



Effects of Population Changes on Residential Properties Rental Values (Empirical Evidences from Kaduna, Nigeria)

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Abstract: *The research centered on how change in population (Demographic) affect residential properties rental values in Sabon-Tasha and Bakin-Ruwa through personal interview and semi structured questionnaire targeted at tenants and registered estate surveyors and valuers data was collected. The study analysed trends of residential properties rental values in Sabon-Tasha and Bakin-Ruwa using a 10 year rental value from 2001-2011 within the study period and also analysed the percentage changes in rental value of properties within the study areas. The research identifies how changes in population affected rental value of properties and also identified factors which led to change in population. The significance of this research is to provide an insight to property investors that demography affects rental values, as such areas with high population will have latent potential for property development.*

Keywords: *Demographic, Rental Values, Property, Residential, Changes.*

INTRODUCTION

Every part of the world where life exists, the numbers of inhabitation within the area be likely to change over time. This change could either have positive or negative effects on the rental values of properties; Royama (1984) identified urban decline and the future of American cities as one of the factors which lead to change in population in American cities, the study stated that as commercial activities begin to expand to the urban fringes or government decided to create a new layout for commercial activities apart from the initial urban center, consequently it will result to change in population, because people will move to the new layout and settle because of their commercial activities.

Poloczanska, Hawkins, Southward, & Burrows, (2008) identified climatic changes in Asia as one of the factors that lead to population changes. The study stated that unfavorable climatic condition makes some people migrate from one geographical location to another. Past studies have focus on Population dynamics and residential behavior (Benenson, Omer & Hatna, 2002, Benenson, 2004, Benenson, Hatna & or, 2009). Hatna & Benenson, (2012) used an Artificial Neural Network (ANN) model to test whether or not there is a connection between socioeconomic and demographic variables and travel activities.

Studies on urban property value have determined that factors such as zoning and distance from the city center significantly affect rent/ property values (Weisbrod, Lerman & Ben-Akiva, 1980, Haurin, & Brasington,

1996). Studies on Neighbourhood traits and Neighbourhood non-residential land use, such as nearby shopping center have been shown to have both negative and positive effects on property values (Ohls, Weisberg & White, 1974, Jun 2012). Demography and office market (Ridker & Henning, 1967, Heikkila et al, 1989, Song & Knaap, 2004). However this study dwells on property values, land values, and rental value, but the type of property was not specified, as little empirical attention has been paid to demography changes and its effect on the rental value of residential properties. This study attempts to bridge the gap. The basic aim of this research is to examine how demographic changes affect rental values of residential properties in a fairly large cosmopolitan area in Northern Nigeria. The following questions will be answered, what are the factors responsible for changes in demography? How does the change in demography affect rental values of residential properties?

Research Problem

It has been **ascertained** that some areas **within the** Northern a {part of} the state collect rents **thought of** as ‘PEPPERCORN RENT’ **while** areas **within the** southern part collect rent **thought of** as ‘RACK RENTAL VALUE’. This discrepancy **could also be** as a **result of the change** in population, this study intends to explore the **touch that** these changes in population have affected the rental values of residential properties

Methodology

Bakin –Ruwa; Came into existence as a result of the construction of the western bye pass, since the construction of the western bye pass road in 1988 people continue to settle along the roadside the settlement has to continue to grow. Sabon-Tasha; Derive its name from the establishment of the new railway line. The settlement is characterized by mix high-density settlement, with both residential and commercial properties. It lacks infrastructure such as hospitals, roads, drainages, and schools. Sabon-Tasha continues to expand as a result of activities of the only refinery in the North located within the study area.

This is an exploratory study designed to asses demographic changes and its effects on rental values of residential properties in Kaduna, Nigeria, one area in the North axis of the state (bakin-ruwa) and one area in the south axis (sabon-tasha) were considered for this study by virtue of their location and homogeneous features. Primary data were collected from the tenants and registered firms of estate surveyors and valuers, secondary. Data on demography for Bakin-Ruwa and Sabon-Tasha were obtained from the Kaduna office of the National Population Commission (NPC), trends in rental values were also collected from practicing estate surveyors and valuers who manage properties in the two areas, one hundred and fifty semi-structured questionnaires were given to randomly selected tenants to ascertain the reason for their relocation. Of the 150 questionnaires, only 98 questionnaires were returned representing over 65% which is adequate for this study. The data collected was analysed using Descriptive statistics. RESULTS AND DISCUSSIONS

Table 1: Rent Passing On 1 Room Tenement Building Per-Annum And % Change As From 1998-2008

	Rent (N)	Percentage Change	Rent (N)	Percentage Change
Year	Sabon-Tasha	%	Bakin-Ruwa	%
1996	4,800.00	-	5,000.00	-
1997	4,800.00	0	5,000.00	0
1998	5,000.00	4	5,000.00	0
1999	5,000.00	0	5,200.00	4
2000	5,000.00	0	5,200.00	0
2001	5,000.00	13.8	5,800.00	10.3
2002	6,000.00	3.3	5,800.00	0
2003	7,000.00	14.3	6,000.00	3.3
2004	8,200.00	14.6	7,000.00	14.3

2005	10,000.00	18	8,800.00	20
2006	11,000.00	9.1	10,000.00	12
2007	12,000.00	8.3	11,400.00	12.3
2008	12,000.00	0	11,400.00	0

Source: Estate Surveyors

Analysis of Trends in Rental Values of One Room Tenement Building within the Study Areas

Sabon-Tasha - In 1996, rent passing as shown in the table above was N4,800.00 per-annum and later to N12,000.00 per-annum by 2008. Thus a total percentage change of rent between 1996 to 2008 is 85.4%.

Bakin-Ruwa – In 1996, rent passing as shown in the above table was N5,000.00 per-annum and rose to N11,000.00 per-annum by 2008. The total percentage change of rent between 2001 to 2011 is 76.2%.

GRAPH SHOWING TREND IN RENTAL VALUE OF ONE ROOM TENAMENT BUILDING FROM 1996 TO 2008 (SABON-TASHA AND BAKIN -RUWA)

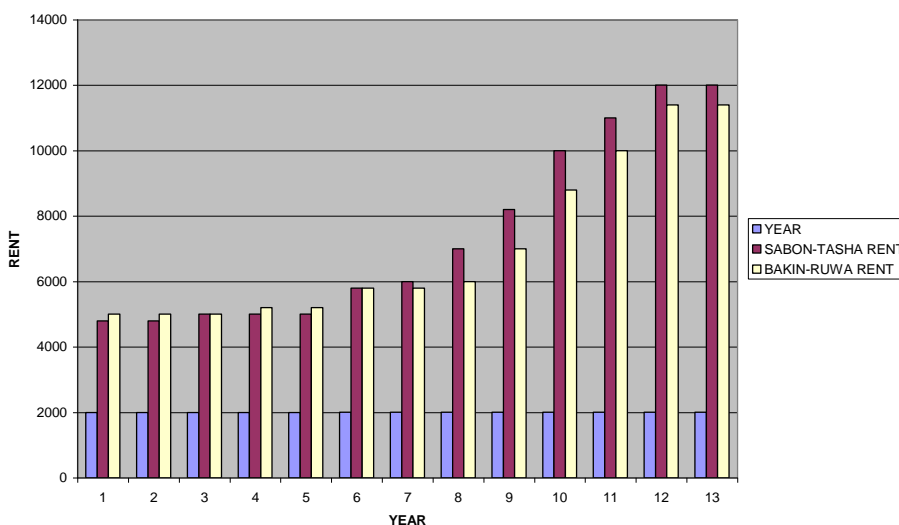


Table 2 Rent Passing in Room and Parlor Tenement Building and % Change Per Annum as from 1996--2008

	Rent (N)	Percentage Change	Rent (N)	Percentage Change
Year	Sabon-Tasha	%	Bakin-Ruwa	%
1996	8,200.00	-	9,000.00	-
1997	8,800.00	6.8	10,000.00	10
1998	10,000.00	12	10,000.00	0
1999	10,000.00	0	12,000.00	16.7
2000	10,000.00	0	14,500.00	17.2
2001	11,600.00	13.8	14,500.00	0
2002	12,000.00	3.3	14,500.00	0
2003	14,000.00	14.3	15,000.00	3.3
2004	16,400.00	14.6	15,000.00	0
2005	21,600.00	24.1	17,000.00	11.8
2006	22,000.00	1.8	21,000.00	21.3
2007	24,000.00	8.3	22,800.00	5.3
2008	24,000.00	0	22,800.00	0

Sources: Estate Surveyors

Table 3: Rent Passing On One Bed Room Flats Per Annum and % Change As From 1996--2008

	Rent (N)	Percentage Change	Rent (N)	Percentage Change
Year	Sabon-Tasha	%	Bakin-Ruwa	%
1996	12,000.00	-	14,000.00	-
1997	14,000.00	14.3	15,000.00	6.7
1998	16,000.00	12.5	18,000.00	16.7
1999	16,000.00	0	20,000.00	10
2000	20,000.00	20	25,000.00	20
2001	25,000.00	20	25,000.00	0
2002	30,000.00	16.7	25,000.00	0
2003	45,000.00	33.3	30,000.00	16.7
2004	50,000.00	10	30,000.00	0
2005	50,000.00	0	45,000.00	33.3
2006	60,000.00	16.7	45,000.00	0
2007	70,000.00	14.3	50,000.00	10
2008	70,000.00	0	50,000.00	0

Source: Estate Surveyors

Table 4: Rent Passing On Two Bedroom Flats Per Annum And % Change As From 1998-2008

	Rent (N)	Percentage Change	Rent (N)	Percentage Change
Year	Sabon-Tasha	%	Bakin-Ruwa	%
1996	20,000.00	-	30,000.00	-
1997	20,000.00	0	35,000.00	14.3
1998	30,000.00	33.3	35,000.00	0
1999	30,000.00	0	40,000.00	12.5
2000	40,000.00	25	40,000.00	0
2001	50,000.00	20	40,000.00	0
2002	60,000.00	16.7	40,000.00	0
2003	65,000.00	7.7	45,000.00	11.1
2004	70,000.00	7.1	50,000.00	10
2005	70,000.00	0	50,000.00	0
2006	80,000.00	12.5	60,000.00	16
2007	100,000.00	20	70,000.00	14.3
2008	100,000.00	0	70,000.00	0

Source: Estate Surveyors

Table 5: Rent Passing On Three Bedroom Flats Per Annum And % Change As From 1998-2008

	Rent (N)	Percentage Change	Rent (N)	Percentage Change
Year	Sabon-Tasha	%	Bakin-Ruwa	%
1996	30,000.00	-	45,000.00	-
1997	45,000.00	33.3	45,000.00	0
1998	50,000.00	10	50,000.00	10
1999	60,000.00	16.7	60,000.00	16.7
2000	70,000.00	14.3	70,000.00	14.3
2001	80,000.00	12.5	70,000.00	0
2002	100,000.00	20	75,000.00	6.7
2003	100,000.00	0	80,000.00	6.3

2004	120,000.00	16.7	80,000.00	5.9
2005	120,000.00	0	85,000.00	0
2006	140,000.00	14.3	100,000.00	15
2007	160,000.00	12.5	120,000.00	16.7
2008	180,000.00	11.1	120,000.00	0

Source: Estate Surveyors

Table 6: Rent Passing And % Change On Shops and Offices Per Annum As From 1996-2008 At Sabon-Tasha And Bakin Ruwa

	Rent (N)	Percentage Change	Rent (N)	Percentage Change
Year	Sabon-Tasha	%	Bakin-Ruwa	%
1996	30,000.00	-	-	-
1997	45,000.00	0	-	-
1998	50,000.00	13.3	20,000.00	
1999	60,000.00	16.7	25,000.00	20
2000	70,000.00	28	30,000.00	16.7
2001	80,000.00	0	40,000.00	25
2002	100,000.00	16.7	50,000.00	20
2003	100,000.00	14.3	50,000.00	0
2004	120,000.00	12.5	60,000.00	16.7
2005	120,000.00	33.3	60,000.00	0
2006	140,000.00	7.7	70,000.00	14.3
2007	160,000.00	6.3	80,000.00	12.5
2008	180,000.00	0	100,000.00	20

Source: Estate Surveyors

Population Figure of Barnawa, Sabon-Tasha and Bakin-Ruwa as from 1991, 1996 And 2006.

The table below shows the population figures and percentage change of, Sabon-Tasha and Bakin-Ruwa, source from National Population Commission (2011). The 1996 figure was obtained using the population change projection of 3.75% annual growth.

Year	Sabon-Tasha		Total Population	Percentage Change	Bakin-Ruwa		Total Population	Percentage Change
	M	F			M	F		
1991	14,242	13,009	27,251	-	12,512	11,459	23,971	-
1996	17,118	15,632	32,750	16.8	15,038	13,771	28,809	16.8
2006	25,655	23,418	49,073	33.3	21,734	19,886	41,610	30.8

Source: NPC, Kaduna

Analysis of Percentage Change in Rental Value and Percentage Change in Population

This analysis is based on the interval of ten years from 2001 to 2011; this explains how population affects rental value through percentage changes.

The total percentage change in the rental value of one room tenement building in Sabon-Tasha from 2001-2011 is 77.1%, while the total percentage change in population from that same period is 50.1%. Bakin-Ruwa from 2001-2011 the total percentage change in rental value is 63.9% while the total percentage change in population is 47.6%.

From 2001-2011 the total population change in the rental value of two-room tenement building in Sabon-Tasha is 90.7% with a total percentage change in a population of 50.1% and Bakin-Ruwa is 80.3% with a total percentage change of 47.6%.

The total percentage change in the rental value of one-bedroom flat in Sabon-Tasha from 2001-2011 is 143.5% with a total percentage in the population of 50.1%, while Bakin-Ruwa recorded a total percentage in rental value of 63.9% with a total percentage change of 47.6% from 2001-2011. From 2001-2011 the total percentage change in rental values of three-bedroom flat in Sabon-Tasha is 137.8% with a total percentage change of 50.1% while Bakin-Ruwa is 74.9% with a total percentage in the population of 47.6%. There was no population Census exercise in 2007 & 2008 and the years that followed.

Factors That Lead to Change in Population

The personal increase in income makes individuals or people relocate from high density to low-density areas. In relation to Bakin-Ruwa and Sabon-Tasha people tend to move from the interior part of Bakin-Ruwa which is overpopulated to Tsaunin-Kura of Sabon-Tasha which is a new layout as well as medium density. Religious crises between Muslims and non-Muslims which made some of the Muslims from Sabon-Tasha to relocate to Bakin-Ruwa and other northern parts of the state and some non-Muslims also relocate to Sabon-Tasha and other southern parts of the state (sectarian crisis in 2000, 2001 and 2006) Political crisis in 2011. Increase in commercial activities also result in the change in population, an example of the shopping complex in Sabon-Tasha due to increase in commercial activities within the area the population tend to increase and rental value of properties within the area begging to increase at a faster rate. This agrees with the study of Hartshorn & Muller, (1989), Easterly & Levine (2001) and Power (2008). In this study, it was discovered that population change tends to increase the rental values of residential and commercial properties within the study areas and it serves as an advantage to the property owners/developers. When the demand of properties out weight supply as a result of population increase, it will lead to an increase in the rental value of properties. The population change on the positive side also tends to increase the rate of commercial activities such as buying and selling of goods and services. However, Bandura, (2004) stated that increase in population brings about the negative effect on human health, as population increase, there will be an increase in the various type of diseases, which are harmful to human health.

The purpose of this study, the slum is one of the major disadvantages of population increase because as population increase there will be overstretched or overused of properties and infrastructural amenities which will lead to deterioration of such few infrastructural amenities where they are available and that will result in a decrease in rental value of residential properties.

Recommendation

The private investors need to be engaged in a Public-Private Partnership in the provision of infrastructure (drainages, refuse disposal) in all the municipalities, then the monies expended can be recouped by charging the end-users token, this will ensure that no slum develops as a result of movement of the populace because of variation in rental values of residential properties

Conclusion

In conclusion, the study was able to establish that demographic changes, greatly affects rental values of properties; both residential and commercial. However with this, is the attendant problem of urban sprawl? To ensure sustainability the Government should provide basic infrastructure and security, to reduce the spade of violence in the country, which causes loss of lives and properties with the spillover the effect of people relocating. Future research can focus on demography and diseases as it affects property development/values.

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