

Examining the Impact of Housing Supply Growth on Rental Demand in the Federal Capital City (FCC), Abuja

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ABSTRACT

Understanding the dynamics of housing markets in rapidly urbanizing regions such as the Federal Capital City (FCC) of Abuja, Nigeria, is essential for comprehending the relationship between rental demand and housing supply growth. This study examines the impact of housing supply expansion on rental demand across the FCC, a planned city that has experienced significant population growth and economic development since its establishment as Nigeria's capital in 1991. Drawing on secondary data compiled from Federal Capital Development Authority (FCDA) housing records, PropertyPro and Nigeria Property Centre rental listing databases, and the National Bureau of Statistics, the research covers the period from 2010 to 2024. These quantitative supply and pricing trends are complemented by qualitative insights gathered through semi-structured interviews with 15 stakeholders drawn from tenant, developer, and FCDA planner groups across five FCC zones.

Findings indicate that housing supply across the FCC grew by approximately 65 percent over the study period, with roughly 45,000 new units added predominantly in peripheral zones such as Kubwa, Nyanya, and Lugbe. Despite this expansion, the effect on rental demand has been spatially uneven. In high-demand central districts such as Maitama and Asokoro, supply growth has produced only marginal adjustments in rental pricing. Peripheral zones show modest downward rental pressure alongside vacancy rates estimated at 15 to 20 percent, reflecting a spatial mismatch between where new supply is located and where demand is concentrated. Multiple regression analysis confirms that migration inflow ($\beta = 0.634$, $p < 0.001$) and job growth ($\beta = 0.366$, $p < 0.001$) are the dominant predictors of rental demand, together explaining 81.2 percent of variance in rental price perceptions ($R^2 = 0.812$, $F(4,395) = 426.47$, $p < 0.001$). The study concludes that housing supply growth, while necessary, must be paired with targeted policy measures including infrastructure investment in peripheral zones, fiscal incentives for affordable housing, and regulation of speculative development.

Keywords: Housing supply growth, rental demand, Federal Capital City, housing affordability, spatial disparities

INTRODUCTION

1.1 Background of the Study

The Federal Capital City of Abuja represents a distinctive case in the challenges of managing housing markets within a rapidly urbanizing, purpose-built administrative center. Established operationally in 1991 as Nigeria's capital, Abuja was designed as a planned city to accommodate a growing national population and centralize governance functions [1]. Over three decades, the FCC has experienced rapid urbanization driven by population influx, economic opportunity, and government-led infrastructure investment. This growth has placed considerable pressure on the housing market, particularly the rental sector, which serves the majority of residents who depend on rented accommodation due to high property purchase costs and limited access to mortgage financing [2].

Despite ongoing efforts to expand housing supply through public initiatives and private investment, rental prices

across large parts of the FCC have remained elevated, raising fundamental questions about whether supply growth can adequately moderate rental demand. Standard economic theory suggests that increases in housing stock reduce rental prices by alleviating scarcity [3], yet empirical evidence consistently demonstrates that this relationship is mediated by location desirability, income inequality, and infrastructure availability [4]. In the FCC, the planned zoning structure with distinct residential, commercial, and administrative districts creates significant spatial disparities in housing availability and desirability [5]. Central districts such as Maitama and Garki sustain persistent rental demand even as supply grows, while peripheral zones like Kubwa and Lugbe see comparatively slower uptake despite higher volumes of new construction. These spatial dynamics interact with broader urban planning and infrastructure gaps that the Japan International Cooperation Agency has documented in Abuja's ongoing development context, including unresolved transport, water, and land-use implementation challenges that continue to shape how residents value and access different parts of the city [6]. This study investigates how these dynamics affect rental demand across the FCC and what policy responses could better align supply growth with genuine housing needs.

1.2 Statement of the Research Problem

Abuja's population has grown well beyond its initial design projections, rising from approximately 378,000 in 1991 to over three million by 2020 [7]. This demographic pressure has intensified rental demand, yet rental prices in many parts of the FCC remain elevated despite housing supply expansion. Empirical evidence points to a persistent disconnect between supply increases and their expected moderating effect on rents. Central areas such as Maitama and Asokoro remain highly sought after even as new units are built, while peripheral zones such as Kubwa and Nyanya report significant vacancy alongside recent construction [8]. The dominance of private developers catering primarily to higher-income buyers, combined with speculative investment practices, inadequate transportation infrastructure, and the persistent income segmentation of demand, compounds the affordability challenge [9]. Three competing explanations must be considered beyond simple supply insufficiency: household income segmentation, speculative vacancy whereby investors hold completed units off the rental market, and transport cost effects that sustain the location premium on central areas regardless of peripheral supply growth.

1.3 Research Question and Objective

This study asks: to what extent does housing supply growth influence rental demand and pricing across different spatial zones of the Federal Capital City, Abuja? The corresponding objective is to evaluate the impact of housing supply growth on rental demand and pricing in the FCC, with specific attention to spatial variations, affordability outcomes, and the structural factors that mediate the supply-demand relationship across income groups.

LITERATURE REVIEW

2.1 Conceptual Framework

The relationship between housing supply and rental demand is central to urban economic analysis. Standard theory holds that increases in housing supply reduce rental prices by easing scarcity and increasing available units competing for tenants [3]. In practice this relationship is rarely straightforward, particularly in rapidly urbanizing cities in the developing world where supply and demand dynamics interact with spatial planning constraints, income disparities, and weak institutional capacity. In the FCC context, housing supply encompasses formal private developments, public housing projects, and informal self-constructed dwellings. Rental demand reflects the aggregate willingness and financial capacity of households to pay prevailing market rents, shaped by income levels, employment proximity, household size, and location preferences. Income segmentation, speculative vacancy, and transport cost deficits each independently constrain the extent to which peripheral supply growth translates into affordability relief [6].

2.2 Theoretical Underpinning

This study draws on Bid-Rent Theory [10] as its primary theoretical lens for understanding spatial variations in rental demand across the FCC. Alonso's framework conceptualizes urban land use as a competitive bidding process in which households bid for locations based on proximity to the urban core, with higher bids reflecting

the value placed on accessibility to employment, services, and amenities. Rents decline with distance from the core as proximity value diminishes. Within the FCC, this framework helps explain the persistent concentration of rental demand in central districts like Maitama and Garki, where proximity to government ministries sustains high willingness to pay regardless of supply conditions. In peripheral zones like Kubwa and Lugbe, lower location utility and weaker infrastructure mean supply growth has outpaced demand, producing rising vacancy rates and limited rental price relief. As long as peripheral zones remain poorly connected to employment hubs, the bid-rent gradient will remain steep and central-area premium rents will persist regardless of how much supply is added at the periphery.

2.3 Empirical Evidence

A growing body of literature documents the spatially differentiated relationship between housing supply and rental demand in Nigerian cities. Mabogunje [1] established the foundational challenge that Abuja's rapid population growth has consistently outpaced its planned housing framework. Olayiwola et al. [9] documented the dominance of private developers and the persistent scarcity of affordable rental options for lower-income residents. Adebayo and Iweala [8] found that new housing developments in peripheral FCC zones have generated higher vacancy rates rather than improved affordability, attributing this partly to poor infrastructure integration and partly to income mismatch between new units and local demand. Akinyemi and Olayiwola [2] highlighted the rental sector's vulnerability to supply shocks, noting that middle-income renters bear a disproportionate cost burden when supply remains concentrated at the high end of the market. UN-Habitat's review of African cities reinforced these findings, emphasizing that supply growth without complementary infrastructure investment rarely improves affordability for the majority of urban residents [11].

METHODOLOGY

To investigate the effect of housing supply growth on rental demand, the study employed a descriptive quantitative research design complemented by qualitative data collection, covering the FCC from 2010 to 2024. A structured questionnaire was administered to 400 respondents selected through stratified random sampling from four strata: registered developers, policy makers, tenants, and house owners, with the sample size determined using Taro Yamane's formula applied to the Phase II study population of 769,104 residents. The questionnaire instrument achieved strong test-retest reliability ($r = 0.82$, $p < 0.01$) and excellent overall internal consistency (Cronbach's Alpha = 0.829).

3.1 Primary Data Collection

Semi-structured interviews were conducted with 15 key informants drawn purposively from three stakeholder groups: five tenants across central districts (Maitama and Asokoro) and peripheral zones (Kubwa and Lugbe), five real estate developers, and five FCDA urban planners. Interviews lasted between 30 and 45 minutes, were recorded with participant consent, transcribed, and analyzed using an inductive-iterative thematic coding framework reviewed for consistency across transcripts. Field visits were conducted across all five zones over a two-week period. The purposive sample is acknowledged as illustrative rather than statistically representative.

3.2 Secondary Data Collection and Variable Construction

Quantitative data on housing supply growth were sourced from FCDA housing records detailing residential units completed between 2010 and 2024. Rental price data were extracted from PropertyPro and Nigeria Property Centre listing databases covering annual asking rents for two-bedroom apartments across the five study zones. These represent asking rents rather than verified transaction prices and may moderately overstate actual rental levels. Vacancy rate estimates were derived from FCDA housing surveys and industry reports. Table 1 documents all data sources, variables constructed, and key limitations.

Table 1: Summary of Data Sources, Variables, and Limitations

Data Source		Variable Constructed	Coverage Period	Key Limitation
FCDA Records	Housing	Housing units completed by zone	2010-2024	Formal sector only; excludes informal/self-built units

Data Source	Variable Constructed	Coverage Period	Key Limitation
PropertyPro / NPC Listings	Annual asking rent, two-bedroom units by zone	2010-2024	Asking rents; may overstate transaction prices
FCDA Housing Surveys / Industry Reports	Vacancy rates by zone (estimated)	2020-2024	Estimates only; no verified administrative vacancy census
National Bureau of Statistics	Population density; employment hub data	2010-2020	Census intervals; interpolated for non-census years
Field Survey (N=400)	Rental price, migration and job growth perception scores	2025	Perception-based Likert scale; cross-sectional design

Note: FCDA = Federal Capital Development Authority; NPC = Nigeria Property Centre. All figures carry the limitations described above and should be interpreted as indicative rather than definitive.

3.3 Regression Model Specification

Multiple regression analysis was used to test the main research objective. The dependent variable was respondents' Rental Price Perception Score, derived from five Likert-scale items measuring agreement that rental prices reflect demand conditions in Phase II (Cronbach's Alpha = 0.842). Independent variables were: Housing Stock 2023 (total formally registered units per district, sourced from FCDA records), Average Growth Rate percentage (compound annual growth rate of housing stock per period, sourced from FCDA records and author calculations), Migration Inflow Impact Score (five-item Likert scale, Cronbach's Alpha = 0.795), and Job Growth Score (five-item Likert scale, Cronbach's Alpha = 0.808). The model is expressed as:

$$\text{Rental Price Perception} = a + b_1(\text{Housing Stock}) + b_2(\text{Growth Rate}) + b_3(\text{Migration Score}) + b_4(\text{Job Growth Score}) + e \quad (3.1)$$

Housing Quantity Perception Score was excluded from the regression to avoid conceptual overlap with the dependent variable. Statistical significance was assessed at $p < 0.05$.

RESULTS AND FINDINGS

4.1 Housing Supply Growth and Rental Price Trends by Zone

Secondary data from FCDA records confirm that total formally registered residential units across the FCC increased by approximately 65 percent between 2010 and 2024, with roughly 45,000 new units added, predominantly in peripheral zones. Table 2 presents rental price and vacancy estimates by zone, illustrating the spatial contrast in supply-demand outcomes.

Table 2: Rental Price and Vacancy Estimates by Zone, 2010-2024

Zone	Zone Type	Supply Growth (%)	Est. Annual Rent 2010 (NGN)	Est. Annual Rent 2024 (NGN)	Price Change (%)	Est. Vacancy 2024 (%)
Maitama	Central	~20%	2,800,000	3,800,000	+36%	<5%
Asokoro	Central	~20%	2,600,000	3,500,000	+35%	<5%
Garki	Central	~17%	1,800,000	2,400,000	+33%	5-8%

Zone	Zone Type	Supply Growth (%)	Est. Annual Rent 2010 (NGN)	Est. Annual Rent 2024 (NGN)	Price Change (%)	Est. Vacancy 2024 (%)
Kubwa	Peripheral	~94%	900,000	1,000,000	+11%	15-20%
Lugbe	Peripheral	~84%	800,000	900,000	+13%	15-20%

Note: Rental figures are annual asking rents for two-bedroom apartments from PropertyPro and NPC listing data. Vacancy estimates are derived from FCDA housing surveys and industry reports. All figures are indicative of market trends rather than definitive statistical measures.

The data in Table 2 reveal a marked contrast between central and peripheral zones. Despite low supply growth of 17 to 20 percent, central district rents increased by 33 to 36 percent over the study period, indicating that demand factors, particularly employment proximity and infrastructure quality, dominate the pricing dynamic in these areas regardless of supply additions. In peripheral zones, substantially higher supply growth of 84 to 94 percent has been accompanied by much more modest rent increases of 11 to 13 percent alongside significantly higher vacancy rates of 15 to 20 percent. This pattern is consistent with a structural mismatch between supply location and demand viability, though speculative motives and income segmentation may also contribute to the elevated vacancy observed.

4.2 Qualitative Evidence

Thematic analysis of the 15 stakeholder interviews revealed consistent patterns that help explain the quantitative trends. Tenant interviews consistently showed that transport cost calculations figure prominently in rental decisions. Multiple tenants described the daily financial burden of commuting from peripheral zones to central employment hubs as comparable to or exceeding the rental savings available in those areas, making peripheral accommodation economically unattractive despite nominally lower rents. Developer interviews indicated that construction concentration in peripheral areas reflects lower land acquisition costs rather than demand-driven location choices, with several developers reporting vacancy periods of six months to over a year following completion of peripheral zone units, consistent with speculative motives. FCDA planners acknowledged infrastructure deficits, particularly transport gaps including the long-delayed Abuja Light Rail, as fundamental constraints on peripheral zone demand, aligning directly with the planning and infrastructure gaps documented in Abuja's development context [6].

4.3 Regression Analysis: Effect of Housing Supply on Rental Demand

Table 3 presents the model summary for the multiple regression analysis predicting Rental Price Perception Score from housing supply and demand-side indicators.

Table 3: Model Summary for Multiple Regression Analysis

Model	R	R ²	Adjusted R ²	Std. Error of Estimate	Durbin-Watson
1	.901	.812	.810	0.058	1.981

Note: Predictors: Housing Stock 2023, Average Growth Rate (%), Migration Inflow Impact Score, Job Growth Score. Dependent Variable: Rental Price Perception Score. Source: Field Survey Data Analysis, 2025.

The model achieves $R = 0.901$ and $R^2 = 0.812$, meaning 81.2 percent of the variance in rental price perceptions is explained by the four predictors collectively. The adjusted R^2 of 0.810 is nearly identical to the unadjusted value, confirming the model is not overfitted. The Durbin-Watson statistic of 1.981 falls within the acceptable range of 1.5 to 2.5, confirming no autocorrelation in the residuals.

Table 4: ANOVA Table for Multiple Regression Model

	Sum of Squares	df	Mean Square	F	Sig.
Regression	6.636	4	1.659	426.47	.000
Residual	1.537	395	0.004	—	—
Total	8.173	399	—	—	—

Note: Dependent Variable: Rental Price Perception Score. Source: Field Survey Data Analysis, 2025.

The overall model is highly statistically significant ($F(4, 395) = 426.47, p < 0.001$). The regression sum of squares of 6.636 substantially exceeds the residual sum of squares of 1.537, confirming the model accounts for the large majority of total variation in rental price perceptions.

Table 5: Regression Coefficients and Significance Tests

Predictor	B	Std. Err	Beta (β)	t	Sig.	VIF
(Constant)	0.247	0.078	—	3.167	.002	—
Housing Stock 2023	.000	.000	.000	.000	1.000	1.000
Average Growth Rate (%)	.000	.013	.000	.000	1.000	1.000
Migration Inflow Score	0.546	0.030	.634	18.200	< .001	1.512
Job Growth Score	0.319	0.033	.366	9.667	< .001	1.512

Note: Dependent Variable: Rental Price Perception Score. VIF values well below threshold of 5.0 confirm no problematic multicollinearity. Source: Field Survey Data Analysis, 2025.

Migration Inflow Score is the dominant predictor ($B = 0.546, \text{beta} = 0.634, t = 18.200, p < 0.001$): for every one-unit increase in migration inflow perception score, rental price perception increases by 0.546 units holding all other predictors constant. Job Growth Score is a significant second predictor ($B = 0.319, \text{beta} = 0.366, t = 9.667, p < 0.001$), contributing an incremental R^2 of 0.094 beyond migration alone. The regression equation is:

$$\text{Rental Price Perception} = 0.247 + 0.546(\text{Migration Inflow Score}) + 0.319(\text{Job Growth Score})$$

Housing Stock 2023 and Average Growth Rate show zero coefficients because they were measured as district-level aggregate constants rather than individual-level variables, a measurement-level constraint that does not diminish the theoretical importance of aggregate supply conditions documented in Table 2. The VIF values of 1.512 for both migration and job growth confirm mild but acceptable multicollinearity, with values well below the threshold of 5.0.

It is important to distinguish clearly between what the data confirm and what remains interpretive. The regression results confirm that perceptions of migration pressure and job growth are the dominant individual-level predictors of rental price perceptions. The inference that speculative vacancy and transport cost deficits independently contribute to the spatial mismatch rests on qualitative stakeholder accounts rather than independently verified administrative data, and should be understood as directional rather than definitive.

SUMMARY AND RECOMMENDATIONS

5.1 Summary

This study examined the effect of housing supply growth on rental demand in Abuja's Federal Capital City over

the period 2010 to 2024, using secondary data from FCDA records and real estate platforms, a structured survey of 400 respondents, semi-structured interviews with 15 stakeholders, and field observation across five FCC zones. Housing supply grew by approximately 65 percent but its impact on rental demand and pricing is highly uneven across zones. Supply growth concentrated in peripheral zones has not translated into effective demand relief, while central districts sustain strong demand, rising rents, and near-full occupancy despite limited new supply. Multiple regression analysis ($R^2 = 0.812$, $F(4, 395) = 426.47$, $p < 0.001$) confirms that migration inflow ($\beta = 0.634$) and job growth ($\beta = 0.366$) are the dominant predictors of rental price perceptions, together explaining 81.2 percent of variance. Three structural factors mediate the relationship: income segmentation of demand, speculative vacancy, and transport cost effects sustaining the central location premium. Supply growth alone is insufficient without complementary interventions addressing infrastructure, housing typology, and speculative behavior.

5.2 Recommendations

1. Infrastructure connectivity in peripheral zones must be prioritized. The FCDA should accelerate transportation links including the Abuja Light Rail and improved road access between peripheral zones and central employment hubs. Without this, peripheral supply growth will continue failing to translate into effective rental demand relief.

2. Affordable housing development must be actively incentivized. Tax incentives, subsidized land allocation, and inclusionary zoning requirements should target developers committing to units within the means of lower to middle-income households, diversifying supply away from its current concentration in duplex and flat categories.

3. Speculative development practices should be regulated. Enforceable occupancy requirements including vacancy taxes and mandatory tenanting timelines would reduce the gap between constructed supply and supply actually available to renters.

4. The FCC master plan should promote mixed-use development in peripheral zones. Integrating residential development with commercial services, healthcare facilities, and public amenities would reduce the location premium placed on central areas and help rebalance rental demand across the city.

ETHICAL STATEMENT

This research was conducted in accordance with established ethical principles for social science research. All primary data collection involving human participants was undertaken with informed consent obtained prior to interviews and questionnaire administration. No personal identifying information was recorded or retained. The research posed no risk of harm to participants, all of whom were adults who voluntarily participated. There are no conflicts of interest to declare among any of the authors. Data supporting this study are available from the corresponding author upon reasonable request.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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