sup>b</sup>
Residual	4.678	4	1.170		
Total	71.900	9			

Source: Field Survey, 2015

From the ANOVA results in table 4, the probability value of 0.017 was obtained implying that the regression model was significant in predicting the relationship between event centres' return and the predictor variables as it was less than  $\alpha=0.05$ . The F-test of 11.495, which is referred to as the F-change is used to test the R-square change to know the level of prediction. As the value moves positively away from zero, the better the predictability of the model. The result from the table revealed that the variables added in the step significantly improved the prediction of event centres return. Thus, the model provides a better fit than the intercept-only model.

Table 5 shows the level of contribution of each macroeconomic variable to changes in the event centres return.

**Table 5: Model Coefficient**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(CONSTANT)	-.612	7.448		-.082	.939
Intrate	-.028	.283	-.016	-.099	.926
Infrate	-.695	.182	-.672	-3.817	.019*
Unemp	-.733	.306	-1.331	-2.395	.075
Extrate	.210	.072	1.144	2.921	.043*
GDP	1.971E-006	.000	.020	.049	.963

Source: Field Survey, 2015

The regression analysis results indicate that the relationship between event centres' return and the predictor variables can be expressed using the following regression equation:

$$\text{Return} = -0.612 - 0.028\text{Intrate} - 0.695\text{Infrate} - 0.733\text{Unemp} + 0.210\text{Extrate} + 1.971\text{E-006GDP} + \mu e$$

From the regression model obtained in table 5, it is observed that inflation rate and exchange rate are significant macroeconomic variables, which affect event centres' returns with the p-value of 0.019, and 0.043 respectively. This is in conformity with the findings of Bello (2005) and Juma (2014). Whereas Wit and Van Dijk (2003) observed that inflation has a positive impact on the prices of direct real estate investment, this study proves otherwise for event centres. There is a statistically significant negative correlation between inflation and event centres return. This may be due to the effect of inflation on the spending capacity of individuals, thereby affecting the patronage of the event centres. It has been established that real estate investment in Nigeria is not an all-time hedge against inflation (Bello, 2005), just as it is clearly shown from this study that a unit change in inflation results in 69.5% variation in event centres return. On the other hand, the Exchange rate was positively correlated with event centres return with a unit change in it resulting in 21% changes in the dependent variable.

## CONCLUSION

It is evident that macroeconomic variables remain key factors in the determination of the operations of property investment in every economy of the world. While many studies of this nature have focused on non-specialized real properties, the result of the correlation coefficient of the regression model on specialized properties with trading potentials has shown that there exists a strong relationship between macroeconomic variables selected in this research and return of event centres. Furthermore, the result established through the coefficient of determination (R2) that much of the variations in returns of event centres are explained by the macroeconomic variables selected for this research (GDP, Interest Rate, Inflation Rate, Unemployment Rate and Exchange Rate). The effects of inflation and exchange rates on event centre returns are statistically significant as shown in table 5. This could be a result of the direct effect these variables have on the spending capacity of the prospective users of these event centres. These are found to be significant at 0.05 levels. Hence, this study concludes that the Nigerian macro-economy influences the return of her specialized real estate investment with trading

potentials as establish through the findings of this research. Although, this study is a work in progress and an eye-opener to the relationship that exists between macroeconomic variables and event centres' return in Akure. Further study can be carried out on this property type using a wider and more developed real estate market where more event centres can be used in different locations.

The macroeconomic variables should be monitored by the government so as to ensure stability in property construction, sales and rental prices, as these can have an influence on the performance of property market as well as the nation's economy. The high inflation rate and unemployment in the economy can reduce the level of patronages of event centres, which will, in turn, reduce the level of returns expected, thereby leading to reduced contributions to the national growth.

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