

PROBLEMS ASSOCIATED WITH THE PROVISION AND MAINTENANCE OF ROAD INFRASTRUCTURE IN NIGERIA

STANISLAUS OKEAHIALAM

Department of Estate Management, Imo State University, Owerri, Imo State, Nigeria.
Email: stanislaus.okeahialam@imsu.edu.ng

CHIKEZIRIM OKORAFOR*

Department of Civil Engineering & Construction Studies Midland, Durban University of Technology Scottsville 3209, South Africa. *Corresponding Author Email: chikezirimo@dut.ac.za

Abstract

One veritable parameter for assessing the status of any urban centre is the condition of infrastructure. Infrastructure is of various forms such as road network, electricity, drainage, sewage system, markets, potable water, waste disposal, telecommunication, primary health services, security, schools as well as housing. The availability and adequacy of this infrastructures contributes largely to a nation's success. In the context of this reportage, the author looked at the problem associated with the provision and maintenance of the urban road transportation system in Nigeria, using a quantitative approach. A total of one hundred and four (104) respondents, that comprises three different practioners in property market vis-à-vis, estate surveyors and valuers; housing developers and housing investors, were utilised. A questionnaire survey was adopted in eliciting views from the participants. The study used three-set criteria amongst the respondents in unravelling the problem. Data collected were presented using descriptive statistics tools such as tables and percentages and were analysed using SPSS. Hitherto, the study revealed that estate surveyors and valuers, housing developers alongside with housing investors gave maximum weight to political factors followed by economic factors as having the greatest negative impact on the provision and maintenance of road infrastructure, while social factors in the study area had little or no negative influence. Therefore, the study concluded that political and economic problems were the greatest challenge facing road infrastructure provision and maintenance in the study area and urged the government to rise to their role of road infrastructure provision and maintenance to enhance housing investment which will increase housing supply and improve economic prosperity.

Keywords: Problem, Maintenance, Road, Infrastructure, Housing, Investment, Nigeria.

INTRODUCTION

In most countries, the stock of public infrastructure represents an enormous asset, which effectively managed, plays a critically important role in attracting foreign investment and supporting a nation's social, cultural, and economic stability, productivity, development, and prosperity (Ng and Loose more, 2007). Managing major public infrastructure projects presents considerable challenges for government/associated stakeholders, particularly where resources are limited (Adetola and Goulding, 2016). Consequently, many countries are now exploring various approaches to engaging the private sector in the delivery of essential infrastructure projects crucial to economic growth/development (Adetola and Goulding, 2016).

Typically, infrastructure projects can be divided into two broad categories: economic infrastructure and social infrastructure (Wellman and Spiller, 2012). Economic infrastructure projects include bridges, drainage systems, sewage treatment plants, telecommunications

networks and road, rail, and air transport facilities, etc. Social infrastructure includes education, prisons, health, tourism, and recreational facilities, etc. However, all infrastructure projects share several common characteristics vis-à-vis generally long lived and typically involve significant technical, legal, political, and economic risks, long payback periods, high gearing, and negative returns in early years (Ng and Loose more, 2007; Aderamo, 2010). Traditionally, in most African countries, road construction has been accorded a higher priority than road maintenance, with scant attention to the imperatives of recurrent costs of road management once the road has been constructed (Erkul, Yitmen and Çelik, 2016; Obare, 2000). The poor condition of paved roads, in effect, speaks to the low level of maintenance in the individual countries (Wasike, 2021). And, as the road networks have expanded, their institutional and financial burden has tended to increase much more rapidly than the national budget could cater for, especially in times of socioeconomic crisis (Wasike, 2021; Dimitriou and Gakenheimer, 2021).

Many countries are not able to meet maintenance costs from budgetary resource constraints, let alone to finance investment in new trunk road systems that meet stipulated requirements and standards according to volume and weight of traffic (Wasike, 2021). In Africa, road networks have not kept pace with growth in demand and only a few cities have been able to keep pace with road network needs (Naazie, Braimah, and Atindana, 2018; Nasir, 2016). In addition, the construction of regional road networks on a sub-regional basis is crucial for economic cooperation and integration, a real regional African road system does not exist yet, and a large number of national road networks are not coordinated effectively (Naazie, Braimah, and Atindana, 2018; Nasir, 2016). In many African countries all of this requires heavy capital investment and expenditure (Nasir, 2016; Aderamo, 2012). Provision and maintenance of road infrastructure are prerequisites for rapid economic growth and poverty reduction, as they influence production costs, employment creation, access to markets, and housing investment. The objective of this paper is to analyse the problems associated with the provision and maintenance of road infrastructure in Imo State, Nigeria.

LITERATURE REVIEW

A major and integral part of sustainable development is efficient provision of environmentally sound infrastructure such as road and transportation, water supply and sanitation, power, and telecommunications. Urban transport infrastructure in developing countries is deficient (Panayotou1998; Cervero, 2014; Cobbinah, Erdiaw-Kwasie and Amoateng, 2015). Road transport is the most widely used means of transportation in Africa (Wasike, 2021; Cervero, 2014). The construction of road infrastructure is often a difficult issue for many countries (Villalba-Romero, Liyanage and Roumboutsos, 2015). While many developing countries do not have public funds available, other developed countries experience public budget restrictions that limit the country's infrastructure development (Gachassin, Najman and Raballand, 2010). With population growth, urbanization, and income growth, the demand on road infrastructure is widening and the inefficiency and lack of road infrastructure is a major impediment to economic growth and urban productivity in cities of developing countries such as Nigeria. For example, road infrastructure particularly that serves as a life wire to mobility

between one location and another has continued to pose a challenge to the populace as it has not received the adequate attention to ease the life and existence of Nigerians. The state of poor road infrastructure in Owerri is a major concern to the citizenry and as such should be brought to the front burner. Poor road infrastructure in Owerri has continued to impact negatively on housing investment. Aderamo (2003) is of the opinion that road transport infrastructural improvement has profound effects in property value and development. It is therefore appropriate to state that poor road infrastructure hinders and/or slows housing investment in any given area or location. Some scholars such as (Ewing and Cervero, 2001; Polzin, 2004) observe that road infrastructure and land use are interdependent. This agrees with the earlier study of Beuran, Gachassin, and Raballand, (2015), that rapid and continued rise in housing and land prices are expected in cities where there is road infrastructure improvement and rapid economic growth. Furthermore, Bodo (2019), asserts that in a real-life situation, a client will consider a property in relation to general amenities of life, time of travel, proximity to work, school and recreational facilities. These considerations by the prospective client are major pointers to the importance of road infrastructure and its pivotal role in the property market, property investment and housing delivery. As affirmed by Andrews, Braimah and Vincent (2018) and Brussel, Zuidgeest, Pfeffer and Maarseveen (2019) poor road infrastructure hinders road transport and curtails societal development and mobility. In light of this, this study seeks to examine the problems associated with the provision and maintenance of road Infrastructure in Owerri, Imo State.

RESEARCH METHODOLOGY

The study employed a quantitative methodology for this activity, giving a questionnaire survey to a chosen sample of participants. A questionnaire survey is a useful tool for quickly gathering the views of a wide range of project participants, according to Creswell (2013) and Gray (2014). A set of formal questions designed to elicit information from respondents is called a questionnaire (Creswell, 2013 and Gray, 2014). The questionnaire for this study aims to convert the information needs of the researcher into a set of targeted questions that participants are able and willing to respond to. According to Brace (2013) and Malhotra (2006), the questionnaire enables the systematic gathering of quantitative data, producing internally consistent and coherent data for analysis.

The study utilized a questionnaire with two sections: the first piece sought personal data from the respondents to create a profile, and the second section addressed the study's goal. The study's three participant types are shown in table 1 below. Purposive sampling was used by the author, and a Likert scale was used to gauge the respondents' opinions.

Table 1: Study respondents

Profession	Functions
Estate Surveyors and Valuers	<ul style="list-style-type: none"> i) Experts in the acquisition of land for the construction, development, and disposal of housing investment. ii) Carry out the valuation, consultancy services, corporate management, and maintenance of housing investments. iii) Carry out feasibility and viability studies of the proposed housing investment project. iv) Render professional services in leasing and out-right sale of housing investments to derive optimum returns on investment.
Housing Developers	<ul style="list-style-type: none"> i) Bridge the gap between the housing construction and housing investors' need in housing investments. ii) Meet the needs of housing development and infrastructure in emerging housing areas. iii) They obtain the necessary permits for housing development. iv) Strive to be up to date and trendy to deliver quality and trendy housing to housing investors. v) They strive to adhere to the master plan while developing housing to avoid demolition and loss of investment to the housing investors.
Housing Investors	<ul style="list-style-type: none"> i) These Investors invest mainly in residential accommodations. They could be private or public property companies involved in housing investment. ii) Make capital and credit facilities available for housing developers with the aim of making profit. iii) Might also get involved in investing in undeveloped land in anticipation of developing housing for the purpose of making future returns. iv) Could invest in housing for personal use, as owner-occupier.

Source: Authors (2023)

One hundred and twenty-six (126) questionnaires were issued in total, of which 104 were deemed appropriate for inclusion in this exercise. Descriptive statistics, specifically the mean percentage and mean item score (MIS), were used to analyse the data.

Data presentation & analysis

Participants' response rate

The number of questionnaires that were given out and collected from the three respondent groups that provided the data for this study is shown in Table 2 below. Three distinct groups of respondents each received a copy of the questionnaire. Thirteen-estate surveyor and valuation firms in the research region each received two copies of the questionnaire, totaling to 26 copies distributed. All the 26 distributed questionnaires were retrieved. This was made possible by the method the researcher used to give this group the questionnaire. In addition to gathering them, the researcher had to personally give the questionnaire. Once more, because this group is manageable in size and is well-versed in the exercise related to the study's topic, they cooperated fully to retrieve the entire study questionnaire that was given to them.

Table 2: Participant response rate

Respondents	Questionnaires distributed	Questionnaires retrieved	Percentage retrieved (%)
Estate Surveyors and Valuers	26	26	100
Housing Developers	45	33	73
Housing Investors	55	45	82
Total	126	104	83

Source: Authors (2023)

As can be seen in table 2 above, the Estate Surveyors and Valuers had 100% of the study questionnaires returned. Only 33 (73%) of the 45 copies of the questionnaire that were sent to the home developers were properly completed, deemed valid, and used for this study. The remaining 12 copies of the questionnaire were not recovered. 45 (82%) of the 55 copies of the questionnaire that were sent to real estate investors were collected and used in this investigation. Therefore, following distribution, the study recorded 104 (83%) questionnaire recoveries from the respondents, which it deems sufficient for a study of this kind. This is a noticeably high questionnaire retrieval ratio that was made possible by the timing of the study, the method used to give the questionnaire, and the ease with which the questions were written. Therefore, the remaining answers in this study were derived from the 104 (83%) questionnaires that were collected. Table 2 also shows that compared to estate surveyors and valuers, more copies of the questionnaire were given to property investors and developers. This is because a larger proportion of these groups—namely, investors and developers—are directly and frequently involved in housing investment in the study area, and their numbers outweigh those of estate firms. It is therefore anticipated that obtaining a greater response from these two categories of respondents will support the research's conclusions.

Demographic Profile of Respondents

The study, which included three distinct respondent groups, judged it appropriate to extract the different variables needed to look at the characteristics of the study participants. In accordance with the demographic profile of the selected study participants, the following variables were selected: married status, years of experience, education level, and gender. These variables were deemed sufficient since they possess the ability to impact the respondents' assessment on their answers to the questions included in the survey. It is evident in the research region that men tend to engage in real estate investment, particularly with regard to housing. It is also evident that a greater proportion of men than women work in the estate surveying and valuation fields. The respondents' ages were also taken into consideration, since not all age groups are active in real estate investing because of various factors, such as financial capability and other logistical considerations. As such, the study considered the age range of the participants that was thought appropriate for this kind of research. To determine whether data was being gathered from respondents who had sufficient knowledge of the topic issue, the study also thought it appropriate to determine the educational background of the selected respondents. The length

of time invested in a particular course of action frequently influences output or outcome; for this reason, the study judged it appropriate to ascertain the duration of the respondents' involvement in housing investment within the study area to verify the information they provided in their study responses. Finally, the research concluded that it was critical to ascertain the respondents' marital status because housing is a critical factor that affects everyone, but it is more necessary for families to have a place to live to have appropriate protection. Hence the study deemed it fit to consider these profiles of the respondents and they are represented in table 3 below.

Table 3: Demographic profile of the three groups of respondents

Profiles of Respondents	Estate Surveyors and Valuers		Housing Developers		Housing Investors	
	Number	Percentage (%)	Number	Percentage (%)	Number	Percentage (%)
Gender:						
Male	22	85	25	76	33	73
Female	4	15	8	24	12	27
Age:						
35-45 years	2	8	12	36	2	5
46-55 years	11	42	15	45	28	62
56-65 years	13	50	6	19	15	33
Education:						
HND	8	31	15	45	15	33
B.Sc.	12	46	15	45	21	47
M.Sc.	6	23	3	10	9	20
Years of Experience:						
3-5 years	2	8	5	15	8	18
6-10 years	8	31	15	46	22	49
11-15 years	12	46	11	33	15	33
Over 16 years	4	15	2	6	-	
Marital Status:						
Married	19	73	28	85	43	96
Single	7	27	5	15	2	4

Source: Authors (2023)

The differences between the respondents' ages, gender, years of experience, education levels, and married statuses are shown in Table 3 above. Among the three respondent groups involved in the study, there were more men than women. This is understandable given that historically, men have been more involved with land and building-related problems in the research field. This seems reasonable, since it is specific to this study, that men would likewise be more engaged in housing investment matters. It is evident that the Estate Surveyors and Valuers group, which had the fewest respondents—26 out of 104—also had the fewest female participants—4—in the survey, even though the number of respondents to the various study

groups varied. The study participants for estate surveyors and valuers were older than 46, as 24 (92%) of the 26 estate surveyors and valuers in the study were 46 years of age or older. Given that estate surveyors and valuers' status require both age and experience, this result was expected. Compared to estate surveyors and valuers, home developers have a different age distribution, with many of them being in the 35–55 age bracket. The table clearly shows that of the 33 home developers who participated in the study, 27 (82%) were in the 35–55 age range.

The majority of the 45 housing investors who participated in this study are similar in age to most estate surveyors and valuers, with 43 (96%) of them being 46 years of age or older. Since housing investors are the ones that finance housing investments using leverage from financial institutions or equity contributions from developers, it is not surprising that the age range of investors is higher than that of developers. But to get such leverage, you must meet specific conditions, like getting a loan approved. Age, status, and experience are therefore considered to achieve these loan requirements as stated by the financial institutions. It is also evident that the majority of the 45 home investors, 28 out of 45, are between the ages of 46 and 55. This is to be expected, as this age group is more involved in housing construction and investment generally, and in the study region specifically. Due to the nature of the investigation, it was determined that the participants' educational backgrounds were crucial in determining their suitability as volunteers in a study of this kind and their level of expertise. Hence all the study participants possess higher degrees. Majority of the Estate Surveyors and Valuers sampled had B.Sc. being 12 (46%), 8 (30%) had HND while 6 (23%) had M.Sc. For the housing developers 15 (45%) of the Housing Developers sampled had B.Sc., 15 (45%) also had HND while 3 (10%) had M.Sc. Finally the housing investors had 21 (47%) of them sampled having B.Sc., 15 (33%) had HND while 9 (20%) had M.Sc. Experience is very importance in almost every task, hence the number of years the study participants had been involved in housing investment was deemed fit, in order to be ascertain that their judgment on the impact of poor road infrastructure on housing investment stemmed from what they had witnessed in time passed, so that conclusions can be drawn based on their responses which had been adequately influence by their field of experience.

The majority of the sampled estate surveyors and valuers had 11–15 years of experience, whereas many of the housing developers had 5–10 years. The bulk of responders who were home investors also had five to ten years of experience. It is also evident that four of the respondents to the Estate Surveyors and Valuers survey had more than 16 years of experience. There were two responders who were housing developers and had more than 16 years of experience; there were none who were housing investors. It is implied that real estate investors exit the real estate market more quickly than other investor groups, to be replaced by up-and-coming or new real estate investors. Since buying a home requires a significant financial commitment, the participants in the housing market are stakeholders with a focus on finance, who use their resources to implement housing market operations. Finance seems to be shifting hands a lot, which is why home investors don't seem to stay in the market for very long.

Overall, 26 (25%) of the 104 respondents were estate surveyors and valuers; of these, 16 (15%) of the 104 respondents had experience in housing investment of 11 years or more; 33 (32%) of the 104 respondents were housing developers; of these, 13 (13%) of the 104 respondents had experience in housing investment of 11 years or more; and 15 (14%) of the 104 respondents were housing investors; these respondents did not have any respondents with 16 years or more of experience in housing investment. Most respondents were married, as evidenced by the marital status data, which showed that 90 (87%) of respondents were married and only 14 (13%) were single. The respondents' marital status makes them ideal for this study because home investments are frequently focused on families.

Ranking of Problems of Road Infrastructure Provision and Maintenance

The challenges related to the provision and upkeep of road infrastructure in the research area are ranked in this section. Tables 4.1, 4.2, and 4.3 present the respondents' rankings in a different way based on their three categories.

Table 4.1: The Estate Surveyors and Valuers' Ranking of the Road Infrastructure Provision and Maintenance Issues.

Problems Associated with Road Infrastructure Provision and Maintenance in Owerri urban, Imo State	1	2	3	4	5	W	RII	Rank
Economic Problems: Lack of funds availability	-	-	-	-	26	130	1.00	1
High cost of materials	-	-	-	5	21	125	0.961	3
High cost of labour	-	-	-	4	22	126	0.969	2
Social problems: Culture	24	2	-	-	-	28	0.215	5
Values	24	2	-	-	-	28	0.215	5
Attitude	26	-	-	-	-	26	0.200	6
Lifestyle	23	3	-	-	-	29	0.223	4
Beliefs	24	2	-	-	-	28	0.215	5
Political problems: Government influence	-	-	-	-	26	130	1.00	1
Ruling party influence	-	-	-	-	26	130	1.00	1
Corruption	-	-	-	-	26	130	1.00	1
Fund misappropriation	-	-	-	-	26	130	1.00	1

Source: Author (2023)

The Estate Surveyors and Valuers' rating of the issues related to the provision and upkeep of road infrastructure is presented in Table 4.1 above. Recall that the study adopted the responses of 26 respondents for the Estate Surveyors and Valuers. The ranking is such that the “5” has the highest weight with “1” having the least weight. The table reveals three groupings of the selected problems of road infrastructure provision and maintenance. The “Economics problems” particularly “Lack of fund availability” of which the respondents in this group gave maximum weight can be well attributable to government influence, which is political in nature. It is important to recall that scholars have observed infrastructure provision is often the responsibility of the municipal authority, hence it is often provided by the government.

Therefore, rather than focusing on the lack of funding, this example emphasizes the lack of political will to provide funding for the construction and upkeep of this kind of road infrastructure. Even though "high cost of materials" is an economic issue, 21 (81%) out of 26 respondents gave it the highest weight. This is because the governance style used in the study area has caused hyper-inflation, which has had a negative impact on the economy and raised the cost of materials needed for the construction and upkeep of road infrastructure. This poses a great challenge to housing investments. Most respondents (22, or 85%) gave the status of the economy—which has an extremely high inflation rate and skyrocketing labour costs—the biggest weight. The research area's culture has little detrimental effect on the social issues pertaining to the provision and upkeep of road infrastructure, as evidenced by the majority of 24 (%) out of 26 respondents who assigned the issue the least weight. Because land-based travel routes have existed in the study area for eons—from track roads to the contemporary road infrastructure available in both developed and developing countries—it is evident that the culture of the area is not opposed to the construction and upkeep of road infrastructure, but rather supports it.

As can be seen from the replies in the table, the culture in the research area supports road infrastructure and presents little to no opposition to it. The majority of 24 (%) out of 26 respondents gave the difficulty of maintaining road infrastructure the least weight, indicating that the "values" of the people living in the study area have little detrimental effect on these matters. It is evident that the values of the people living in the study area are not opposed to the construction and upkeep of road infrastructure, but rather they are in favour of it because land-based travel routes have existed for ever and have been locally and manually maintained.

Further, the value of the people in the research region supports road infrastructure and presents little to no threat to it. Given that the majority of 26 persons (100%) assigned the least weight to the same, the "Attitude" of the people in the research region has no detrimental effects on the provision and maintenance of road infrastructure. Inferentially, the studied area's attitude promotes rather than undermines the construction and upkeep of road infrastructure. Based on the responses in the table, it can be observed that the people living in the study region have an attitude that is supportive of road infrastructure and does not present any challenges to it. As evidenced by the fact that 23 (88%) out of 26 respondents gave the "lifestyle" the least weight, the study area's road infrastructure provision and upkeep are either positively impacted by it or not at all. It can be inferred that the "Lifestyle" in the research region is supportive of road infrastructure provision and upkeep rather than opposed to it. Lastly, the majority of 24 (%) out of 26 respondents assigned the least weight to the "Beliefs" of the study participants, suggesting that they had little influence on the same. As a result, the "Beliefs" in the research region are not opposed to the construction and upkeep of road infrastructure. Therefore the "Beliefs" in the study area welcomes road infrastructure and poses little or no challenge to it as presented in the table. Inferentially, the social factors have the least weight attributed to them in terms of negative impact on road infrastructure provision and maintenance.

The table reveals that the Estate Surveyors and Valuers gave their total weight to political factors as having greatest negative impact on the provision and maintenance of road infrastructure, as the 26(100%) of them gave political factors the highest weight. In the present-day Nigeria and with reference to Imo State personal experience and observation has it that political influence on several fronts has become of utmost concern, this is also true for infrastructure provision and maintenance, such as road infrastructure. The political class determine to a very large extent on what infrastructure get to who and to where. The self interest in politics has affected such as road infrastructure as government often channel development such as roads to locations of personal interest. Inferentially in Imo State of today, with reference to Owerri urban, political influence is a major determinant of road infrastructure provision and maintenance. Hence Political and economic problems rank highest with RII= 1.00. The second ranking problem confronting road infrastructure provision and maintenance in the study area is also an economic problem. Hence inferentially, economic, and political problems have posed hindrances to road infrastructure provision and maintenance in Owerri, urban Imo state.

Table 4.2: The Ranking of Problems of Road Infrastructure Provision and Maintenance by Housing Developers

Problems of Road Infrastructure Provision and Maintenance in Owerri urban, Imo State	1	2	3	4	5	W	RII	Rank
Economic problems: Lack of funds availability	-	-	-	2	31	163	0.987	2
High cost of materials	-	-	-	5	28	160	0.969	4
High cost of labour	-	-	-	6	27	159	0.963	5
Social problems: Culture	26	7	-	-	-	40	0.242	9
Values	29	4	-	-	-	37	0.224	11
Attitude	22	11	-	-	-	44	0.266	7
Lifestyle	24	9	-	-	-	42	0.254	8
Beliefs	27	6	-	-	-	39	0.236	10
Political problems: Government influence	-	-	-	4	29	161	0.975	3
Ruling party influence	-	-	-	2	31	155	0.939	6
Corruption	-	-	-	5	28	160	0.969	4
Fund misappropriation	-	-	-	1	32	164	0.993	1

Source: Author (2023)

Table 4.2 above shows the ranking of problems challenging road infrastructure provision and maintenance by the housing developers. The ranking is such the “5” has the highest weight with “1” having the least weight. The table also reveals three groupings of the selected factors challenging road infrastructure provision and maintenance which are “Economic Problems”, “Social Problems” and “Political Problems”. “Political Problems” were ranked highest particularly “Fund Misappropriation” (RII: 0.993) which majority 32 (96.9%) out of 33 Housing developers sampled for this study give it maximum weight. It is well established that most infrastructural facilities are provided by municipal authorities. Hence “Fund Misappropriation” for road infrastructure provision and maintenance is attributable to government act of corruption in the study area. “Economic Problems” particularly “Lack of Fund Availability” confronting road infrastructure provision and maintenance in the study area ranked second in order of importance with (RII: 0.987), while another “Political Problem”

being “Government Influence” ranked third according to order of importance with (RII: 0.975). It is important to note here that the economic problem that ranked second in order of importance as they affect poor road infrastructure is related to “Political problems” since the required fund for such is expected to come from the government. “Social problems” challenging road infrastructure provision and maintenance in the study area had the least ranking in terms of impacting on road infrastructure provision and maintenance, according to the housing developers in the study area. There is no known culture in the study area that are against development particularly in road infrastructure, little wonder why 26 (79%) of the 33 respondents are of the opinion that the culture in the study area has little negative influence that can inhibit road infrastructure provision and maintenance. 29 (88%) out of 33 gave the least rank to “Value”. This means that the “Value” of the people in the study area is not against road infrastructure provision and maintenance, hence has little impact on it. 22 (67%) out of 33 gave “Attitude” which is a “Social problem” the least rank, while 11(33%) gave the second to the least rank to “Attitude”. This means that the “Attitude” of the people to road infrastructure provision and maintenance has more impact than other “social problems” as more housing developer gave least weight to other social problems than to “Attitude”. This from observation could be attributable to the non-compliance to building setbacks which affect the occupants during road infrastructure provision and maintenance exercise. Inferentially, the attitude of the people in the study area does not pose a negative impact on the provision and maintenance of road infrastructure rather it supports. Therefore, the attitude of the people in the study area welcomes road infrastructure provision and maintenance, therefore poses little or no challenge to it as observable from the responses on the table. “Lifestyle” in the study area has little or no negative influence on road infrastructure provision and maintenance as majority 24 (72%) out of 33 gave the least rank to show same. Inferentially the “lifestyle” in the study area is not against the provision and maintenance of road infrastructure rather it supports it.

Finally, the “Beliefs” of the people in the study area has little negative influence on same as majority 27 (82%) out of 33 gave the least rank to that. Hence, the “Beliefs” in the study area is not against the provision and maintenance of road infrastructure, hence does not impact on it negatively. Therefore the “Beliefs” of the people in the study area welcomes road infrastructure and poses little or no challenge to it as presented in the table. Inferentially, the social factors have the least weight attributed to them in terms of negative impact on road infrastructure provision and maintenance. The table reveals that the Housing Developers gave highest weight to “Economic factors” as having greatest negative impact on the provision and maintenance of road infrastructure. Analytically in the present-day Imo State personal experience and observation has it that political influence on several fronts has become of utmost concern, this is also true for infrastructure provision and maintenance, such as road infrastructure, as “political factors” are ranked to have the second highest impact on road infrastructure provision and maintenance as opined by housing developers in the study area. Although “fund availability” (economic factors) ranked highest, followed by “political factors” according to the housing developers, it is important to observe that the “fund availability” for road infrastructure provision and maintenance is “politically” determined since the municipal authority in the study area is responsible for road infrastructure provision and maintenance.

Hence the housing developers ranked political problems highest, seconded by economic problem and third ranking being a political problem as well as shown in the table. The table also shows that social problems have the least significance in inhibiting road infrastructure provision and maintenance in the study area with the least RII of 0.224 reflected on “Value” of the people.

Table 4.3: The Ranking of Problems of Road Infrastructure Provision and Maintenance by the Housing Investors

Problems associated with Road Infrastructure maintenance in Owerri urban, Imo State	1	2	3	4	5	W	RII	Rank
Economic problems: Lack of funds availability	-	-	-	3	42	222	0.986	3
High cost of materials	-	-	-	5	40	220	0.977	4
High cost of labour	-	-	-	1	44	224	0.995	2
Social Problems: Culture	45	-	-	-	-	45	0.200	6
Values	45	-	-	-	-	45	0.200	6
Attitude	45	-	-	-	-	45	0.200	6
Lifestyle	45	-	-	-	-	45	0.200	6
Beliefs	45	-	-	-	-	45	0.200	6
Political problems: Government influence	-	-	-	7	38	218	0.968	5
Ruling party influence	-	-	-	-	45	225	1.000	1
Corruption	-	-	-	-	45	225	1.000	1
Fund misappropriation	-	-	-	-	45	225	1.000	1

Source: Authors (2023)

Table 4.3 shows the ranking of problems of road infrastructure provision and maintenance by the housing investors. It is important to recall that this study adopted the responses of 45 respondents for the housing investors. The ranking is such the “5” has the highest weight with “1” having the least weight. The table reveals three groupings of the selected problems of road infrastructure provision and maintenance. The “Political Problems” particularly “Ruling party influence”, “Corruption” and “Fund misappropriation” had all the 45 (100%) respondents in the group give maximum weight to them with RII at 1.00. It was only “Government influence” that had 38 (84%) out of the 45 respondents give maximum weight. It is important to recall that infrastructure provision is often the responsibility of the municipal authority, hence it is often provided by the government. Here political problems are ranked to have more significant negative impact on road infrastructure provision and maintenance by the housing investors in the study area. This quite discouraging as the government is the municipal authority within the study area saddled with the responsibility of road infrastructure provision and maintenance

“Economic problems” being “High cost of labour” ranked second with (RII at 0.995) in having significant negative impact on road infrastructure provision and maintenance by the housing investors in the study area. “High cost of labour” having 44 (98%) out of 45 respondents giving it highest weight. This was followed by “Lack of fund availability” with 42 (93%) out of 45 respondents with (RII at 0.986). These “Economic problems” that rank second and third respectively after “Political problems” are also politically influenced. Hence these “Economic

problems” of road infrastructure provision and maintenance stem from the political influence, as the governance style adopted in the place of study has led to hyper-inflation which has resulted to negative influence on the economy giving rise to “High cost of labour” needed for road infrastructure provision and maintenance. All these pose great challenges to housing investments in the study area. According to this group of respondents “Social problems” of road infrastructure provision and maintenance, they have this in response. The “Culture”, “Value”, Attitude”, “Life style” and “Beliefs” in the study area have little or no negative influence on road infrastructure provision and maintenance, as 45 (100%) of the respondents gave the least weight to all of the selected “Social problems” that impact on road infrastructure provision and maintenance in the study area. Observably the “culture” of the study area is not against the provision and maintenance of road infrastructure rather it supports it, because right from time immemorial in the study area, travel routes on land has been in existence, ranging from track roads to the modern-day road infrastructure as is obtainable in developed and developing nations alike. Therefore the “culture” in the study area welcomes road infrastructure and poses little or no challenge to it as observable from the responses in the table. The “Values” of the people in the study area observably also has little negative influence on road infrastructure provision and maintenance. Hence the “value” of the people in the study area is not against the provision and maintenance of road infrastructure rather it supports it. Therefore, it can be inferred that the “value” of the people in the study area welcomes road infrastructure and poses little or no challenge to it as observable from the responses in the table. The “Attitude” of the people in the study area has no negative influence on road infrastructure provision and maintenance as shown in the table. Inferentially, the “attitude” of the people in the study area does not pose a challenge to the provision and maintenance of road infrastructure rather it supports. Therefore the “attitude” of the people in the study area welcomes road infrastructure and poses no challenge to it as observable from the responses on the table.

The “Lifestyle” in the study area has little or no negative influence on road infrastructure provision and maintenance as shown from the table. Inferentially the “Lifestyle” of the people within the study area is not against the provision and maintenance of road infrastructure rather it supports it. Finally, the “Beliefs” of the people in the study area has little or no negative influence on same. Hence, the “Beliefs” in the study area is not against the provision and maintenance of road infrastructure. Therefore the “Beliefs” of the people in the study area welcomes road infrastructure and poses little or no challenge to it as presented in the table.

Inferentially, the “social factors” have the least weight attributed to them in terms of negative impact on road infrastructure provision and maintenance in the study area. The table reveals that the Housing Investors gave more weight to “Political factors”, followed by “Economic factors” as having greatest negative impact on the provision and maintenance of road infrastructure, while social factors have the least negative impact on road infrastructure provision and maintenance. In the present-day Nigeria and with reference to Imo State personal experience and observation has it that political influence on several fronts has become of utmost concern, this is also true for infrastructure provision and maintenance, such as road infrastructure. The political class determine to a very large extent on what infrastructure get to who and to where. The personal interest in politics by the political class has affected road

infrastructure provision and maintenance in the study area. The government often channels development such as roads to locations of personal preferences rather the locations of utmost importance and necessity. Inferentially in Imo State of today, with reference to Owerri urban, “Political problems” are major determinants of the state of poor road infrastructure as shown in the table. From the analysis, the three groups of respondents submit that political problems are responsible for poor road infrastructure in Owerri, Imo state.

DISCUSSION OF FINDINGS

Estate Surveyors and Valuers ranked “political problems” highest with one “economic problem” with RII at 1.00. It is important to recall that scholars have observed that infrastructure provision is often the responsibility of the municipal authority, hence it is often provided by the government. Hence lack of fund availability here is laying emphasis on the lack of political will to make funds available for such road infrastructure provision and maintenance, rather than the absence of funds. Observably, culture in the study area is not against the provision and maintenance of road infrastructure rather it supports it, because right from time immemorial in the study area, travel routes on land has been in existence, ranging from track roads to the modern-day road infrastructure as is obtainable in developed and developing nations alike. Therefore, culture in the study area welcomes road infrastructure and poses little or no challenge to it. The values of the people in the study area have little negative influence on road infrastructure provision and maintenance as majority 24 (%) out of 26 gave the least weight to its challenge to road infrastructure provision and maintenance. Observably the values of the people in the study area are not against the provision and maintenance of road infrastructure rather it supports it, because right from time immemorial travel routes on land has been in existence and had been maintained locally and manually. Therefore, the values of the people in the study area welcome road infrastructure and pose little or no challenge to it as observable from the responses. The “Attitude “of the people in the study area has no negative influence on road infrastructure provision and maintenance as all 26 (100%) Estate Surveyors and Valuers gave the least weight to same. Inferentially, the attitude of the people in the study area has no significant challenge to the provision and maintenance of road infrastructure rather it supports. Therefore, the attitude of the people in the study area welcomes road infrastructure and poses little or no challenge to it as observable from the responses. The “Lifestyle” in the study area has little or no negative influence on road infrastructure provision and maintenance as majority 23 (88%) out of 26 gave the least weight to same. Inferentially the “Lifestyle” in the study area is not against the provision and maintenance of road infrastructure rather it supports it.

Finally, the “Beliefs” of the people in the study area has little influence on same as majority 24 (92%) out of 26 gave the least weight to that. Hence, the “Beliefs” of the people in the study area is not against the provision and maintenance of road infrastructure. Therefore the “Beliefs” in the study area welcomes road infrastructure and poses little or no challenge to it as presented in the table. Inferentially, the social factors have the least weight attributed to them in terms of negative impact on road infrastructure provision and maintenance. The Estate Surveyors and Valuers gave their total weight to political factors as having greatest negative impact on the

provision and maintenance of road infrastructure, as 26 (100%) of them gave political factors the highest weight. In the present-day Nigeria and with reference to Imo State, personal experience and observation has it that political influence on several fronts has become of utmost concern, this is also true for infrastructure provision and maintenance, such as road infrastructure. The political class determine to a very large extent on what infrastructure get to who and to where. The self interest in politics has affected such as road infrastructure as government often channel development such as roads to locations of personal interest. Inferentially in Imo State of today, with reference to Owerri urban, political influence is a major determinant of road infrastructure provision and maintenance. The ranking of the problems of road infrastructure provision and maintenance by the Housing developers is same used for Estate Surveyors and Valuer and it is such that “5” has the highest weight with “1” having the least weight. The “Political problems” were ranked highest with (RII at 0.993). The housing investors also ranked “Political problems” with (RII at 1.00) highest as impacting on road infrastructure provision and maintenance. Unfortunately, political problems have impacted negatively on road infrastructure provision and maintenance in the study area. This is quite discouraging as the government is the municipal authority within the study area saddled with the responsibility of road infrastructure provision and maintenance. There is lack of “Political Will” by the politicians in the study area to make funds available for adequate road infrastructure provision and maintenance. “Economic problems” ranked second in having negative impact on road infrastructure provision and maintenance by the housing investors in the study area. According to housing investors “Social factors” challenging road infrastructure provision and maintenance such as “Culture”, “Value”, Attitude”, “Lifestyle” and “Beliefs” in the study area have little or no negative influence on road infrastructure provision and maintenance, as 45 (100%) of the respondents gave the least weight to all the selected “Social factors” that impact on road infrastructure provision and maintenance in the study area. Observably the “culture” of the study area is not against the provision and maintenance of road infrastructure rather it supports it. The “culture” in the study area welcomes road infrastructure and poses little or no challenge to it as observable from the responses. “Values” of the people in the study area observably also has little negative influence on road infrastructure provision and maintenance. Hence the “value” of the people in the study area is not against the provision and maintenance of road infrastructure rather it supports it. Therefore, it can be inferred that the “value” of the people in the study area welcomes road infrastructure and poses little or no challenge to it as observable from the responses in the table 4.16. The “Attitude” of the people in the study area has no negative influence on road infrastructure provision and maintenance. Inferentially, the “attitude” of the people in the study area does not pose a challenge to the provision and maintenance of road infrastructure rather it supports. Therefore the “attitude” of the people in the study area welcomes road infrastructure and poses no challenge to it. The “Lifestyle” in the study area has little or no negative influence on road infrastructure provision and maintenance. Inferentially the “Lifestyle” of the people within the study area is not against the provision and maintenance of road infrastructure rather it supports it. Finally, the “Beliefs” of the people in the study area has little or no negative influence on same. Hence, the “Beliefs” in the study area is not against the provision and maintenance of road infrastructure. Therefore the “Beliefs” of the people in the study area welcomes road infrastructure and poses little or no

challenge to it. Inferentially, the “social factors” have the least weight attributed to them in terms of negative impact on road infrastructure provision and maintenance in the study area. The Housing Investors gave more weight to “Political factors”, followed by “Economic factors” as having greatest negative impact on the provision and maintenance of road infrastructure, while social factors have the least negative impact on road infrastructure provision and maintenance. Inferentially in Imo State of today, with reference to Owerri urban.

CONCLUSION

From the report, Owerri urban, Imo State's inadequate road infrastructure has remained a barrier to development, particularly for housing investment. Given the condition of the roads under examination, the government's role in their provision and upkeep has been deemed to be inadequate in the research region. The study area's biggest obstacle to providing and maintaining road infrastructure is found to be political and economic issues. Even while the study area's economy is also influenced by politics, economic issues have had a negative impact on the provision and upkeep of road infrastructure, leading to substandard roads in the area. The development and upkeep of road infrastructure have not been significantly hampered by social issues. To improve housing investment, which will increase housing supply and improve housing delivery to feed the burgeoning population in Owerri urban, Imo State, the government in the study area needs to rise to their role in providing and maintaining road infrastructure.

References

- 1) Aderamo, A. J. (2003). A graph theoretic analysis of intra-urban road network in Ilorin, Nigeria. *Research for development. The Journal of the Nigeria Institute of Social and Economic Research*, 17 (1 &2), 221-240
- 2) Aderamo, A. J. (2010). Transport in Nigeria: The case of Kwara State. *African Economics and Business Review*, 8 (1), 19-40
- 3) Aderamo, A. J. (2012). Urban transportation problems and challenges in Nigeria: A planner's view. *Prime Research on Educatio*, 2 (3), 198-203.
- 4) Adetola, A and Goulding, J. (2016). Collaborative framework for road infrastructure management. Available at <https://www.icevirtuallibrary.com/doi/full/10.1680/jinam.14.00025> [Accessed on 16/10/2023].
- 5) Beuran, M., Gachassin, M., and Raballand, G. (2015). Are there myths on road impact and transport in sub-Saharan Africa? *Development Policy Review*, 33(5), 673–700.
- 6) Bodo, T. (2019). Rapid urbanisation: theories, causes, consequences and coping strategies. *Annals of Geographical Studies*, 2(3), 32–45.
- 7) Brussel, M., Zuidgeest, M., Pfeffer, K., and Maarseveen, V. M. (2019). Access or accessibility? A critique of the urban transport SDG indicator. *ISPRS International Journal of Geo-Information*, 8(67).
- 8) Cervero, R. (2014). Rail transit and joint development: Land market impacts in Washington, D.C. and Atlanta. *Journal of the American Planning Association* 60, (1), 83-94.
- 9) Cervero, R. and Duncan, M. (2002). Transit's value-added: Effects of light and commuter rail services on commercial land values. Transportation Research Board, 81st annual meeting presentation.

- 10) Cobbinah, P. B., Erdiaw-Kwasie, M. O., and Amoateng, P. (2015). Rethinking sustainable development within the framework of poverty and urbanisation in developing countries. *Environmental Development*, 13(1), 18–32.
- 11) Dimitriou, H and Gakenheimer, R. (2021). *Urban Transport in the Developing World: A Handbook of Policy and Practice*; Edward Elgar Publishing: London, UK, 2021.
- 12) Erkul, M., Yitmen, I., and Çelik, T. (2016). Stakeholder engagement in mega transport infrastructure projects. *Procedia Engineering*, 161(1), 704–710.
- 13) Gachassin, M., Najman, B., and Raballand, G. (2010). The impact of roads on poverty reduction a case study of Cameroon (5209). The World Bank Africa Region Transport Unit: Toulouse.
- 14) Naazie, A., Braimah, S.R., and Atindana, V.A. (2018). The Effects of Bad Roads on Transportation System in the Gushegu District of Northern Region of Ghana. *American Scientific Research Journal for Engineering, Technology, and Sciences*, 40, 168-185.
- 15) Nasir, O (2016). “The Impacts of Transport infrastructure Provision on Economic Development”. A Case study of Aweday Town of Oromia Region Ethiopia. A Master’s thesis proposal from in the Department of Urban Infrastructure Provision Management. June 14, 2016.
- 16) Ng, A and Loosemore, M. (2007). Risk allocation in the private provision of public infrastructure. *International Journal of Project Management*, Volume 25, Issue 1,2007, Pages 66-76, ISSN 0263-7863, <https://doi.org/10.1016/j.ijproman.2006.06.005>.
- 17) Obare, G.A. (2000). ‘The impact of road infrastructure on input use and farm level productivity in Nakuru District, Kenya.’ PhD thesis. Egerton University, Njoro, Kenya.
- 18) Ogwude, C. (2011). Managing transport infrastructure in Nigerian cities. A paper presented at the Nigerian Institute of Town Planners (NITP) and Town Planers Registration Council of Nigeria (TOPREC) Mandatory Continuing Professional Development Program (MCPDP) Ibadan, Nigeria.
- 19) Panayotou, T (1998). The Role of the Private Sector in Sustainable Infrastructure Development. *Bridges to Sustainable Bulletin* 101 UNDP.
- 20) Polzin, S. E. (2004). Relationship between land use, urban form and vehicle mile of travel: The state of knowledge and implications for transportation planning. A White Paper Prepared for the Florida Department of Transportation BC 353: RPWO: 46.
- 21) Villalba-Romero, F., Liyanage, C and Roumboutsos, A. (2015). Sustainable PPPs: A comparative approach for road infrastructure. Available at https://www.sciencedirect.com/science/article/pii/S2213624X15000267?casa_token=JWwzb631uZ4AAA-AA:pItbXoOOVarvG9FKx_-tdUdSbj-8wtqI9Weqd2B_xMmkcWLGR5Nb4udjvnasvDehF7cyoZs4hNs[Accessed on 19/10/2023].
- 22) Wasike, W. S. K. (2021). Road Infrastructure Policies in Kenya: Historical Trends and Current Challenges. Available at https://d1wqxts1xzle7.cloudfront.net/80457898/PNADS064-libre.pdf?1644307046=&response-content-disposition=inline%3B+filename%3DRoad_Infrastructure_Policies_in_Kenya_Hi.pdf&Expire=17102023[Accessed on 17/10/2023].
- 23) Wellman, K. and Spiller, M., (2012). *Urban infrastructure: finance and management*. John Wiley & Sons.