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A Critique of Resident's Socio-Economic Status on Infrastructure Maintenance in Akure Municipality, Nigeria

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Abstract

It has been argued from time immemorial that if the drive for sustainable infrastructure in any society is to be achieved, its maintenance management needs to be optimized. Dishearteningly, the institutions of government at every level responsible for infrastructure maintenance in Nigeria had been constrained by the nation's dwindling economic fortune in carrying out their statutory mandate with the spill-over effect on residents to make infrastructural facilities in their domain functional. Thus, the focus of this study was to investigate the contribution of the socio-economic standing of residents of Akure Municipality to infrastructure maintenance. With respect to this survey, 425 questionnaires amounting to 1% of the research population were administered using systematic probability sampling technique and retrieved from residents living in this area. These retrieved questionnaires were analyzed using appropriate statistical test. Findings revealed that residents of Akure core were people of low educational setting and poor income standing. It was further discovered empirically that the socio-economic variables of residents put together; which include sex, age, marital status, education, occupation and income, could only contribute 14.8% to issues of infrastructure maintenance in this locale. The study concludes by recommending poverty alleviation program, involvement of non-profit oriented organizations in infrastructure maintenance and massive reorientation towards achieving sustainable maintenance culture in Akure residential core.

Keywords

Socio-economic Implication, Infrastructure Maintenance, Akure Core

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1. Introduction

The term socio-economic status (SES) is conceived to be the social and economic standing of a given individual, or group of individuals, within the larger society [6]. This is expressed in measures of income, occupational status, and educational attainment, among others [7]. The utility of the above definitions of SES rested on the fact that it is an indicator for measuring human wellbeing.

There is no universally accepted definition for infrastructure. As such, its various depictions are influenced by the technocratic posture of the beholder. As for this academic adventure, infrastructure is pictured as the enterprise or the products, services and facilities necessary for an economy to function [11]. In a clearer sense, maintenance could be viewed as means of keeping in good condition all projects of development that are of benefit to mankind [1]. Therefore, it is expedient to note that if the zeal and desire of government and the governed to achieve sustained socioeconomic growth is to come to fruition, necessary infrastructure maintenance mechanism must be put in place.

It has been argued that the intrigues between SES of residents in any clime and infrastructure provision, maintenance, and

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sustainability is a product of spatiotemporal phenomenon. Okoro [14] pointed out that increase in government expenditure over the space of time on infrastructural facilities will stimulate economic growth. The resultant effect of these investments will lead to increase in resident's per capita base. This is viewed from the perspective that more employment opportunities will be generated, accessibility to quality education will be optimized and ultimately the menace of poverty will be substantially addressed.

Owoeye & Omole [18] reported that settlements are urbanizing at exponential fashion without corresponding increase in supply of adequate housing and infrastructure. Aribigbola [5] argued that this has culminated into rapid and spontaneous growth springing socio-economic and environmental challenges. The exodus of people in rural areas to urban centres is alarming, calling for serious concern. The reason for the influx of people to urban areas is not unconnected to zeal for better socio-economic exploit in terms of employment, education among others. The fact remained that it poses serious pressure on existing urban infrastructure stock such as roads, schools, health centres, electrical installations etc [8]. This is even worrisome taking into cognizance the dwindling economic fortune of the country which had rendered virtually all tiers of government incapacitated in providing, as well as, maintaining enabling infrastructure for the teeming urban populace [12]. This has invariably led to premature deterioration of physical assets which would have aided productive processes.

In the submission of Wajim, Garba and Grace [21], it was clearly established that spontaneous pattern of growth and development is phenomenal in urban cores. This could be linked to the fact that this part of the city is often an economic hub to different set of people irrespective of their socio-economic standings. It is from this insight that this paper intends to investigate the implications of socio-economic status of residents of Akure municipality on infrastructure maintenance with a view to providing recommendations that will aid policy-informed maintenance practices in the locale.

2. Material and Method

2.1. The Study Area

Akure is a fast growing metropolitan area located in the southwest geopolitical zone of Nigeria. Geographically, the city lies within latitude 7^0 15^1 and 7^0 28^1 north of the equator and longitudes 5^0 6^1 and 5^0 25^1 east of the Greenwich meridian, as shown in Figures 1 and 2 [2, 4]. It is the administrative seat and economic heartbeat of Ondo State created in 1976 [20].

Suffice to say that the city over the space of time had undergone tremendous changes in her developmental process in terms of residential composition and urban heterogeneity [3]. This is evident with people of different walks of life transiting in and out of the city for different purposes which include employment opportunities, education and so on. This has invariably influenced the city population surging from 239,124 in 1991 to 353,211 in 2006 [16]. With 3.2% growth rate, the population of Akure city is expected to reach 589,376 in 2020.

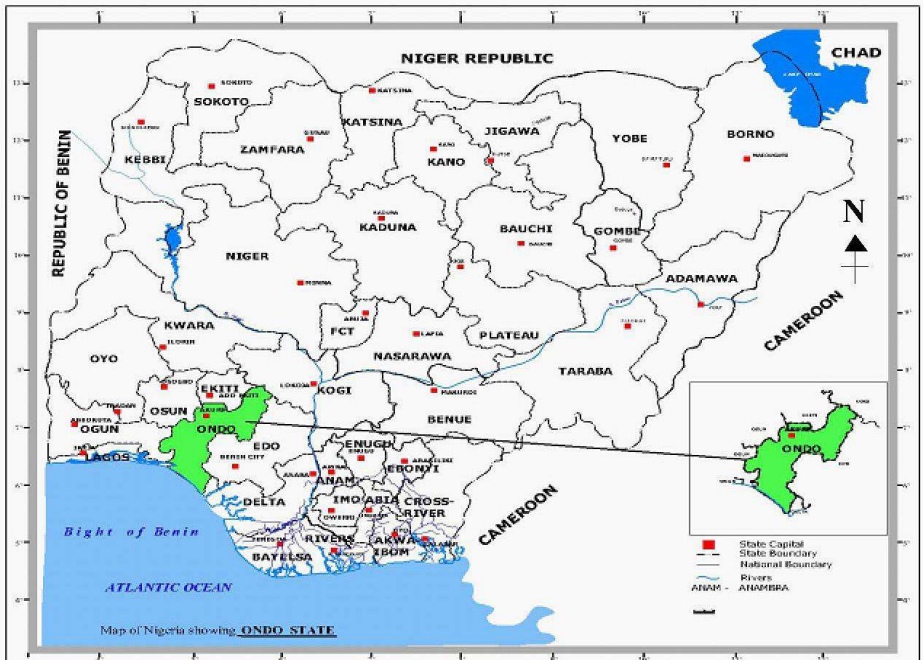

Figure 1. Ondo State in the National Setting.

Source: Ondo State Ministry of Physical Planning and Urban Development (2019)

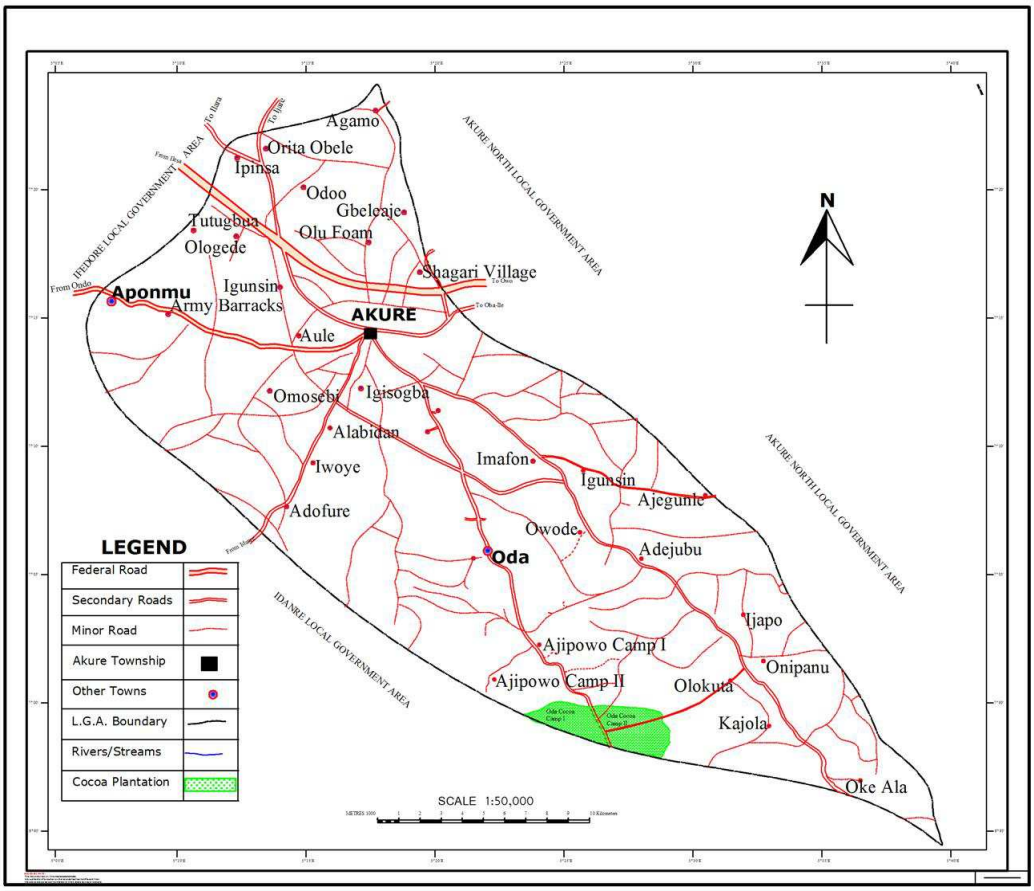

Figure 2. Akure (the State Capital) and other major towns within the Local Govt. Area.

Source: Akure South Local Govt. Secretariat, Akure (2019).

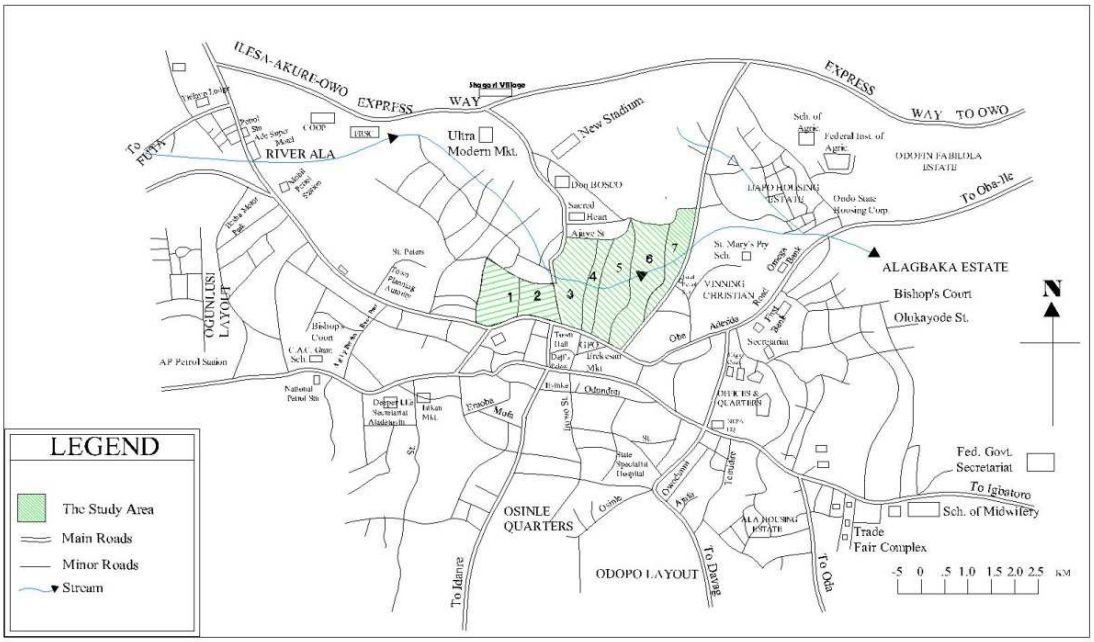

Figure 3. The Study Area - Locational Map of selected streets within the Core of Akure.

Source: Olasemojo & Owoeye (2020)

The spatial coverage for this study is limited to Akure urban core. To put the record straight, there are twenty-two

residential streets in the core of Akure [9, 15]. Seven out of these streets which include Imuagun, Odo-Ijoka, Araromi, Oja-Oshodi, Odo-Ikoyi, Isolo, and Ijomu were randomly chosen for this study (see Figure 3). The rationale behind the choice of these streets was not unconnected to the fact that they are slum environments with poor housing condition and extensive infrastructural facilities decadence when compared to other residential quarters in this locale.

2.2. Research Database

With respect to data collection for this study, building demographic survey of these residential streets was carried out using Google earth software and digitized with the aid of ArcGIS to arrive at 1696 buildings. The report of Integrated Household Survey conducted by Ondo State Bureau of Statistics [13] established that average household size in Akure urban was estimated at five persons per family (5ppf) and five households per building (5hpb). Thus, the estimated population of the research locale is computed to be 42,400 persons. For the purpose of questionnaire administration, a 1% of the research population, amounting to 425 was adopted, which in the words of [8] was considered reasonable taking into cognizance peculiar environmental issues common to all residents in this locale. These set of questionnaires were administered in this locale using systematic random sampling technique to retrieve data from residents at the interval of twenty buildings. The rationale for this rested on the fact that a household is interviewed per building. Empirical data retrieved from sampled respondents in the course of this survey were analyzed and interpreted using appropriate statistical techniques.

3. Result and Discussion of Findings

3.1. Socio-economic Status of Respondents

Socio-economic characteristics of residents of Akure urban core under consideration in this study were gender, age, marital status, education, occupation and income respectively. This is mirrored from the point that these elements at play are quintessential variables which invariably influence infrastructure maintenance.

3.1.1. Gender Composition of Respondents

In the course of this survey, data obtained from respondents, as illustrated in Figure 4, revealed that a larger number of the male folk, constituting 76.5%, were interviewed compared to their female counterparts (23.5%). This is hinged on the fact that the male class in this part of the world are in most usual cases the house heads. Thus, the onus of maintaining and sustaining household and neighbourhood infrastructure is most often placed on the male class. This statistical revelation was in tandem with the finding of [10] where they asserted that the responsibilities of provision and maintenance of basic facilities across the residential zones of Akure city was majorly on the male fold.

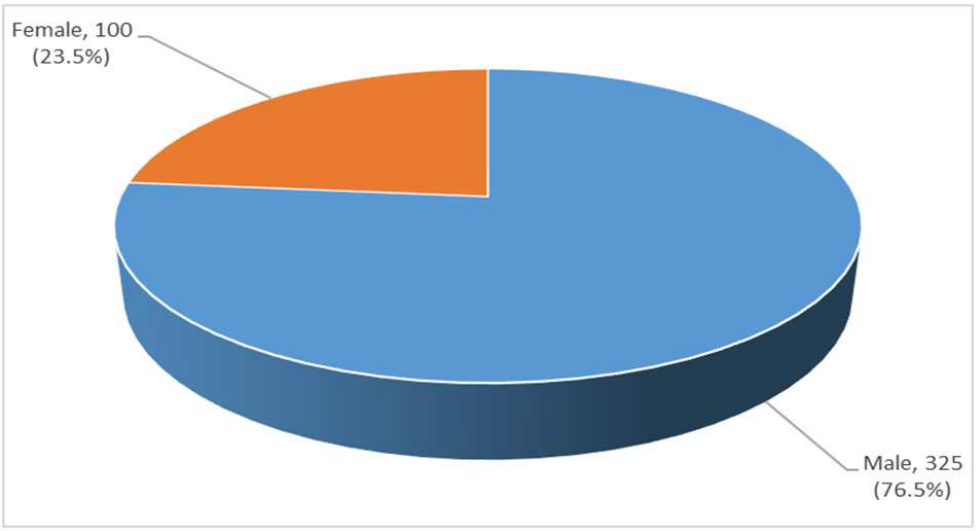

Figure 4. Gender Composition of Respondents.

Source: Field Survey, 2019

3.1.2. Age Composition of Respondents

With regards to age composition of respondents in this locale, as illustrated in Figure 5, data obtained from the field explicitly revealed that majority of the residents (49.88%) in this part of the city were in between the ages of 31-45 years, followed by 18-30 years (38.12%). This statistical discovery is a pointer to the fact that these set of people were in their

productive ages which is vital if the desire for efficient maintenance of infrastructure assets is to be achieved.

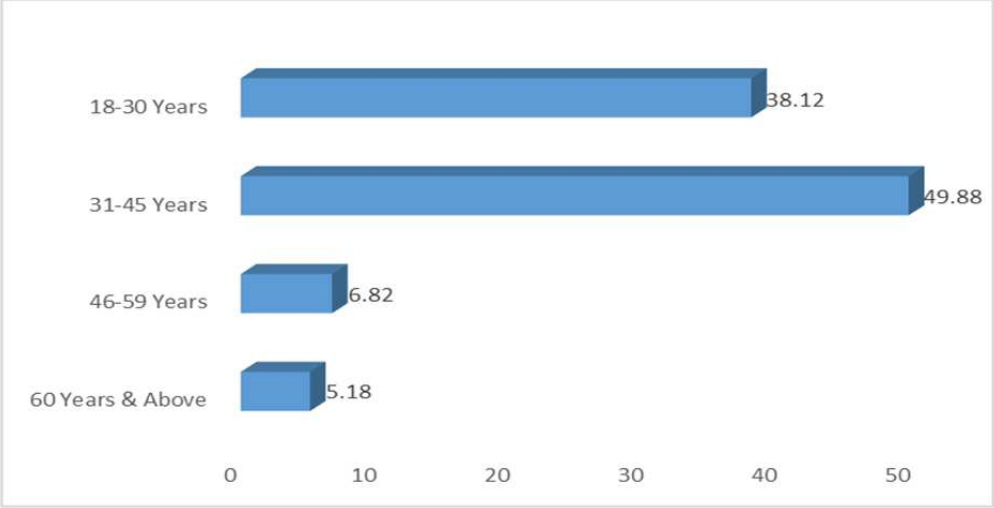

Figure 5. Age Composition of Respondents.

Source: Field Survey 2019

3.1.3. Marital Status of Respondents

On the issue of marital status of respondents in the core of Akure, it was overwhelmingly revealed that majority of the residents interviewed (55%) were married while 33% were singles. This finding, as shown in Figure 3, was not unconnected to the fact that respondents interviewed were in the marriageable ages of between 18- 60 years and above. Furthermore, it could be argued that married people; especially of low income stratum, tend to commit less resource on externalities such as infrastructure maintenance as they often prioritize the upkeep of their immediate households.

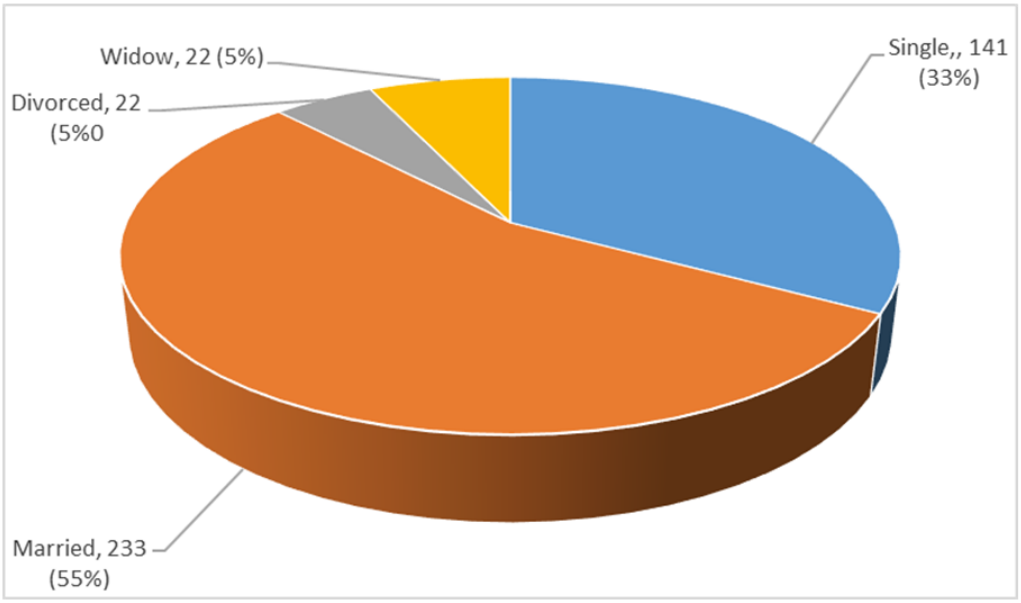

Figure 6. Marital Status of Respondents.

Source: Field Survey 2019

3.1.4. Level of Education of Respondents

From the perspective of educational qualifications of residents in the core of Akure, it was quite evident from Figure 7 that 49% of the people residing in these environs were Senior Secondary School Certificate (SSCE) holders. It could be inferred from this point of view that residents of this part of the city were literates but with little or no zeal or inner drive for higher educational attainment. Suffice to say that higher educational attainment guarantees good maintenance

culture. Thus, the issue of infrastructure maintenance challenges was a common phenomenon in Akure core owing to resident's low educational standings.

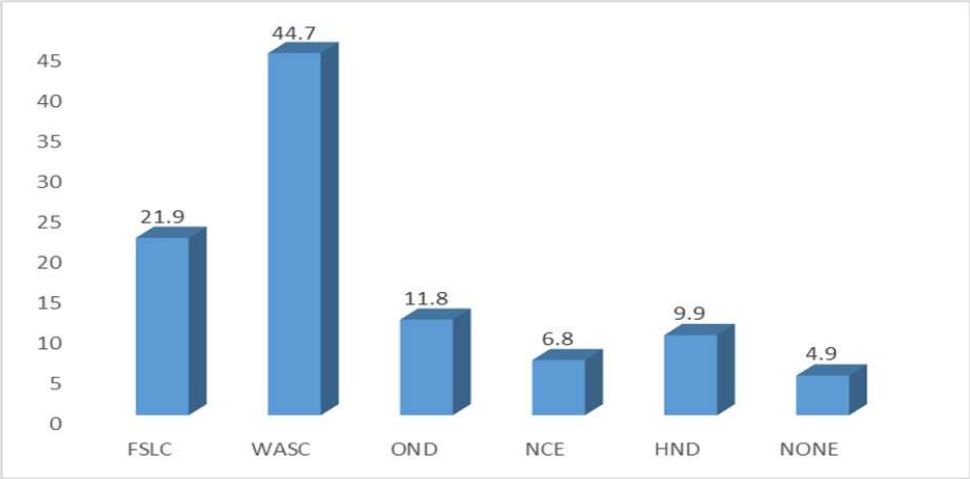

Figure 7. Level of Education of Respondents.

Source: Field Survey, 2019

3.1.5. Occupational Distribution of Respondents

With regards to occupational distribution of residents in Akure core, data obtained from respondents revealed that 41.6% and 33.2% of residents interviewed in these environs engaged in trading activities and artisanal enterprises such as barbing, tailoring, among others. The nature of resident's occupational distribution in this locale could be attributed to their low educational status which had been argued to be one of the encumbrances to effective infrastructure maintenance.

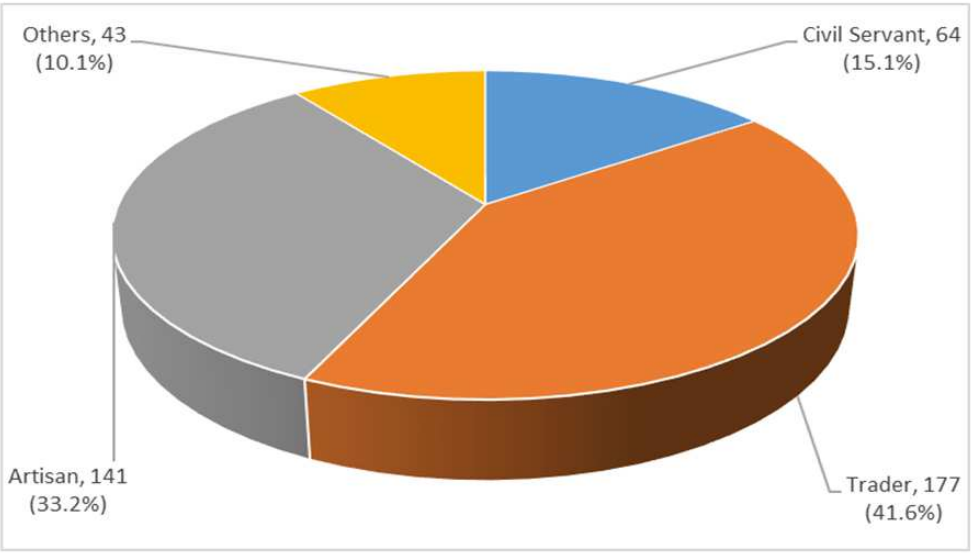

Figure 8. Occupational distribution of respondents.

Source: Field Survey, 2019

3.1.6. Income Distribution of Respondents

The income distribution of respondents in Figure 9 showed that 46.6% of residents interviewed earned between ₦20,001 and ₦40,000; 30.1% earn between ₦40,001 and ₦60,000 while only 4.9% earned above ₦60,000 as gross monthly household income. Going by the submission of [13], which posited that five persons are mostly found in a family, and the United Nations income approach that a person living below $1.9 per day is adjudged to be poor; it could be deduced, therefore, that residents in this part of the city were people of low per capita base. The reliability of this finding was premised on the ground that the current rate of exchange was

about ₦470 to $1 which could hardly cover household feeding expenses let alone infrastructural facilities maintenance. This finding is in consonance with the view of [17] who posited that residents of Akure city core are people of low per capita base and [19] who established that the area is a locus of abject poverty.

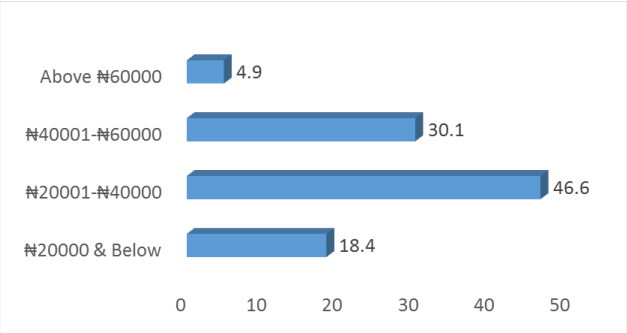

Figure 9. Income Distribution of Respondents.

Source: Field Survey, 2019

3.2. Relationship Between Socio-economic Attributes of Respondents

The socio-economic factors investigated in this study are nominal and ordinal variables. Thus, it violates the operation of Pearson product moment correlation which encompasses that variables should be continuous. Consequently, these set of variables were transformed using double-log transformation to achieve approximate normality needed for the analysis. The result shown in Table 1 revealed negative relationship between sex and age with correlation coefficient of -0.305. This implies that as the population of people in productive age increases, no matter the gender, the indices on infrastructure maintenance challenges decreases. Conversely, there was positive relationship between marital status and age with a correlation coefficient of 0.296. The significance of this established nexus rested on the fact that marriage is influenced by age. This is evident in the 1999 constitution of Nigeria as amended that forbids child's marriage.

Likewise, there were significant positive relationship between education/sex and education/age with correlation coefficient of 0.350 and 0.166 respectively. This established nexus is attributed to the fact that the issue of education cut across gender without any form of discrimination whatsoever when it comes to access to qualitative education. With respect to the nexus between occupation, sex, age, marital status and education; occupation has significant negative relationship with sex and marital status of correlation coefficients -0.105 and -0.047 respectively while it has significant negative relationship with age and education of correlation coefficients 0.137, and 0.203 respectively. This could simply be premised on the ground that the occupation of people is reflected in their gender, age, educational attainment and marital status.

Lastly, income is a chief factor as it established significant relationship with other socio-economic variables under investigation in this study. Hence, it will not be out of context to say that higher income enhances qualitative education, increases occupational wellbeing, emplaces marital harmony and ultimately make provision for externalities such as infrastructure maintenance.

Table 1. Pearson Product Moment correlation test on socio-economic status of respondents.

	(X_1)	(X_2)	(X_3)	(X_4)	(X_5)	(X_6)
Sex (X_1)	1.000					
Age (X_2)	-0.305 0.000	1.000				
Marital status (X_3)	0.043 0.376	0.296 0.000	1.000			
Education (X_4)	0.350 0.000	0.166 0.001	0.009 0.853	1.000		
Occupation (X_5)	-0.105 0.031	0.137 0.005	-0.047 0.300	0.203 0.000	1.000	
Income (X_6)	0.178 0.000	0.186 0.000	0.303 0.000	0.293 0.000	0.127 0.009	1.000

Sources: Computer Print-out, 2019

3.3. Implication of Socio-economic Attributes of Residents on Infrastructure Maintenance

The regression model summary shown in Table 2 revealed a correlation coefficient (R) of 0.385 and coefficient of determination (R^2) = 0.148. The inference that could be drawn from this analysis is that socio-economic characteristics of residents in the core of Akure only contributed 14.8% to issues of infrastructure maintenance in their domain.

Table 2. Model Summary.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.385	0.148	0.136	0.42160

Source: Computer Print-Out 2019

This statistical discovery was not surprising looking at the low level of educational attainment and poor income standing of residents living in this area. The finding was further justified taking into cognizance the pitiable condition of infrastructural facilities in this area; especially, pipe-borne water. Another point that could be ascribed to this finding rested on the fact that the issue of infrastructure provision and maintenance were the exclusive responsibility of government as it is not profit oriented. The pathetic situation of infrastructure maintenance in Akure core is in agreement

with the submission of [4] who argued that little or no attention is given to infrastructure maintenance needs in Nigeria by her government from colonial period till date, which has stimulated high level of decadence in her infrastructure sector.

4. Conclusion and Policy Recommendations

It has been established in earlier studies that the socio-economic wellbeing of man influences the quality of infrastructure assets in his domain. Consequently, infrastructure is a potent indicator for measuring human wellbeing in our rural and urban landscapes. Thus, the comparative chain of development with regards to these variables, as it affects all and sundry cannot be over emphasized. It is rather unfortunate to reveal in this study that residents of Akure core are people of low educational standing and poor income status. This has inevitably led to lack of technical know-how and financial means to activate sustained maintenance practices in this locale. Looking at the fact that infrastructure is a public good; it is heartrending to note that government had abdicated their responsibility of infrastructure provision and maintenance owing to myriads of inexplicable reasons. This has regrettably degenerated into a state of conundrum requiring immediate remedy.

In an attempt to address this debacle, the following recommendations are presented thus:

1) There should be synergy between government and the governed in the form of public private partnership (PPP), which should be embraced to address the challenge of infrastructure maintenance in this locale.

2) The involvement of non-governmental organizations (NGOs), community based organizations (CBOs), and religious based organizations (RBOs) in infrastructure maintenance would go a long way to tackle maintenance glitches in this area. Thus, residents of these environs should not be hesitant in seeking assistance from non-profit oriented organizations available in their domain.

3) Inauguration of poverty alleviation programs to include the provision of low-interest loan facilities for the poor to embark on small-scale businesses with the aim to revitalizing their economic base. Government and well-to-do individuals in the city should show some sense of magnanimity in supporting this gesture to ensure success of this program.

4) Massive re-orientation program should be put in place to address sustainable maintenance culture which would invariably stimulate a paradigm shift in infrastructure maintenance practices in the study locale.

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