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Effect of Inadequate Public Infrastructure on Residential Property Neighborhood in Damaturu Metropolis

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Abstract:

This study examines the effect of inadequate public infrastructural utilities/facilities on residential property neighborhood in Damaturu metropolis with a view to reveal the significance of adequate public utilities on residential property neighborhood. The study uses the descriptive and exploratory research design using the quantitative research approach. field data was obtained using structured closed ended questionnaire administered within Damaturu metropolis using stratified simple random .One hundred and forty(140) Questionnaires were distributed out of which one hundred and five were used for the analysis .The data were analyzed using descriptive statistics and mean ranking through the use of statistical package for sciences (SPSS).water supply, educational centers and drainage system are the infrastructural facilities ranked the highest provided while power supply and waste disposal are ranked the lowest in the neighbourhoods of Gwange and Sabon-Fegi areas of Damaturu Metropolis. Among the highest effects of inadequate public infrastructural provision includes; low demand of residential properties, lower rental values, slump development while those with low effects includes; insecurity and high rate of

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diseases. the property developers, government, policy makers and other relevant stakeholder should take into consideration any future construction of housing unit to make necessary and adequate provision of infrastructural facilities since it will improve the living condition and satisfy either the sitting or prospective resident /tenant of the residential properties.

Keywords: Effects, Public Infrastructure, Residential Property, Provision, Gwange, Sabon-Fegi,

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Introduction

According to Nubi (2002), infrastructure are the facilities that allows a city to function effectively. It is also seen as a wide range of economic and social facilities crucial to creating an enabling environment for qualitative life and enhanced economic growth. Infrastructural facilities include housing, electricity, pipe-borne water, drainage, waste disposal, roads, sewage, health, education, telecommunications and institutional structures like police station, fire-fighting stations, banks and post office. In other words, infrastructure is the large scale public services/utilities or systems, services and facilities of a country or region that are necessary for economic activity, including power and water supplies, public transportation, telecommunications, roads and school. Furthermore, American Heritage Dictionary Editors (2000) also defines the term "infrastructure" as the basic facilities, services, and installations needed for the functioning of a community or society, such as transportation and communications systems, water and power lines, and public institutions including schools, post offices and prisons.

Neil (2004) also opined that public utilities services have a direct bearing on economic growth. Furthermore, adequate public utilities reduce the cost of production which in turn affects the profitability level of output and employment, particularly in any small-scale business. Similarly, infrastructure refers to all basic inputs and requirements for the effective functionality of the economy. public utilities are simply the driving engine that is needed for proper functionality of a city. These utilities can be carried out by private or public involvement with the aim of facilitating the effective functionality of the society. Obuteru (2005) identified two categories of infrastructure namely physical and social public utilities

The term public utilities refer to all the physical, social and economic elements needed to support the population, in addition to other municipal services which include sewer, water supply, natural gas and electric services, schools and police stations, roads, airports, etc. According to quoted in Yomi (2003) "public utilities is seen as including those social services derived from a set of public works traditionally provided by the public sector, to enhance private sector production and to allow for household consumption. They include services like roads, hospitals, schools, water supply, sewage, etc. The main characteristic in the definition involves physical features, facilities or utilities which are usually put in place by public involvement and expenditure, and are aimed at facilitating the efficient functioning of a society. As society develops, the need to provide basic infrastructure for the wellbeing of their inhabitants arises. Public infrastructural development refers to the bringing into existence of the basic amenities and services which must be in place for a particular activity or pursuit. However, no nation can boast of significant development or an enhanced economy without providing the basic public infrastructure to the citizens' well-being. Amis and Kumar (2000) argued that public utilities help individuals cope with the different dimensions of poverty. It follows therefore, that whenever people are deprived of basic public infrastructure, the result is impoverishment. It also follows that cities with the greatest number of poor people are those whose citizens lack public utilities the most. Urban infrastructure, apart from being a

major determinant of environmental quality, is a critical agent for the socio-economic development of an urban area (Okusipe, 1999). It plays a significant role in the economic, social and environmental aspects of life of an urban settlement.

Literature Review

A suitable shelter is one of the basic necessities of life (Ihuah & Benebo, 2014). Most developing countries in the world upon attainment of independence focus their attention not only sustaining their economy, but also lay a lot of emphasis towards providing shelter, general welfare and quality of living of that citizens through provision of public infrastructural facilities within the residential properties neighbourhoods. While the overall importance of these public infrastructural provision cannot be over emphasized; their significance of provision, which is to enhances real property values, as well as promote the social and economic life-span of the building in order to achieve environmental or sustainable development. For many countries are used to achieve their desire or goal for economic, social and political growth, there must be adequate provision of public utilities, which will ultimately stimulate the growth of the economy and promote human welfare. The provision of road, electricity, water supply, health centers, educational facilities and other various utilities enhance the rental values of residential properties. The contribution of Federal, state and local government have enhanced in a so many ways to the Nigeria society with their economic well-being. And as it would be readily admitted, the basic requirement for planning expansion of infrastructural provision is a forecast of the future population demand. Government contributions toward the major capital investment for infrastractural provision project are a common policy in many part of the world, particularly in developing countries. This is mainly due to the fact that government in developing countries usually have varied economic objective and obligations and usually find it expedient from time to time to use government owned utilities as direct instruments for attaining these objectives. Lawan (2000), Ihuah and Eaton (2013), Ihuah and Fortune (2013) contended that the federal Housing Authority of Nigeria have concentrated their energies mainly on the provision of number of housing units without giving proper attention to adequate public infrastructures to these developed housing estate units. And this is reflecting on the poor physical outlook of most of this housing estate across Nigerian housing sector (kadiri, 2004; Ihuah & fortune, 2013). Even where some of these public utilities are providing to the housing estates, their maintenance and sustenance have been problematic since there is no posts construction management frameworks adopted for the maintenance management of the provided public infrastructure in Nigeria. (Ihuah & Benabo, 2014).

But, the inadequate public infrastructural provision problems are not just typical to a particular reason rather it's cut across several reasons (Ihuah & Benebo, 2014, Ayodele & Alabi, 2011) and is assumed to be creating a diminishing effect on the value of properties located close and within neighborhood. Again, the property values is related to the type of interest substituting in that property, but these rights are also enhanced or improved by the adequacy of the essential public infrastructures provided to that area, the location of the property and the level of demand and supply of such real property are equally significance, but the accessibility land scope and availability of other public infrastructures where the real

property is located should be much more significance to determine the property values (Ihuah & Benabo, 2014). Unfortunately, there are localities within developing countries where the population is deprived of adequate modern infrastructures and a great majority of them live under sub-human conditions. Better housing with adequate public infrastructures have been acknowledged universally as one of the basic human need with a profound impact on the life style, welfare as well as productivity of the individual.

According to Olaseni and Alade, (2012) many problems are responsible for the inadequate public infrastructural provision in Nigeria such as poor funding; corruption; economic sabotage; poor maintenance culture; population explosion; and neglect of urban and regional planning laws. According to Ihuah and Benebo (2014), funding is one of the problem among the most significant problem of inadequate public infrastructural provision has become a major challenge to residential properties and other projects development in Nigeria for decades. This may be related to the incessant population increases in the country, associating within the increasing need or demand for public infrastructures provision in all sectors also increases since these public infrastructures are harmonizing with the economic activities for growth and development. Unfortunately, the government resource and their allocation have hardly met the increasing demand for public utilities projects adequacy provision in the Nigerian economic context and even to the other developing and developed countries. The short-fall in these residential public utilities provision as a result of the increasing population growth continue to affect the economy negatively, and lowers productivity in every sector and in addition aggravates the property values of the country.

According to Olaseni and Alade (2012) corruption has become a major socio-economic problem in Nigeria with negative effects on public utilities development. According to Olaseni and Alade (2014) we went further to affirm that embezzlement of funds allocated to public infrastructures development is a common feature in public offices. Also, many project for which fund have been allocated and released were never completed while inflation of project cost is a common experience (Yunusa, 2011). While according to Aigbokhan, (1999) the case of abandoned project is common because civil servant in charge of such project collect bribe from contractor and this either result in sub -standard job or abandonment. Other problem to inadequate public infrastructures provision are economic sabotage, lack of strong relevant policy support and poor maintenance culture practice in Nigeria and these problem has been acknowledged in the works of (Odenyinka & Yusuf 1997).

Deprived communities in Damaturu metropolis have been making consistent plea to the government to extend the service of these public utilities in their area and/or improve the few that are available. the inadequate provision of these public utilities has effected the study area adversely. For example, epileptic power supply led to a failure of many enterprises and industries in the study area, it also helter production where the entrepreneur cannot afford to buy generator, inadequate of these public utilities in the study area have also led to the fall in capital values and fall in demand of residential properties within the study area. It appears that there is lack of in-depth studies carried out in the past on the effect of inadequate public utilities on residential property values in the neighborhood of Damaturu metropolis.

Therefore, this study is going to bridge the gap by investigating on the effect of inadequate public utilities on residential property neighborhood in Damaturu metropolis.

Methodology

This study uses the descriptive/exploratory research design using quantitative approach. the design present oriented or direct methodology used to investigate population by selecting samples to analyzed and discover occurrences. The population of this study is the household heads and tenant within the Sabon-Fegi and Gwange neighbourhoods in Damaturu metropolis. The instrument used for data collection in this study is questionnaire, a well-structured questionnaire was designed and distributed to the respondents to answer relevant questions that will help answer the research questions, this will help to achieve the objectives of the study by allowing the respondents to provide answer to the question asked by the researcher. A total of two hundred and twenty (220) was used as the sample frame which was obtained from ministry of lands and housing Damaturu for the purpose of this research. The sample size for this study was obtained using Krejcie and Morgan (1970) table. The table shows a total sample size of one hundred and forty (140) which was used for the study, 105 questionnaires were found suitable for the analysis, Furthermore, the study adopted stratified and simple random sampling. The data collected from the field survey was analyzed using descriptive statistics with the use of statistical package for social sciences (SPSS). For illustration, the weighted mean of a five-point likert scale response with 1, 2, 3, 4 and 5 denoting Very High, High, Moderate, Low and very Low, while the other scale response with 1, 2, 3, 4, and 5 denoting Very poor, Poor, Moderate, High and Very High respectively. The Weighted Mean can be calculated using the formula below;

$$\frac{n_1+2n_2+3n_3+4n_4+5n_5}{N}$$

Where the weighted mean, n is the frequency of very low, n_1 the frequency of low, n_2 the frequency of undecided, n_3 the frequency of insignificant, n_4 the frequency of moderate, n_5 the frequency of very High and N the total population of the respondents.

Results and Findings

Table 1; Demographic information of the respondents

S/No	Attributes	Options	Response	%
1	Gender of the Respondents	Male	93	88.6
		Female	12	11.4
2	Age of the Respondents	Between 20 – 30 years	39	37.1
		Between 31 – 40	44	41.9

		years		
		Between 41 - 50 years	18	17.1
		Between 51 and above	4	3.8
3	Educational Qualification	SSCE Certificate	14	13.3
		National Diploma/NCE	51	48.6
		Bachelor's degree/HND	33	31.4
		Master's Degree and above	7	6.7
4	Occupation of the Respondents	Civil servant	51	48.6
		Professional	18	17.1
		Artisan/self employed	22	21.0
		unemployed	13	12.4
		Retired	1	0.9
5	Status of ownership	Landlord	53	50.5
		Tenant	52	49.5
6	Type of Residential Property	Tenement	31	29.5
		Flat	49	46.7
		Bungalow	17	16.2
		Duplex	8	7.6
7	Location of Property	Gwange	62	59.0
		Sabon-Fegi	43	41.0

Table 1 reveals the demographic information of the respondents, this indicates that 88.6% of respondents are male while 11.4% are female, respondents with age between 31-40 years has the highest percentage of 41.9% while the least is between 51years and above with 3.8%. respondents with ND/NCE are considered to be the highest represented by 48.6% while Master's degree and above is the least represented by 6.7%, under the occupation of the respondents, civil servants constitutes the highest percentage of 48.6% while retirees is having the least with 0.9% respectively. The status of ownership indicates that 50.5% are landlords while 49.5% are tenants, flat residential property is considered with the highest respondents of 46.7% while duplex is having 7.6%. 59% of the respondents are residing in Gwange while 41% represents those residing in Sabon-Fegi respectively.

Table 2; Level of Public Infrastructural Provision in The Study Area

Utilities	Very Low		Low		Moderate		High		Very High		Mean	Rank
	F	%	F	%	F	%	F	%	F	%		
Water supply	0	0.0	14	13.3	35	33.3	19	18.1	37	35.2	3.75	1st
Education center	3	2.9	18	17.1	28	26.7	35	33.3	21	20.0	3.50	2nd
Drainage system	0	0.0	25	23.8	28	26.7	29	27.6	23	21.9	3.48	3rd
Road network	5	4.8	30	28.6	17	16.2	28	26.7	25	23.8	3.36	4th
Health service	2	1.9	32	30.5	19	18.1	34	32.4	18	17.1	3.32	5th
Power supply	6	5.7	24	22.9	29	27.6	26	24.8	20	19.0	3.29	6th
Waste disposal	23	21.9	24	22.9	35	33.3	17	16.2	6	5.7	2.61	7th

Table 1 highlights the level of public infrastructural provision in the study area, water supply is the utility that is ranked 1st with a mean of 3.75, followed by education center which was ranked 2nd with a mean of 3.50. drainage system is ranked 3rd with a mean of 3.48, road network is ranked 4th with a corresponding mean of 3.36, health centers/services is ranked 5th with a mean of 3.32. However, utilities that has a low ranking includes power supply and waste disposal with a mean of 3.29 and 2.61 respectively.

Table 3; Condition of Public Infrastructure in the Study Area.

Utilities	Very Poor		Poor		Fairly		Good		Very Good		Mean	Rank
	F	%	F	%	F	%	F	%	F	%		
Water supply	3	2.9	17	16.2	34	324	19	18.1	32	30.5	3.57	1st
Electricity	3	2.9	28	26.7	25	23.8	24	22.9	25	23.8	3.38	2nd
Drainage system	4	3.8	32	30.5	19	18.1	34	32.4	16	15.2	3.25	3rd
Health service	6	5.7	27	25.7	27	25.7	26	24.8	19	18.1	3.24	4th
Road Network	12	11.4	31	29.5	18	17.1	19	18.1	25	23.8	3.13	5th
Education service	1	1.0	35	33.3	31	29.5	28	26.7	10	9.5	3.10	6th
waste collection	32	30.5	20	19.0	31	29.5	15	14.3	7	6.7	2.48	7th

Table 2 presents the condition of public infrastructures provided in the study area, water supply is the utility that is ranked 1st with a mean of 3.57 followed by electricity ranked 2nd with a corresponding mean of 3.38. drainage system is ranked is ranked 3rd with a mean of 3.25, health services is having a mean of 3.24 and ranked 4th. Utilities such as road network, education centers and waste collection are at the at the extreme bottom with the mean of 3.13, 3.10 and 2.48 are ranked 5th, 6th and 7th respectively.

Table 4; Effect of Inadequate Provision Public Infrastructure

Effects	Very Low		Low		Moderate		High		Very High		Mean	Rank
	F	%	F	%	F	%	F	%	F	%		
Low demand of residential property	7	6.7	26	24.8	17	16.2	28	26.7	27	25.7	3.40	1st
Lower rental values	14	13.3	20	19.0	11	10.5	45	42.9	15	14.3	3.26	2nd
Slum development	26	24.8	7	6.7	37	35.2	27	25.7	8	7.6	2.85	3rd
Flooding	17	16.2	25	23.8	33	31.4	26	24.8	4	3.8	2.76	4th
High Illiteracy rate	19	18.1	25	23.8	29	27.6	29	27.6	3	2.9	2.73	5th
Lack of accessibility	26	24.8	19	18.1	25	23.8	30	28.6	5	4.8	2.70	6th
Insecurity	16	15.2	27	25.7	41	39.0	16	15.2	5	4.8	2.69	7th
High Rate of Diseases	17	16.2	26	24.8	41	39.0	16	15.2	5	4.8	2.68	8th

Table 4 highlights the effects of inadequate public infrastructures on the immediate residential areas of Gwange and Sabon-Fegi Neighbourhoods of Damaturu metropolis. Inadequate provision of public utilities results the effects such as low demand of residential property having a mean of 3.40 is ranked 1st, lower rental values is ranked 2nd with a mean of 3.26, slump development is ranked 3rd with a corresponding mean of 2.76. flooding is ranked 4th with a mean of 2.76, high rate of illiteracy is having a mean of 2.73 and is ranked 5th. Effects such as lack of accessibility, insecurity and high rate of diseases are ranked 6th, 7th and 8th with a corresponding mean of 2,70, 2.69 and 2.68 respectively.

Conclusion and Recommendation

The study is aimed at examining the effects of inadequate public infrastructural utilities and services on residential property neighborhood with a view to proffer solutions to the existing problems. the fact and opinion expressed by the respondents in this study are as a result of the field survey carried out by the research in the study area. These facts cumulatively have express that there is inadequate provision of all the essential public infrastructures but in various proportion in the respective study area under consideration**.** These public infrastructures are: access roads; electricity supply, water supply; drainage system; waste management system; and educational centers. The study further demonstrates that amongst these indispensable public infrastructures, good access roads and electricity supply were the most significant public infrastructures required in property neighbourhoods. This study has confirmed that significant provision of these public infrastructures will contribute and support property values. Furthermore, if these infrastructural facilities are adequately provided, it will enhance the quality of living environment of the residents/tenants, as well as promoting an improved and sustainable property values of residential properties.

It is recommended that, the federal, state and local government should give more priority to the provision of infrastructural facilities/utilities which will in turn improve the standard and quality of living in the neighbourhoods. Especially, water from the public mains should be provided to the people in the area in order to have a portable drinkable water. Also the condition of the existing source of water supply should meet up with the standard for clean and portable water. Power supply should be improved also which have a direct effect on the neighbourhoods. There should be a proper and effective way of waste disposal of residents in the study area. Drainage system should be constructed to facilitate easy and free flow of waste littering around the street/road thereby preventing flooding. the property developers, government, policy makers and other relevant stakeholder should take into consideration any future construction of housing unit to make necessary and adequate provision of infrastructural facilities since it will improve the living condition and satisfy either the sitting or prospective resident /tenant of the residential properties.

References;

Aibangbee, S. S. (1997) Functions of Urban public utilitis in National Development. A paper presentation at the 27thannual conference of the Nigerian Institution of Estate Surveyors and Valuers at Premier hotel, Ibadan.

Aigbokan, B.E. (1999);Eivaluating Investment on Basic Infrastructure in Nigeria, Proceedings of the Eight Annual Conferences of the Zonal Research Units (Organized by Research Dept; Central Bank of Nigeria, at Hamdala Hotel, Kaduna, 11-15 June,1999), pp. 208.

Amis D. And Kumar (2000) Urban economic growth, infrastructure, and poverty in India: Lessons from Visakhapatnam, environment and urbanization. Vol. 12 (1)

Ayodele, E.O. and Alabi, O. M. (2011), Abandonment of Construction Projects in Nigeria: Causes and Effects; Journal of Emerging Trends in Economics and Management Sciences (JETEMS), vol. 2, Iss. 2, pp. 142-145.

Ihuah, P. W. and Fortune, J. C. (2013). Toward a Framework for the Sustainable Management of Social (Public) Housing Estates in Nigeria. Journal of US-China Public Administration,

Ihuah, P.W. and Benebo, A. M. (2014), An Assessment of the Causes and Effects of Abandonment of Development Projects on Property Value in Nigeria, International Journal of Research in Applied, Natural and Social Sciences, Vol. 2, Iss. 5, pp. 25-36

Ihuah, P.W. and Eaton, D. (2013) "A Framework for the Sustainable Management of Social (Public) Housing Estates in Nigeria: a pilot study; A Paper Presented at RICS COBRA

Kadiri, K.O. (2004), Low Cost Technology and Mass Housing System in Nigeria Housing. Journal of Applied Sciences. Vol. 4, Is. 4, pp 565-567.

Krejcie, R. V. and Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, *30*(3), 607-610.

Lawal, M. I. (2000), Principles & Practice of Housing Management; IICO Books, Ile-Ife. 20

Nubi, W. and Goodall (1974) Aspect of land economics. London: The Estate Gazette Limited.

Odenyinka, H. A. and Yusuf, A. (1997); The Causes and Effects of Construction Delays on Cost of Housing Project in Nigeria; Journal of Financial Management and Property and Construction, vol. 2, pp. 31-41.

Okusipe, M.O (1999): "Environmental Quality and Urban Planning: A case of Metropolitan Lagos, Nigeria" The Lagos Journal of Environmental StudiesVol.2 No (1):pg53-63.

Olaseni, M. and Alade, W. (2012), "Vision 20:2020 and the Challenges of Infrastructural Development in Nigeria".Journal of Sustainable Development; Vol.5, No.2, pp.63-66.

Research Conference, New Delhi, India (available at w.w.wrics/cobra.com)

Yomi F. (2003) Urban finance and infrastructure development in Nigeria. Atlantis Books, Ibadan Nigeria.

Yunusa, M. (2011); Planning Cities for Wealth Creation: Lecture delivered at the First Urban Dialogue Series; Department of Urban and Regional Planning, Faculty of Environmental Sciences, University of Lagos.

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