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INVESTIGATING THE INFLUENCE OF ECONOMIC INDICATORS ON PROPERTY VALUE TRENDS IN KEFFI

Gambo, Yusuf Luka[1], Adamu, Ezekiel Ogana[2],

[1]Dept. of Estate Management, University of Jos
[2]Dept. of Estate Management and Valuation, Federal Polytechnic, Nasarawa

Email: ogana2nice@yahoo.com

Abstract

Economic indicators such as Gross Domestic Product (GDP), inflation, interest rates, employment levels, exchange rates, and consumer purchasing power are widely recognized as key variables influencing property markets. Hence, this study examined the impact of economic indicators, including GDP, inflation rates, interest rates and unemployment rates on property value trends in Keffi, Nigeria with the aim of providing valuable insights that can guide future research, policy development, and investment strategies in the Nigerian real estate market. Using primary and secondary data sources, the research employed trend analysis, statistical models (R2, RMSE, MAPE), and ANOVA to investigate the relationship between economic indicators and property values. The results showed a steady increase in residential property values over the years, with fluctuations in macroeconomic variables such as inflation, interest rates, unemployment, and GDP. The study's models demonstrated good predictive accuracy, indicating that economic indicators have a significant influence on property value trends in Keffi, Nigeria. The ANOVA results revealed that inflation rates have a negative, albeit insignificant, correlation with property values. In contrast, high interest rates were found to suppress property values by increasing borrowing costs, deterring potential buyers. Conversely, positive GDP growth was associated with increased property values, reflecting heightened economic prosperity and investment capacity. Additionally, high unemployment rates negatively impacted property values by reducing overall demand in the property market. The study concludes that macroeconomic variables, including interest rates, inflation, GDP growth, exchange rates, and employment levels, significantly influence property market dynamics. Hence, the study recommended that to stimulate the real estate market, policymakers should implement policies promoting economic growth, stability, and development, such as investing in infrastructure, promoting foreign investment, and fostering economic development.

Keywords: Economic Variables, Gross Domestic Product, Inflation Rates, Interest Rates, Property Values

INTRODUCTION

The real estate sector plays a pivotal role in the socio-economic development of a nation, acting both as a contributor to economic growth and as a barometer of economic health. Property values,

in particular, represent a significant proportion of household wealth and institutional investment portfolios, making them a critical indicator of economic performance and financial stability (Case & Shiller, 2003). In addition, property values are key components of individual wealth and institutional investment portfolios and also a critical element of the real estate market, influenced by a myriad of economic factors that reflect the overall health and dynamics of an economy. Understanding the dynamics of economic indicators that influence property value trends is therefore crucial for policymakers, investors, real estate developers, and financial institutions alike.

Leung (2004) and Gyourko (2009) asserted that economic indicators such as gross domestic product (GDP), inflation rates, interest rates, employment levels, exchange rates, and consumer purchasing power are widely recognized as key variables influencing property markets. These macroeconomic variables impact demand and supply dynamics; cost of capital; and investment decisions within the real estate sector. For instance, Iacoviello and Neri (2010) noted that lower interest rates generally reduce mortgage costs, thereby increasing housing demand and pushing up property values. Fama and Schwert (1977) on the other hand, noted that inflation can distort asset values but may also enhance real estate's appeal as a hedge against currency devaluation. In addition, numerous studies have explored the relationships between economic indicators and property values. For instance, a study by McDonald and Stokes (2013) found that GDP growth, inflation, and interest rates significantly influence property values. Similarly, Leamer (2007) highlighted the importance of economic indicators, such as employment rates and construction costs, in determining property values.

In the Nigerian context, several studies have also highlighted the significant relationship between economic indicators and real estate market behavior. According to Olayiwola and Adeleye (2006), fluctuations in inflation and interest rates are strongly associated with changes in urban property values across major Nigerian cities. Similarly, Oloke, Simon, and Olayanju (2013) observed that macroeconomic instability especially erratic inflation, exchange rate volatility, and high lending rates negatively affects real estate development and property value sustainability in Nigeria. Akinjare, Akinjare and Olanrele (2012) also noted that the Central Bank of Nigeria's monetary policy decisions, such as adjustments to the Monetary Policy Rate (MPR), also play a substantial role in shaping mortgage market dynamics and housing affordability. Furthermore, the performance of Nigeria's property market is closely linked to the nation's GDP growth and employment trends. As Nubi (2008) emphasized, economic growth stimulates infrastructural development and real estate investment, while rising unemployment reduces effective demand for housing, particularly in urban centers such as Lagos, Abuja, and Port Harcourt.

However, not much is known for other developmental cities such as Keffi, the case study for this research. Despite its growth potential, Keffi's real estate market remains largely understudied. There is a need for empirical research that investigates the dynamics of the local property market, particularly in relation to macroeconomic variables. This study aims to fill this knowledge gap by examining the influence of economic indicators on property value trends in Keffi.

Keffi's strategic location as a gateway to the North-Central region of Nigeria, coupled with its growing economic and infrastructural development, makes it an important area for real estate investment. However, the city's property market is influenced by a range of economic indicators that are not yet fully understood. For instance, the impact of regional GDP growth, local employment rates, and inflation on property values in Keffi is very important. Moreover, the potential spillover effects from Abuja's real estate market could create unique dynamics that influence property values in Keffi, a phenomenon that has been observed in other satellite cities as documented by Ikejiofor (2006).

This research aims to address these gaps by providing an in-depth analysis of the economic indicators that influence property value trends in Keffi. By focusing on a specific, emerging urban area, this study seeks to contribute to a more nuanced understanding of the factors driving property markets in Nigeria. The findings from this research will provide valuable insights for policymakers, investors, and other stakeholders involved in the real estate sector, offering a framework for understanding how local economic conditions influence property values in Keffi.

LITERATURE REVIEW

The investigation of the relationship between economic indicators and property value trends is a critical area of research in real estate economics, as these indicators provide essential insights into the factors that drive changes in property values. This literature review explores existing research on the influence of key economic indicators - such as inflation, interest rates, GDP growth, and unemployment - on property values, with a particular focus on the Nigerian context and the emerging city of Keffi.

Global Perspectives on Economic Indicators and Property Values

Extensive research has been conducted in developed economies, particularly in the United States, to understand how economic indicators affect property values. One of the foundational studies in this area is by Case and Shiller (1989), who analyzed the U.S. housing market and demonstrated that economic fundamentals like income levels, interest rates, and inflation significantly impact property values. They argued that these macroeconomic variables are crucial in determining housing market trends, with property values being highly sensitive to fluctuations in these indicators. Their work was supported by later studies such as Himmelberg, Mayer, and Sinai (2005), who further explored the influence of economic conditions on housing affordability and property valuations, particularly in urban markets.

Similarly, Zandi (2002) expanded this research by examining the impact of macroeconomic conditions on commercial real estate values. Zandi emphasized the role of economic cycles - periods of expansion and contraction - in influencing property values, noting that during economic

expansions, increased business activity and rising income levels drive up demand for commercial real estate, leading to higher values. Conversely, during downturns, reduced economic activity and lower incomes lead to decreased demand and falling property values. This cyclical nature of real estate markets has been corroborated by studies like Gyourko and Saiz (2004), which highlighted the importance of understanding economic cycles when analyzing property market dynamics.

Economic Indicators and Property Values in Developing Economies

In developing economies, where markets are often more volatile, the impact of economic indicators on property values can be even more pronounced. Adams and Füss (2010) conducted a comparative analysis of real estate markets across various countries, focusing on the effects of inflation. They found that inflation generally has a negative impact on property values, particularly in developing economies, where economic instability is more common. High inflation erodes purchasing power, reduces demand for real estate, and increases investor uncertainty, leading to downward pressure on property values. This finding aligns with earlier research by Malpezzi and Mayo (1997), who noted that in developing countries, inflation often exacerbates the challenges of housing affordability and market stability. Interest rates are another critical economic indicator affecting property values in developing economies. Hendershott (2000) explored the relationship between interest rates and real estate values, finding that higher interest rates increase the cost of borrowing, reducing affordability and demand for real estate. This dynamic is particularly relevant in developing economies, where access to credit is often more restricted, and the impact of interest rate changes can be more immediate and severe. The role of interest rates in shaping real estate markets in developing countries has also been explored by researchers like Naikoo, Ahmed, and Ishtiag (2021), who emphasized the importance of monetary policy in influencing housing finance and property market activity.

African Real Estate Markets: Insights and Challenges

In African contexts, the study of economic indicators and their impact on property values has gained increasing attention, though research remains limited compared to other regions. The real estate markets in African countries are often characterized by high levels of volatility and are influenced by a unique set of economic, political, and social factors.

Ajayi (1998) provided one of the earliest comprehensive studies on the Nigerian property market. His research focused on the impact of economic instability - characterized by fluctuating inflation and interest rates - on property values in Nigeria. Ajayi found that periods of high inflation and rising interest rates were associated with significant declines in property values. This finding is supported by more recent studies, such as those by Moore (2020), who highlighted the challenges posed by economic unpredictability in Nigeria's real estate sector. Nubi’s research underscores the importance of stable economic policies in fostering a favorable environment for real estate investment.

Aluko (2011) expanded on Ajayi's findings by exploring the influence of macroeconomic variables such as GDP growth and unemployment rates on real estate values in Nigeria. Aluko's study found that GDP growth is positively correlated with rising property values, suggesting that periods of economic expansion tend to drive up demand for real estate. Conversely, high unemployment rates were shown to have a dampening effect on the market, as lower employment levels reduce purchasing power and decrease overall demand for property. These findings are consistent with the work of Okwu, Ngoepe-ntsoane, Tochukwu and Obiora (2017), who examined the impact of economic development on housing markets in Nigerian cities and highlighted the role of employment in shaping housing demand.

Oyedokun and Adewale (2015) investigated the impact of economic indicators on property values in Lagos, Nigeria. The study employed a multiple regression analysis and found that GDP growth, inflation, and interest rates have a significant impact on property values. Similarly, Aluko and Amidu (2016) examined the effect of economic indicators on property prices in Abuja, Nigeria. The study used a vector auto-regression (VAR) model and found that GDP growth, inflation, and interest rates have a significant impact on property prices. In another study, Chikere and Okorocha (2017) analyzed the relationship between economic indicators and property values in Port Harcourt, Nigeria. The study employed a multiple regression analysis and found that GDP growth, inflation, and employment rates have a significant impact on property values. Subsequently, Oloyede and Ogunba (2018) investigated the impact of economic indicators on property prices in Nigeria using a time-series analysis. The study found that GDP growth, inflation, and interest rates have a significant impact on property prices. In another recent research, Abdullahi and Muhammad (2019) examined the relationship between economic indicators and property values in Kano, Nigeria. The study employed a multiple regression analysis and found that GDP growth, inflation, and employment rates have a significant impact on property values.

Investigating Property Value Trends in Keffi: A Focus on Local Dynamics

Despite the valuable contributions of Ajayi and Aluko, there remains a notable gap in the literature concerning the impact of economic indicators on property values in specific urban areas within Nigeria, particularly emerging cities like Keffi. Keffi, located in Nasarawa State and in close proximity to Abuja, Nigeria's capital, is an emerging city with significant potential for real estate development. However, the specific economic factors driving property value trends in Keffi have not been extensively studied, leaving a gap in understanding the local real estate market.

Study Area

Keffi metropolis is situated about 50 kilometers from Abuja and is also the seat of Nasarawa State University which is along the Keffi-Akwanga express way. The town has 138 km2 of land and 92,664 people living there as of the 2006 census. The postal code for the area is 961. The town has many mineral resources, such as tin and columbite. It also grows crops like millet, sorghum, yams, and cotton, making farming another significant economic activity there. Keffi cattle market is one

of many markets held in the town, where trade is also thriving. Artisanal work and animal production are two other important sources of income for the people living in Keffi town. Furthermore, Keffi is home to a large number of hotels, banks, and other establishments that are both government and privately held which includes the Federal Medical Centre, a Correctional Facility, Federal Government College, Orientation Camp of the National Youth Service Scheme, a privately owned Aluminum Roofing Sheet production plant amongst others. Keffi is a great place to invest in Real Estate because of these qualities.

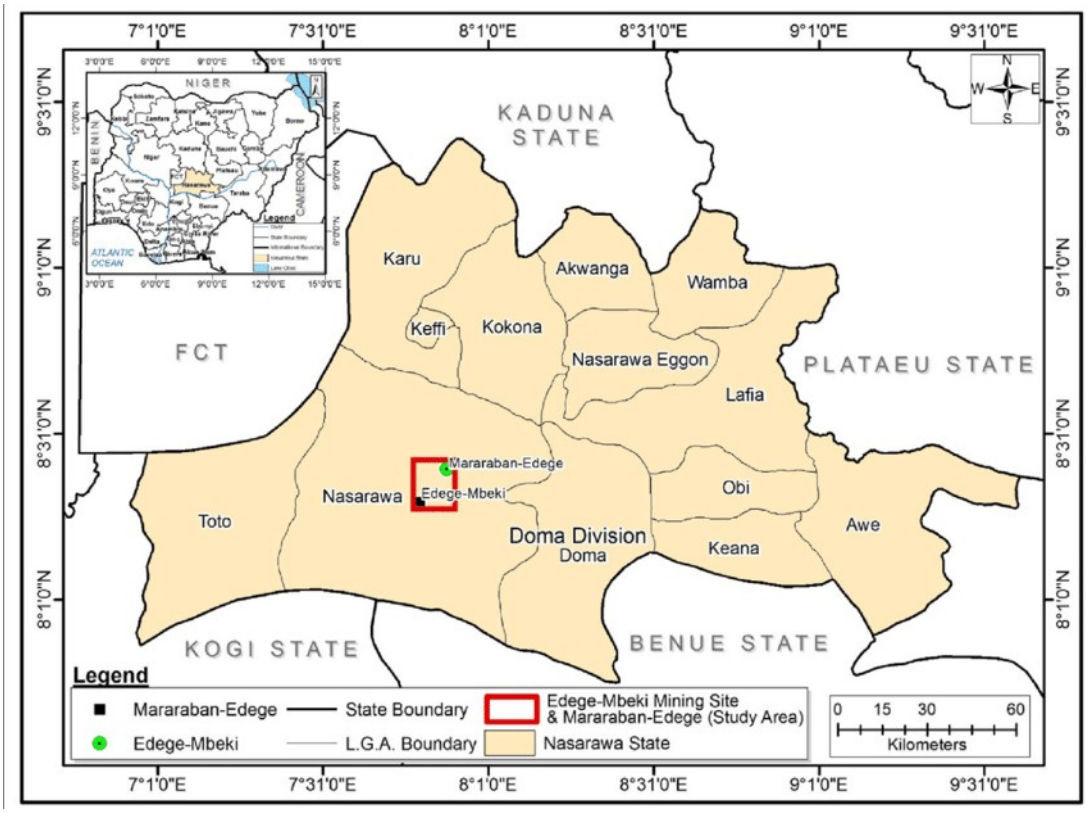

Figure 1: Map of Nasarawa State showing Keffi
Source: Mohammed and AbdulMumin (2019)

METHODOLOGY

This study adopted a time-series analysis approach to examine the influence of key economic indicators on property valuation trends in Keffi. The analysis covered a 10-year period, from 2013 to 2023, enabling a comprehensive exploration of the relationship between macroeconomic variables and changes in property values over time. The core economic indicators investigated include the inflation rate, interest rates, gross domestic product (GDP) growth, and the

unemployment rate. Data on these macroeconomic variables were obtained from secondary sources, specifically the Central Bank of Nigeria (CBN) and the National Bureau of Statistics (NBS), both of which maintain annual and quarterly records of economic performance metrics. The data were accessed through publicly available online databases and annual reports published by these institutions. In addition, property capital value data were collected through direct engagement with local real estate agents operating in Keffi. A structured data collection template was used to gather historical valuation figures of Residential properties across the study period. Agents were selected based on their professional experience, consistency in record-keeping, and geographical spread within Keffi to ensure a representative sample of market trends. To examine the relationship between the selected economic indicators and property values, the study utilized multiple regression analysis. This statistical method allowed for the identification of the degree and direction of influence each economic variable has on property valuations, while controlling for the effects of the others. The use of this technique provided a robust framework for understanding the interplay between macroeconomic dynamics and real estate market behavior in Keffi.

RESULTS AND DISCUSSION

The statistical analysis results and an evaluation of the study's findings based the research objectives are presented in this part. Macroeconomic variables and the trend in property values were examined and discussed. It was determined how macroeconomic issues affected property values over the evaluation period.

Table 1: Capital value of residential properties in Keffi

YEAR	PROPERTY CAPITAL VALUE (N0000/m2)
2013	60.6773
2014	64.1966
2015	70.0385
2016	77.7427
2017	85.5170
2018	92.9570
2019	101.1372
2020	105.6884
2021	112.0297
2022	123.7928
2023	132.6831

Source: Field Survey (2024)

Table 1 displays the property capital values of properties in the study area. As anticipated, the analysis showed a progressive upward movement in the values of residential properties in the study areas within the study period. To investigate the capital value performances of residential properties in the study area, the property capital values were computed, using 2013 as the base year.

Table 2: Macroeconomic variables data

YEAR	INFLATION RATE (%)	INTEREST RATE (%)	UNEMPLOYMENT RATE (%)	REAL GDP (BILLION N)
2013	8.5	16.7	10.0	63,219
2014	8.1	16.5	7.8	67,153
2015	9.0	16.8	9.0	69,024
2016	15.6	16.9	13.4	69,931
2017	16.5	17.6	17.5	68,491
2018	12.1	16.9	22.6	69,800
2019	11.4	15.4	25.2	71,388
2020	13.2	13.6	30.2	70,014
2021	17.0	11.5	32.6	70,452
2022	18.8	18.75	37.7	74,639
2023	24.5	24.75	40.6	77,936

Source(s): CBN and NBS (2023)

The pictorial representations in Figure 2 through Figure 6 illustrate the trend analysis of residential property values alongside selected economic indicators, including the inflation rate, interest rate, unemployment rate, and gross domestic product (GDP) for the period 2013–2023.

Figure 2 shows that residential property values in Keffi exhibited a consistent upward trend, with an exponential increase year over year. This sustained growth highlights a dynamic real estate market characterized by annual increments and variations in residential property values within the study period.

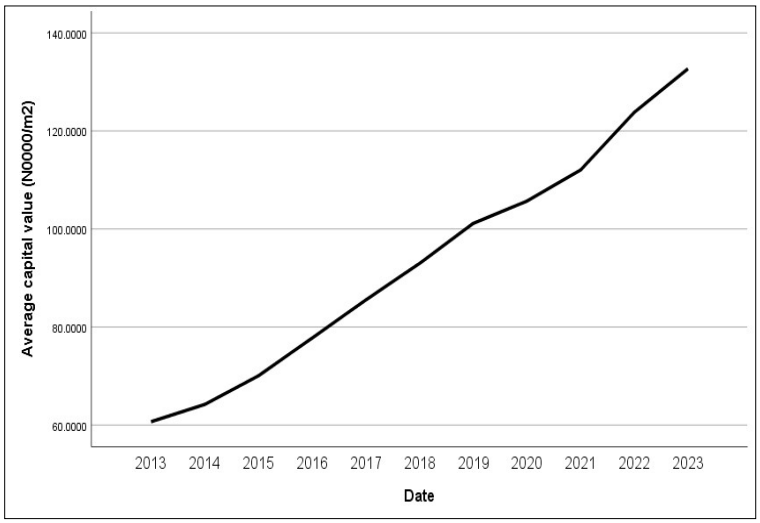

Figure 2: Residential property values in Keffi from 2013 to 2023
Source: Field Survey (2024)

Figure 3, which presents the trend in inflation rates, indicates a fluctuating pattern. A notable increase occurred between 2013 and 2015, with the inflation rate peaking around 2017. Following this period, some moderation was observed, although the general trend remained volatile, particularly during times of economic uncertainty.

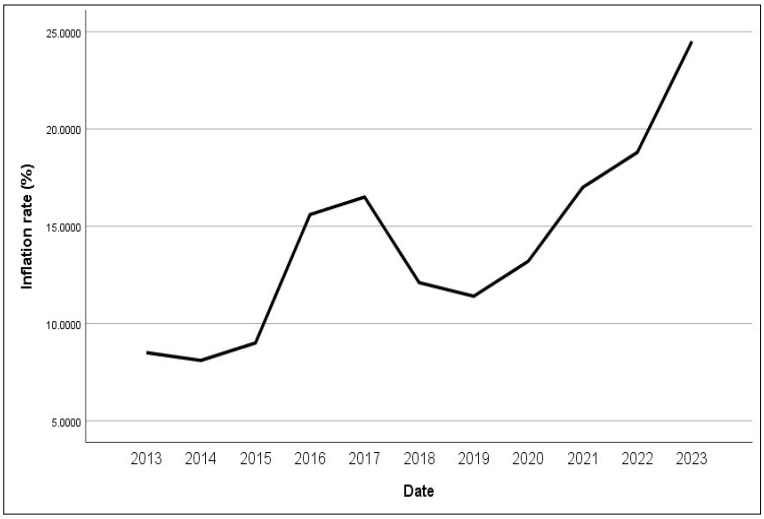

Figure 3: Trend in inflation rates from 2013 to 2023
Source(s): CBN and NBS (2023)

Figure 4 depicts the interest rate trend. Between 2013 and 2018, interest rates remained relatively stable but dropped significantly in 2018—from 16.5% in 2017 to 12.1% in 2018 largely due to economic downturns that also impacted inflation. However, the effects of the COVID-19 pandemic, beginning in 2020, contributed to a renewed increase in interest rates, which rose from 13.2% in 2020 to 24.5% in 2024, as governments adjusted fiscal and monetary policies in response to economic pressures.

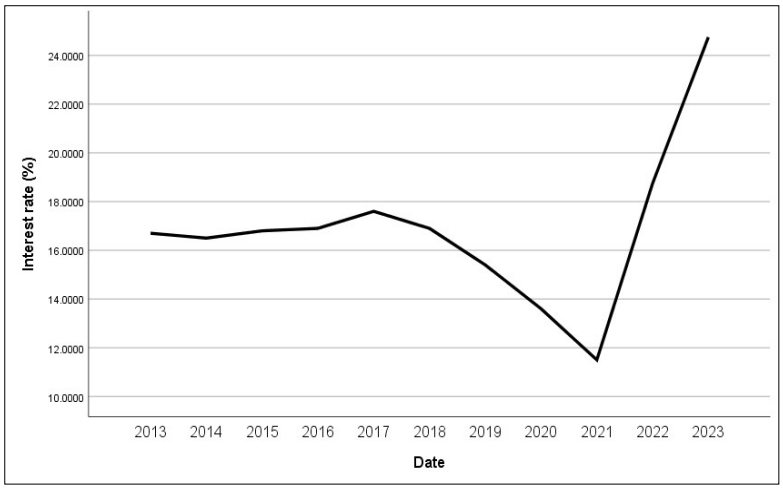

Figure 4: Interest rate trend between 2013 and 2023
Source(s): CBN and NBS (2023)

Figure 5 provides an overview of the unemployment rate, revealing a steady and alarming increase from 10.0% in 2013 to 40.6% in 2023. This rising unemployment trend signals persistent challenges in the labour market and underscores the urgent need for policy interventions to curb joblessness in the country.

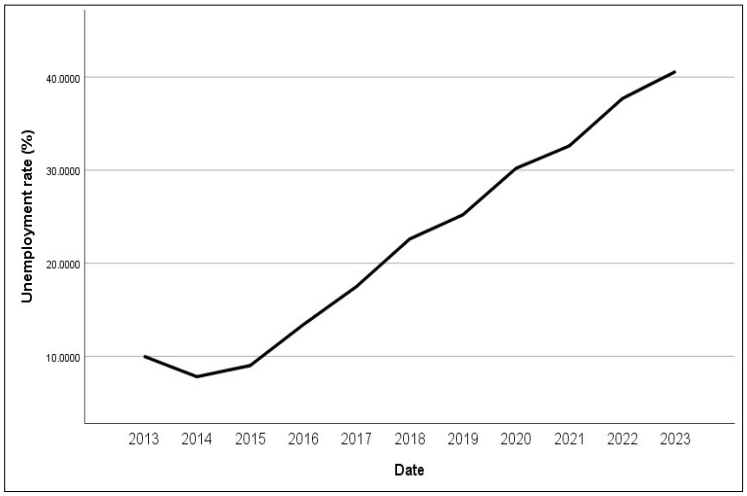

Figure 5: An overview of the unemployment rate from 2013 to 2023
Source(s): CBN and NBS (2023)

Figure 6 tracks the GDP growth in Nigeria. The data show a gradual and stable increase in GDP values from ₦63,219 billion in 2013 to ₦77,936 billion in 2023 indicating continued economic expansion despite prevailing macroeconomic challenges.

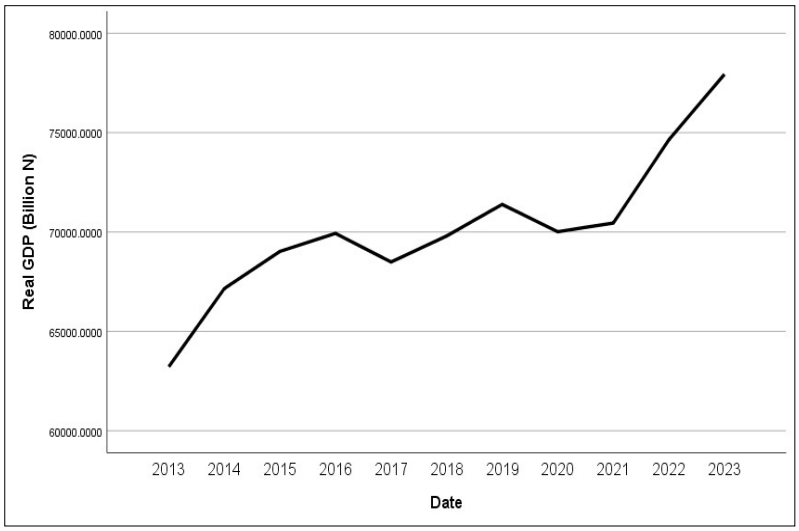

Figure 6: Track of the GDP growth in Nigeria from 2013 to 2023
Source(s): CBN and NBS (2023)

To assess the predictive validity of the time-series model, the study employed forecasting techniques to project the values of key economic indicators for the next seven years. The model's performance was evaluated using statistical metrics such as the coefficient of determination (R^2), Root Mean Square Error (RMSE), and Mean Absolute Percentage Error (MAPE). The results of this diagnostic assessment are summarized in Table 3.

Table 3: Model Statistics for Performance Predicting of the Economic Indicators

		Model Fit statistics			
Model	**Number of Predictors**	**Stationary R-squared**	**R-squared**	**RMSE**	**MAPE**
Average capital value (N0000/m2)-Model_1	0	-6.661E-16	.990	2.320	1.845
Inflation rate (%)-Model_2	0	-4.441E-16	.574	3.215	17.078
Interest rate (%)-Model_3	0	-.022	.166	3.002	7.209
Unemployment rate (%)-Model_4	0	.112	.965	2.200	11.813
Real GDP (Billion N)-Model_5	0	.000	.613	1970.064	2.121

Source: Field Survey (2024)

The Coefficient of Determination R2, Root Mean Square Error (RMSE) and Mean Absolute Percentage Error (MAPE) are instruments used in measuring the accuracy of performance and prediction. With the exception of R2 which has a value is closer to indicates a good predictive ability of the model, RMSE and MAPE on the other showed that a lower value reflects the status of the model has been good with an excellent predictive accuracy.

Using R2, it can be deduced that average capital values of properties and the rates of unemployment have better predictive ability with values of 0.990 and 0.965 which is very close to 1. Interest rate has the lowest predictive ability because the value is 0.166. For RMSE and MAPE; average Capital values and unemployment rates have the better predictive abilities having the lower values amongst the variables. The predictions are as presented in Table 4:

Table 4: Forecast of Economic Indicators and Capital Values of Properties between 2024 and 20230

		FORECAST						
Model		**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Average capital value (N0000/m2)	Forecast	139.8837	147.0843	154.2848	161.4854	168.6860	175.8866	183.0872
	UCL	145.1311	154.5052	163.3736	171.9802	180.4196	188.7401	196.9705
	LCL	134.6363	139.6633	145.1961	150.9906	156.9524	163.0331	169.2038
Inflation rate (%)	Forecast	26.1000	27.7000	29.3000	30.9000	32.5000	34.1000	35.7000
	UCL	33.3718	37.9839	41.8952	45.4436	48.7603	51.9122	54.9394
	LCL	18.8282	17.4161	16.7048	16.3564	16.2397	16.2878	16.4606
Interest rate (%)	Forecast	30.7650	36.7820	42.7991	48.8161	54.8331	60.8502	66.8672
	UCL	37.4533	50.7531	65.4980	81.4986	98.6185	116.7566	135.8347
	LCL	24.0767	22.8110	20.1001	16.1336	11.0478	4.9438	-2.1003
Unemployment rate (%)	Forecast	44.0823	47.5176	50.9530	54.3883	57.8237	61.2590	64.6944
	UCL	48.9849	56.9272	65.6735	75.1281	85.2192	95.8921	107.1042
	LCL	39.1796	38.1081	36.2324	33.6485	30.4282	26.6260	22.2846
Real GDP (Billion N)	Forecast	79407.7000	80879.4000	82351.1000	83822.8000	85294.5000	86766.2000	88237.9000
	UCL	83864.2938	87181.9754	90070.1469	92735.9876	95259.7467	97682.5808	100028.9389
	LCL	74951.1062	74576.8246	74632.0531	74909.6124	75329.2533	75849.8192	76446.8611

Source: Field Survey (2024)

Table 4 presented the prediction and forecasting of the economic indicators and property values between 2024 and 2030. The predictions showed that average values of properties are expected to rise from 139.8837 to 183.0872 in 2023. Furthermore, the rates of inflation is expected to increase from 26.1 in 2024 to 35.7 in 2030 thus requiring adequate management. For the rates of interest, the prediction gave a value of 30.7% in 2024 and 66.87% in 2030 which further showed a high rate of interest. The rates of unemployment and GDP also showed corresponding increases in the values between 2024 and 2030.

Table 5: ANOVA test result of the Influence of Economic Indicators on Property Values in Keffi

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	5789.136	4	1447.284	696.631	.000b
	Residual	12.465	6	2.078		
	Total	5801.601	10			

a. Dependent Variable: Weighted average capital value (N0000/m2)
b. Predictors: (Constant), Real GDP (Billion N), Interest rate (%), Inflation rate (%), Unemployment rate (%)

Table 5 displays the computed F statistic (F = 696.631) of the analysis of variance. This value falls within the rejection zone and suggests that the model is statistically significant because at least one of the model's coefficients is non-zero. The model can, however, be used to forecast how economic indicators would affect property values in Keffi.

Table 6: Summary of Regression Model

Coefficients[a]					
Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	-55.236	16.806		-3.287	0.017
Inflation rate (%)	-0.188	0.192	-0.039	-0.976	0.367
Interest rate (%)	-0.430	0.203	-0.059	-2.122	0.078
Unemployment rate (%)	-1.537	0.090	-0.752	-17.089	0.000
Real GDP (Billion N)	0.002	0.000	0.266	5.894	0.001

Dependent Variable: Capital value (N0000/m2)

Analysis revealed significant correlations between the selected economic indicators and property values trends in Keffi. Specifically, the study found that: for Inflation Rates; there is a negative correlation between inflation rates and property valuations, though this correlation is not significant. Higher inflation leads to decreased purchasing power, adversely affecting property values (Adams & Füss, 2010). Regarding the interest Rates; the high interest rates tend to suppress property values by increasing borrowing costs, which deters potential buyers (Hendershott, 2000). In terms of GDP Growth, the Positive GDP growth correlates with increased property valuations, reflecting higher economic prosperity and investment capacity (Aluko, 2011). Regarding the unemployment Rate, Ajayi (1998) noted that higher unemployment rates negatively impact property values as they reduce overall demand in the property market and the findings of the results are in agreement with same. The findings of this study are in strong alignment with existing

literature, reinforcing the well-established notion that economic conditions play a pivotal role in shaping property valuations. This relationship is crucial in understanding the dynamics of the real estate market.

Firstly, the observed negative impact of inflation on property values corroborates the theoretical framework and empirical evidence presented by previous researchers. Inflation, often a marker of decreasing purchasing power, tends to erode the real value of money, leading to higher costs for borrowing and construction. This, in turn, can suppress demand for property and result in lower property valuations. The consistency of this finding with seminal works such as those by Case and Shiller (1989) and Zandi (2002) highlights the robustness of this economic principle across different temporal and geographical contexts.

Similarly, the adverse effect of rising interest rates on property values is a well-documented phenomenon in economic theory and real estate studies. Higher interest rates typically lead to increased mortgage costs, which can reduce the affordability of homes and dampen demand in the housing market. This study's findings further validate this relationship, showing that as interest rates climb, property valuations tend to decline. This result is consistent with the findings of numerous studies that have explored the interplay between monetary policy and real estate markets.

On the other hand, the positive correlation between GDP growth and property valuations underscores the importance of overall economic health in driving the real estate market. GDP growth often reflects increased economic activity, higher employment rates, and rising incomes, which collectively boost consumer confidence and spending power. These factors are crucial in stimulating demand for real estate, thereby driving up property values. This positive relationship between GDP growth and property market performance is a clear indication of how closely linked the real estate sector is to the broader economy.

More so, this study's findings emphasize the interconnectedness of various economic indicators and their combined effect on property valuations. The alignment of these results with established theories and empirical evidence not only adds credibility to the current research but also contributes to a deeper understanding of the economic forces at play in the real estate market. These insights are particularly valuable for policymakers, investors, and real estate professionals who seek to anticipate market trends and make informed decisions. Thus, this study reaffirms the critical influence of economic conditions on property valuations, with inflation, interest rates, and GDP growth emerging as key drivers. The consistency of these findings with existing literature reinforces the validity of economic models used to predict real estate market behavior and highlights the need for continuous monitoring of these indicators to ensure the stability and growth of the property market.

CONCLUSION AND RECOMMENDATIONS

This study offers significant insights into the intricate relationship between key economic indicators and property valuation trends in Keffi. The study examined the trend in capital values of residential properties in Keffi as well as the trend in macro-economic variable such as inflation, interest rate, unemployment and GDP. Furthermore, the performance of the economic indicators and the influence of the itemized economic indicators on property values were examined in the research. The study revealed that there was a steady increase in the values of the properties over the years which continued to increase at an exponential rate. This increase continued from year to year thus further showing the annual increment and variations in the values of residential properties in Keffi within the specified period. In addition, the macro-economic variable showed fluctuating rates from year to year. The Coefficient of Determination R2, Root Mean Square Error (RMSE) and Mean Absolute Percentage Error (MAPE) are instruments used in measuring the accuracy of performance and prediction. With the exception of R2which has a values is closer to indicates a good predictive ability of the model, RMSE and MAPE on the other showed that a lower value reflects the status of the model as been good with an excellent predictive accuracy. The results of the ANOVA on the influence of macro-economic variables on property values further showed that there is a negative correlation between inflation rates and property valuations, though this correlation is not significant. Regarding the interest Rates; the high interest rates tend to suppress property values by increasing borrowing costs, which deters potential buyers. In terms of GDP Growth, the Positive GDP growth correlates with increased property valuations, reflecting higher economic prosperity and investment capacity while higher unemployment rates negatively impact property values as they reduce overall demand in the property market and the findings of the results are in agreement with same.

The research concluded that macroeconomic variables—such as interest rates, inflation, GDP growth, exchange rates, and employment levels play a pivotal role in influencing the dynamics of property markets. Hence, it is imperative that policymakers implement policies such as investments in infrastructure, promotion of foreign investment and economic development that promote economic growth, stability, and development in order to stimulate the real estate market.

The following are thereby recommended:

1. *Stabilize Macroeconomic Policies*: Government and monetary authorities should ensure consistent and stable macroeconomic policies to reduce uncertainty in the real estate market. Predictable interest rates, inflation control, and exchange rate stability will help foster investor confidence.

2. *Lower Interest Rates for Housing Finance*: The Central Bank of Nigeria (CBN) should consider implementing policies that reduce lending rates, especially for mortgages and property development financing, to stimulate housing demand and promote property market growth.

3. *Enhance Access to Affordable Mortgage Financing*: Strengthening institutions such as the Nigeria Mortgage Refinance Company (NMRC) and encouraging private sector participation in the housing finance sector will increase access to affordable and long-term credit facilities for homebuyers.

4. *Improve Data Availability and Market Transparency*: Real estate market data in Nigeria remains fragmented. There is a need for centralized, accessible, and regularly updated property data systems to guide investment decisions and improve market transparency.

5. *Revamp Land Administration and Property Registration Systems*: Streamlining land titling and property registration processes across the country will reduce transaction costs, increase investor trust, and improve property valuation accuracy.

6. *Promote Economic Diversification for GDP Growth*: Broad-based economic growth, beyond oil dependency, will support income expansion, employment generation, and higher housing demand, thereby driving long-term property value appreciation.

7. *Institutionalize Real Estate Forecasting Models*: Government agencies and private sector players should adopt data-driven property forecasting tools using econometric models to anticipate the impact of economic indicators on property trends.

8. *Encourage Public-Private Partnerships (PPPs) in Housing Delivery*: Collaborative efforts between the government and private developers can help scale up affordable housing supply, particularly in urban centers with growing populations.

9. *Implement Inflation-Indexed Real Estate Instruments*: Developing financial instruments that protect real estate investments against inflation - such as inflation-indexed mortgages - will enhance investor interest and protect long-term property values.

10. *Strengthen Urban Planning and Infrastructure Development*: Coordinated urban planning and investment in infrastructure (roads, electricity, drainage, etc.) should be prioritized, as these significantly affect property values and market attractiveness.

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